EXECUTIVE SUMMARY

Photo Credit: Zyp Bikeshare

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Bike share is a flexible and convenient transportation and mobility option that allows users to have access to bicycles throughout a community. Bike share systems offer specially-designed, durable, and versatile bicycles. Bike share systems have successfully been implemented in communities throughout the United States during the past six years. This study was undertaken to assess the feasibility of a bike share system in the City of Wilmington, which has unique characteristics and challenges.

BENEFITS AND RISKS OF BIKE SHARE

Bike share is an inexpensive and quick-to-implement transportation system. Based on experiences in a multitude of cities, it can deliver a variety of transportation and mobility, economic, health, safety, and quality of life benefits. Bike share can provide a fundamental shift in the way people move about and make transportation decisions. However, bike share systems also have risks including those related to the cost of implementation, helmets use, and environmental costs related to the rebalancing of bicycles. Overall bike share has become a less costly way to increase accessibility to jobs and destinations within a city.

COMPARABLE BIKE SHARE SYSTEMS

Four existing U.S. bike share programs were selected based on their demographic, economic and geographic similarities to Wilmington as well as the bike share system's operational and ownership model. The selected programs included:

- Capital Bikeshare – Washington, DC Area
- Charlotte B-cycle – Charlotte, NC
- Cogo Bikeshare – Columbus, OH
- Indego – Philadelphia, PA

Characteristics from these programs were used to compare to and evaluate existing conditions conducive for bike share in Wilmington.

GOALS AND OBJECTIVES

A preliminary set of system goals and objectives were developed based on feedback received from key local/ regional stakeholders and the general public, and were later refined through discussions with representatives from the City and the Delaware Department of Transportation

Boulder B-cycle (Boulder, CO)

(DelDOT). The goals and objectives reiterate the priority of getting more people on bicycles, focusing on a system that is accessible and affordable to most, and helps promote the City as a livable and competitive community that can attract and retain new talent.

EXISTING CONDITIONS AND PUBLIC ENGAGEMENT

An analysis of existing conditions in Wilmington was conducted, including geographic and road conditions, demographics, transportation mode share, bicycle infrastructure and tourism.

The findings of this analysis showed that there are several aspects of Wilmington which make it conducive to a potential bike share system. These include: (1) a climate to support year-round cycling; (2) a concentration of employment in downtown areas; (3) a tight-knit street grid offering various routing options to bicyclists; (4) significant business commuting via Amtrak and SEPTA creating a potentially strong demand for bike share; and, (5) a higher population density than its peer cities. However, there are also challenges to bike share implementation including: (1) an auto-oriented culture; (2) streets with high traffic volumes and speeds, which create uncomfortable bicycling conditions; (3) lack of comfortable on-street bicycle facilities; and, (4) rising crime rates in and near the downtown areas.

Many members of the community and stakeholders from local and regional agencies helped determine the overall feasibility of implementing a bike share program. The public engagement process encouraged input utilizing various media to shape the direction of the project and answer many questions about local sentiment towards implementation of a bike share program. Feedback received during the public engagement process was very positive, identifying many of the same opportunities and challenges previously described.

Based on the analysis of existing conditions, feedback received from public and stakeholder input, in addition to the set of goals and objectives, the implementation of a bike share program in the City of Wilmington was found to be **feasible**.

SYSTEM PLANNING

Following the feasibility determination a bike share demand analysis was performed using publicly available data. A heat mapping analysis assigned points to various data factors to identify areas with the highest potential demand for bike share ridership in the City. The final heat map is shown on the figure below and shows that the areas of the City with the highest potential for bike share use include:

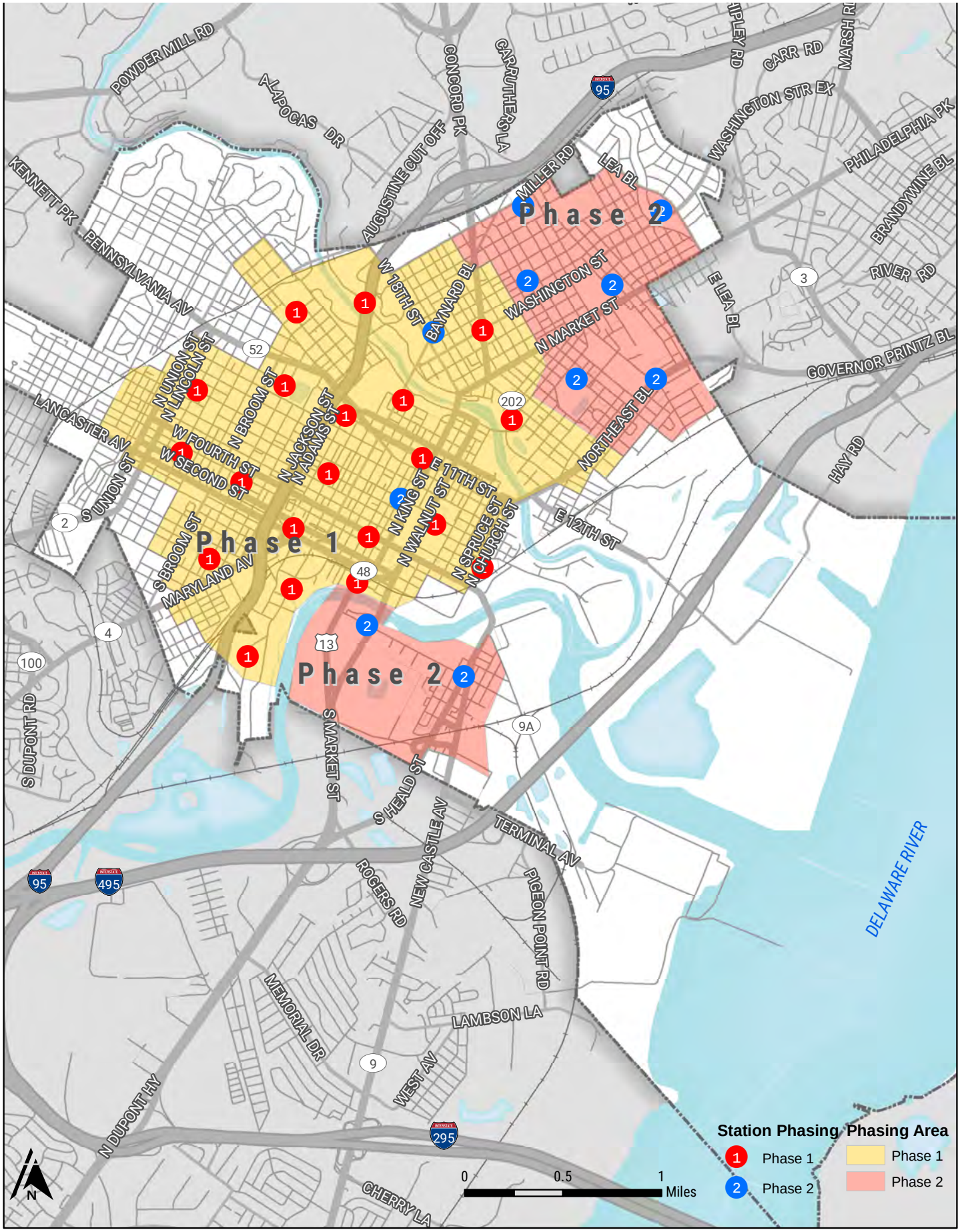
- Downtown Wilmington
- LOMA
- Quaker Hill
- East Side
- Hilltop
- Hedgeville
- Cool Springs

Using these results, a business plan was undertaken to establish an implementation approach and to assess costs. It was determined that the City has the potential to support an initial system of 30 stations and 300 bicycles divided into two phasing areas as noted in the table below and shown in the map on the following page.

Table i: Proposed System Phasing

Phase	Stations	Bicycles	Docks	Stations per sq. mi.
1	20	200	340	6.7
2	10	100	170	5.0
TOTAL	30	300	510	5.8

When fully implemented, the proposed system would incorporate an area of around five square miles which represents around 45 percent of the City's total land area. The proposed bike share system would begin implementation in Downtown Wilmington and expand into the following neighborhoods: Upper East Side, East Side, LOMA, Quaker Hill, Riverfront, West Center City, Trinity Vicinity, Midtown Brandywine, Brandywine Village, Southeast 9th Ward, Triangle, Delaware Avenue, Cool Spring, West Hill, Hill Top, Browntown, St. Elizabeth Area, Bayard Square, Little Italy, Riverside, 11th Street Bridge,



Wilmington Bike Share Proposed System Phasing and Station Locations

Indego (Philadelphia, PA)

Eastlake, 9th Ward, Eastlawn, Harlan, Price's Run, and Southbridge. The proposed phasing and generalized station locations can be seen in the figure on the previous page.

It is important to note that the proposed phasing plan should be used as a guideline for bike share implementation. The plan does not preclude future expansion into other areas or accelerated expansion into areas identified in a later phase. Finally, the recommended station locations are shown as generalized areas where bike share stations could be installed. Final station placements will require additional public outreach and fieldwork.

BUSINESS PLAN

Bike share programs in the U.S. are operated and structured in various ways. Each community exploring bike share must define its own model by considering the individual program's strategic goals, financial constraints, and political realities. This study provides recommendations for implementing a bike share program in the City of Wilmington. This business and implementation plan addresses the following four components:

- *Ownership and Governance*: Every bike share system needs to select an "owner" who will lead the oversight of the system and legally own the equipment. Based on Wilmington's current funding environment, local transportation needs, and input from local and regional stakeholders, it is recommended that Wilmington pursue an agency owned and privately operated governance structure. In particular, the Delaware Transit Corporation (DTC) was identified as a potential agency to take on the responsibility of managing the program. This will require further discussions with DTC and other agencies regarding their interest and capacity.

- *Operating Model*: Bike share systems in the United States are either operated directly by their owner or through a contracted vendor. There are strengths and weaknesses to both models, and the preferred operating model largely depends

Table ii: Projected Capital and Installation Costs

	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Phase 1 - Capital Purchase and Installation	$ 800,000 - $1,170,000	$ -	$ -	$ -	$ -	$ 800,000 - $1,170,000
Phase 2 - Capital Purchase and Installation	$ -	$ -	$425,000 - $620,000	$ -	$ -	$425,000 - $620,000
System Startup	$ 215,000	$ -	$ -	$ -	$ -	$ 215,000
Agency Administrative Costs, Pre-Launch	$ 85,000	$ -	$ -	$ -	$ -	$ 85,000
Total Capital and Startup Costs	$1,100,000 - $1,470,000	$ -	$425,000 - $620,000	$ -	$ -	$1,525,000 -$2,090,000

Table iii: Projected Operating Costs per Phase per Year

Phase	Year 1	Year 2	Year 3	Year 4	Year 5	Total Operating Costs
Phase 1	$ 430,000	$ 440,000	$ 455,000	$ 470,000	$ 480,000	$ 2,275,000
Phase 2	$ -	$ -	$ 230,000	$ 235,000	$ 240,000	$ 705,000
Total Per Year	$ 430,000	$ 440,000	$ 685,000	$ 705,000	$ 720,000	$ 2,980,000

on the capacities of the final program owner. DTC has been identified as a potential agency to take on the responsibility of managing the program. This is because DTC has extensive experience with vendor contracting, relies on this model to operate its transit system, has a proven history of cooperation with other city and regional agencies, has an active presence in the City, and has demonstrated the capacity to administer the a transit program.

- *Technology*: Bike share technology is rapidly evolving and Wilmington has more choices than ever in procuring a bike share system including smart docks, smart bikes and the emerging market for electric-assist or pedelec bicycles. Regardless of what technology is selected, the City has expressed interest in a system that is durable, secure, easy to use, and as family-friendly as possible.

- *User Fees and Funding*: The program will depend on a diverse range of funding sources from user fees and public grants, to sponsorships and private support for the program. Based on projections, it is expected that the City will have an operating cost recovery of around 51 percent. The City will therefore need to diversify its funding streams to cover the additional funding needed for operating the system. A combination of federal grants, private sponsorship, and advertising is recommended.

PROGRAM COSTS

Cost and ridership projections for the program were created based on observed performance of peer systems, the proposed size and phasing of the program, and assumed user fee structure. The total capital cost of implementing the program is estimated to be between $1.5 M and $2.1 M depending on the type of equipment selected.

In addition to capital, the program will require ongoing operating funding. As previously noted, the program cost recovery is projected to hold steady at 51 percent throughout its first five years of operation. This cost recovery level is comparable to that of peer cities with existing bike share programs. An itemized table of costs can be found above.

IMPLEMENTATION CONSIDERATIONS

Other considerations that will need to be addressed prior to and during implementation of the bike share system include:

- *Regional Coordination*: It is recommended that representatives from the City of Wilmington, DTC and DelDOT develop a cooperative agreement that delineates the responsibilities of each of the parties within this public partnership to ensure that the implementation of the bike share system is streamlined and cost-effective.
- *Transit Integration*: A bike share system represents a unique opportunity for the City of Wilmington and DTC to increase the use of bicycles for short trips and to complement the investments made in the regional transit system. Additional coordination will be needed as the DTC and its partners consider full transit fare payment system integration with bike share.
- *Public Outreach*: Communication and outreach with key stakeholders and the general public should continue throughout the planning and implementation of the proposed program to increase the buy-in from local communities and the potential success of bike share implementation.
- *Social Equity*: The City places an emphasis on developing a bike share program that serves the needs of all users. Historically bike share program riders have been disproportionately white, young, and well-educated. For the program to truly succeed in the City, bike share will need to appeal to a more diverse range of riders. Successfully expanding the reach of bike share will require a multi-pronged approach that includes extensive public outreach, reducing barriers to use, special pricing, and a greater emphasis targeted marketing and buy-in of the community.

IMPLEMENTATION STEPS AND TIMELINE

Steps needed to implement a bike share system in Wilmington include:

- *Fundraising*: One of the most critical steps in implementing a bike share system. Securing funding for capital operations should start early and continue after the program has been launched.
- *Procurement*: Through this process DTC and its partners will select the type of equipment and the operator. This could be completed as separate RFP's for equipment and operations or as part of a single RFP.
- *Site Planning and Permitting*: Following the recommendations contained in this document, DTC and its partners should conduct fieldwork and outreach to confirm that all locations meet all spacing requirements and affected stakeholders are well informed about the implementation of the system.
- *Branding and Marketing*: DTC should develop a brand and marketing strategy to promote the program along with its partners. Community and stakeholder outreach is recommended for increased buy-in.
- *Operations*: The operator finds an operations location, develop user agreements, operating protocols and secure any necessary subcontractors.
- *Deployment*: The operator begins assembling all equipment and begins the installation of all bike share stations.
- *Launch/Opening Day*: DTC should work with its partners to promote and market the event so as to get a large number of stakeholders and the public excited about the system.

It is estimated that the proposed bike share system could be launched in approximately 18 months from the beginning of this process.