

Introduction

A Purpose and Need Statement is a foundational element of the alternatives development process and the National Environmental Policy Act (NEPA) planning process. It identifies current and future deficiencies in the existing transportation system, as well as the transportation needs resulting from these deficiencies. The Purpose and Need Statement for the Broad Street Line Extension to the Navy Yard establishes the rationale for a heavy rail link to the Philadelphia Navy Yard enabling one-seat trips to the area from Center City Philadelphia. This document embodies transportation conditions that are observable and data-supported, as well as issues, opportunities and needs articulated by the public and stakeholders. Public and stakeholder input regarding problems, opportunities and needs will be gathered through a stakeholder committee, several public open-house style meetings, and an online survey that was administered from October 22, 2015 to January 4, 2016.

This draft Purpose and Need Statement states the purpose of the proposed action, documents the deficiencies in the existing transportation system and the foreseeable long-term consequences of these deficiencies, and describes the needs arising from these deficiencies and supporting the purpose. The Purpose and Need Statement serves as a cornerstone for the development and evaluation of alternatives, and works to guide decision making through the evaluation process.

Project Background

History

There is a long history in the Philadelphia region of attempting to extend the Broad Street Subway Line to the Navy Yard. In 1966, the City of Philadelphia commissioned a study to examine the potential of extending the Subway Line from the newly planned Pattison Avenue station into the Philadelphia Naval Yard, which was then an active military base with tens of thousands of employees. That study found the project to be feasible, with minor challenges. However, due to U.S. military engagements abroad and the ongoing Cold War, the \$14.5 million extension was never built. Since that time, several studies have been conducted with a similar scope, including one most recently in 2008.

The Philadelphia Navy Yard dates back to 1776 when the Continental Congress leased land along the Front Street docks for the development of the country's Navy. As the Philadelphia shipbuilding industry grew, operations were moved to the current location on League Island around the time of the Civil War. Between 1876 and 1996, 53 new warships were constructed and 1,218 ships were repaired on site, and it employed over 40,000 people at its peak production during World War II. The site was designated for closure under the Defense Base Closure and Realignment Act of 1990 (BRAC), and operations at the Naval Base ceased in 1991 with the shipyard following soon after in 1996.

In March 2000, The Philadelphia Authority for Industrial Development (PAID) acquired approximately 1,000 acres at the site of the former U.S. Navy Yard from the federal government. The Philadelphia Industrial Development Corporation (PIDC), a private, not-for-profit corporation created to promote economic development and job creation throughout the city, manages the planning, development and operation of these real estate assets on behalf of PAID and the City of Philadelphia.

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Once acquired, the 2004 Philadelphia Navy Yard Master Plan was created to guide planning and investment decision-making through the proposals of new conceptual designs and infrastructure improvements. Furthermore, transit options, including an extension of the Broad Street Line, were evaluated in how each could serve what was projected to be 30,000 employees and thousands of residents. Since 2004, The Navy Yard has established itself as a viable and attractive location offering unique attributes for office space users, industrial enterprises, and collaborative academic, governmental and private research, particularly focused on the pharmaceutical, applied sciences and energy sectors. Due to the Navy Yard's extraordinary success, new land restrictions and emerging patterns of commercial development, the 2013 Master Plan Update produced new projections for employment and residential data – close to 3,000 residents and over 36,000 employees at full build-out.

Study Area

The Navy Yard is situated in a strategic location halfway between New York and the District of Columbia along Interstate 95, approximately 3.5 miles south of Center City Philadelphia, at the terminus of historic Broad Street. It covers 1,200 acres, an area as large as Center City Philadelphia, and currently hosts more than 11,000 employees from over 145 companies in more than 6.5 million square feet of facilities (www.NavyYard.org). Major employers in The Navy Yard include Urban Outfitters, Inc., Tasty Baking Company, Iroko Pharmaceuticals, Aker Philadelphia Shipbuilding, and the U.S. Navy. The Navy Yard is divided into five districts, Historic Core, Central Green District, Mustin Park District, Canal District, Port District. Each of which has plans and strategies for development.

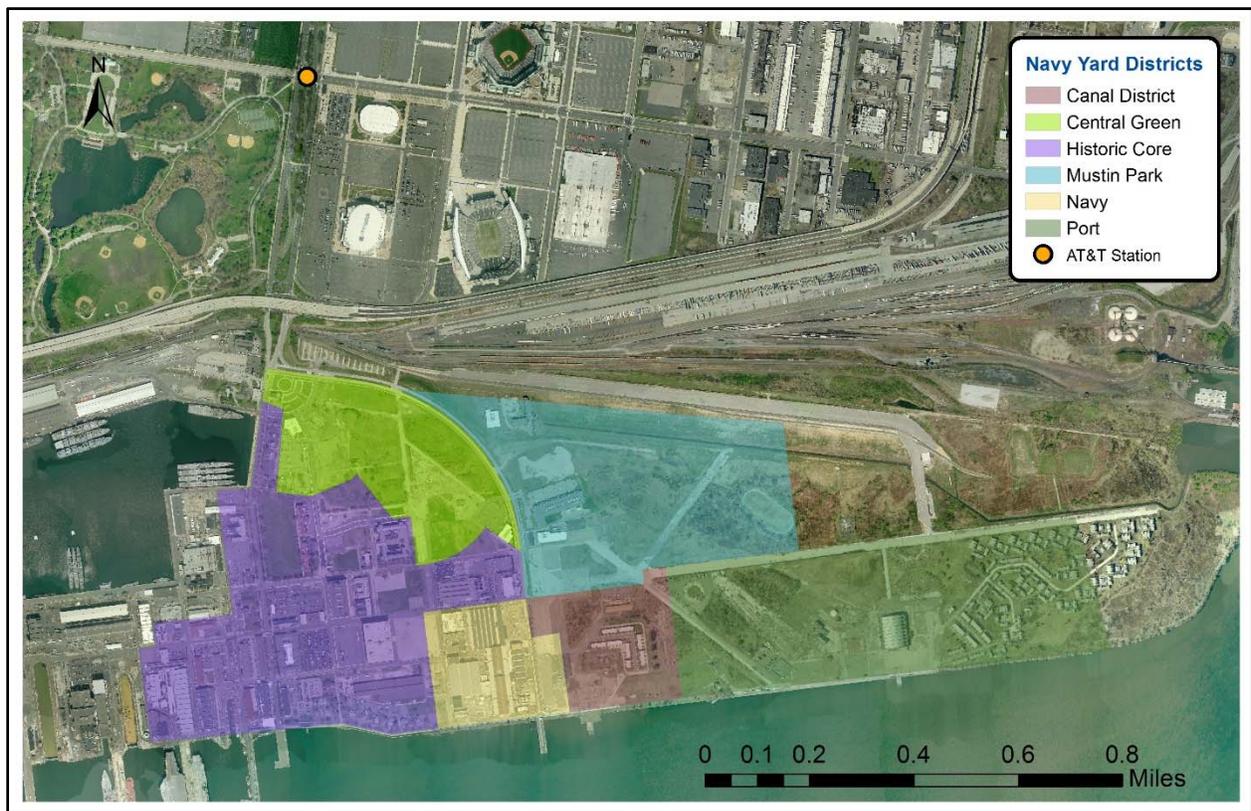


Figure 1: Study Area

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 Broad Street Line Extension to the Navy Yard

Transportation

There is currently no rail access to the Navy Yard. The nearest station, AT&T Station on the Broad Street Line (BSL), is over a half mile from the Navy Yard’s entrance. The BSL operates between the Fern Rock Transportation Center in North Philadelphia and the aforementioned AT&T Station (née Pattison Avenue Station). Connections to SEPTA’s regional rail system and Amtrak are available at the City Hall Station via transfer to the Market-Frankford Line or the Trolley Lines, as well as at the Fern Rock Transportation Center.

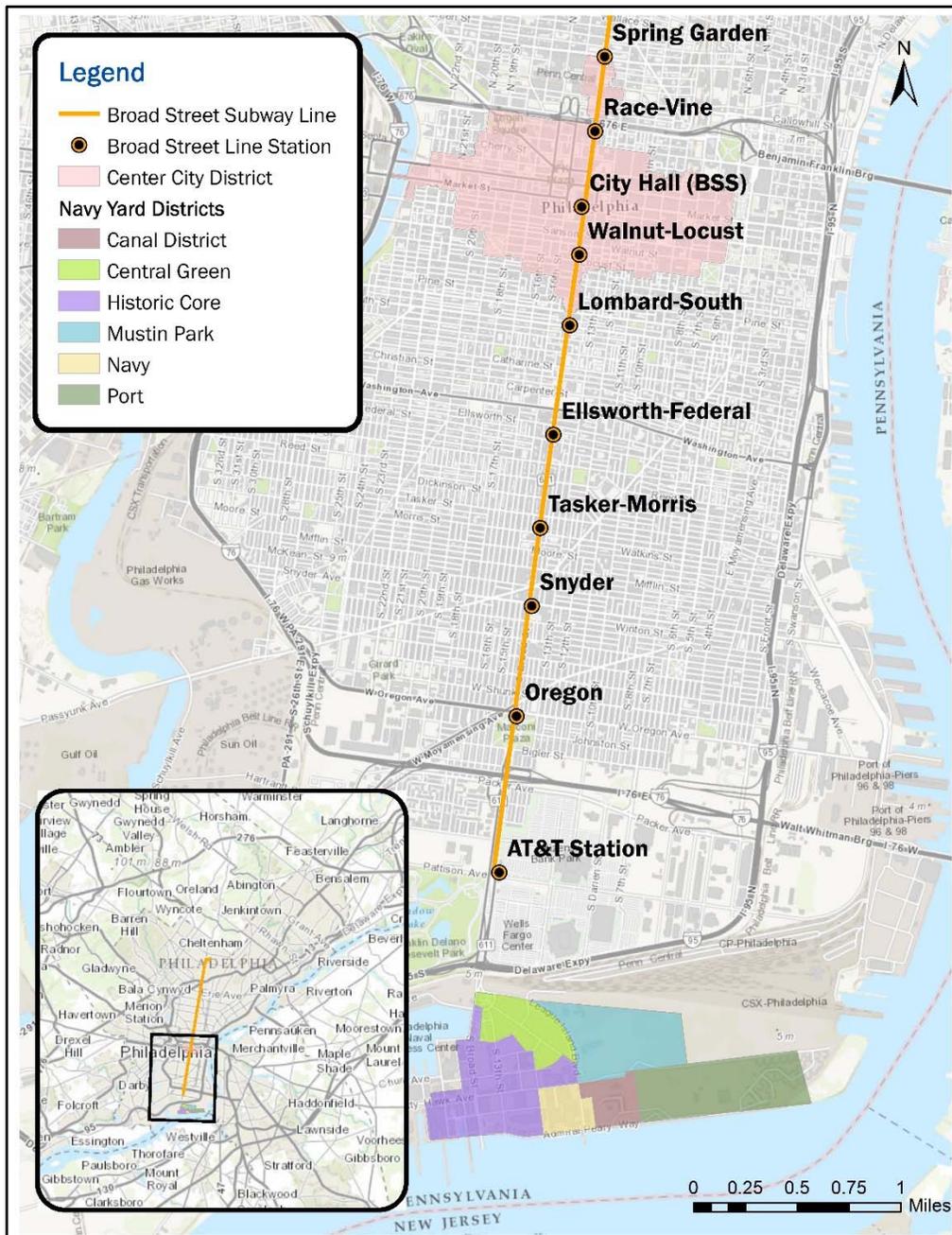


Figure 2: Situation of the Navy Yard

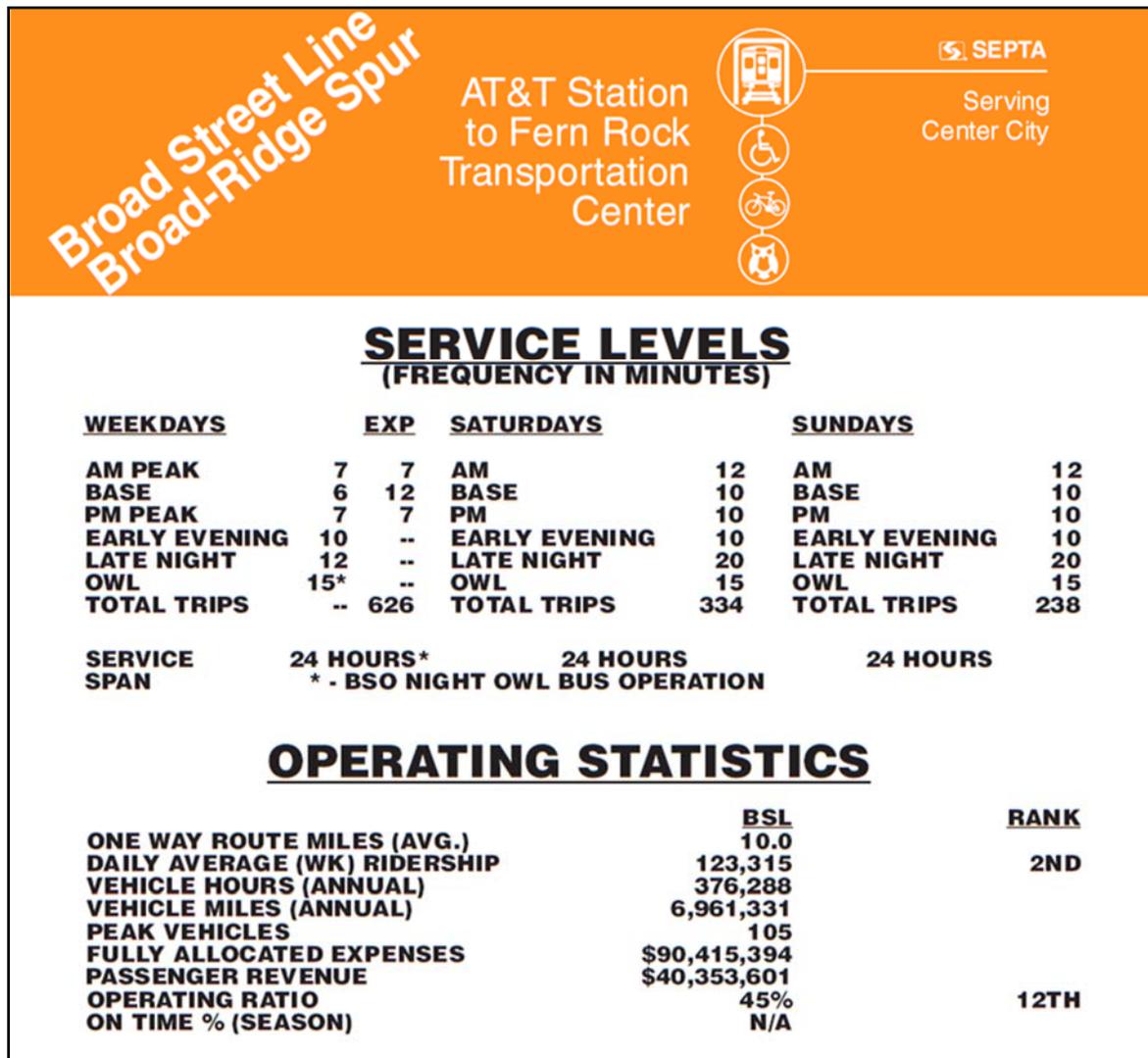


Figure 3: Broad Street Line Statistics Spring 2015 (Source: SEPTA)

To provide access to the Navy Yard, PIDC, through a contract with Krapf Coaches, initiated the Center City Express and the Navy Yard Loop, to serve as the primary transit linkages to The Navy Yard. The Navy Yard Loop replaced SEPTA Route 71, a route that linked the AT&T Station on SEPTA's Broad Street Line with The Navy Yard. The Navy Yard Loop operates from approximately 5:30 a.m. to 7:30 p.m. and connects the AT&T Station terminal station of the Broad Street Line, heavy subway rail, with five locations within The Navy Yard and one additional stop along 26th Street in southwestern Philadelphia.

Express shuttle bus service from Philadelphia City Center, known as the City Center Express, runs from 6:15 a.m. to 10:41 a.m. and from 2:30 p.m. to 7:50 p.m. The City Center Express operates from a location on 10th Street between Market and Filbert Street to five separate bus stops within The Navy Yard development.

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SEPTA currently provides weekend bus transit access to The Navy Yard via the Route 17 service. Service operates from The Navy Yard from approximately 7:00 a.m. to 7:00 p.m. with approximately one bus every 60 minutes.

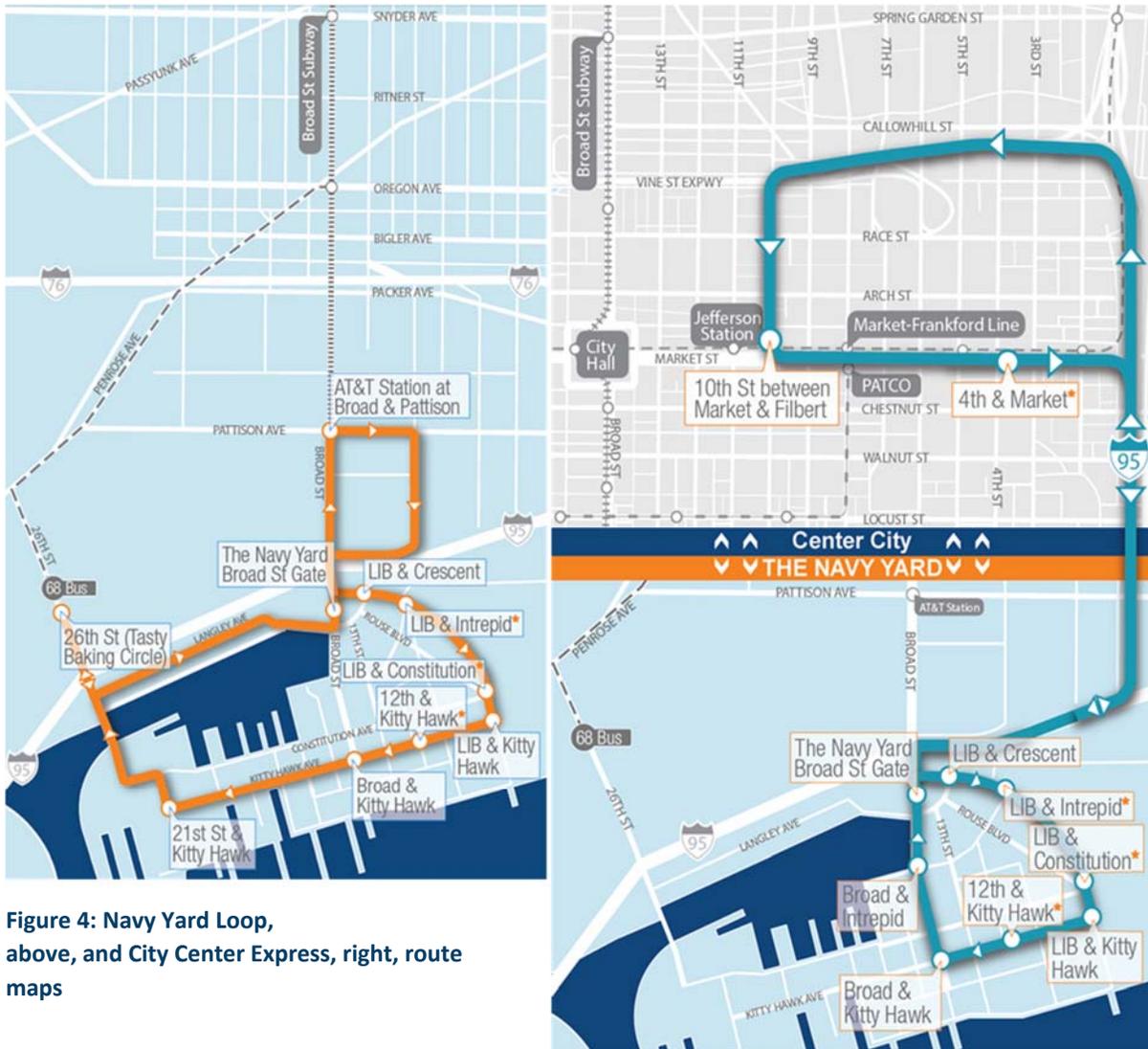


Figure 4: Navy Yard Loop, above, and City Center Express, right, route maps

Purpose

While the location of the Navy Yard 3.5 miles south of Center City Philadelphia makes it attractive for development, the site has impediments to achieving optimal growth, including limited access and limited parking supply. This project will improve transit connectivity and increase opportunities for mobility between The Navy Yard, Center City Philadelphia, and the greater Philadelphia region. The purpose of the project is the following:

- To advance the goals of recently adopted local and regional land use, transportation, and economic development plans.

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- To provide a direct connection to/from the Navy Yard to Center City, the heart of the region’s transportation network, and in return, the Philadelphia region’s jobs, residents, and transportation infrastructure.
- To use public transportation as a means to develop the Navy yard to reach its full potential as a mixed-use center of residential and commerce vitality.
- To capitalize on the greater than \$1 billion of public/private investment in creating a major economic development center.
- To provide the appropriate mode of high capacity public transportation to serve a dense, urban development whose access is limited by its physical and geographical constraints.

The project purpose stems from increased transit demand due to current and future employment and population growth, lack of transit connections to the Navy Yard, inadequate parking supply for future development, and sustainability goals/measures in adopted plans.

Population and Employment Growth

The need for enhanced transit service is driven primarily by the continuing employment growth in the Navy Yard. Currently, there are over 11,000 employees working in the Navy Yard (www.NavyYard.org). However, as shown in Table 1, the 2013 Master Plan Update forecasts over 36,000 employees at full build-out in 2040, an increase of over 225 percent. While today the only residents of the Navy Yard are a few Navy officers, negotiations are under way to reverse the existing deed which restricts residential development at the Navy Yard. In doing so, PIDC hopes to develop over 1,000 residential units for almost 3,000 residents.

Table 1: Build-out Projections (Source: 2013 Master Plan Update)

	Central Green	Historic Core	Canal District	Mustin Park District	Port Expansion	Shipyard and Commerce Center	Totals
Acres	72	194	38	81	192	623	1,200
Occupied (SF)	478,796	1,718,402	-	101,344	106,050	3,933,449	6,338,041
Future Renovations (SF)	-	1,352,380	-	-	-	332,185	1,684,565
New Construction (SF)	921,000	1,420,673	948,000	901,000	965,000	235,000	5,390,673
Total (SF)	1,399,796	4,491,455	948,000	1,002,344	1,071,050	4,500,634	13,413,279
Residential Units	-	1,018	-	-	-	-	1,018
Employment	5,599	17,392	3,792	4,009	1,071	4,501	36,364

Current Commuting Patterns

Due to a lack of rail access to the Navy Yard, 80 percent of Navy Yard employees currently drive to work. According to the Lower South District Plan adopted in 2012, the workforce generates 55 million vehicle miles traveled (VMT) per year. At the projected rate of growth, VMT would reach 90 million by 2022, and 138 million at full build-out of the Navy Yard (<http://phila2035.org/pdfs/FinalLowerSouth.pdf>).

Draft Purpose and Need Statement Broad Street Line Extension to the Navy Yard

As shown in Figure 6, many employees live in Center City Philadelphia. Extending the Broad Street Line would provide direct access for these employees, as well as connect the Navy Yard to the regional transportation system.

Inadequate Parking Supply

Currently, over 6,400 cars commute to the Navy Yard each day. Based on current commuting patterns, without any new alternatives, the number of cars will increase to 10,400 by 2022 and to over 15,000 cars at full build-out. Providing enough parking for over 15,000 cars would impede future development potential. Based on a survey from the 2012 Lower South Plan, the majority of commuters would switch or strongly consider switching modes if the Broad Street line was extended. With such an extension, the projected amount of cars would decrease to 4,600 cars daily by 2022.

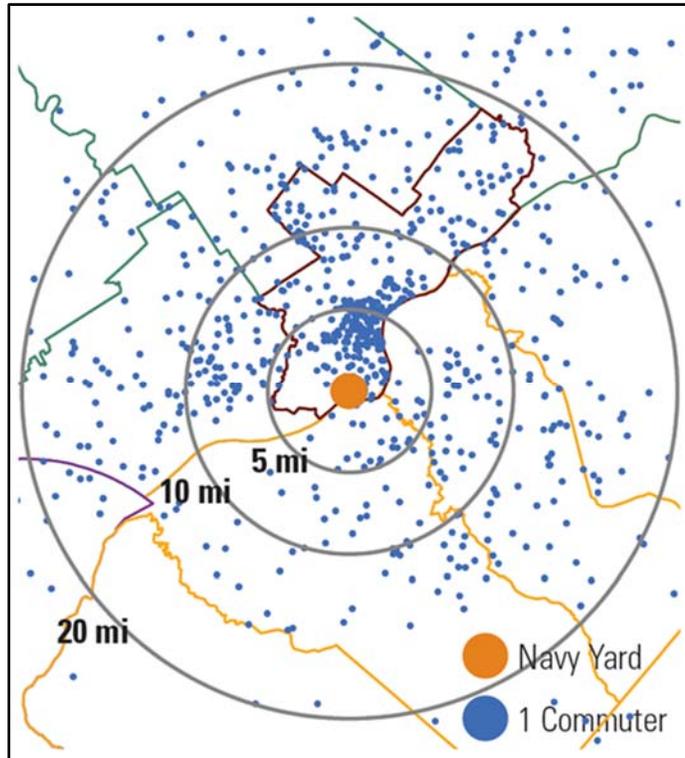


Figure 5: Navy Yard Commuting Distances (Source: Lower South Plan)

Project Need

With the planned growth of the Navy Yard, there is a demand for increased transit service to/from and within the study area. This demand is not met because of the limitations of the existing transportation infrastructure and the deficiencies in current transit service. Specifically, the need for increased transit service has 3 components: the need for transit service to better serve existing patrons and accommodate new patrons; the need for better transit service to maximize and maintain the Navy Yard's growth potential; the need for transit service to enhance and support sustainability plans.

Need for Transit Service to Better Serve Existing Patrons and Accommodate New Patrons

The only public transit service currently available for travel to and from the Navy Yard is private bus service, which provides a limited supply of transit service to the study area. The constraints of traffic congestion, inability to increase roadway capacity, as well as lack of parking supply limit the solutions which could be used to address these needs. Commuters using rail or bus must transfer to the shuttles in order to reach the Navy Yard. This minimum two-seat transit trip incurs the inconvenience of a "travel time penalty," which affects the desirability of the trip for current and potential transit riders. Providing high quality transit and eliminating the need for transfers would improve travel times of current riders and attract additional transit riders.

Need for Transit Service to Maximize and Maintain the Navy Yard's Growth Potential

The Broad Street Line subway extension would support greater densities and produce a positive net benefit to property values within a walkable proximity of its stations. The Broad Street Line Extension will leverage, catalyze, and greatly enhance the development potential of the entire Navy Yard, generating investment, employment, and tax rateables for the city and state. Without the Broad Street Line extension, the Navy Yard becomes increasingly suburban with large parking areas, lower density development, and limited amenities.

Need for Transit Service to Enhance and Support Sustainability Plans

The adoption of the preferred alignment for the Broad Street Line Extension will assist in meeting the following sustainability goals outlined in adopted plans:

- Improve greenhouse gas and criteria air pollutant emissions performance.
 - SEP-TAINABLE and Greenworks Philadelphia
- Increase transit mode share.
 - SEP-TAINABLE
- Improve air quality toward attainment of federal standards.
 - Greenworks Philadelphia
- Provide walkable access to park and recreation resources for all Philadelphians.
 - Greenworks Philadelphia
- Improve transit access to the Navy Yard by increasing the frequency of and extending transit service.
 - Lower South District Plan

Goals and Objectives

The following goals and objectives of the proposed project complement the purpose and need, and focus on related socioeconomic, economic development, environmental, cost efficacy, and transportation issues.

Category	Goals	Objectives
Socioeconomic	<i>To ensure a ladder of opportunity by providing access to employment in the Navy Yard.</i>	Provide transit connections to Center City Philadelphia to increase employment opportunities for low to moderate income individuals in the greater Philadelphia region.
		Provide transit that leads to increases in personal income, total employment, and employment in key employment categories in the Study Area.
Economic Development	<i>To leverage past and future investments in the Navy Yard to increase the economic competitiveness of the City of Philadelphia and the Commonwealth.</i>	Enable the Navy Yard to reach its fullest growth potential as envisioned in the master plan.
		Promote one-seat travel between Center City and the Navy Yard to connect two major commerce centers with frequent, convenient travel options.
		Continue to promote growth of the Navy Yard to serve as a model center for innovation in work-live-play developments in the Commonwealth.
Environmental	<i>To advance the joint sustainability agenda of the City of Philadelphia and SEPTA.</i>	Avoid or minimize impacts to sensitive environmental and cultural resources.
		Provide a travel option that will enable passengers to reduce their carbon footprints and reduce the GHG emissions of transportation to and from the Navy Yard.
		Provide a reliable transportation mode that allows for efficient land use and minimizes parking demand.
		Provide a travel option beneficial to the region's air quality.
Cost Effectiveness	<i>To implement a cost-effective and financially feasible heavy rail link to the Navy Yard.</i>	Minimize the cost per rider for both capital and operating expenses.
		Develop an alternative that will have an operating and maintenance cost that can be funded within regional funding constraints.
		Provide maximum opportunities for partnerships and cost sharing in the public and private sectors.
Mobility Improvement	<i>To increase mobility between the Navy Yard, Center City, and the greater Philadelphia region.</i>	Provide optimal frequency, capacity and span of service.
		Provide a travel option that reduces trip time for those traveling to and from the Navy Yard.
		Provide a travel option that enhances transit access to the Navy Yard.
		Increase the percentage of people using transit as their preferred mode of transportation to get to and from the Navy Yard.



AGENDA

SEPTA Broad Street Line Extension to the Navy Yard

Purpose and Need and Alignment Workshop

Friday, June 12, 2015 (11:00 AM – 2:00 PM)

I.	Welcome and Introductions	Elizabeth Smith	11:10 AM
II.	Project Goals a) Goal Themes b) Goal Statements	Troy Truax	12:10 PM
III.	Next Steps a) Stakeholder Interviews b) Measurable Objectives c) Purpose and Needs Statement d) Evaluate Alternatives	Troy Truax	12:25 PM
IV.	Lunch (to be provided)		12:30 PM
V.	Potential Alignments Discussion	David Hollis	1:50 PM
VI.	Final Comments/Meeting Adjournment	Elizabeth Smith	2:00 PM

Broad Street Line Extension to the Navy Yard Purpose and Need and Alignment Workshop

Date: Friday, June 12, 2015

Location: SEPTA
1234 Market Street, 10th Floor Conference Room
Philadelphia, PA

Time: 11:00 AM – 2:00 PM

Attendees:

- Steve Dantonio, SEPTA
- Byron Comati, SEPTA
- Fritz Ohrenschall, SEPTA
- Liz Smith, SEPTA
- Anita Davidson, SEPTA
- Angela Watson, PennDOT
- Brad Lane, DVRPC
- Carmen Zappile, PIDC
- Will Agate, PIDC/The Navy Yard
- Troy Truax, Baker
- Gary Greening, Baker
- Alexis Williams, Baker
- Alan Urek, Philadelphia Planning
- Jeremy Colello, HNTB
- Dave Hollis, HNTB
- Bradley Flamm, HNTB
- Lindsey Graham, HNTB

Meeting Summary

- Liz Smith, project manager for SEPTA, welcomed meeting participants to the workshop and had every attendee introduce his or herself.
- Troy Truax began to discuss the Purpose and Need (P&N) from the 2008 BSLC Feasibility Study. He says that there is no reason to “reinvent the wheel” if everyone agrees with the previously used P&N.
- Byron Comati emphasized the importance of a P&N statement and said the P&N from the previous study was too vanilla.
- Will Agate said the current P&N is entirely about the Navy Yard. He said it should be more about how the Philadelphia Region will be stronger due to the Navy Yard growth.
- The group created the following P&N statement:
 1. To advance the goals of recently adopted local and regional land use, transportation, and economic development plans.
 2. To provide a direct connection to/from the Navy Yard to Center City, the heart of the region’s transportation network, and in return, the Philadelphia region’s jobs, residents, and transportation infrastructure.
 3. To use public transportation as a means to develop the Navy yard to reach its full potential as a mixed-use center of residential and commerce vitality.
 4. To capitalize on the greater than \$1 billion of public/private investment in creating a major economic development center.
 5. To provide the appropriate mode of high capacity public transportation to serve a dense, urban development whose access is limited by its physical and geographical constraint.
- Troy Truax then led the group into a discussion of Goals and Objectives by describing the New Starts Goal Categories.
- The group created the following Goals.
 1. Socioeconomic – To ensure a ladder of opportunity to provide access to investments in the Navy Yard.
 2. Environmental – To advance the joint sustainability agenda of the City of Philadelphia and SEPTA.

3. Cost Effectiveness – To minimize the cost per rider for both capital and operating expenses.
 4. Cost Effectiveness – To maintain and grow the number of people in the region that use transit.
 5. Mobility Improvement – To improve travel time reduction.
 6. Economic Development – To enable economic development that minimizes parking.
- Will Agate said he was not satisfied in the amount of time spent on Goal and Objectives since it is essential in evaluating Alternatives, but understood the need to move on to the next topic due to time constraints.
 - Dave Hollis began the discussion of potential alignments. He handed out four different maps to the group: Existing Land Uses, Existing and Planned Pedestrian and Bicycle Paths, 2040 Master Plan Building Types, and Existing and Targeted 2040 Employment and Residents.
 - The attendees were divided into two groups with the task of identifying ideal alignments using the available data. The two groups identified 7 alignment which HNTB will digitize and send to stakeholders.