District of Columbia
capital bikeshare
Development Plan

Executive Summary

Sam Kittner / Capital Bikeshare

District Department of Transportation

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

Background

Five years ago the District of Columbia and Arlington County launched Capital Bikeshare, one of the first large-scale bikeshare programs in America. The program has grown into a model for cities across the country and an integral part of the District's transportation system. However the District Department of Transportation (DDOT) understands that for bikeshare to remain a success it needs continued investment and planning. Over the last year, DDOT has worked to refine its goals for bikeshare and develop a strategic plan for future growth in coordination with DDOT's long-range transportation plan, moveDC. The *Capital Bikeshare Development Plan* provides DDOT with a data-driven foundation for ongoing planning activities through performance metrics, an in-depth market analysis, financial forecasts, and a system expansion plan. The six-year plan is intended to guide the program from Fiscal Year (FY) 2016 – FY2021. The following Executive Summary highlights DDOT's proposed expansion plans for the program as well as other findings from the full study.

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Arlington County, VA / Capital Bikeshare

Strategic Framework

The Capital Bikeshare Development Plan starts off with a strategic framework articulating DDOT's goals and objectives for the future of bikeshare in the District. These four goals drive decision making in this plan, and succinctly summarize what the District hopes to accomplish through bikeshare. To ensure DDOT meets its goals, each objective is tied to performance metrics that the agency plans to monitor over time. See Section 2.3 in the full report for a detailed discussion of the recommended performance monitoring process.

GOALS	OBJECTIVES
1. Transportation Ensure bikeshare is a valued part of the District's transportation system for all users.	**1.1:** Increase transportation system utility for users. **1.2:** Integrate bikeshare into the existing system. **1.3:** Reduce bikeshare crashes and encourage a culture of safety among users.
2. Community Leverage bikeshare to promote a thriving community.	**2.1:** Promote retail and entertainment spending through improved accessibility. **2.2:** Develop a bikeshare system that effectively serves tourists and visitors in D.C. **2.3:** Reduce the environmental impact of transportation by maximizing the use of bikeshare and providing a strong alternative to driving alone.
3. Quality of Life Make people's lives better through bikeshare.	**3.1:** Attract a wide variety of users regardless of age, race, income, or gender. **3.2:** Improve public health by increasing physical activity through biking amd reduce health disparities among communities in the District. **3.3:** Expand user access to a range of destinations, including jobs and services that can be reached by bikeshare.
4. Fiscal Sustainability Use effective management and decision-making to guarantee system sustainability.	**4.1:** Maintain the bikeshare system in a state of good repair. **4.2:** Grow responsibly by balancing service provision, system costs, public input, and revenue generation concerns. **4.3:**Ensure bikeshare technology and procurement remain flexible to meet the constantly changing needs of the system.

BIKESHARE'S MARKET

How well does bikeshare serve its "Market"? To answer this question, the study defined DC's travel markets in a number of ways:

By Population Groups

- Income
- Gender
- Race/Ethnicity
- DC Residents
- Workers
- Visitors

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By Trip Purpose

- Commuting
- Leisure
- Excercise
- Multi-modal

By Geography

- Neighborhoods
- Downtown vs. outlying areas
- Major destinations and attractions
- Public facilities

Market Study

The market study examined the characteristics of Capital Bikeshare users (Section 3.3 in the full report), trip patterns and station performance (Section 3.4), and select geographic measures in order to identify market segments at the neighborhood level (Section 3.5). The geographic markets are examined based on nineteen measures. The results are summarized to highlight:

- Ridership potential
- Revenue potential
- Areas with a public welfare/health need for bikeshare
- Areas where bikeshare would contribute most to transportation accessibility.

Overall the study found that Capital Bikeshare successfully serves much of the District's core bikeshare market. Future expansion will require a more targeted and nuanced approach, focusing on filling in gaps, improving service reliability, and diversifying the user base. The key findings of the market analysis are as follows:

1. Infill of core service area. High usage has led to bikes being unavailable at busy locations during peak times, and docks being unavailable at popular destinations. Moreover, even in neighborhoods with good bikeshare coverage, there are still places that are outside convenient walking distance to a bikeshare station. Strategies to meet the needs of the core areas include:

- Add additional stations to fill system gaps in places like Columbia Heights, the U Street Corridor, Downtown, and Shaw.
- Provide additional stations or docks at locations that are at capacity to improve service reliability for users.
- Explore incentives to reduce the large trip imbalance between Downtown and nearby high ridership residential neighborhoods.

2. Greater expansion into diverse residential areas. There are opportunities to expand bikeshare to new neighborhoods, in particular neighborhoods with a high percentage of low-income and non-white residents. Strategies to expand include:

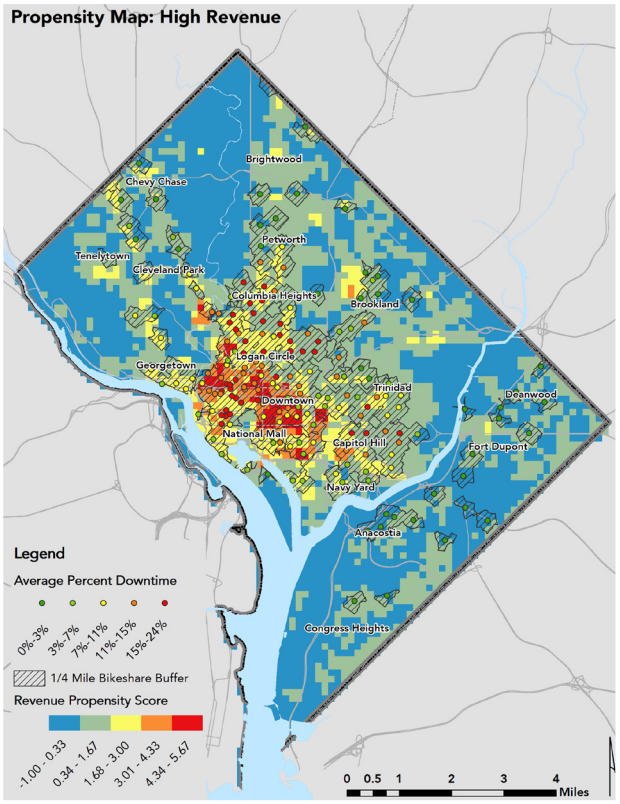
- Expand bikeshare to new parts of the city to increase the utility and coverage of the program.

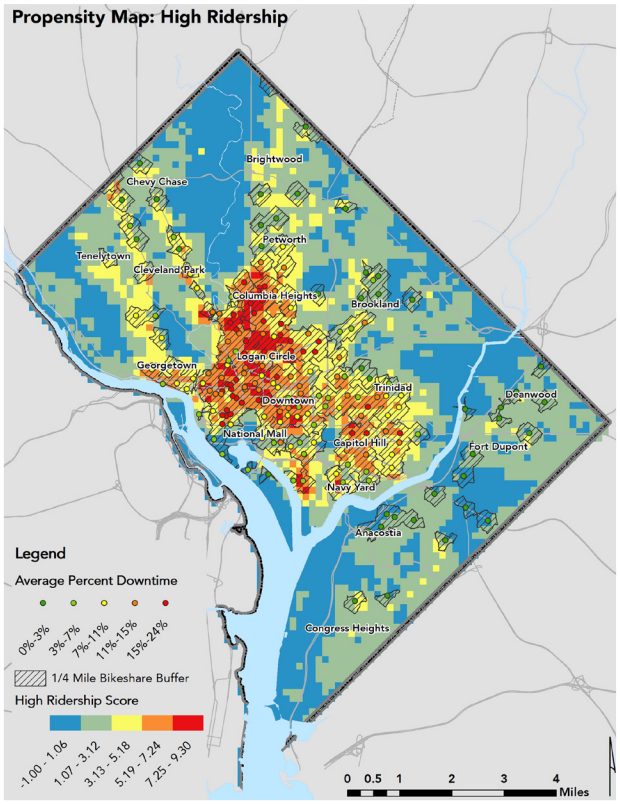
The study summarizes its analysis through a series of propensity maps that examine where the greatest revenue, ridership, public welfare, and accessibility potential for bikeshare exist

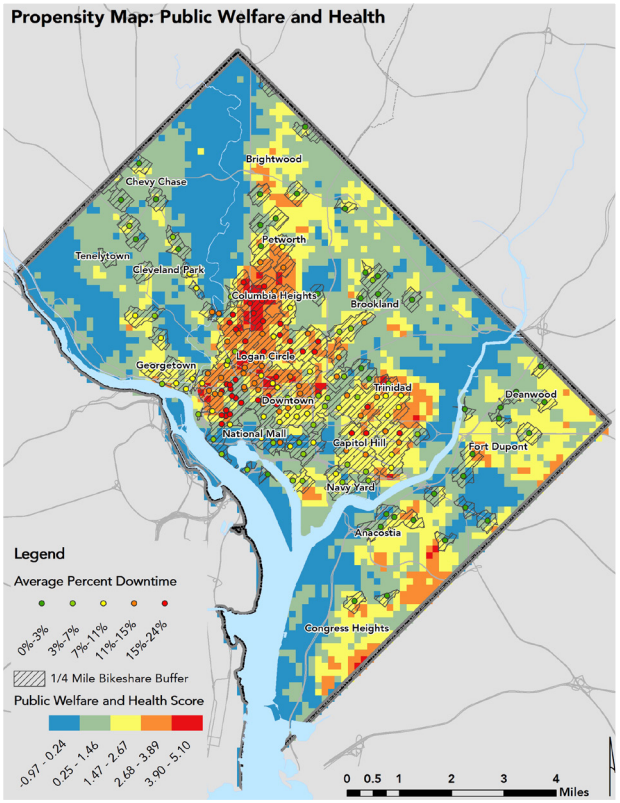
- Utilize bikeshare as a tool to meet citywide public policy objectives such as combatting obesity and improving access to public facilities and services.
- Implement and expand programs targeted at under-represented groups among bikeshare users such as non-white or low-income populations.

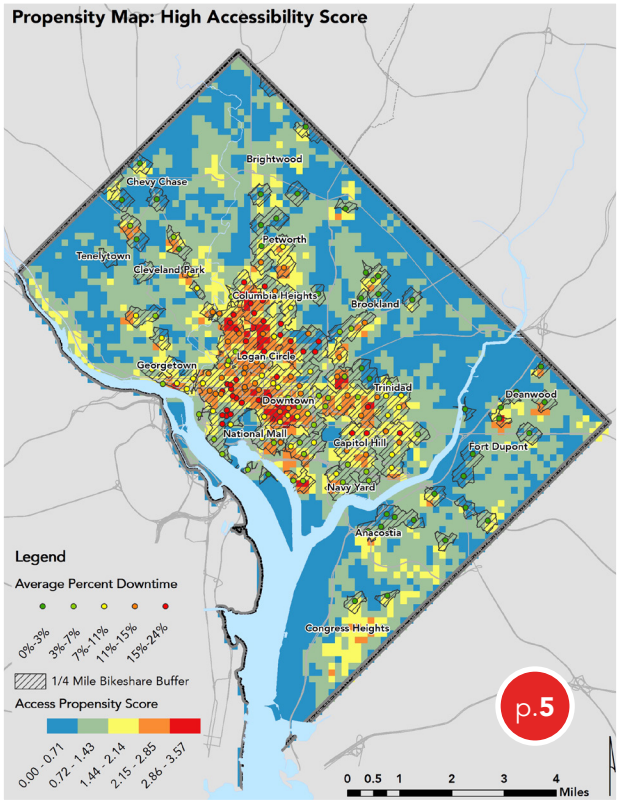
3. Better reach the casual user market. Leverage existing stations near hotels, tourist sites, and Metrorail stations through greater promotion of bikeshare. Strategies for expanding bikeshare to the tourist market include:

- Expand bikeshare to fill the gaps within major tourist hubs like around the National Mall.
- Further integrate bikeshare into city wayfinding to make the program more accessible to non-residents.
- Continue to build relationships with major tourist attractions, the Convention Center, and hotels to further the popularity of bikeshare as a travel option among tourists.









Expansion Plan

While the Development Plan focuses on a six-year timeframe, all expansion will occur between FY2016 and FY2018 to allow DDOT to reassess expansion priorities and state of good repair costs midway through the six-year period. Forty seven stations are proposed for FY2016, 27 for FY2017, and 25 for FY2018. By FY2019, the plan calls for 301 Capital Bikeshare stations and 2,483 bicycles. If additional revenue sources become available, the bikeshare system may expand beyond the recommendations outlined in the plan.

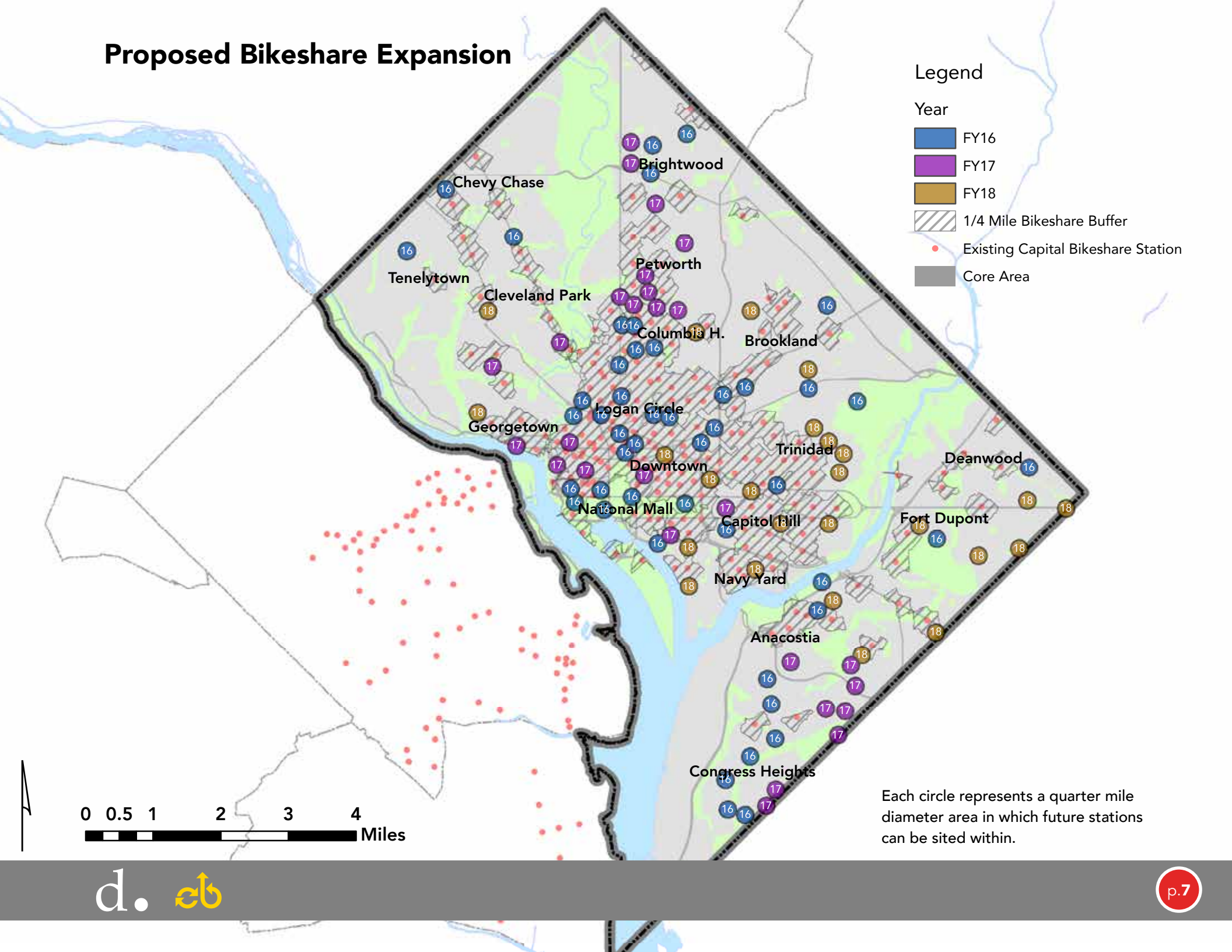
The expansion plan reflects DDOT's new planning criteria (Section 4.2) that help ensure the system grows in a responsible manner. Recommendations are phased in by cluster so that as bikeshare expands, users have a range of destinations within biking distance of every new station. The plan tries to balance expansion between expanding to new parts of the city, with adding stations in high-revenue and high-demand locations. This policy will ensure that as a public service, Capital Bikeshare is available to a wide portion of the District's residents, while ensuring that the program needs a minimal subsidy to operate.

Capacity issues within the system are also addressed by the expansion plan. In addition to the 99 planned new stations, 21 existing stations will be expanded (space permitting), including 9 in the core area and 12 in outlying parts of the city. Expansion should improve the availability of bicycles at critical hubs in the Capital Bikeshare system such as near U Street Metro, Logan Circle at P Street, and Dupont Circle. As a policy, for every five stations added outside the core, two stations will need to be added in Downtown neighborhoods to ensure suitable capacity in the District's core.

EXPANSION NUMBERS

- **99** additional bikeshare stations
- Expansion of **21** existing stations to relieve bicycle shortages
- **65** percent of District residents will live within a quarter mile of a bikeshare station
- **42** percent more low-income residents will be within a quarter mile of a bikeshare station
- **90** percent of District jobs will be within a quarter mile of a bikeshare station
- All **40** Metro stations in the District will be within 660 feet of a bikeshare station
- **97** percent of DC transit trips will end or begin near a bikeshare station

Proposed Bikeshare Expansion



Each circle represents a quarter mile diameter area in which future stations can be sited within.

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Financial Plan

The financial plan (Section 5) estimates the operating and capital costs for D.C.'s portion of Capital Bikeshare over the next six years. The capital costs of the District's six-year expansion plan are estimated to be $6.5 million in year-of-expenditure dollars. Capital costs include new stations, bicycles, site planning, and installation costs.

In addition to new capital, the District needs to prepare for future state of good repair (SGR) costs. As bicycles and stations reach the end of their useful life they will require replacement. Over the next fifteen years, SGR costs will average approximately $6,900 per station per year.

As a public transportation service, Capital Bikeshare requires a small operating subsidy. The program is expected to recover 77 percent of its operating costs from advertising and user revenue in FY2016; the cost recovery ratio is anticipated to increase by FY2021 to 84 percent. By comparison, farebox recovery for Metrobus is 24 percent and for Metrorail is 67 percent.

Ridership is projected to grow steadily in keeping with historic ridership growth rates within the District, with annual ridership in increasing from 2.8 million to 4.2 million by FY2021.

There are a number of options for the District to reduce its operating subsidy for Capital Bikeshare. DDOT is actively exploring system sponsorship and station sponsorships as a means to raise capital and operating revenue. Last year, DDOT began selling advertising space on bikeshare stations. As the advertising program grows, it can potentially help further improve the program's cost recovery ratio. Finally, DDOT is exploring ways future expansion can lower unit operating costs through reduced re-balancing needs.

Next Steps

The purpose of this study is to provide DDOT a data-driven understanding of the Capital Bikeshare system and where the greatest opportunities exist for expansion in the future. However, this study represents only the first step in expanding the Capital Bikeshare program. Before any new stations are installed, the agency will conduct public outreach, coordinate with key stakeholders, and procure additional funding for stations. Public involvement will be key for DDOT to finalize station siting. While this Plan highlights recommended areas for stations, public feedback will help determine which specific locations are best suited for bikeshare stations.

Moreover, while this Plan produces a roadmap for future Capital Bikeshare expansion, a number of challenges lie ahead for DDOT. Capital Bikeshare must grow usage among low-income and minority riders by addressing barriers to use. Expanded marketing and outreach, as well as eliminating payment barriers for people without credit cards will help to expand the programs user base. There are many streets in the District that present a physical and psychological barrier to safe bicycling and DDOT will need to continue to coordinate future investment in bicycle infrastructure with Capital Bikeshare expansion. Lastly, DDOT will need to continue to coordinate with all neighboring jurisdictions to ensure Capital Bikeshare operates efficiently and effectively as a regional system, not just within each jurisdictional boundary.

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To access the full plan or provide feedback please visit
ddot.dc.gov

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