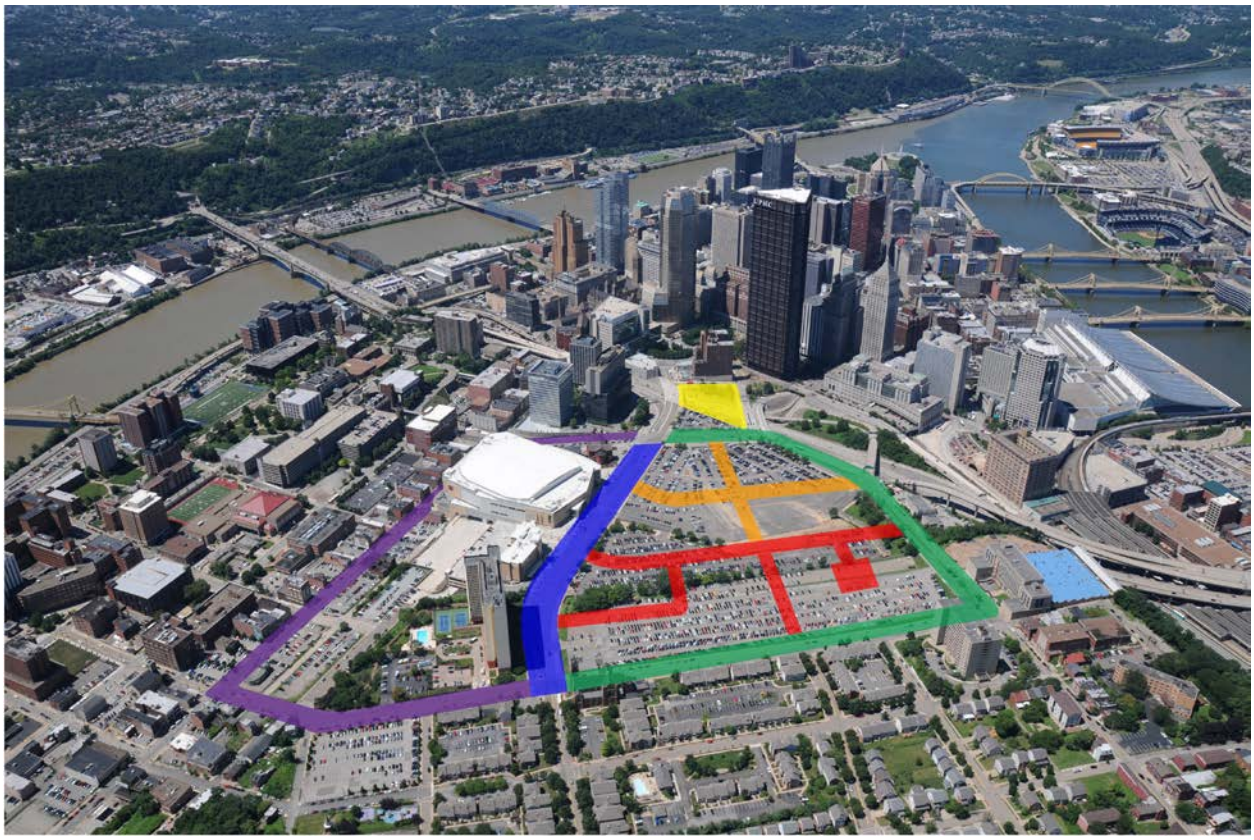
FY 2014 TIGER Discretionary Grant Application

Project: **Lower Hill Urban Redevelopment Infrastructure Project**
Location: **Pittsburgh, PA**
Applicant: **Sports & Exhibition Authority of Pittsburgh and Allegheny County**
Requested: **$19.91m for capital grant; $1.55m for project-level planning grant**
Total request of $21.47m



The Project provides for roads, supporting utilities, enhanced multi-modal choices, and design of a "cap." In the 1950s, urban renewal leveled much of Pittsburgh's predominantly minority Lower Hill District neighborhood to make way for a new civic arena. This aging arena was torn down in 2012. The 28-acre site is currently physically and economically separated from the central business district. TIGER VI funds for capital are being requested to close the funding gap to rebuild streets and other urban infrastructure to support mixed-use redevelopment on the 28-acre site and to make infrastructure improvements to the surrounding area. TIGER VI funds for project-level planning are being requested for final design of a cover ("cap") over the interstate highway to better reconnect the 28-acre site and Hill District to Pittsburgh's Downtown. The project will improve economic mobility for a disadvantaged population by removing barriers to transportation systems, providing multi-modal choices to connect people to centers of employment, education and services, and promoting long-term economic opportunities through the redevelopment of the 28-acre site.

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Executive Summary

The Sports & Exhibition Authority of Pittsburgh and Allegheny County (**SEA**) is submitting an application for a FY2014 TIGER Discretionary Grant (**TIGER VI**). The grant will provide funding for construction of a new urban street grid on a 28-acre site (**28-acre site**) located in the City of Pittsburgh (**City**) and Allegheny County (**County**), improvements to existing streets, and the final design of a cover or cap (**"cap"**) over the Interstate I-579 Crosstown Boulevard (collectively, the **Project**).

The Project is the top regional priority and a multi-agency initiative, with support from community organizations. TIGER VI funds are requested for both a capital grant and a project-level planning grant to close the funding gap. The capital grant request is $19.91 million toward a $34.91 million cost for capital elements. The project-level planning grant request is $1.55 million toward the cost for design. Together, TIGER VI funds of $21.47 million are requested for a $36.47 million Project cost ($39.51 million less $3.04 million for costs of portions underway) for a **federal share of 58.9% and 41.1% local match**.

Activities to be Funded by TIGER VI	Total Project Cost	Less Cost of Portions Underway	TIGER VI Project Scope	TIGER VI Funds Request
Capital Request	$36,811,078	$1,896,697	$34,914,381	$19,914,381
Elements I-IV, VI				
Inspection				*$3,412,269*
Construction				*$16,502,112*
Project-Level Planning Request	$2,700,000	$1,148,368	$1,551,632	$1,551,632
Element V				
Design				
TOTAL	**$39,511,078**	**$3,045,065**	**$36,466,013**	**$21,466,013**

The Project's schedule is estimated at the time of this application submission. Because the timing of a TIGER VI award announcement and/or execution of grant agreement is currently unknown, the applicant is prepared to advance the Project as outlined on pages 17-18.

The 28-acre site was once part of the predominantly African-American Hill District (the **Hill District**) until it was cleared in the 1950s in the name of urban renewal. The Hill District, as a result of the urban renewal project, became physically and economically separated from the central business district of the City (**Downtown**). Constructing the new street grid, making improvements to the surrounding roads and eventually constructing a "cap" over the I-579 Crosstown Boulevard will serve to improve mobility through **multi-modal connections** to centers of employment, education and services. The Project will also support the proposed mixed-use development for the 28-acre site, as described herein (the **Development Program**).

The Project will create ladders of opportunity for residents of a disadvantaged and disconnected community in Pittsburgh. The Project will serve as an economic engine for Hill District residents by providing jobs, business opportunity and generating economic multiplier effects within the Greater Hill District community. The Project will remove barriers to

transportation by providing access and mobility including: new pedestrian connections, enhanced bus routes, dedicated and shared bike lanes, safer intersections, improved access to an existing light-rail transit (**LRT**) station, improved connection to existing high-occupancy vehicle (**HOV**) lanes of I-279, and improved links to a planned bus rapid transit (**BRT**) system which will connect Downtown to Oakland, two of the region's largest employment centers (see page 13).

The Project strongly aligns with other long-term priorities of the U.S. Department of Transportation (**US DOT**) including state of good repair (new street grid, open public space and related improvements), economic competitiveness (new jobs and economic productivity enhanced by multi-modal choices), environmental sustainability (stormwater management, efficient lighting, LEED-ND neighborhood), safety (safe intersections, reduced accidents, accessible multi-modal choices), innovation (multi-space parking meters, energy district), and partnership (multi-agency and stakeholder collaboration).

With respect to the Development Program, the master planning is near completion. The final mix of development will be determined in response to market demands and opportunities, and it is currently anticipated to provide approximately 606,000 sq ft of Class A office space, over 254,000 sq ft of commercial space, a 150 room hotel, 2.8 acres of public green open space and 1,191 residential units. The development is estimated to generate approximately 4,231 temporary construction jobs, and 2,948 permanent jobs when fully built-out. The residential district of the development is anticipated to provide at least 20% affordable housing and stakeholders are currently in discussion to finalize other housing and economic goals. It is intended that the infrastructure and the development will earn LEED for Neighborhood Development (**LEED-ND**) certification. LEED-ND integrates the principles of Smart Growth, New Urbanism and green building into the neighborhood design. It is expected that most buildings will be LEED certified buildings.

Project Description

Project Scope

The overall Project scope is divided into six separate and distinct elements (**Elements**, see Figure 1). TIGER capital funding is being requested for Elements I, II, III-a, IV, and VI. TIGER project-level planning funding is being requested for Element V-b. The Elements of the Project have been established to ensure that they have independent utility. The Project and each individual Element would be ready to serve their intended use upon completion of the Project or an individual Element.

Project Status

The Project has progressed at time of this application as follows: i) preliminary design for Elements I, II, III and IV has been completed and funded by local sources, ii) Element I final design (New Street 2, 3, 4 and Eastern Portion of Street 5) is funded by local sources and is near completion, with a projected construction start in August 2014, iii) Element II final design (New Street 2 and Middle and Western Portions of Street 5) is funded by local sources with

completion in August 2014, with a projected construction start in April 2015, iv) Element III-b (Centre Ave storm separation) construction is funded by local sources, with a projected construction start in June 2014, v) Element V-a (preliminary design of the "cap") is funded by a federal earmark, and the engineering consultant has been selected in accordance with the federal/state process and design is anticipated to start in May 2014 and vi) design for Element VI is anticipated to start in September 2014.

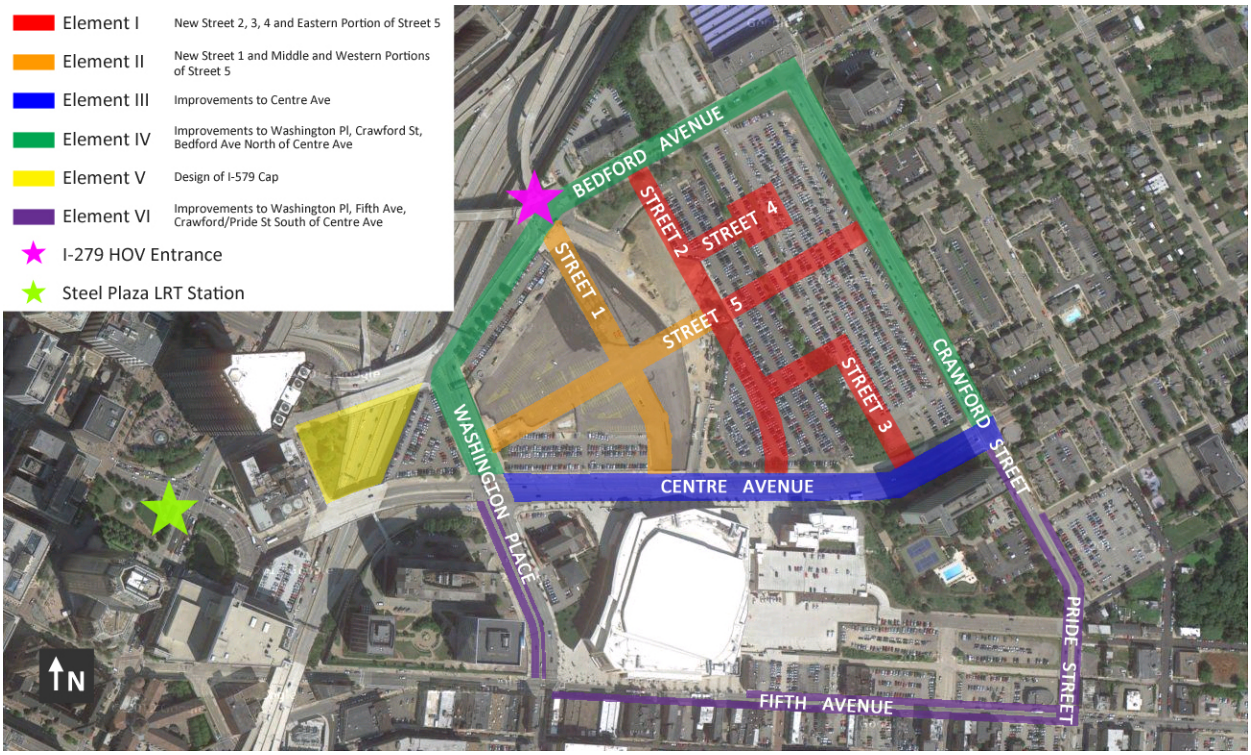

Figure 1: Aerial View of Capital Elements, Project-Level Planning Elements, LRT Station, I-279 HOV Entrance.

Site Conditions

The 28-acre site has an approximately 150 foot elevation change from the lowest southern corner to the highest northeastern corner. The new street grid was arrived at after determining that providing additional streets would not be possible due to: 1) the steepness of upper blocks, 2) the need to provide adequate sight lines and 2% crosswalk slopes at intersections, 3) the minimum distances needed between intersections, and 4) traffic impacts at Washington Place. The majority of the existing streets, sidewalks, traffic and pedestrian signals, and lighting surrounding and leading to the 28-acre site has deteriorated and are in need of upgrades. Portions of these existing sidewalks and streetscapes adjacent to CONSOL Energy Center and the Crawford Square Housing Development have recently been improved and these improvements will be incorporated into the proposed upgrades. The proposed upgrades will enhance connectivity and access to Downtown, Uptown, the HOV, LRT and future BRT. With respect to design of the "cap," before construction of the I-579 Crosstown Boulevard, a seamless urban fabric connected the Hill District to Downtown. Today, a freeway trench and a tangle of interchanges with nominal pedestrian access divide the two neighborhoods. A cover or "cap" over the I-579 Crosstown Boulevard between Centre Avenue and Bigelow Boulevard is

planned that would create an acre of new urban green open space, pedestrian connections and/or private development opportunities.

Project Elements and Benefits

Capital Elements

Below summarizes the capital Elements and benefits associated with each:

Element I: New Street 2, 3, 4 and Eastern Portion of Street 5

Status: Preliminary design work completed. Final design estimated to be completed in June 2014. Both preliminary and final design work is funded by SEA. Construction start is projected for August 2014. Construction work to be funded by Redevelopment Assistance Capital Program (**RACP**).

Scope: Work includes grading, constructing roadways, sidewalks, energy efficient street lighting, stormwater planters and street trees, streetscape, storm, sanitary and water lines, pathways for potential district energy system and other utilities, and inspection costs.

Current Condition: Temporary surface parking spaces, with minimal landscaping.

Benefits:

- Construct a new street grid system and pedestrian connections (reminiscent of the grid that pre-dated the urban renewal of the 1950s) to reconnect people to centers of employment, education and services of Downtown, Uptown and Oakland.
- Provide ability for Port Authority bus routes to be located on Street 5 so as to be centrally located within new blocks; this may help to lessen event traffic impacts in and around new arena (CONSOL Energy Center) south of the 28-acre site.
- Enable Port Authority to establish transit routes into the neighborhood.
- Provide connection to nearby Steel Plaza LRT station.
- Provide necessary infrastructure for future mixed-use development.
- Improve stormwater management through detention/retention in stormwater planters to meet goal of 1.2 inch retention of 95 percentile storm event.
- Provide street lighting with energy efficient fixtures.
- Support two-way traffic and a 25 mph or less speed limit.
- Construct street intersections that will be flattened to allow for 2% or less cross slope to meet current ADA accessibility requirements.
- Increase urban character and quality of life and reduce urban heat island effect through addition of streetscapes and street trees.

Element II: New Street 1 and Middle and Western Portions of Street 5

Status: Preliminary design work completed. Final design estimated to be completed in August 2014. Both preliminary and final design work was funded by SEA. Construction start is projected for June 2015.

Scope: Work includes grading, constructing roadways, sidewalks, energy efficient street lighting, stormwater planters and street trees, streetscape, storm, sanitary and water lines, pathways for potential district energy system and other utilities, and inspection costs.

Current Condition: Temporary surface parking spaces, with minimal landscaping.

Benefits:

- Construct a new street grid system and pedestrian connections (reminiscent of the grid that pre-dated the urban renewal of the 1950s) to reconnect people to centers of employment, education and services of Downtown, Uptown and Oakland.
- Provide ability for Port Authority bus routes to be located on Street 5 so as to be centrally located within new blocks; this may help to lessen event traffic impacts in and around new arena (CONSOL Energy Center) south of the 28-acre site.
- Enable Port Authority to establish transit routes into the neighborhood.
- Provide connection to nearby Steel Plaza LRT station.
- Provide necessary infrastructure for future mixed-use development.
- Improve stormwater management through detention/retention in stormwater planters to meet goal of 1.2 inch retention of 95 percentile storm event.
- Provide street lighting with energy efficient fixtures.
- Support two-way traffic and a 25 mph or less speed-limit.
- Construct street intersections that will be flattened to allow for 2% or less cross slope to meet current ADA accessibility requirements.
- Increase urban character and quality of life and reduce urban heat island effect through addition of streetscapes and street trees.

Element III-a: Improvements to Centre Avenue

Status: Preliminary design work completed by SEA. Final design estimated to start September 2014. Both preliminary and final design work is funded by SEA. Construction start is projected for June 2015.

Scope: Work includes improving roadways, sidewalks, medians, energy efficient street lighting, stormwater planters and street trees, streetscape, storm, sanitary and water lines, other utilities, adding a new dedicated bicycle lane and improving a shared-use bicycle lane, and inspection costs.

Current Condition: City-owned street.

Benefits:

- Add new dedicated bicycle lane and improve shared-use of roadway for motor vehicles and bicycles
- Reduce vehicle speeds with lane width reductions.
- Provide pedestrian safety modifications such as improved sidewalks and medians that prevent crossings in dangerous locations.
- Provide improved connection for public to access additional transit modes, such as the Steel Plaza LRT station.
- Provide better connections to future Port Authority BRT system thereby enhancing transit access to centers of employment, education and services in Downtown and Oakland – East End.
- Improve pedestrian connections from Hill District to centers of employment in Downtown and Uptown.
- Add new traffic signals and pedestrian safety controls; this may lessen event traffic impacts in and around new arena (CONSOL Energy Center) south of the 28-acre site.
- Improve connections to HOV with intersection enhancements and street connections.
- Improve street lighting with energy efficient fixtures.
- Improve stormwater management through detention/retention in stormwater

planters.
- Street intersections at Crawford St Street 1, Street 2 and Washington Pl will be designed to meet current ADA accessibility requirements.
- Increase urban character and quality of life and reduce urban heat island effect through addition of streetscapes and street trees.

Element III-b: Improvements to Centre Avenue – storm separation

Status: Final design for storm separation work complete and bidding complete. Both preliminary and final design work is funded by SEA. Estimated construction start date is June 2014. Construction work to be done by Pittsburgh Water and Sewer Authority (**PWSA**) with a loan provided by Pennsylvania Infrastructure Investment Authority (**PennVest**) (state).

Scope This work is a new dedicated storm sewer from Crawford St and Washington Pl.

Current Condition: City-owned street.

Benefits:
- New dedicated storm sewer will allow for existing combined sewer to be used as a dedicated sanitary line in the future to help PWSA to meet their mandate related to combined sewer overflows (**CSO**).

Element IV: Improvements to Washington Pl, Crawford St, Bedford Ave North of Centre Ave

Status: Preliminary design work completed by SEA. Final design estimated to start September 2014. Both preliminary and final design work is funded by SEA. Construction start is projected for June 2015.

Scope: Work includes constructing roadways, sidewalks, energy efficient street lighting, stormwater planters and street trees, streetscape, storm, sanitary and water lines, other utilities, improving a shared-use bicycle lane, and inspection costs.

Current Condition: City-owned streets.

Benefits:
- Add new dedicated bicycle lane and improve shared-use of roadway for motor vehicles and bicycles
- Reduce vehicle speeds with lane width reductions.
- Provide pedestrian safety modifications such as improved sidewalks and medians that prevent crossings in dangerous locations.
- Provide improved connection for public to access additional transit modes, such as the Steel Plaza LRT station.
- Provide better connections to future Port Authority BRT system thereby enhancing transit access to centers of employment, education and services in Downtown and Oakland – East End.
- Add new traffic signals and pedestrian safety controls; this may lessen event traffic impacts in and around new arena (CONSOL Energy Center) south of the 28-acre site.
- Improve connections to HOV with intersection enhancements and street connections.
- Improve street lighting with energy efficient fixtures.
- Improve stormwater management through detention/retention in stormwater planters.
- Street intersections at Crawford St Street 1, Street 2 and Washington Pl will be designed to meet current ADA accessibility requirements.

- Increase urban character and quality of life and reduce urban heat island effect through addition of streetscapes and street trees.

Element VI: Improvements to Washington Pl, Fifth Ave and Crawford/Pride South of Centre

Status: Preliminary and final design work estimated to start September 2014. Both preliminary and final design work will be funded locally. Construction start is projected for June 2015.

Scope: Work includes improving sidewalks, energy efficient street lighting, planters and street trees, streetscape, new traffic signals, pedestrian safety controls, and inspection costs.

Current Condition: City-owned streets.

Benefits:

- Provide better connections to future Port Authority BRT system thereby enhancing transit access to centers of employment, education and services in Downtown and Oakland – East End.
- Improve pedestrian connections from Hill District to centers of employment, education and services in Downtown and Uptown.
- Improve street lighting with energy efficient fixtures.
- Meet current ADA accessibility requirements at street intersections.
- Improve stormwater management through planters.
- Add new traffic signals and pedestrian safety controls.
- Increase urban character and quality of life and reduce urban heat island effect through addition of streetscapes and street trees.

Project-Level Planning Elements

Below summarizes the project-level planning Elements and benefits associated with the work:

Element V-a: Preliminary Design for I-579 Crosstown Boulevard "Cap"

Status: Engineering consultant (**HDR**) has been selected following the federal/state selection procedures. Work is being funded by a federal earmark and local match. Preliminary design completion is anticipated by February 2015.

Scope: Work includes preliminary design of "cap" above the Interstate I-579 Crosstown Boulevard (see Figure 2).

Current Condition: Open air trench over the I-579 Crosstown Boulevard between Centre Avenue and Bigelow Boulevard.

Benefits: See Element V-b below.

Element V-b: Final Design for I-579 Crosstown Boulevard "Cap"

Status: Project-level planning grant request, $1.55m for final design. Work to occur after completion of preliminary design. Funding for construction of "cap" to be identified before final design.

Scope: Final design for construction of a "cap," to create an urban open space and pedestrian connections over the I-579 Crosstown Boulevard, which will connect the 28-acre site and Hill District to Downtown.

Current Condition: Open air trench over the I-579 Crosstown Boulevard between Centre Avenue and

Bigelow Boulevard.

Benefits:

- Remove the physical divide between the Hill District and Downtown, creating enhanced pedestrian connections, access and multi-modal choices to centers of employment, education and services between the two neighborhoods.
- Remove barriers to connected systems of transportation.
- Provide opportunities for infill private development with open space.
- Improve pedestrian safety at high-traffic exit ramps and interchanges.
- Provide opportunities to better manage stormwater.
- Enhance public open space opportunities.
- Provide improved connection for public to access additional transit modes, such as the Steel Plaza LRT station
- PennDOT has recently made improvements to the adjacent bridge structures at Centre Avenue and Bigelow Boulevard including new bridge decks and sidewalks.
- HDR's previous experience similar to this "cap" work includes I-90 South Boston Interchange, Boston Marine Industrial Park Tunnel, SR-520 in Washington State, I-5 in Seattle and I-90 First Hill Lid in Washington State.

Figure 2: Concept of "cap" over I-579 Crosstown Boulevard (Source PAR), compared to existing condition.

Project Schedule

Below is an estimated schedule for each Element (see Figure 3). Note that the order in which the Elements are undertaken may be interchanged in response to real estate development, market forces and Pittsburgh Arena Real Estate Redevelopment LP's (**PAR**) (option holder of the redevelopment rights) determined order of development. The Project schedule demonstrates that the six Elements of the Project can meet all local, state, and federal requirements by June 30, 2016 in order for US DOT to obligate funding in advance of September 30, 2016.

Element I: New Street 2, 3, 4 and Eastern Portion of Street 5	
Planning	
Preliminary Design Complete	March 31, 2013
Final Design Start	August 23, 2013
Final Design Complete	June 1, 2014
Issue Bid Package	June 4, 2014
Receive Bids	July 3, 2014
SEA Board Approval	July 18, 2014
Construction	
Construction Start	August 1, 2014
Construction Completion	October 1, 2015
Element II: New Street 1 and Middle and Western Portions of Street 5	
Planning	
Preliminary Design Complete	March 31, 2013
Final Design Start	March 3, 2014
Final Design Completion	August 31, 2014
Issue Bid Package	September 3, 2014
Receive Bids	October 2, 2014
SEA Board Approval	October 17, 2014
Construction (TIGER project)	
Construction Start	June 30, 2015
Construction Completion	August 16, 2016
Element III-a: Improvements to Centre Avenue	
Planning	
Preliminary Design Complete	January 31, 2014
Final Design Start (Roads)	September 29, 2014
Final Design Completion (Roads)	February 20, 2015
Issue Bid Package	February 23, 2015
Receive Bids	March 24, 2015
SEA Board Approval	April 9, 2015
Construction (TIGER project)	
Construction Start	June 30, 2015
Construction Completion	August 16, 2016
Element III-b: Improvements to Centre Avenue - storm separation	
Planning	
Final Design Start (Utility)	June 5, 2013
Final Design Complete (Utility)	January 29, 2014
Construction (PWSA)	
Construction Start	June 1, 2014
Construction Completion	October 1, 2014
Element IV: Improvements to Washington Pl, Crawford St, Bedford Ave North	
Planning	
Preliminary Design Complete	January 31, 2014
Final Design Start	September 29, 2014
Final Design Completion	February 20, 2015
Issue Bid Package	February 23, 2015
Receive Bids	March 24, 2015
SEA Board Approval	April 9, 2015
Construction (TIGER project)	
Construction Start	June 30, 2015
Construction Completion	August 16, 2016
Element V-a (Preliminary design of I-579 "cap")	
Planning	
Preliminary Design Start	May 9, 2014
Preliminary Design Completion	February 3, 2015
Element V-b (Final design of I-579 "cap")	
Design (TIGER project)	
Final Design Start	March 1, 2015
Final Design Finish	November 26, 2015
Elements VI (Improvements to Washington Pl, Fifth Ave, Crawford/Pride St.)	
Planning	
Preliminary Design Start	September 29, 2014
Preliminary Design Complete	December 29, 2014
Final Design Start	December 30, 2014
Final Design Completion	March 16, 2015
Issue Bid Package	March 23, 2015
Receive Bids	April 21, 2015
SEA Board Approval	May 14, 2015
Construction (TIGER project)	
Construction Start	June 30, 2015
Construction Completion	August 16, 2016

Figure 3: Project schedule broken out by Elements.

Development Program and Private Investment

The Project is part of a larger community building effort. PAR, working with City's Planning Department, URA and SEA, is nearing completion of a specially planned district zoning and a preliminary land use development plan (**PLDP**) based on a system of interconnected streets, pedestrian connections, high-quality urban open space, form-based code approach to zoning, shared parking strategies and sustainability (see Attachment 5). The actual mix of development that will occur will be determined in response to market demands and opportunities (see Figure 4) but is currently anticipated to provide approximately 606,000 sq ft of Class A office space, over 254,000 sq ft of commercial space, a 150 room hotel, a 2.8 acres of public green open space and 1,191 residential units (Source: 2010 AECOM study updated by PAR). The 2010 AECOM study (see Attachment 3) projects that the development program will create 4,231 temporary construction jobs and 2,948 permanent jobs (full-time equivalents). The estimated private investment that will occur with respect to the development program is projected to be **$379 million**. PAR has announced that its first developer would be McCormack Baron Salazar to develop housing/retail in the eastern blocks of the 28-acre

PAR, in partnership with community leaders and officials, is currently in discussions with the community to develop a plan to leverage opportunities created by the planning, construction and operation phases of the development of the 28-acre site in order to positively impact the community. The areas of focus are: jobs, minority and women business participation, housing affordability, coordination and community development in the Greater Hill District, and preservation of community legacy and communications.

Figure 4: Illustrative Master Plan from Preliminary Land Use Development Plan (Source: PAR).

<u>Community Involvement</u>

To date, the Project and Development Program have been presented to the Hill District community, public officials and the general public through a series of open houses, public meetings, community conversations and working groups to receive input from residents and stakeholders. These events include: PennDOT Public Open House for the roadway design at the Hill House at Kaufmann Center (March 26, 2014); Community Presentation at the Hill House Kaufmann Center (November 21, 2013); Public meeting by Southwestern Pennsylvania Commission regarding the infrastructure at Two Chatham Center (September 23, 2013); Public meeting by Southwestern Pennsylvania Commission regarding infrastructure at Two Chatham Center (August 27, 2013); Transportation Subgroup community workshop at Hill District CDC (June 21, 2013); Transportation Subgroup community workshop at the SEA Office (June 6, 2013); Hill District CDC community conversation at the Thelma Lovette YMCA (April 17, 2013), and Hill District CDC community conversation at the Kaufmann Center (April 10, 2013).

Long-Term Redevelopment Efforts in Greater Hill District

The Project and Development Program are part of a larger and longer-term effort to revitalize and redevelop the Hill District which has included past and ongoing public-private partnership projects. In the early 1990s, Crawford Square Housing Development was constructed east of the 28-acre site which includes over 400 mixed-income apartments and single family homes and other amenities. In 2008, a new $3.5 million Carnegie Library opened on Centre Avenue. In 2012, a new $12 million Thelma Lovette YMCA opened on Centre Avenue. In 2013, a new $11.5 million grocery store (Shop N Save) opened on Centre Avenue. This is the first such grocery store to locate in the Hill District in decades and it also provides supporting space for a coffee shop, a mobile phone store and other retail outlets. The former Connelley Trade School, located adjacent to the 28-acre site, is being repurposed into the Energy Innovation Center (**EIC**). The EIC is a $45 million, 180,000 square foot, multi-tenant, 'living laboratory' providing green job workforce development programs. The EIC is anticipated to open 4Q 2014 as a LEED Platinum certified building. Nearby housing development includes phased reconstruction of existing complexes such as Addison Terrace ($160 million) into a mixed-income community, as well as smaller affordable housing developments planned by local faith-based development groups. Other surrounding housing projects in development include Bedford Dwellings, Dinwiddie Street Residential, and the recently completed Fifth Avenue School lofts.

Brief History

The Hill District is one of Pittsburgh's oldest residential neighborhoods. Beginning in the late 19th century, the industrial base of Pittsburgh evolved and waves of immigrants from Eastern Europe and the rural Southern U.S. came here seeking work and settled in the Hill District. By 1940, many Europeans had moved elsewhere in the City and the Hill District had become a predominantly African American community. The Lower Hill was declared blighted, and by 1956, 1,300 buildings on 95 acres of land were demolished, 413 businesses and over 8,000 residents were forced to relocate. By 1966, only a new public auditorium (known as the **Civic Arena**), an apartment building and an apartment/hotel complex were constructed in the cleared area. Also during the late 1950s, the I-579 Crosstown Boulevard was constructed on the border between Downtown and the Hill District. This project shifted traffic patterns and further isolated and divided the neighborhood from the economic activity of Downtown. The overall Hill District population dropped from 53,648 in 1950 to 10,450 in 2010 (see Figure 5).

Framework of 1950s photo. Source: Carnegie Library of Pittsburgh

Aerial 1967 photo. Source: Harry S. Coughanour, Carnegie Library

Project Site Oct 2012. Source: SEA

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Demographics

The 28-acre site portion of the Hill District currently has a population of zero (0). The Hill District qualifies as a "severely distressed neighborhood" by the definition of the Community Development Financial Institutions Fund of the U.S. Department of the Treasury. The following table sets out the demographics of the entire Hill District (the Project site, Crawford-Roberts, Middle Hill, Upper Hill, Bedford Dwellings and Terrace Village census tracts) and the City as a whole:

	Hill District	City of Pittsburgh
Population	10,450	305,704
% Non-White	83.7%	32.6%
Households	5,885	156,165
Employment - civilian labor force	3,380	148,357
% Unemployed	17.2%	9.0%
% People with less than college degree	72.9%	59.5%
Median household income (2009)	$18,336	$36,860
% People below poverty line	39.2%	21.7%

Figure 5: Demographic comparison between Hill District and City of Pittsburgh (Source: US Census 2010).

Comment on the Historic Review Process

A public process was undertaken for reviewing the possibilities for reuse of the Civic Arena. Following that process, on September 16, 2010 the SEA determined to demolish the Civic Arena. Work on taking down the building began in August 2011 and by May 2012 the demolition was complete. See Attachment 13 for further discussion.

Project as Part of a Larger Plan

The Project area is part of a larger effort for the redevelopment of Downtown and the entire Hill District. The various plans and initiatives include:

Greater Hill District Master Plan. The Hill District community completed the Greater Hill District Master Plan in September 2011 (see Attachment 8.1) to provide a conceptual framework to guide future development in the Hill District. The Greater Hill Master Plan provides the following "Guiding Concepts" for the development of the Lower Hill (pg 74): (1) create a continuous and connected street network – complete the grid, (2) develop a mix of uses, with a retail node at Centre Avenue and Crawford Street that reinforces the identity of Centre Avenue as a retail street, and (3) improve streetscape along Centre Avenue (lighting, signage and vegetation). With respect to the Crawford corridor including Pride Street, the goal is to establish a continuous and distinct streetscape along Crawford (pgs 78-81). Along the Fifth Avenue corridor, the goal is to provide streetscape improvements to maximize the benefits of future BRT (pgs 82-85).

Bus Rapid Transit Planning. BRT for the Downtown – Oakland – East End Corridor is a strategy to enhance economic development and community revitalization prospects through improved transit (see Figure 6). The project is being advanced by a collaborative, known as GetTherePgh (see www.GetTherePgh.org) comprised of educational and medical institutions, civic and business associations, transportation organizations, neighborhood groups and government agencies. Downtown and Oakland are the largest traffic generators in Southwestern Pennsylvania. Downtown is the region's office, retail and commercial hub, Oakland houses the region's major universities and medical institutions and both areas contain major cultural venues. It is the region's busiest transit corridor, where about 37% of Pittsburgh's residents live. Each weekday, an average of 70,000 employees, students, visitors and others ride the corridor buses, accounting for 30% of Port Authority's system ridership. The BRT would provide faster, more reliable, easily understood, and more evenly scheduled trips through this currently high-transit service corridor using stop consolidation, additional exclusive bus lanes and traffic signal priority at key intersections. Preliminary data indicates that the BRT improvements would result in significant travel time savings. The BRT project is preparing for a development phase to complete preliminary engineering, technical analysis and environmental assessment tasks. Please see Attachment 9 for a more detailed history and status of the BRT project.

Figure 6: Proposed BRT route in relation to Project.

Greenprint. The Project and development program are consistent with the open space recommendations made in the Greenprint document prepared in 2009 by Find the Rivers! (a partnership between the Hill House Association and Pittsburgh Parks Conservancy). The purpose of the Greenprint is to create an ecologically sound template for future development in the Hill District and to, among other things, establish the Hill District as a healthy place with better-than-average quality of life characterized by urban development, working in concert with natural assets and offering people daily access to nature, green spaces, walking/biking routes and parks (Greenprint Conceptual Plan, The Hill: A Village in the Woods," 2009, pg 7) (see Attachment 8.3).

MovePGH. The Project is identified in MovePGH, a planning module of the City's initiative to complete an overall comprehensive plan. MovePGH is a blueprint for livable communities and sustainable systems and a guide for a complete multi-modal transportation system for the City. The purpose of MovePGH is to provide a transportation network that is safe and efficient while meeting the City's commercial, residential and recreational needs. Projects identified include complete streets, bike and pedestrian connections, improvements to intersections and roadways, road diets, streetscapes and additions or improvements to transit systems.

Downtown Plan. In a plan adopted in 1998 (The Pittsburgh Downtown Plan: a blueprint for the 21st century (see Attachment 8.2), the City Planning Department found that the 28-acre site and others "have suffered from the misguided effects of Post-War urban renewal." The plan also found that one major development obstacle was "the lack of an urban street grid connecting to the surrounding neighborhood." In 2005, Pittsburgh City Council amended its zoning map to create a new sub district for the 28-acre site (Pittsburgh PA, Zoning Code Section 910.01 J), in accordance with the 1998 plan. With the adoption of this amendment, the City established the goal of reconnecting the areas adjacent to the site "by means of restoring a traditional pattern of development" on the 28-acre site.

Project Parties

Applicant

The SEA is the lead applicant for the TIGER VI application and is carrying out the Project. The SEA is governed by a seven member Board of Directors appointed by the City and County. The SEA exists pursuant to the Sports and Exhibition Authority Act (16 P.S. Section 5502-A et seq.).

With respect to construction oversight, in the past 15 years the SEA has successfully managed 11 major building and infrastructure construction projects worth nearly $2 billion and has successfully brought these efforts in on-time and within budget. These projects were: Heinz Field, PNC Park, David L. Lawrence Convention Center & Garage, Convention Center Infrastructure, Convention Center Riverfront Plaza, North Shore Infrastructure, North Shore Riverfront Park, North Shore Garage, CONSOL Energy Center, CONSOL Energy Center Garage and West General Robinson Street Garage (the last in cooperation with its affiliated agency, the Stadium Authority of the City of Pittsburgh). With respect receiving federal transportation monies for infrastructure construction, the SEA successfully managed North Shore Infrastructure (Phases I-V, HOV and Chuck Noll Way), North Shore Riverfront Park (2 phases), Convention Center Infrastructure (Phases I-III) and Convention Center Riverfront Plaza. The SEA received the federal monies directly, pursuant to reimbursement agreements among SEA-City-PennDOT for infrastructure, and SEA-PennDOT for parks.

Project Parties

The Project is being undertaken with the support of the following project parties:

*Commonwealth of Pennsylvania (the **Commonwealth**).* On February 20, 2013, the Governor of the Commonwealth authorized $15 million in RACP funding for the 28-acre site and associated infrastructure work, with a grant agreement executed on October 2, 2013. On April 9, 2014, the Governor's Office confirmed the use of RACP as a local match for the Project (see Attachment 6).

Allegheny County. The SEA is working closely with the County with respect to the planning, design, funding and other activities related to the Project.

City of Pittsburgh. The new streets to be built will, upon completion, be dedicated City streets, and the existing streets to be improved are currently City streets. Pittsburgh City Council accepted the right of way locations in August 2013 (Attachment 7.12). The SEA is working closely with the City with respect to the planning, design, funding and other activities related to the Project, and will enter into a cooperation agreement for maintenance of the roads by the City. In a related project, the City will construct pedestrian and signalization improvements at the Washington Place/Centre Avenue intersection with anticipated construction start in June 2014.

*Urban Redevelopment Authority of the City of Pittsburgh (**URA**)*. The URA is the City's economic development agency, committed to creating jobs, expanding the City's tax base and improving the vitality of businesses and neighborhoods. The URA is the owner of approximately 9 acres of the 28-acre site. The SEA is working closely with the URA with respect to the planning and other aspects of the Project (see Attachment 7.15).

*Pittsburgh Water and Sewer Authority (**PWSA**).* The PWSA is coordinating with the SEA on the storm separation work along Centre Avenue between Crawford Street and Washington Place. SEA completed the design work, and PWSA will construct the lines with loan funding provided by PennVest to PWSA. The anticipated construction start is June 2014.

Pittsburgh Arena Real Estate Redevelopment LP. PAR has a 10-year option to develop the site. PAR has engaged a team of urban planners, landscape architects, sustainability consultants, transportation planners and development advisors to lead the planning, outreach, marketing and development efforts. They have been working with City Planning, the SEA, the URA and the community on the master plan for a mixed-use development on the 28-acre site. PAR has expended over $3.5 million to date on the development of the PLDP and related development activities. PAR has announced that its first developer would be McCormack Baron Salazar to develop housing/retail in the eastern blocks of the 28-acre site.

Community Representatives

Community representatives with respect to the Project include the Hill Community Development Corporation, the Hill District Consensus Group, the Hill House Association, Allegheny County Executive Rich Fitzgerald, Mayor William Peduto, State Senator Wayne D. Fontana, State Representative Jake Wheatley Jr., County Councilman William Russell Robinson, City Councilman R. Daniel Lavelle and representatives of Hill District ministers.

Other Related Parties

The Project is being coordinated with or receiving support from a wide range of local and state agencies, community groups and related stakeholders to help move the Project forward:

*Port Authority of Allegheny County (**Port Authority**)*
*Pennsylvania Department of Transportation (**PennDOT**)*
Pennsylvania Department of Environmental Protection
*Southwestern Pennsylvania Commission (**SPC**)*
Allegheny Conference on Community Development
Pittsburgh History & Landmarks Foundation
*Parking Authority of Pittsburgh (**Parking Authority**)*
*Allegheny County Sanitary Authority (**ALCOSAN**)*
Pittsburgh Green Innovators
Pittsburgh Climate Initiative
VisitPittsburgh
Pittsburgh Downtown Partnership
Uptown Partners
Green Building Alliance
Horizon Properties
Bike Pittsburgh
Duquesne University
UPMC
Sustainable Pittsburgh
3 Rivers Wet Weather

Grant Funds and Sources/Uses of Project Funds

The following table (see Figure 7) shows the projected sources and uses of funds for the Project. A grant agreement for $15 million in RACP funding for the Project was executed in August 2013 and is unencumbered at time of this application. Other funding raised is for work underway which includes a loan from PennVest to PWSA (Element III-b) and a federal earmark for preliminary design (Element V-a). Note that the order in which the Elements are undertaken may be interchanged, as specific development opportunities come about.

The SEA is applying for funding from other federal, state, local and private sources. At time of this application, the SEA has applied for funding under two federal grant programs: i) a Public Works grant in the amount of $2.9 million from the U.S Department of Commerce, Economic Development Administration (**EDA**); if awarded, the funds will be used towards a portion of construction and inspection costs of Element I and ii) a Transportation Alternatives Program grant in the amount of $964,680 from the US DOT for a portion of construction of Element II and Element III-a. With respect to Element V-a, a federal earmark ($918,694) has been granted for preliminary design of the "cap."

The SEA intends to continue to pursue other state and local sources such as: i) grant programs that may arise from the recently enacted Commonwealth transportation legislation (Act 89 of 2013) and ii) local foundation support for green infrastructure related costs. These local sources, if awarded, may be utilized as local match to TIGER VI. Funding for construction of the "cap" will be identified before final design.

Capital Request (Construction / Inspection)	**USES**	**SOURCES**	**FUNDING TYPE**
Element I: New Street 2, 3, 4 and Eastern Portion of Street 5			
Inspection	$986,245	$986,245	TIGER VI
Construction	$9,862,452	$9,862,452	RACP
			EDA ($2.9m pending)
Subtotal	*$10,848,697*	*$10,848,697*	
Element II: New Street 1 and Middle and Western Portions of Street 5			
Inspection	$562,498	$562,498	TIGER VI
Construction	$5,624,984	$2,812,492	RACP
		$2,812,492	TIGER VI
			TAP ($965K pending)
Subtotal	*$6,187,482*	*$6,187,482*	
Element III-a: Improvements to Centre Avenue			
Inspection	$908,615	$908,615	TIGER VI
Construction	$8,260,140	$2,325,057	RACP
		$5,935,083	TIGER VI
Subtotal	*$9,168,755*	*$9,168,755*	
Element III-b: Improvements to Centre Avenue - storm separation			
Inspection	$172,427	*$172,427*	PennVest (state)
Construction	$1,724,270	*$1,724,270*	PennVest (state)
Subtotal	*$1,896,697*	*$1,896,697*	
Element IV: Improvements to Washington Pl, Crawford St, Bedford Ave North of Centre Ave			
Inspection	$292,491	$292,491	TIGER VI
Construction	$2,659,007	$2,659,007	TIGER VI
Subtotal	*$2,951,498*	*$2,951,498*	
Element VI: Improvements to Washington Pl, Fifth Ave and Crawford/Pride South of Centre			
Inspection	$662,419	$662,419	TIGER VI
Construction	$5,095,530	$5,095,530	TIGER VI
Subtotal	*$5,757,949*	*$5,757,949*	
Project-Level Planning Request (Design)			
Element V-a (Preliminary design of I-579 "cap")			
Preliminary Design	$1,148,368	$918,694	Federal earmark
		$229,674	SEA / Local
Subotal	*$1,148,368*	*$1,148,368*	
Element V-b (Final design of I-579 "cap")			
Final Design	$1,551,632	$1,551,632	TIGER VI (planning)
Subtotal	*$1,551,632*	*$1,551,632*	

TOTAL Project Cost	$39,511,078	
Less Costs of Work Underway	$3,045,065	
TIGER VI Scope (Elements I, II, III-a, IV, V-b, VI)	**$36,466,013**	
TIGER VI Request	**$21,466,013**	**58.9%**
Local Match	$15,000,000	41.1%

Figure 7: Sources and Uses of Project and resulting local match.

Use of Local Match

The local match source for the Project is the RACP funding of $15 million. Further to letter by the Governor of the Commonwealth of Pennsylvania dated April 9, 2014 (see Attachment 6), the RACP funding can be used only for Elements I, II, III-a, IV as indicated in table above. Please be aware at time of this application, additional match may be provided for Element VI. If such match is committed, that match would apply only to Element VI.

Further, the timing of a TIGER VI award announcement and/or grant execution is currently unknown. The Project is moving forward and a portion of RACP may be expended. The SEA anticipates Element I as the first work to progress (see Figure 8). The preliminary and final design of Element I are following the federal/state procedures. If RACP monies are expended on

Element I prior to TIGER VI award and/or grant execution, the recalculated match for TIGER VI funding would be:

Match Recalculated (If Element I proceeds prior to TIGER Award)			
Total Project	$39,511,078		
Work Underway (not in TIGER VI scope)	$3,045,065		
Element I (not in TIGER VI scope)	$10,848,697	(RACP, local)	
Total TIGER VI Scope	**$25,617,316**		
TIGER VI Request (capital and planning)		**$20,479,768**	**79.9%**
Local Match (remaining RACP)		$5,137,549	20.1%

Figure 8: Recalculated Match if Project advances prior to TIGER award.

Pre-Development Investment

To date, over $9.7 million in local and private funding (see Figure 9) has been invested in site clearance of the 28-acre site (by SEA) and master planning costs for the Development Program (by PAR):

Pre-Construction Phase	**USES**	**SOURCES**	
Site Clearance			
Building Vacated, SEA Maintains / Historic Review	$1,898,332	$1,898,332	SEA Funds
Demolition of Former Civic Arena	$3,658,166	$3,658,166	SEA Funds
Improvements for Temporary Spaces	$691,718	$691,718	SEA Funds
	$6,248,216	*$6,248,216*	
Master Planning Process (estimated)			
Master Plan, Consultants, Community Outreach	$3,500,000	$3,500,000	PAR
	$3,500,000	*$3,500,000*	
TOTAL	**$9,748,216**	**$9,748,216**	

Figure 9: Monies expended to date in pre-development work.

Over $3.7 in design costs (for Elements I – IV, VI) have been or will be funded from local sources.

Design	**USES**	**SOURCES**	
Preliminary Design			
Interior Streets (Elements I - II)	$1,011,370	$1,011,370	Local
Perimeter Streets (Elements III-IV, VI)	$458,073	$458,073	Local
	$1,469,443	*$1,469,443*	
Final Design			
Interior Streets (Elements I - II)	$1,137,354	$1,137,354	Local
Perimeter Streets (Elements III - IV, VI)	$1,099,342	$1,099,342	Local
	$2,236,697	*$2,236,697*	
TOTAL	**$3,706,140**	**$3,706,140**	

Figure 10: Sources and Uses for design costs of Project**.**

Land Value

The SEA is owner of the portion of the 28-acre site that will contain new federally eligible (non-local) streets. These federally eligible streets when completed will become City streets. The SEA

will provide the right-of-way to the City at no cost. The right-of-way donation credit for the federally eligible streets is available as additional local match (see Figure 11). The value of the right-of-way donation credit is estimated at $10,919,163 based on a 2006 appraisal.

	Square Foot	Appraised Value Per Square Foot	Appraised Value	80% Appraised Value
Street 5 (less area between Crawford and Street 2)	81,718	$65.00	$5,311,668	$4,249,334
Street 1	60,325	$65.00	$3,921,094	$3,136,876
Street 2	67,941	$65.00	$4,416,191	$3,532,953
		Total	$13,648,954	**$10,919,163**

Figure 11: Potential right-of-way credits.

Selection Criteria

Primary Selection Criteria

The Project demonstrates strength in each primary selection criteria for both the capital and project-level planning Elements. These include:

State of Good Repair

Both urban renewal and the construction of the I-579 Crosstown Boulevard that occurred in the 1950s isolated the Hill District, shifted traffic patterns and divided the Hill District from the economic activity of Downtown. The capital elements of the Project will replace temporary surface parking spaces on the 28-acre site with a new street grid and related infrastructure, and will improve both the design and condition of existing streetscapes along Centre Avenue, Washington Place, Fifth Avenue, Bedford Avenue, Crawford / Pride Streets to become more pedestrian friendly. The work will remove barriers to transportation systems to a historically disadvantaged population, and will provide multi-modal transportation choices (pedestrian connections, safe intersections, dedicated and shared bike lanes, enhanced bus routes, improved access to LRT stops, a future link to planned bus-rapid-transit system, and better access to existing I-279 HOV entrance). With respect to the project-level planning portion of the Project, the final design of the “cap” will provide progress towards future construction that will eliminate the physical highway barrier between the neighborhood and Downtown. The streets and related infrastructure will be dedicated to and maintained by the City. In addition, completed storm, sanitary and water lines will be turned over to PWSA to maintain.

Economic Competitiveness

The Project will reconnect the Greater Hill District to the local economic network and will improve economic mobility by providing enhanced multi-modal connections for the community to access centers of employment, education and services such as Downtown and Oakland which are the second and third largest business districts in Pennsylvania. The Project will support the Development Program for the 28-acre site which is estimated to attract over $379 million of private investment, and create approximately 4,231 temporary construction jobs and 2,948 permanent jobs when the development is fully built-out. The Project will increase the economic productivity of land and result in the investment of capital in a severely distressed neighborhood. The Project will also help to spur further development, and create jobs, businesses and investment in the Greater Hill District neighborhood, and put properties which

are now exempt back on the tax rolls. The new street grid, existing streets, and associated development will increase the efficiency of the movement of workers and goods within and to and from the area by reducing travel times and providing enhanced multi-modal choices. The possibility of structures being located the "cap," which may attract more private investment, is being investigated as the design progresses. In addition to the direct economic and efficiency benefits to the local economy, the Project will provide a model for other neighborhoods leveled by the urban renewal movement and will improve the long-term economic competitiveness of the United States.

Quality of Life

The Project will create enhanced and convenient multi-modal choices that will improve connections between a historically economically disadvantaged population to centers of employment, education and services to Downtown and Oakland, two major economic centers. The current condition of the 28-acre site consists of parking lots with no people residing within the site. The Project will support a future mixed-use development that will increase community revitalization. By restoring the street grid, improving existing intersections and roadways and adding/improving multi-modal choices, the Project will create a healthy, safe and walkable area. Specific efforts to improve quality of life include:

PEDESTRIAN CONNECTIONS: The new streets are laid out to work with the challenging grades while providing adequate development blocks. In addition to the new and existing streets, cross-block connections and pedestrian paths will be provided within the private development blocks to enhance mobility throughout the site (see Figure 12). The pedestrian routes will be designed to be continuous through the use of stairways, switchback ramps, elevators or other solutions. The improvements will provide more circulation points for pedestrians walking between the Hill District, Uptown and the Downtown. There will be a direct path up Street 5 into the Hill District, and more north-south connections on Street 1 and Street 2.

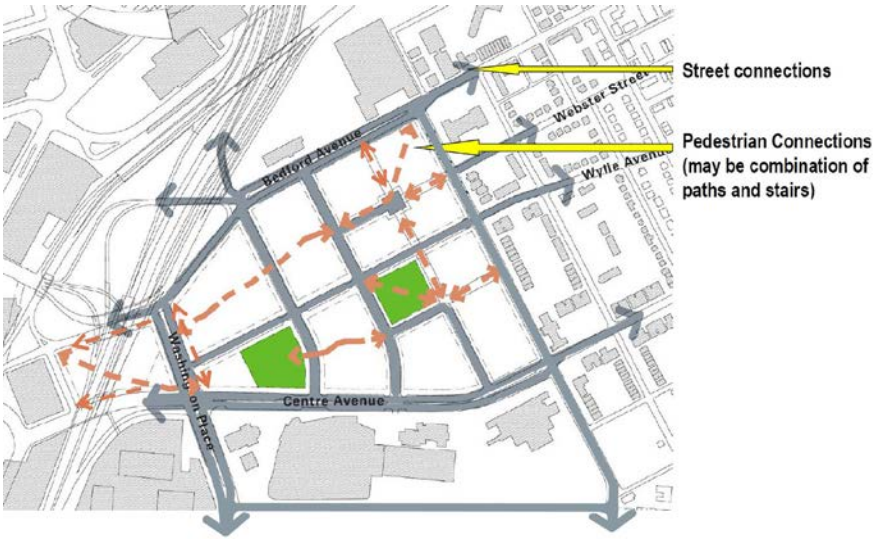

Figure 12: Pedestrian and street connections contemplated in Project.

When the entire development is built, it is projected that 300-400 new pedestrians will use Street 5 during each of the morning and evening peak hours. Similarly, significant numbers of new pedestrians will be on Street 5 during the daytime and lunch hours. When the entire development is built, it is projected that 900-1,500 new pedestrians will use Centre Avenue during each of the morning and evening peak hours. Similarly, significant numbers of new pedestrians will be on Centre Avenue during the daytime and lunch hours. These people could potentially circulate to other areas to visit nearby destinations in the Hill District, Uptown and Downtown. Traffic signals will have pedestrian pushbuttons, count down equipment (numbers that show how many seconds are left to cross) and audible signals for the vision-impaired.

BICYCLES: According to the 2012 American Community Survey, the City of Pittsburgh has the 6th highest level of commuting by bike and foot in the nation (of the 60 largest cities). This is due in part to significant bicycle-friendly investments that have been made in the City over the last several years. Before 2007, the City had less than 11 miles of shared and dedicated bike lanes. Between 2007 and 2014, an additional 48 miles of shared and dedicated lanes were added, improving safety for cyclists and reducing barriers to entry for new cyclists. In March 2014, Pittsburgh was one of six cities selected by the national PeopleForBikes Green Lane Project to receive two years of financial, strategic, and technical assistance to install dedicated bicycle lanes. As part of the PeopleForBikes project, Downtown Pittsburgh will gain its first dedicated bicycle lane. Further to the City's multi-modal commitments, it has been recognized as the location for the National Pro Walk, Pro Bike, Pro Place Conference to be held in September 2014.

BICYCLE AMENITIES: Shared use roadways are roads on which both motor vehicles and bicycles operate (see Figure 13). Centre Avenue is an existing shared use roadway designated by the City. The Project will improve this shared route for bicyclists and increase accessibility to the east end of the City into Downtown. Improving the route will also encourage cyclists to use Centre Avenue rather than other nearby streets that may be dangerous due to narrow lane widths and reduced visibility. A dedicated bicycle lane will be added to the south end of Centre Avenue heading toward the Hill District between Crawford Street and Washington Place. The dedicated bicycle lane will provide a six-foot travel lane clearly marked for only bicycle traffic. An exclusive bike box will also be added at the termination of the lane at Crawford Street. Bike boxes increase visibility of cyclists, give bicycles a head start when the signal changes from red to green and allow cyclists to make left turns in a safer fashion. A widened lane on the northern end of Centre Avenue will provide for a shared bicycle lane. Shared lane markings and appropriate signage such as "Share the Road" and "Bicycle Route" will indicate the presence of a bicycle route to cyclists, as well as to provide notification to motorists that a higher number of bicyclists will be present. Within the site, high quality and durable metal bicycle racks will be installed at key areas.

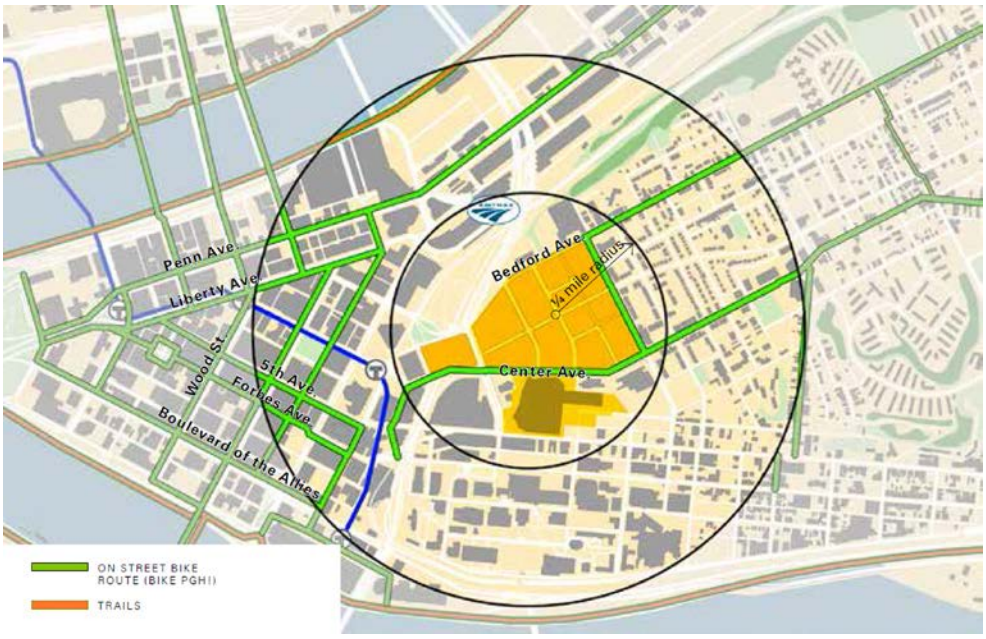

Figure 13: Proposed bike path improvements in Project and surrounding area, and existing trails**.**

Bike Share is a planned City program to provide bicycles for short-term use. The bikes can lock into any of the 50 solar-powered stations planned throughout the City. The 500 bikes that will be part of the City's program will be designed to be sturdy, vandal-proof and with safety in mind. In 2013, the SEA entered into an agreement with the City to locate a Bike Share station along the Centre Avenue sidewalk outside of CONSOL Energy Center. The station will include a minimum of 35 bicycle docks. The City's Bike Share system will be in place prior to the completion of the Project.

IMPROVED BUS ROUTES; ACCESS TO LIGHT RAIL TRANSIT, HOV ENTRANCE AND PLANNED BUS RAPID TRANSIT: The new street grid will allow buses to circulate on more streets in the Lower Hill, with additional stops that will add convenience for riders. Buses will be able to use Street 1 and Street 5 (see Figure 14). Bus stops will be improved with better waiting areas. The Project will provide improved pedestrian access to the Steel Plaza LRT stop. The LRT links Downtown with the North Shore, Pittsburgh's southern neighborhoods and Allegheny County's southern suburbs. The Project will also provide access to the planned BRT (see page 13). Since buses will be able to use Street 1 and Street 5, buses can detour to avoid Centre Avenue during very large events at the CONSOL Energy Center. This will dramatically reduce the wait time for riders on the days of big events. Improvements to the peripheral streets, particularly Washington Place, may also improve connections with the Port Authority's express routes on I-279 HOV lanes and the BRT. Due to the Lower Hill's convenient proximity to Port Authority's transit stops and stations, the LRT and the planned BRT, the Project will enhance multi-modal choices to connect people to various centers of employment, education and other essential services.

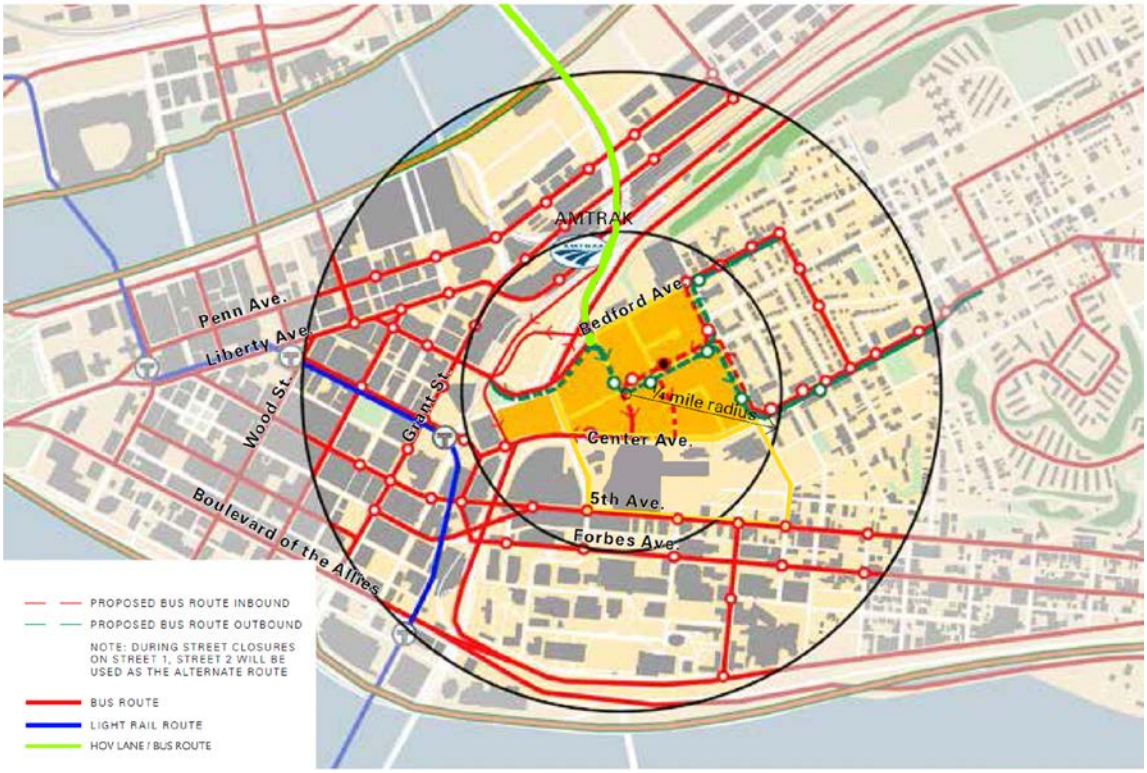

Figure 14: Proposed bus routes, existing LRT route and HOV lanes (Source: PAR**).**

SHARED PARKING: A shared parking strategy will be implemented in the build out of the development in order to make the most of the off-street parking supply. The shared parking strategy will take into account the different users of parking within the site to calculate the number of spaces needed. The Project site is suited for this strategy because there are a number of destinations on the site that have different peak demand times. In addition to providing a more efficient use of land, better urban design and walkability, this strategy creates a captive market for the businesses within the site when users and residents park once and visit multiple destinations.

PUBLIC ART: Public art is a vital component of any active and vibrant community. The PLDP offers opportunities for public art in open spaces, plazas, building lobbies and facades. The art selected will have themes celebrating the rich heritage of Pittsburgh and the Hill District and to honor business, sports and cultural icons.

AFFORDABLE HOUSING: The development program is anticipating the development of residential units. Based on current market and finance conditions most housing is expected to be rental with at least 20% of the units being affordable housing units.

Environmental Sustainability

The Project and Development Program incorporate innovative sustainability initiatives. It is intended that the development will earn a LEED for Neighborhood Development (LEED-ND) certification. It is expected that most buildings will be LEED certified buildings. The SEA has

extensive experience with LEED and has been involved in four LEED projects to date. The David L. Lawrence Convention Center (**DLCC**) received a Gold rating under the LEED for New Construction rating system in 2003 when it was the first convention center to receive a LEED certification. In 2012, the DLCC received a Platinum rating under the LEED for Existing Buildings: Operations & Maintenance rating system, making it the first convention center to have 2 LEED ratings. The CONSOL Energy Center received a Gold rating under LEED for New Construction in 2010. It was the first NHL arena to receive a LEED rating. The SEA also recently built out office space within the DLCC that received a Platinum rating under LEED for Commercial Interiors in 2013. The Project is expected to include the following sustainable features, and may include additional green features that are not enumerated here:

ADDRESSING COMBINED SEWER OVERFLOWS: The City's sewer system is primarily composed of combined sewers, which means that stormwater and sewage are carried in a single pipe. As little as one-tenth of an inch of rain (an average Pittsburgh rainfall is one-quarter inch) can create CSOs, which is when raw sewage overflows into our rivers and streams. PWSA and ALCOSAN must implement solutions to significantly decrease the number of CSOs in order to comply with legal mandates.

The traditional sewage systems that consist of miles of underground pipe are known as grey infrastructure. Separating storm and sanitary grey infrastructure to reduce CSOs, while effective, is very costly to implement on a city-wide scale. Green infrastructure can assist by retaining water and reducing flows at the site of the storm event, keeping the stormwater out of the grey infrastructure system. The Project includes both grey infrastructure improvements and green infrastructure solutions to assist PWSA and ALCOSAN in their efforts to reduce CSOs.

Green infrastructure will be part of the Project and the development itself will manage stormwater by applying innovative solutions such as stormwater planters, permeable paving, rain gardens, green roofs, blue roofs and other stormwater retention methods. The current, mostly impervious site conditions result in approximately 26 million gallons of stormwater runoff annually. The streets and development blocks will be designed to capture the "first flush" (1.2 inches) of rainfall, reducing the annual runoff volume to approximately 5.3 million gallons. Since water is our essential lifeline, improving water quality with these strategies will have a tremendous impact on the quality of life.

STORMWATER PLANTERS (green infrastructure): Stormwater planters (see Figure 15) will be installed at appropriate locations as part of the Project along both new and existing streets. The stormwater planters will mimic natural infiltration in a controlled way that will be designed to capture the first flush (1.2 inches) of stormwater that hits the streets and sidewalks. Concrete curbs will define the edges of each planter to protect plantings and reduce salt damage. The stormwater planters are expected to have a size of 100 square feet. The soil will be comprised of a bio-retention soil medium for maximum infiltration. Overflow from the stormwater planters during large or prolonged storm events will be captured by the grey storm sewer infrastructure.

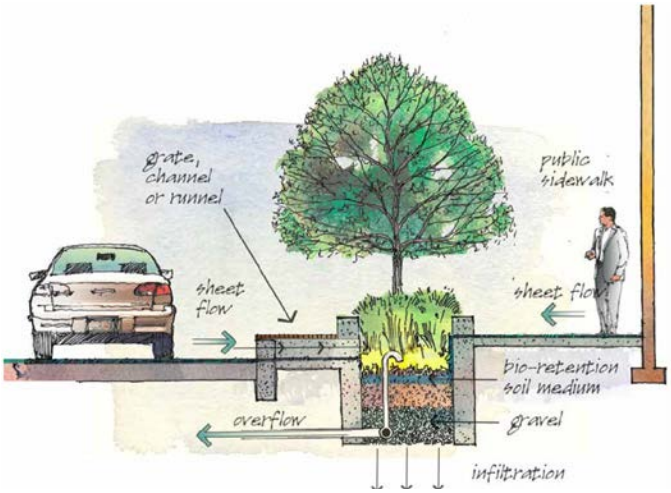

Figure 15: Example of stormwater planters (Source: PAR).

STREET PLANTINGS AND URBAN FOREST: Street plantings are a large component of restoring Pittsburgh's historic urban forest. The plants selected will require low maintenance, be salt and pollution tolerant, and offer a variety of form, textures and colors providing interest for pedestrian traffic. The plantings perform a critical function in the green infrastructure by reducing runoff through evaporation and transpiration.

SITE LIGHTING: Site lighting plays a major role in setting the tone for creating an enjoyable atmosphere within the development. Unified illumination, reduction of glare, use of "dark sky" compliant fixtures and energy efficiency are all priorities. Public safety is also of utmost importance for the site lighting design. The City recently adopted a new street lighting standard based on best practices from around the world, including recommendations from the Illuminating Engineering Society and the International Dark-Sky Association. This situates Pittsburgh as a leader among American cities in lighting standards. The fixtures for the Project will comply with these innovative standards and will incorporate other items such as a minimum ten-year guaranteed lifespan of the LED fixtures and a minimum light output per Watt.

Safety

The Project will serve to reduce the number of non-driver injuries in the Lower Hill through implementation/installation of:

- Enhanced pedestrian signalization equipment at the signalized intersections including pedestrian countdown signals, optimized timing of signal phases to provide optimal pedestrian crossing times, pedestrian push buttons, audible pedestrian equipment, enhanced pavement markings and signage at pedestrian crosswalks
- Reduced pedestrian crossing distances through construction of bump outs and medians on roadways within and adjacent to the Project area

- Appropriate pedestrian crossing pavement markings and signage at unsignalized intersections within the Project area.

The incidence of crashes, serious injuries and fatalities within the region will be reduced due to the location of the Project. The number of alternative mode trips (i.e. public transit, bicycling, walking, ridesharing) would be dramatically higher than what would be seen at any of the alternative suburban locations per the benefit cost analysis in Attachment 2. Change in modal split in the urban location would result in a significant decrease in total vehicle miles traveled, which is directly related to the numbers of crashes, which, in turn, would decrease.

Secondary Selection Criteria

Innovation

The Project will include the following innovative programs:

LEED-ND: The Project will support a sustainable new development. LEED has long been the standard for sustainable buildings and development. LEED-ND is a rating system that combines the principles of Smart Growth, New Urbanism, green infrastructure and green building. The Project partners are committed to the continued, coordinated effort needed to ensure a LEED-ND certification for the Lower Hill.

MULTI-SPACE PARKING METERS: In 2012, the Parking Authority introduced a new pay-by-license plate technology for on-street multi-space parking meters. Customers enter their vehicle license plate number at a solar-charged multi-space meter such that the system has real time information of parking availability that could make it more efficient for someone to find parking. The Parking Authority anticipates installing these meters on the Project streets.

ENERGY DISTRICT: The efficient use of energy is a major component of sustainable design, both for individual buildings and for an entire development. As part of the development program for the 28-acre site, a central co-generation plant is being considered. A central co-generation plant would supply more efficient heating, cooling and power to individual buildings, eliminating the need for large mechanical rooms and equipment in each building. It functions regardless of any electricity grid outages increasing the development's resiliency. In order to have the option to develop a central co-generation plant, the Project will include designated utility pathways for the potential district energy system and may include existing major energy users such as UPMC Mercy and Duquesne University.

TRANSPORTATION DEMAND MANAGEMENT: As described in the PLDP (Section 8.5 in Attachment 5), transportation demand management strategies are being considered to meet LEED-ND goals. These include: parking cash out, flextime, ride sharing, ride

matching, pedestrian and bicycle promotion, guaranteed ride home, car-free programs, vehicle sharing and bicycle sharing, among other things.

Partnership

A diverse multitude of partners are involved in the development and funding for the Project, including local government and other public, private and nonprofit entities. A list can be found under the Project Parties section of the application (pages 14-16). The SEA has successfully worked with a similar set of cross-sector parties on past projects. The Project is the product of a robust long-term planning process that has included the primary and supporting parties in addition to other local, state and federal agencies, community development organizations and related stakeholders.

Results of Benefit-Cost Analysis

The Benefit-Cost Analysis for the public infrastructure improvements at the site in the Lower Hill District was based on a comparison of build-out of the proposed multi-use development at the Project Site with three prototypical suburban communities in three distinct areas: McCandless Township, the Municipality of Monroeville, and the Municipality of Bethel Park. The analysis is based on the underlying assumption that economic expansion will occur in Allegheny County. The analysis reviews the differences between the Lower Hill urban redevelopment and three suburban locations. The density of development and resulting employment in the retail and commercial office (services), and the residential build-out was assumed to be the same for each scenario. The key difference between the proposed development in the Lower Hill District versus the alternative suburban locations is changes in transportation behavior. To support this analysis, the SPC conducted a detailed analysis simulating travel patterns for the above described development scenario for the Lower Hill District redevelopment area and each of the suburban locations. Generally, the trip generation and mode use behavior for each suburban location shows a significantly higher volume of auto trips with longer distances and longer drive times when compared to the same change in development at the urban location. The difference between the Lower Hill District and each alternative suburban location in trip generation, distance, and time was used as the basis for calculating the benefits to the Project. The analysis looks at changes in travel time, fuel consumption, emissions production, vehicle operating costs, and safety (see Figure 16).

A summary of the results showing total value of time, fuel, emissions, operating cost, and safety savings for each alternative when compared to the Lower Hill District is provided on the following page. The results indicate a positive benefit-to-cost ratio for the Lower Hill District redevelopment project when compared to each alternative. The Monroeville Area alternative resulted in a benefit-to-cost ratio of 2.09, representing the high range. Both the McCandless Township and Bethel Park Area alternatives show similar ratio results in the middle range, 1.51 and 1.46, respectively. Based on the more conservative of the middle range results, Bethel Park versus Lower Hill District indicates a positive discounted benefit of $55.8 million over the 20 year period of the analysis, which is significantly greater than the discounted cost of $38.2 million for the Project. The detailed tables and Excel file supporting these results are included as Attachment 2 . A detailed description of the model is included as Attachment 2.3.

Benefit Cost Analysis Results Summary
Lower Hill District Area versus…
Net Annual Benefits (Time, Fuel, Emissions, Operating Costs, and Safety) at 3.0% Discount

	McCandless Township Area	Monroeville Area	Bethel Park Area	Lower Hill TIGER Project Costs Nominal	Lower Hill TIGER Project Costs 3.0% Discount
2014	$4,023,627	$6,982,536	$2,988,788	$6,431,624	$6,431,624
2015	$3,881,844	$6,734,225	$2,883,183	$20,244,423	$19,654,779
2016	$3,769,495	$6,539,389	$2,799,746	$12,835,031	$12,098,248
2017	$3,660,398	$6,350,190	$2,718,724		
2018	$3,554,458	$6,166,464	$2,640,046		
2019	$3,451,584	$5,988,053	$2,563,645		
2020	$3,098,709	$4,518,619	$2,845,041		
2021	$3,009,581	$4,388,466	$2,763,137		
2022	$2,922,705	$4,261,840	$2,683,367		
2023	$2,838,228	$4,138,702	$2,605,802		
2024	$2,756,298	$4,019,282	$2,530,574		
2025	$2,456,910	$2,778,337	$2,770,943		
2026	$2,386,467	$2,698,675	$2,691,316		
2027	$2,317,494	$2,620,707	$2,613,511		
2028	$2,250,601	$2,545,093	$2,538,050		
2029	$2,185,554	$2,471,561	$2,464,676		
2030	$1,931,544	$1,424,062	$2,669,740		
2031	$1,876,205	$1,383,415	$2,592,974		
2032	$1,821,983	$1,343,455	$2,518,005		
2033	$1,769,396	$1,304,702	$2,445,293		
2034	$1,769,808	$1,305,025	$2,445,831		
Total	**$57,732,890**	**$79,962,796**	**$55,772,392**	**$39,511,078**	**$38,184,651**
Benefit-to-Cost Ratio	**1.51**	**2.09**	**1.46**		

Benefit-Cost Analysis Results Summary

Savings from 2014-2034 broken down by long-term outcome category at 3.0% discount

	Lower Hill versus…		
Long-Term Outcome:	**McCandless Township**	**Monroeville Area**	**Bethel Park Area**
Economic Competitiveness			
Time	*$ 35,908,712*	*$ 48,279,021*	*$ 35,034,608*
Fuel	*8,894,475*	*12,920,414*	*8,447,666*
Operating Costs	*3,193,688*	*4,639,259*	*3,033,255*
Economic Competiveness Total	$ 47,996,875	$ 65,838,693	$ 46,515,529
Sustainability - Emissions	1,078,841	1,548,400	1,034,577
Safety	8,657,174	12,575,703	8,222,286
Long-Term Outcome Total	**$ 57,732,890**	**$ 79,962,796**	**$ 55,772,392**
Benefit-to-Cost Ratio	**1.51**	**2.09**	**1.46**

Figure 16: Results of Benefit Cost Analysis (Source: Delta).

One time construction impacts attributable to the construction of infrastructure at the Project Site were estimated based on total construction costs of $39.5 million (see Figure 17). Total one-time construction employment is based on US DOT estimates of 13,000 short-term job years created per one billion dollars of government investment. The total value of employment is based on a multiplier of 1.148 recommended by the Federal Highway Administration.

Construction Employment Impact

Element	Cost	Employment Value		Estimated Total Employment 2/
		Employment Factor 1/	Total Value	
I	$ 10,848,697	1.148079	12,455,161.20	162
II	$ 6,187,482	1.148079	7,103,718.15	92
III-a	$ 9,168,755	1.148079	10,526,455.07	137
III-b	$ 1,896,697	1.148079	2,177,558.00	28
IV	$ 2,951,498	1.148079	3,388,552.87	44
V-a	$ 1,148,368	1.148079	1,318,417.19	17
V-b	$ 1,551,632	1.148079	1,781,396.11	23
VI	$ 5,757,949	1.148079	6,610,580.22	86
TOTAL	**$ 39,511,078**		**$ 45,361,839**	**590**

1/ If a project does not include a substantial ROW purchase in the cost, FHWA recommends a multiplier of 1.148079.

2/ Based USDOT estimate of 13,000 short-term job years created per one billion dollars of government investment, or $76,900 per job-year.

Figure 17: Estimated construction employment resulting from infrastructure work (Source: Delta).

Project Readiness

Pre-Construction Activities and Related Media Information

As described on page 3 herein, the Project is underway. Further to the infrastructure work and Development Program, attached are related media articles (see Attachment 12).

Right-of-Way

The SEA and the URA are owners of the 28-acre site, and the perimeter roads are owned by the City, therefore no right of way acquisitions are required. The City passed a resolution to accept the proposed right of way locations for the new streets (see Attachment 7.12).

NEPA Status for Elements I, II, III, IV

According to the PennDOT Scoping Field View Meeting on January 28, 2014, the work is anticipated to be a Class II federal action requiring the preparation of a Level 1B Categorical Exclusion Evaluation (**CEE**) (see Attachment 7.8). The majority of the support documentation required for the CEE submission is complete and ready for review. The Project will not result in impacts of potential significance or the need for measures to avoid or mitigate impacts. A list of tasks completed and the expected schedule has been prepared with oversight from the SEA's engineering consultant, Michael Baker Jr. Inc., and demonstrates that the Project can meet local, state and federal requirements by June 30, 2016 in order for US DOT to obligate funding in advance of September 30, 2016 (see Attachment 7.9).

NEPA Status for Element V

As reviewed with PennDOT, the proposed work is anticipated to be a Class II federal action requiring the preparation of a Level 1B CEE. The task of assembly and approval of the Level IB CEE is part of the preliminary design scope of work, which is to begin in May 2014.

NEPA Status for Element VI

The task of assembly and approval of the CEE will be part of the preliminary design scope of work, which is to begin in September 2014.

Planning Approvals

Elements I-IV of the Project appear in the 2040 Transportation and Development Plan for Southwestern Pennsylvania (the **Long Range Plan**) (see Appendix B of the Long Range Plan which can be found at www.spcregion.org) which was developed through a process lead by SPC. Element V is a Transportation and Community and System Preservation project. Streets 1, 2 and 5 are on SPC's long-term Transportation Improvement Program. PennDOT has assigned Multi Modal Project Management System (MPMS) numbers to the Project as follows: 97843 – LHR New Interior Roadway (Elements I & II), 97844 – LHR Exterior Roadway (Elements III & IV) and 97846 – I-579 Crosstown Boulevard "Cap" Project (Element V). The design and pattern of utilization of the new streets for which federal funds would be used (Streets 1, 2 and 5) is consistent with the functional classification of "Urban Collectors." That functional classification for these streets has been approved by the SPC, PennDOT and the Federal Highway Administration (see Attachment 7.10). The existing streets to be improved (Crawford Street, Bedford Avenue, Washington Place, Centre Avenue, Fifth Avenue and Crawford/Pride Streets) are currently listed on the federal-aid highway system.

Federal Wage Rate Certification

Federal wage rate certification signed by SEA (requirements of subchapter IV of chapter 31 of title 40, US Code) is included as Attachment 10.

Attachments

This Narrative and attachments referenced in this TIGER VI application and other supporting information can be found at the SEA's Lower Hill website at www.lowerhilltiger.com.