

FY 2016 TIGER Discretionary Grant Application

Project: I-579 Cap Urban Connector Project: Bridging a Critical Gap to Revitalize the Hill District
Location: Pittsburgh, PA
Requested: \$20 million; 62.5% federal share
Submitted: April 29, 2016



The I-579 Cap Project will provide for a structure over a portion of the below-grade I-579 Crosstown Boulevard highway. The 3-acre Cap is a “ladders of opportunity” project for the economically disadvantaged Hill District community. The Cap will be transformative for the Hill District by removing a physical barrier and re-establishing connectivity to centers of employment, education and services in Downtown Pittsburgh. The Cap will create convenient and accessible pedestrian and bicycle pathways that will connect to a transit and free subway system in Downtown. The Cap will revitalize the Hill District by providing for the safe movement of commuters and residents, and supporting public and private development.

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I. Project Description

The Project that the TIGER Funds will support

The TIGER VIII grant will provide funding for construction of a new “cap” structure above Interstate 579-Crosstown Boulevard (**I-579**) located in the City of Pittsburgh, Allegheny County, Pennsylvania ([Figure 1](#)). The Cap is a “ladders of opportunity” project that will create a new 3-acre connection (**Cap** or **Project**) linking downtown Pittsburgh (**Downtown**) and the economically disadvantaged Hill District (**Hill** or **Hill District**). The Project is a top regional priority and part of a multi-agency initiative, with support from community organizations, elected officials, and related stakeholders.



Figure 1: The Cap is located between Downtown Pittsburgh and the Hill District, and will re-establish a link between the two neighborhoods that was severed in the 1950s. A conceptual surface layout of the Cap is shown in color.

The Sports & Exhibition Authority of Pittsburgh and Allegheny County (**Authority**) is requesting \$20,000,000 in FY2016 TIGER Discretionary Grant (**TIGER VIII**) funding toward a \$32,000,000 Project cost for a federal share of 62.5%. The match will consist of state, local and private funding, as well as a land match.

	TIGER VIII Funding	Non-Federal Match	Total Project Cost
	\$20,000,000	\$12,000,000	\$32,000,000
% Share	62.5%	37.5%	

Expected users of the Cap

The Cap will be transformative for the Hill District neighborhood. I-579, when it was constructed in the 1950s, severed the link between Downtown Pittsburgh and the Hill District. Over 50 years of isolation and disinvestment have led to a community that has lost 80% of its peak population. Over 40% of its residents are living below the poverty level. Over 21% are unemployed. Over 50% walk or take public transportation to work.

The Cap will provide “ladders of opportunity” for residents of the Hill District by creating a safe, convenient pedestrian and bicycle connection to centers of employment, education and services in Downtown Pittsburgh, the economic engine of the Western Pennsylvania region.

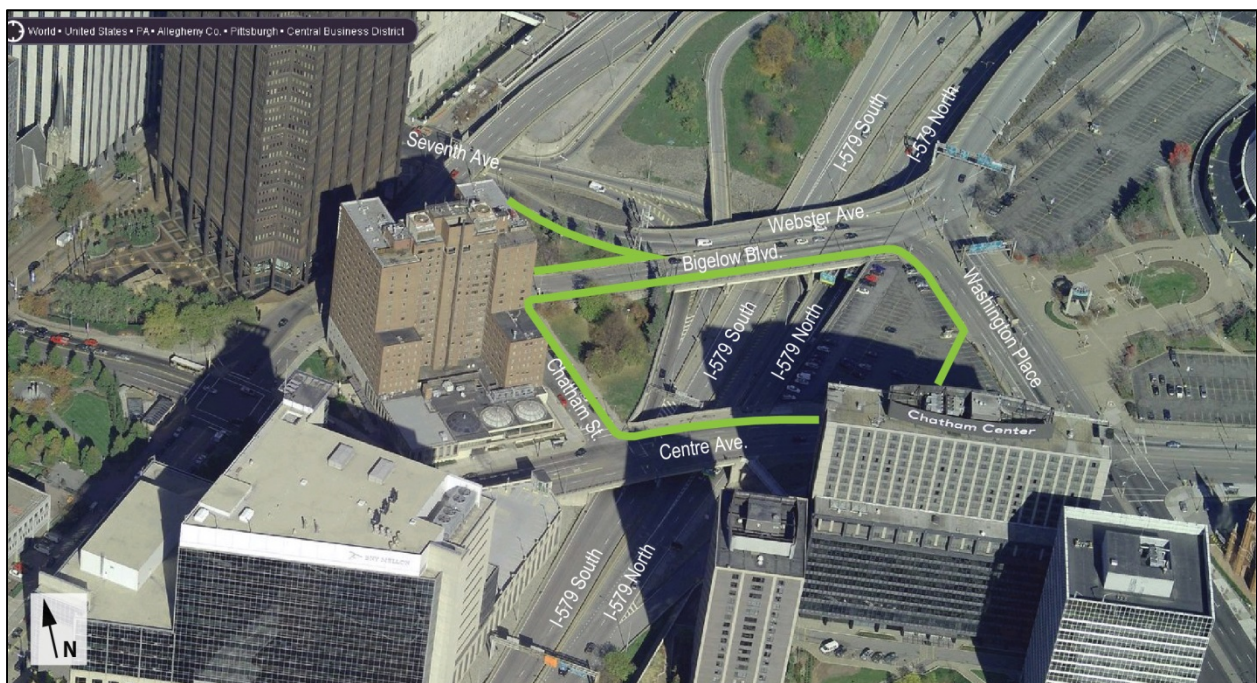


Figure 2: The Cap will be a 3-acre urban open space connector covering the below grade I-579 highway providing for a seamless connection between the Hill District to the east, and Downtown to the west.

The 3-acre Cap will create safe and accessible routes for walking and biking between the Hill District and Downtown, including connections to the free fare Downtown / North Shore subway. The Project will include a new bus stop on Centre Avenue at the Cap site, and a new bike sharing station. The Project will provide for safer pedestrian crossings at the Chatham Street and Bigelow Boulevard intersection. ADA compliant curb-cut ramps and crosswalks will be constructed with associated signs, audible/count-down pedestrian signals, and pavement markings. New ADA compliant walkways leading to the intersection will be constructed.

The Cap will be a bridge type structure covering the below-grade I-579 between the existing Centre Avenue Bridge and the Bigelow Boulevard Bridge. (Figure 2 above)

Existing conditions – how we got to where we are

The historic Lower Hill was once a densely populated neighborhood and an active part of the predominantly African-American Hill District community until it was cleared in the name of urban renewal. After World War II, the Lower Hill was declared blighted and by 1956, 413 businesses and over 8,000 residents were forced to relocate, and 1,300 buildings on 95 acres of land were demolished. (Figures 3-6) Only a new public auditorium (known as the Civic Arena), an apartment building and an apartment/hotel complex were ever built. The remaining land was never developed and what once was a thriving community became mostly surface parking.



Figure 3: The Hill District residents subject to displacement in 1955.



Figure 4: Civic Arena framework over Lower Hill neighborhood in 1950s.



Figure 5: The historic Hill District neighborhood demolished and Civic Arena under construction in 1960s.

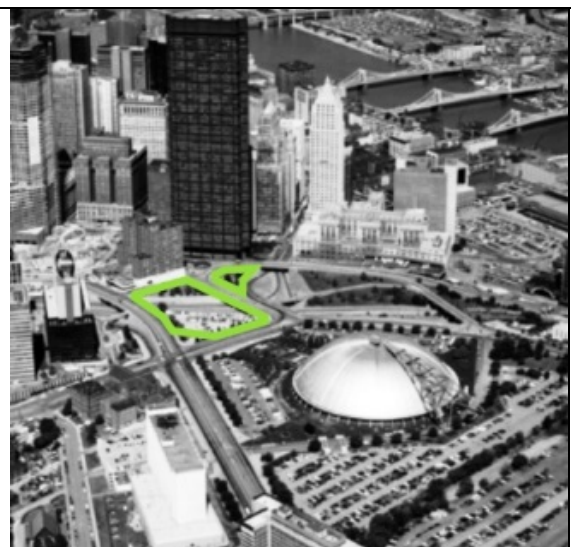


Figure 6: Civic Arena site circa 1990s.

Also during this time period, the I-579 Crosstown Boulevard was constructed on the border between Downtown and the Hill District. It created a trench separating what was left of the Hill District from the economic activity and cultural life of Downtown. (Figure 7) The highway shifted traffic patterns and further isolated and divided the neighborhood from Downtown.

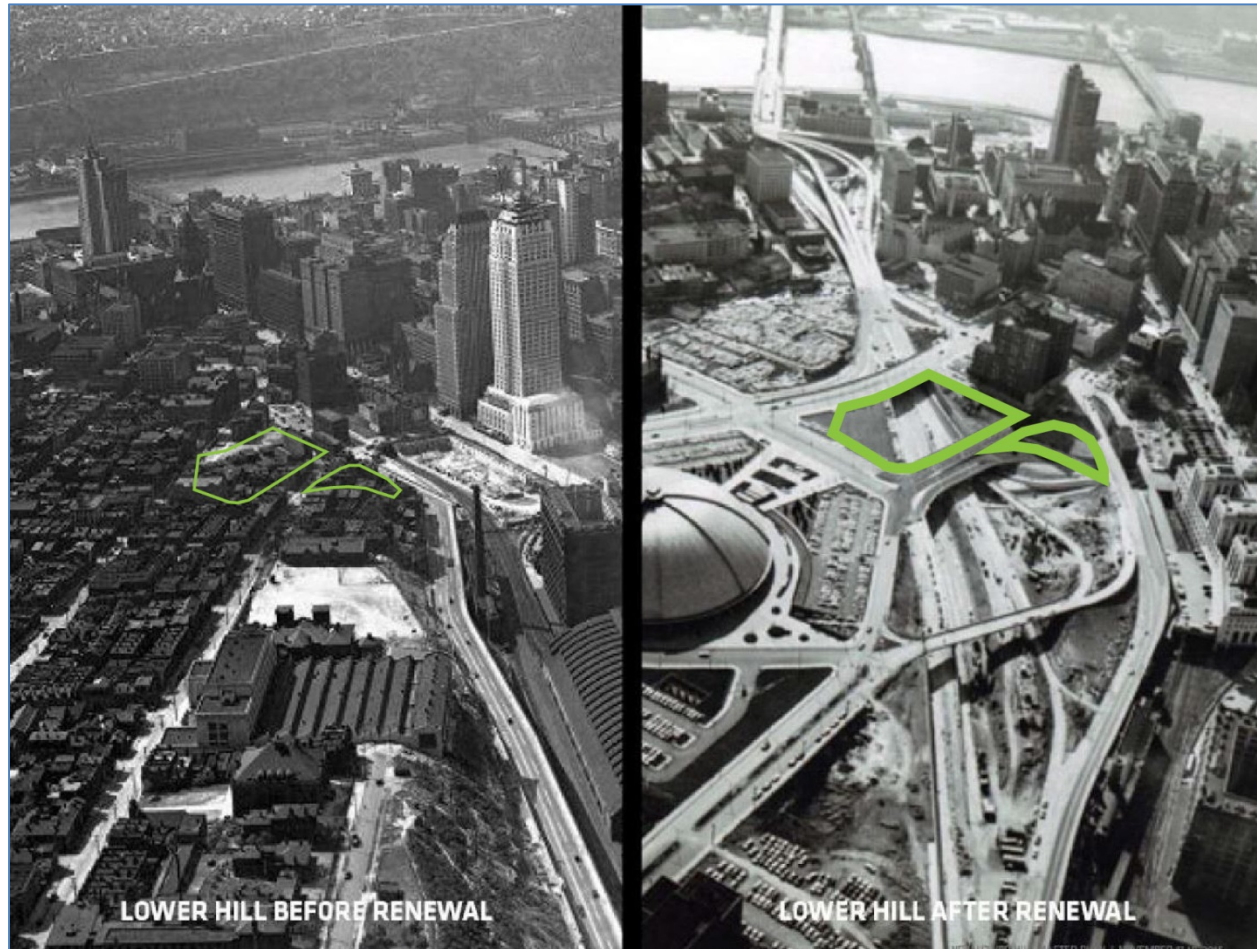


Figure 7: I-579 severed the physical connection of the Lower Hill to Downtown.

The Hill District population dropped from 53,648 in 1950 to 9,457 in 2013 (American Community Survey, U.S. Census). The Hill District consisting of Crawford-Roberts, Middle Hill, Upper Hill, Bedford Dwellings and Terrace Village census tracts¹ is a severely distressed neighborhood. Unemployment is over 21.2%, the median household income is \$18,827 and 41.0% of the residents live below the poverty line (US Census 2013, see page 21).

The Project will help to repair these injuries of the 1950s by building a Cap structure over the below grade highway, and in so doing extend the economic strengths of Downtown to the Hill District. (Figure 8)

¹ The Project site and the adjacent 28-acre development site were once part of the historic Lower Hill census tract. After urban renewal, the historic Lower Hill was treated as being part of the central business district census tract. These sites currently consist of surface parking lots, highways and open space, and have no population.

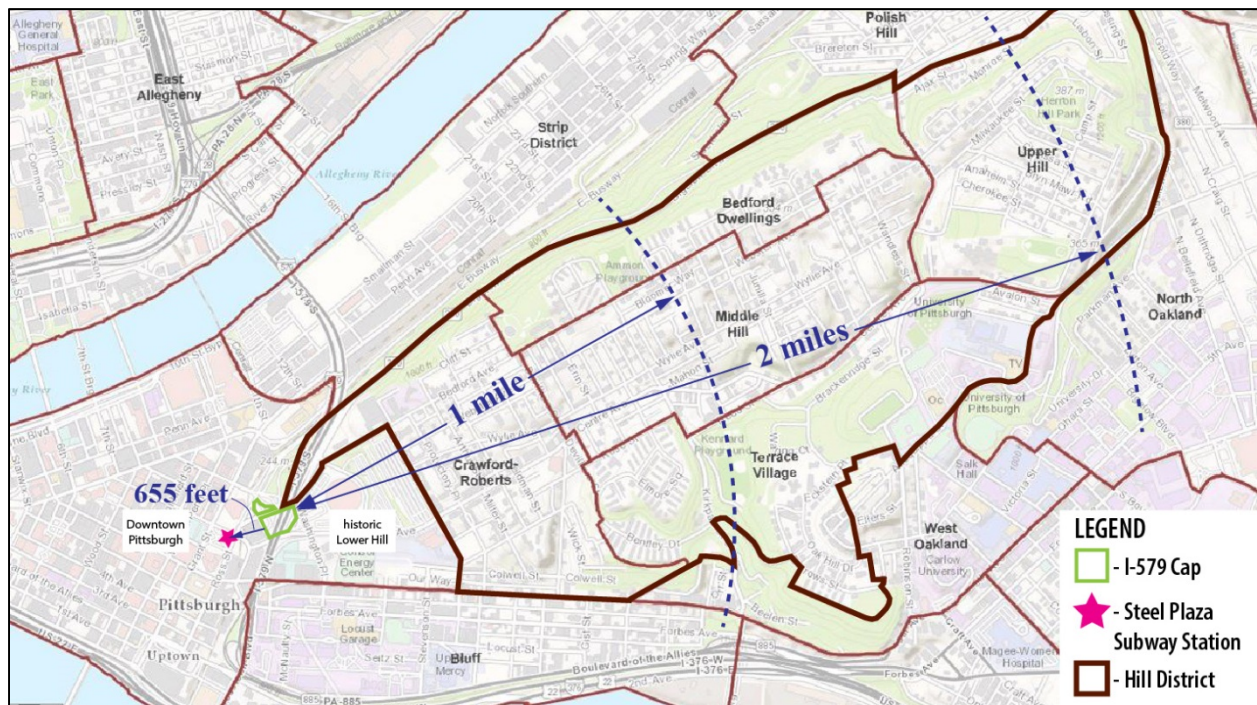


Figure 8: HILL DISTRICT: People from the Hill District (outlined in heavy border) will benefit from the Cap. The reconnection will restore a short, safe walk or bike ride from Hill District neighborhoods to the Cap and to Downtown and the free-fare subway.

Project Details

The Project will consist of the construction of a new “cap” structure spanning over a portion of I-579, and improvements to an adjacent intersection and underutilized vacant land parcels. The Cap project will re-establish the physical link between Downtown Pittsburgh and the Hill District community.

The Cap structure above I-579 will be approximately 52,800 sq ft and consist of pre-stressed concrete adjacent box beams over I-579 paralleling the existing Centre Avenue and Bigelow Boulevard Bridges. The bridge deck will be an 8” thick reinforced concrete slab composite with the beams. The live loading on the structure will be a full pedestrian load. The Cap structure will span across I-579 west to east with a combination of a 2-span structure (adjacent to the Centre Avenue Bridge on the southern limit) and a 3-span structure (adjacent to the Bigelow Boulevard Bridge at the northern limit). Columns, supported on drilled shafts, will be placed within the existing I-579 medians to support the overhead Cap structure. The height of the existing I-579 outside retaining walls will be reduced to provide space for the Cap structure and abutments. Abutments on deep foundations (micropiles or drilled shafts) to support the Cap structure will be placed behind the existing I-579 outside retaining walls.

The existing non-ADA compliant walkways leading from Seventh Avenue to the Chatham Street/Bigelow Boulevard intersection will be replaced and brought up to current design standards. Improvements to the intersection will include ADA compliant curb-cut ramps and

Project readiness

The Project is currently in final design. HDR Engineering (**HDR**) is the lead engineer and was selected in accordance with federal / state selection procedures. HDR is a national firm with previous experience similar to this Project. A federal earmark (\$918,694) and local match committed by the Authority (\$229,674) funded the preliminary engineering work. A FY2014 TIGER VI planning grant (\$1.55 million) and local match committed by the Authority (\$387,908) is funding final design.²

All pre-construction activities for the Project, including local, state, and federal requirements, are scheduled to be completed by May 2017. (See page 29)

Ladders of Opportunity

The Project will be transformative for the economically disadvantaged Hill District by providing a reliable, safe and affordable way to reach jobs, education and other essential services. It will strengthen access to opportunities for residents of the Hill.

Work

The Project will provide economically disadvantaged residents in the Hill District an improved, safe walking and biking route to connect to the pool of over 78,000 jobs in Downtown (US Census 2014). The population of the Hill District is 9,457. In 2013, according to the US Census, the unemployment rate in the USA was 9.7%, in Allegheny County (**County**) it was 7.8%, and in the City of Pittsburgh (**City**) it was 9.6%. In comparison, the Hill District community had a 21.2% unemployment rate, over double the national average. Today, the Hill District continues with a larger percentage of its population unemployed compared to other parts of the City and region.

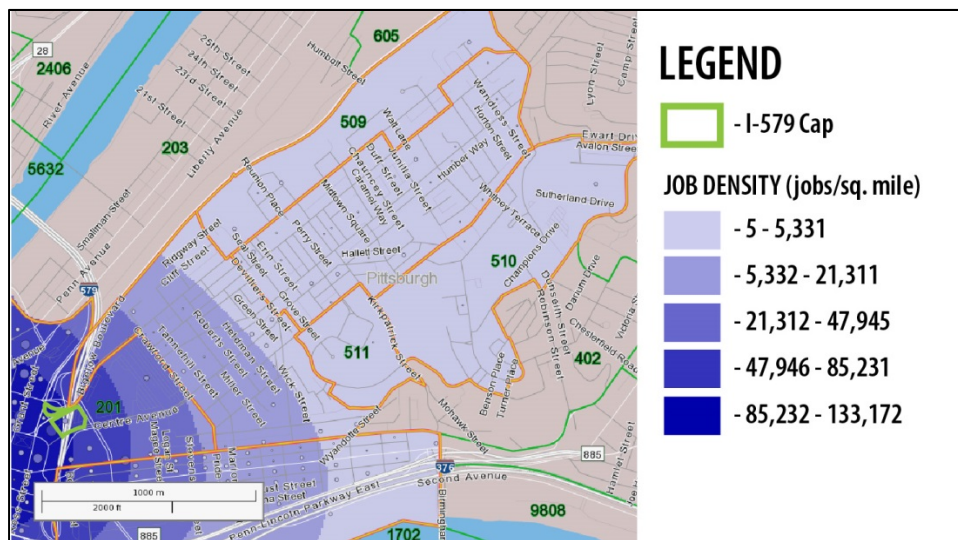


Figure 10: LOCATION OF JOBS: Job density between Downtown and Hill District (US Census 2014).

² Neither the federal funding nor the local match for the preliminary engineering / final design is used as match for this FY 2016 TIGER VIII application.

RESIDENTS OF THE HILL DISTRICT

Over 2,400 affordable housing units are located in the Hill District, and there are over 1,500 additional affordable units planned in the next decade. The Hill District population is heavily dependent on transit and walking to get to work. Over 60% of occupied Hill District households do not have vehicles. The walkability from the Hill to Downtown centers of employment will be greatly enhanced by the Cap. (Figure 11)

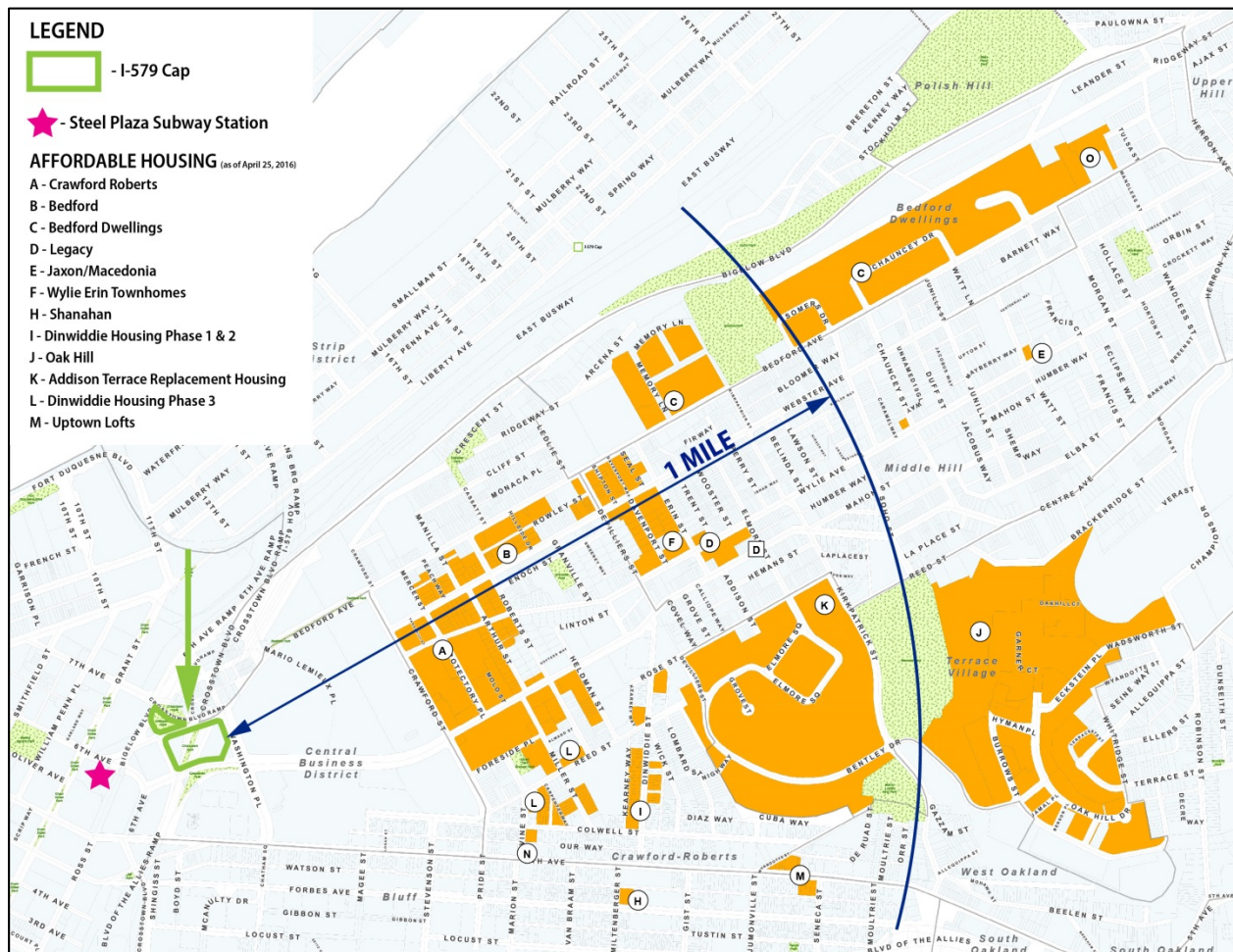


Figure 11: AFFORDABLE HOUSING: There are over 2,400 existing affordable housing units in Hill District. The Hill District residents are heavily dependent on public transportation and walking. The Cap will provide a safe and accessible connection to/from Downtown and the public transit system, including the free Downtown subway.

Connect

PEDESTRIAN CONNECTIONS

The Cap is a critical piece of the pedestrian connection through Downtown and the Hill District. There are two efforts underway to articulate safe and accessible pedestrian pathways. The Cap is the location where these two efforts meet. (Figure 12)



Figure 12: CONNECT: The Cap is a key part of a seamless walking route that will connect Downtown, through the Cap and to the Hill District.

To the west, Envision Downtown is implementing *A Great Route* project. This is a designated walking route through Downtown to the Cap made up of regular attractions, safe from vehicular traffic, and providing moments to rest (Figure 13). The initiative is focused on improving pedestrian safety, removing barriers for persons with disabilities, investing in transit rider amenities, making it safer to bike and reducing traffic congestion.

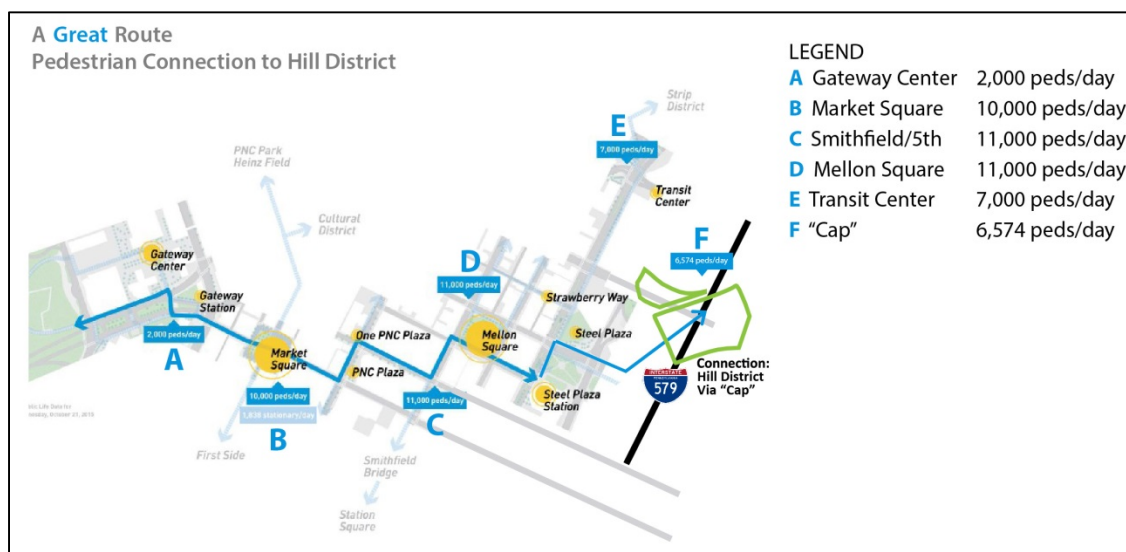


Figure 13: CONNECT: Designated pedestrian path from Cap through Downtown. Enlargement of Downtown path depicted in Figure 12 (*A Great Route* is an initiative by Envision Downtown).

To the east, the proposed new development at the 28-acre site (see page 18) will work with the unique qualities of the site's steep slope, and still provide for a highly walkable site. The needs of pedestrians and bicyclists are given a high priority in the development plan, leading to a proposed network of paths to supplement the traditional street grid.

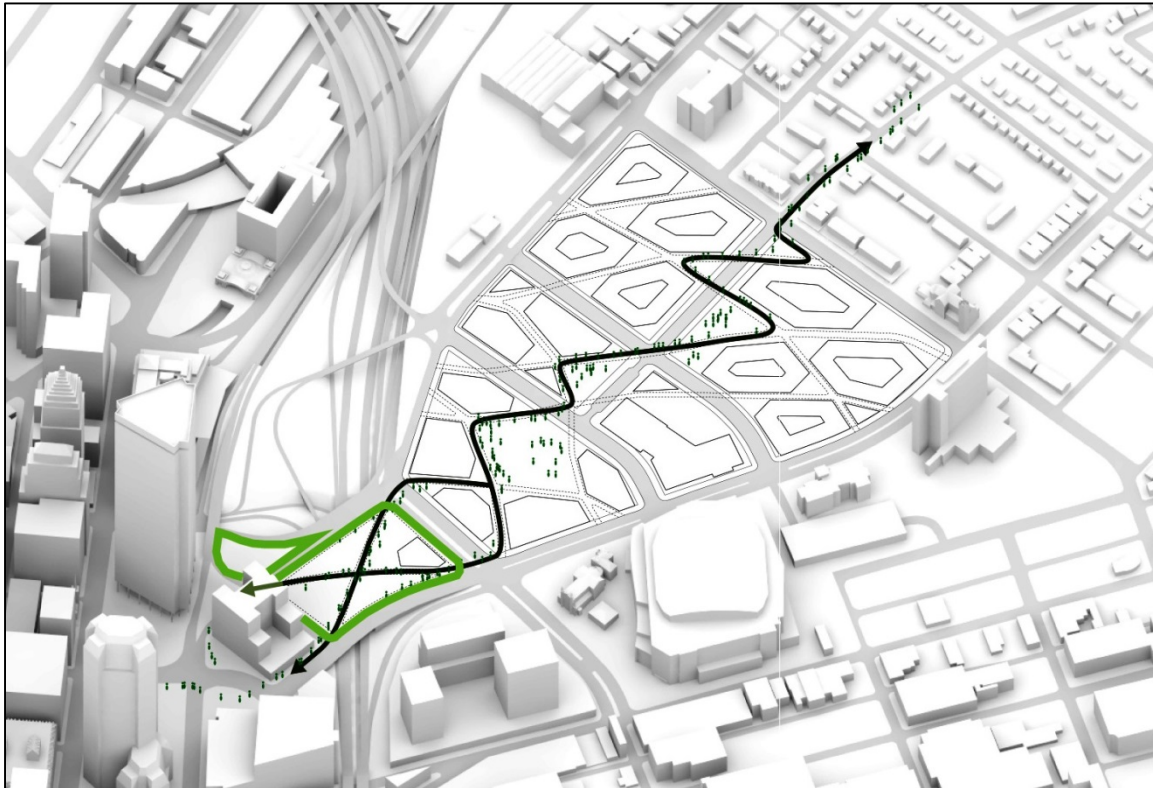


Figure 14: CONNECT: Conceptual plan for seamless pedestrian connections from east to the Cap, to Downtown. Enlargement of conceptual pedestrian path to the east depicted in Figure 12 (prepared by Bjarke Ingels Group).

TRANSIT CONNECTIONS

The Project will allow commuters and residents of the Hill safer modal options to reach the transit hub of Downtown. The subway system is free within Downtown and to the North Shore. From Downtown, bus connections and light rail transit connections can be made to the full County transit system. The Greyhound and Amtrak stations are also in Downtown. (Figure 15)

EDUCATION CONNECTIONS

The Cap will provide a link to education institutions in Downtown and North Shore. For example, the North Side campus of the Community College of Allegheny County (**CCAC**) is accessible from a subway stop on the North Shore. In FY2014, 130 students living in the Hill District attended CCAC, and a portion travelled via public transit from the Hill District to the North Side CCAC campus. The walking and biking route through the Cap to the subway provides a free and faster means of transportation to the community college than bus or car travel. (Figure 16)

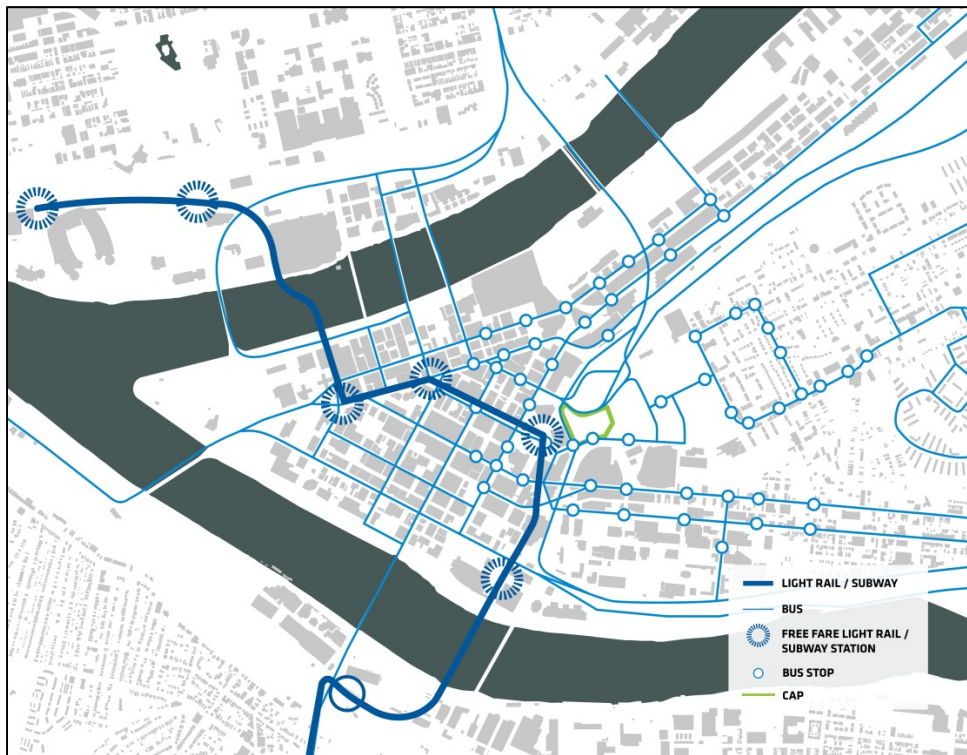


Figure 15: TRANSIT: The Cap is very close to free subway station (655 feet). The Cap will provide for a new bus stop, and related infrastructure work will provide for more efficient bus re-routing for in Lower Hill.

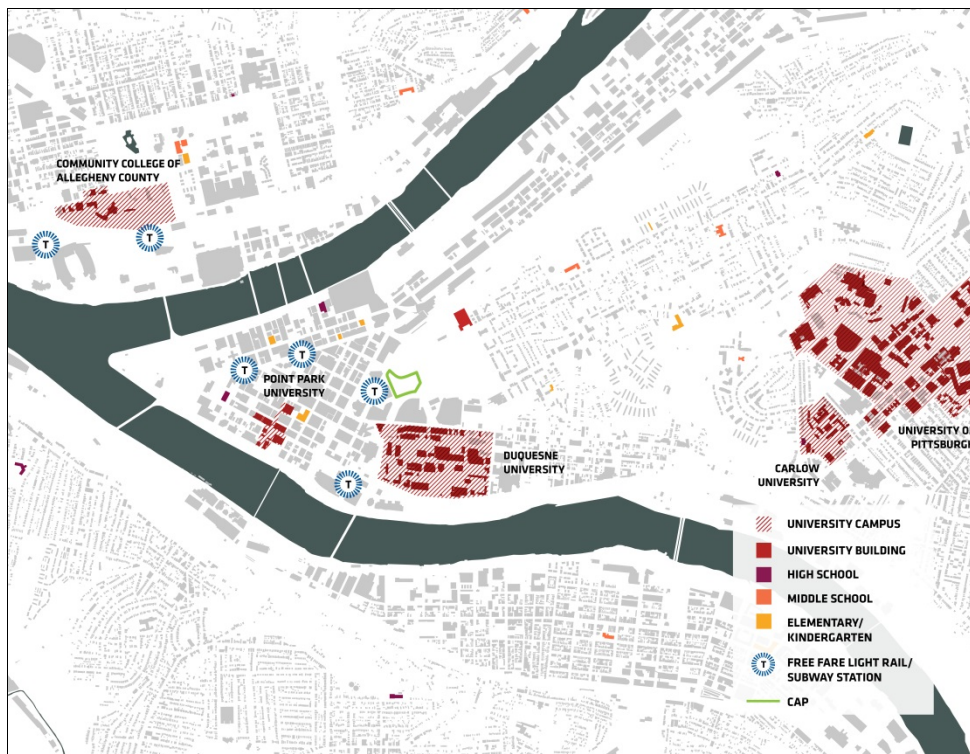


Figure 16: EDUCATION: The Cap will provide access to education institutions in Downtown and North Shore.

DESTINATION AND SERVICES

The Cap will provide a safe link to Downtown and to the free subway line, and to various destinations and cultural institutions (symphony, dance, opera, theater, science center, convention center). Downtown is the center of financial, business, legal and municipal services and provides shopping and other amenities. Recreational opportunities are available in Downtown and the North Shore (Point State Park, North Shore Riverfront Park, the riverwalk and trails). (Figure 17)



Figure 17: DESTINATION AND SERVICES: The Cap will provide safe access to Downtown attractions, services and destinations.

BICYCLE NETWORK

The Cap will improve and add to the existing bicycle network in and around Downtown and the Hill District. In 2014, new dedicated bike pathways were installed in Downtown Pittsburgh. Along Centre Avenue east of the Cap site is an existing shared use roadway designated by the City for bike travel. As part of the Lower Hill redevelopment efforts, a dedicated bicycle lane will be added to the southern lanes of Centre Avenue heading toward the Hill District between Crawford Street and Washington Place. It is expected the Cap bicycle pathways will tie into this network. In addition, Healthy Ride Pittsburgh, the City's bike share program that launched in

2015, provides bicycles for short-term from 50 solar-powered stations located throughout the City. It is intended that a new bike share station will be incorporated on the Cap site. These efforts at the Cap site will provide for a safer and accessible bicycle network for users. (Figure 18.)

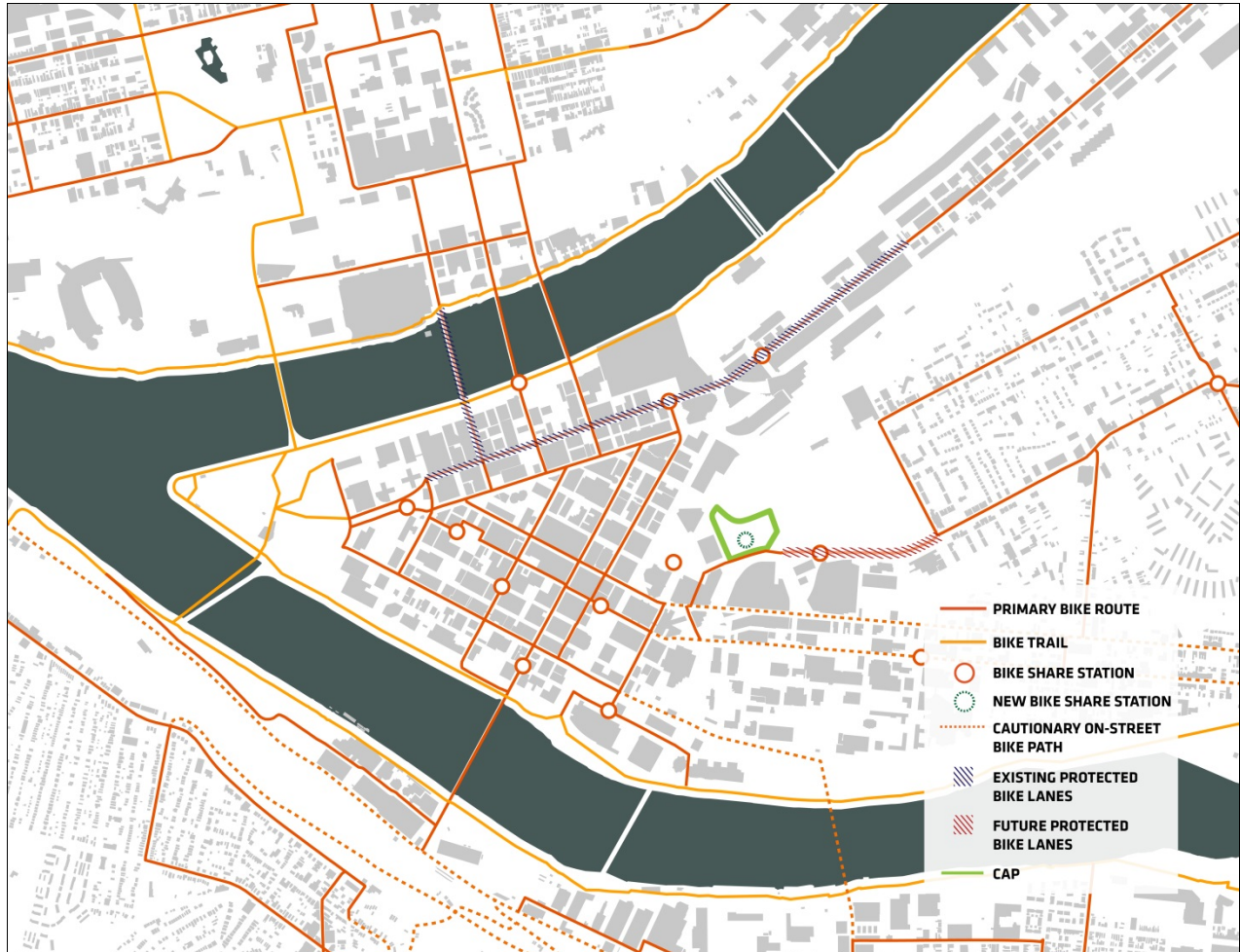


Figure 18: BICYCLE NETWORK: The Cap will add to and improve the existing and planned bicycle network in Downtown and the Hill District by adding new bike pathways and bike share station.

Revitalize

The Cap is a key component in the efforts to redevelop the Hill District. The Urban Redevelopment Authority of Pittsburgh (**URA**) has stated that the Project is building “critical infrastructure that will leverage further development, create jobs and provide added opportunities to the greater Hill District community.” (See page 17)

The development potential of the Hill District is significant. There are over 2,000 vacant properties (lots and buildings) in the Hill District. This is 53% of all parcels in the Hill. (Figure 19)

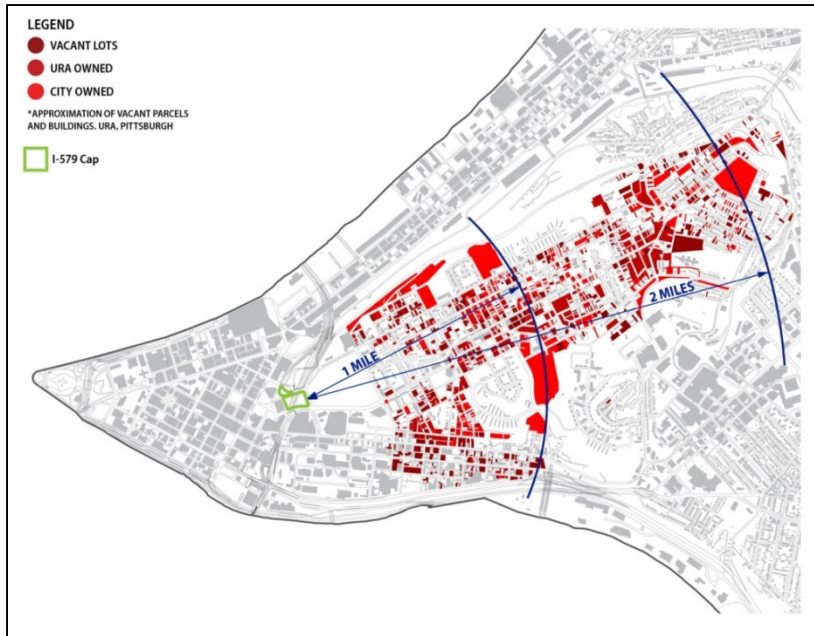


Figure 19: VACANT PROPERTY: The Cap will support larger redevelopment efforts related to vacant lots and buildings in the Hill District.

The community has been actively involved in planning the revitalization of the Hill District. The community has developed a conceptual framework to guide further development in the Hill District, including non-displacement strategies (Greater Hill District Master Plan), a plan for design and redevelopment of the Centre Avenue corridor in the Middle and Upper Hill (Centre Avenue Corridor Plan), a greenspace plan (The Hill, a Village in the Woods- Greenprint Concept and Design Proposals), and plan focused on vacant property (Hill District Vacant Property Strategy). ([Attachment 7](#))

Transportation challenges

Prior to construction of I-579, a seamless urban fabric connected the Hill District to Downtown. Today, the two neighborhoods are divided by a freeway trench and a tangle of interchanges providing only minimal pedestrian access. The Project site itself has an approximately 20-foot elevation change from the lowest western corner to the highest northeastern corner. These conditions result in a discontinuous nature for people who bike/walk to work between Hill and Downtown. In addition to the poor connectivity, there are high-volume cross streets, and substandard intersection crossings surrounding the Cap site and nearby ramps to I-579 at Bedford Avenue. With respect to crash data in the surrounding intersection and ramps of the Project site, Pennsylvania Department of Transportation (**PennDOT**) recorded 157 incidents of crashes in the area between 2010-2014, some of which involved pedestrians and cyclists. There is an insecurity due to traveling in mixed traffic. People have to cross busy roadways, and some jaywalk to do it. Cyclists navigate in and out of traffic. These incidents point to the general substandard nature of the surrounding site. The Project will generally improve safety for all types of transportation in these areas. Existing substandard conditions at the Cap site are depicted in [Figures 20-25](#).



Figure 20: Crossing at Chatham / Bigelow – looking south.



Figure 21: Crossing at Chatham / Bigelow, looking north.



Figure 22: Uninviting pathway into Hill, looking east



Figure 23: Open trench above I-579, a barrier between Hill District and Downtown, looking north.



Figure 24: Substandard, discontinuous sidewalk along Webster Avenue Bridge used by pedestrians.



Figure 25: Non-ADA compliant pathways.

Description of Transportation Solutions

The construction of a Cap over the below grade I-579 will provide transportation solutions to significantly improve the safety of pedestrians and bicyclists around the Cap area by providing for the elimination of the substandard discontinuous sidewalk along the Webster Avenue Bridge used by pedestrians; the reconstruction and upgrade of the pedestrian crosswalk at the Bigelow Boulevard / Chatham Street intersection; the reconstruction of the severely deteriorated sidewalks along the perimeter of Project site including Bigelow Boulevard, Chatham Street, Washington Place and Centre Avenue; the construction of a new ADA compliant walkway from Seventh Avenue and the new crosswalk at Bigelow Boulevard / Chatham Street including curb cut ramps, pedestrian pushbuttons and audible countdown pedestrian signal heads; the construction of ADA compliant walkways throughout the new urban space to connect with the Washington Place crosswalks; incorporation of bicycle and pedestrian signage; improving safety in the heavily traveled Centre Avenue and Webster Avenue / Bigelow Boulevard overpass bridges; installing appropriate path lighting, as needed for safety of all users; and adding landscaping, benches, and resting areas for path users. (Figures 26-27).



Figure 26: BEFORE: Current condition of Centre Avenue looking west to Downtown over I-579.

Figure 27: AFTER: Conceptual layout of Cap providing an inviting, safe, accessible connector to Downtown over I-579, and future new bus stop.

Other transportation solutions include providing pedestrian and bicycle access to Downtown, the center of the public transit system, including the Steel Plaza subway station approximately 650 feet away. A new bus stop will be located at the Cap site on Centre Avenue that will encourage users to utilize public transit. The Project site will anticipate a link to a proposed bus rapid transit (BRT) system³ (currently in its environmental review stage) which will connect Downtown to Oakland, the region's two largest employment centers. Other Project related improvements include stormwater management, employing efficient lighting systems, providing noise mitigation, giving new purpose to underutilized parcels of land close to Downtown, and enhancing public open space programming opportunities.

³ BRT for the Downtown – Oakland – East End Corridor is a strategy to enhance economic development and community revitalization prospects through improved transit. The project is being advanced by a collaborative, known as GetTherePgh (www.GetTherePgh.org) comprised of educational and medical institutions, civic and business associations, transportation organizations, neighborhood groups and government agencies.

The Project is a key component of a larger effort to revitalize the Hill District

The Cap is a key element in a larger effort to revitalize the Hill District. These larger efforts also have a focus on providing “ladders of opportunity” for residents of the Hill District. The Project will make these broader development efforts more successful and impactful to the Hill District and the City as a whole. The following identifies some of these expanding efforts:

Development of Adjacent 28-Acres

Included in the larger efforts to redevelop the Hill District is the development of the 28-acres of vacant land to the east of the Project site with housing, retail and commercial.

INFRASTRUCTURE

The Civic Arena which was located on the 28-acre site has been demolished. With state and local funding, the Authority is now constructing a street grid and infrastructure improvements that are needed for the land to be developed. Construction of the primary streets will be completed in early 2017. (Figures 28-29)

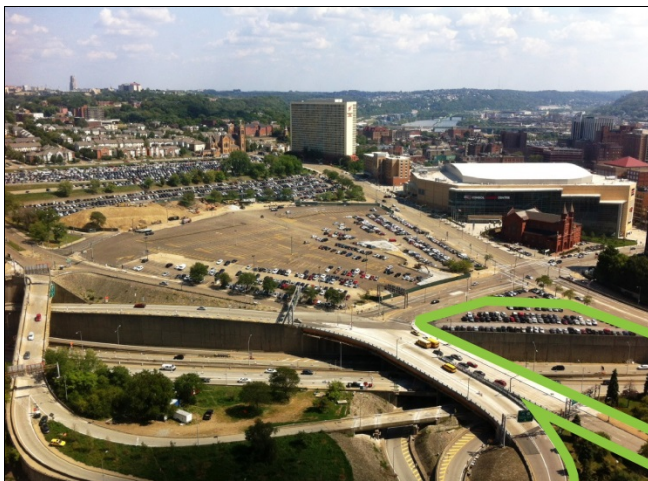


Figure 28: 28-ACRE SITE CLEARED FOR DEVELOPMENT: Demolition of Civic Arena completed in 2012, creating current 28-acre development site



Figure 29: STREETS UNDER CONSTRUCTION: Blue designates new primary streets currently under construction.

The Authority is also undertaking the construction of the new intersection at new Street 1 and Centre Avenue this summer. This intersection project is funded in part through the United States Department of Transportation (**US DOT**) Transportation Alternatives Program (**TAP**). The Authority responded to US DOT's SEP 14- Local Labor Hiring Preference Pilot Program notice and on November 11, 2015 Federal Highway Administration (**FHWA**) approved the Authority's local hire work plan for use on this TAP project. This allows the Authority to require that the contractors make good faith efforts to provide that 20% of the work-hours are performed by residents of the greater Hill District. The Authority is interested in applying its local hire work plan to the construction of the Project if permitted by FHWA regulations.

PRIVATE DEVELOPMENT

In December 2014, a Lower Hill Preliminary Land Development Plan (**PLDP**) for a mixed-use development on the 28-acre site ([Figure 30](#)) was approved by the City of Pittsburgh Planning Commission, and a Specially Planned Zoning District was established for the area by action of Pittsburgh City Council, both including the concept of the Cap ([Attachment 4](#)).



Figure 30: The Cap in relation to the Illustrative plan of the mixed-use development.

Pittsburgh Arena Real Estate Redevelopment L.P. (**PAR**) is a private entity that holds the rights to purchase and develop the parcels of the 28-acre site. PAR anticipates that the mixed use development will attract over \$379 million in private investment, create almost 4,000 jobs during construction and 3,000 permanent jobs. PAR has expended over \$3 million for the master plan and other pre-development costs for the Lower Hill. The development of the 28-acre site is proceeding pursuant to a Comprehensive Option Agreement dated September 11, 2014 among the Authority, URA and PAR. PAR is currently working toward the first developments on the site which are expected to be an office building and housing. PAR has announced that it has chosen McCormack Baron Salazar as its lead housing redeveloper and that a minority housing redeveloper will be chosen through a request for proposals process that is currently underway.

COMMUNITY COLLABORATION AND IMPLEMENTATION PLAN (CCIP)

In September 2014, PAR and the “Lower Hill Working Group” (a Hill District community negotiating body) entered into a Community Collaboration and Implementation Plan in order that the neighborhood could benefit from the opportunities created by the 28-acre redevelopment, with the primary goals and objectives being jobs, workforce development, local inclusion, business opportunities and partnerships, housing, community development coordination, cultural and community legacy initiatives and communication/ tracking / reporting. A Community Collaboration Executive Management Committee has been established to oversee the implementation of the plan. ([Attachment 4](#))

CREATION OF GREATER HILL DISTRICT REINVESTMENT AND DEVELOPMENT FUNDS

The City, County and Pittsburgh Public School District (**Taxing Bodies**) are each participating in a plan that is intended to leverage private investment in the redevelopment of the Lower Hill to provide funding for the redevelopment and revitalization of the greater Hill District. In 2015, pursuant to the PA Local Economic Revitalization Act (**LERTA**), each of the Taxing Bodies enacted legislation designating the 28-acre development site as a LERTA district. Pursuant thereto, each development in the 28-acre site is exempted from real estate taxes for the first 10 years (up to \$250,000 / year/ parcel). On the condition that the property owner instead makes payments to the URA for deposit to Hill District reinvestment and development funds. The URA will use the money in the reinvestment and development funds for investments, infrastructure and redevelopment activities in the greater Hill District. It is projected that these funds will receive approximately \$40M over the term of the LERTA district..

Extension of Affordable Housing at Crawford Roberts

In the early 1990s, Crawford Square was constructed just east of the 28 acre site with 194 low-income units (60% AMI) in the 348 unit development. In March 2016, as the covenants providing for the affordable housing were set to expire, the City assisted in restructuring the financing with McCormack Baron Salazar, and in so doing, the affordability of the units was extended for another 30 years. In addition, 40 vouchers will be provided by the Housing Authority of the City of Pittsburgh allowing people with incomes below 30 percent of the AMI to move into some of the affordable units.

US Department of Housing and Urban Development (HUD)- Choice Neighborhoods Application

In February 2016, the City and the Housing Authority of the City of Pittsburgh jointly applied for a HUD \$2 million (\$500,000 planning and \$1.5 million early implementation) Choice Neighborhoods Planning Grant for the Bedford Dwellings public housing site located in the Hill. Bedford Dwellings (see [Figure 11](#)) is the oldest and largest (411 units) public housing development in the City. Bedford Dwellings, after decades of neglect, economic dislocation and abandonment is seeing development pressure. The grant would support a planning process to give residents a voice in shaping their future so that they may benefit from the economic development opportunities that are starting to emerge.

II. Project Location

Geospatial location and map

The Project is located in the 2nd Ward in the City of Pittsburgh, Allegheny County as depicted below is bounded by Chatham Street, Centre Avenue Bridge, Washington Place and Bigelow Boulevard Bridge, together with land north of Bigelow Boulevard. (Figure 31) The Project site includes air space above the I-579 highway and adjoining land parcels. Coordinates of the center point of the Project site are 40.440881, -79.992737.

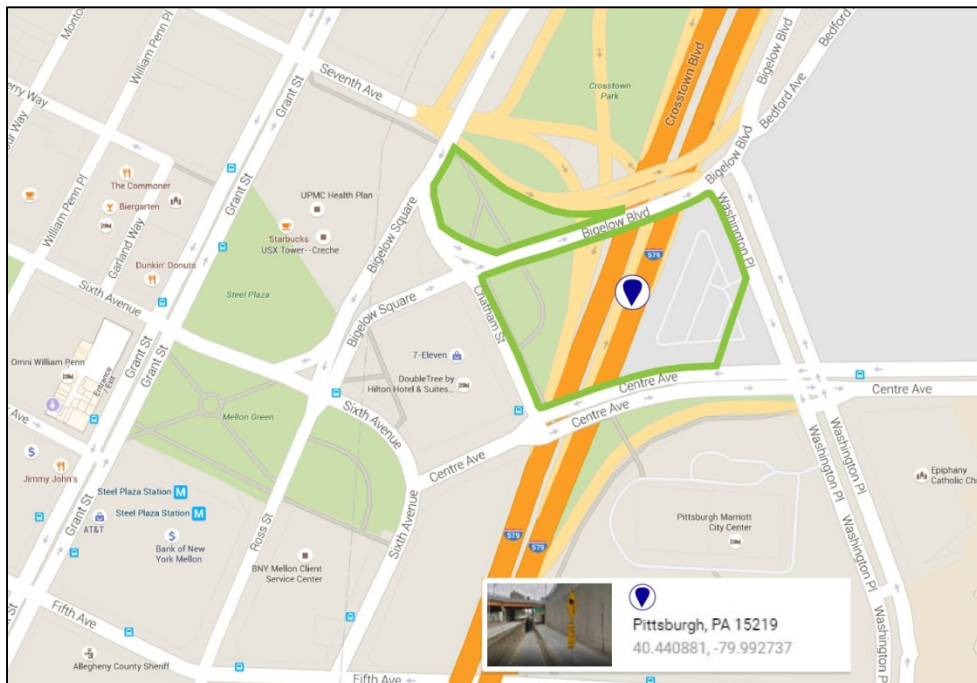


Figure 31: Location of Project site (in green border).

Demographics

The Hill District includes the Crawford-Roberts, Middle Hill, Upper Hill, Bedford Dwellings and Terrace Village census tracts.⁴ (Figure 32) The overall Hill District population dropped from 53,648 in 1950 to 9,457 in 2013 (2013 U.S. Census). It is expected that the Project and larger development efforts will help turn this declining population trend around.

The 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. In 2013, the Hill District community had a 21.2% unemployment rate, over double the national average. Figure 33 sets out the demographics with respect to population, means of transportation to work and availability of vehicles, in relation to the City and County as a whole.

⁴ The historic Lower Hill, as shown on Figures 8 and 32, currently has no population.



Figure 32: The Cap location in relation to the Hill District neighborhoods.

	Allegheny County	City of Pittsburgh	Hill District
Demographics (2009-2013 US Census)			
Population	1,226,933	306,062	9,457
% Unemployment Rate	7.9%	9.6%	21.2%
% People Below Poverty Level	12.9%	22.6%	41.0%
Median Household Income	\$51,366	\$39,195	\$18,827
Means of Transportation to Work (2010-2014 US Census)			
Workers 16 years and older	592,946	143,604	2,829
Vehicle	81.2%	65.4%	46.3%
Public transportation (no taxi)	9.1%	16.9%	34.0%
Walking	4.2%	10.9%	16.6%
Biking	0.5%	1.8%	0.0%
Other (taxi, worked at home)	4.9%	5.0%	3.1%
Occupied Housing Units (2009-2013 US Census)			
No Vehicle Available	13.9%	24.7%	59.5%

Figure 33: Demographic information of Hill District in relation to City of Pittsburgh and Allegheny County.

III. Project Parties

The Project is a priority for the region and is supported by state and local government, public authorities, elected officials, Downtown and Hill District community organizations, private businesses, non-profit organizations, philanthropic foundations and other interested stakeholders

Applicant

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

With respect to construction oversight, in the past 17 years the Authority 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, 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). Currently, the Authority has started the first phase of infrastructure work in the Lower Hill for construction of a new interior street grid. With respect to federal transportation funded projects, the Authority 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 Authority received the federal monies directly, pursuant to reimbursement agreements among Authority-City-PennDOT for infrastructure, and between Authority-PennDOT for parks.

Partnerships

US DEPARTMENT OF TRANSPORTATION. In 2014, the US DOT awarded a \$1.55m TIGER VI planning grant for the final design of the Project.

COMMONWEALTH OF PENNSYLVANIA. The Commonwealth of Pennsylvania has jurisdiction over I-579 at the location of the Cap. The Commonwealth, subject to the approval of FHWA, will provide a license permitting the Cap to occupy the airspace above I-579. Pursuant to the license agreement, the Commonwealth, through PennDOT, will provide for the construction of the Cap in accordance with the final plans and designs prepared by the Authority and approved by the Commonwealth and FHWA. The Commonwealth has committed \$3.4million to the Project from its Redevelopment Assistance Capital Program (**RACP**). Additional funding requests for the Project have been submitted to and are pending with the Commonwealth.

ALLEGHENY COUNTY. The Authority is working closely with the County with respect to the planning, design, funding and other activities related to the Project.

CITY OF PITTSBURGH. The City is active in the larger efforts to revitalize the Hill District. The Authority is working closely with the City with respect to the planning, design, funding and other activities related to the Project. The City will own the Project upon completion. The City has recently constructed pedestrian and signalization improvements at the Washington Place / Centre Avenue intersection (at the south east corner of Project site).

URBAN REDEVELOPMENT AUTHORITY OF PITTSBURGH. 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 a portion of the land that will become part of the Project and will transfer this land to the Authority prior to the start of construction. The Authority is working closely with the URA with respect to the planning and other aspects of the Project.

PITTSBURGH ARENA REAL ESTATE REDEVELOPMENT LP. PAR, related entity to the Pittsburgh Penguins hockey club, holds an option to develop the 28-acre site east of the Project. PAR has worked with the community through the CCIP document to address matters with respect to the 28-acre development such as job creation, local inclusion and workforce development. PAR will provide \$900,000 in funding for the Cap. PAR engaged Clayco and McCormack Baron Salazar (MBS) to redevelop specific parcels on the 28-acre site. PAR and MBS engaged Bjarke Ingels Group (BIG) to provide additional planning concepts.

Community representatives

Community representatives include: U.S. Senator Robert P. Casey, Jr., U.S. Senator Patrick J. Toomey, U.S. Congressman Mike Doyle, Allegheny County Executive Rich Fitzgerald, City of Pittsburgh Mayor William Peduto, State Senator Wayne D. Fontana, State Representative Jake Wheatley, Jr., City Councilman R. Daniel Lavelle, County Councilman Dewitt Walton, Hill Community Development Corporation, and Hill House Association.

Related parties

The Authority is coordinating with or receiving support from a wide range of local and state agencies, officials, community groups and related stakeholders to help move the Project forward ([Attachment 9](#)): 3 Rivers Wet Weather, A. Phillip Randolph Institute, Action Housing, ALCOSAN, Allegheny Conference on Community Development, Bike Pittsburgh, Carnegie Library, Clayco, Community College of Allegheny County, Duquesne University, Elmhurst Group (DoubleTree), Envision Downtown, Green Building Alliance, Hill Community Development Corporation, Hill House Association, Jones Lang LaSalle, Marriott City Center, McCormack Barron Salazar, PA Department of Community and Economic Development, Pittsburgh Bike Share, Pittsburgh Downtown Partnership, PA Environmental Council, Pittsburgh Gateways, Pittsburgh Green Innovators, Pittsburgh History & Landmarks Foundation, Pittsburgh Parks Conservancy, Pittsburgh Penguins, Pittsburgh Public Schools, Pittsburgh Water and Sewer Authority, Port Authority of Allegheny County, Redevelopment Authority of Allegheny County, Riverlife, Southwestern Pennsylvania Commission, Sustainable Pittsburgh, UPMC, Uptown Partners, Urban Redevelopment Authority of Pittsburgh, VisitPittsburgh.

IV. Grant Funds and Sources / Uses of Project Funds

Project sources and uses

The following table shows the committed sources and uses of funds for the Project. (Figure 34) The non-federal cash match sources include: i) \$3,400,000 from a RACP grant, ii) \$900,000 contribution by PAR, iii) \$390,000 contribution by Authority and URA, iv) \$1,750,000 from Richard King Mellon Foundation and Hillman Foundation and, and v) land match.

	USES	SOURCES	FUNDING TYPE
Construction	\$26,440,000	\$3,400,000	State
		\$390,000	Local
		\$900,000	Private
		\$1,750,000	Foundations
		\$20,000,000	TIGER VIII Request
Land Value	\$5,560,000	\$5,560,000	Land credit
TOTAL Project Cost	\$32,000,000	\$32,000,000	
	62.5%	\$20,000,000	TIGER VIII Request
	37.5%	\$12,000,000	Non-Federal Match

Figure 34: Project sources and uses.

The budget⁵ for the Project, which is now in final design, has been revised from last year's FY2015 TIGER application (then a \$33.69 million construction budget) due to refinements to the design and cost estimates. (Figure 35)

Roadway	\$283,755
Signing Pavement Marking and Delineation	\$550,000
Erosion and Sediment Control	\$150,000
Maintenance and Protection of Traffic	\$500,000
Surface Improvements	\$4,873,037
Structure	\$15,614,790
Highway Lighting	\$230,000
Traffic Signal Plan	\$370,193
General Conditions	\$1,464,589
Construction Inspection / Management	\$2,403,636
Total Project Construction Cost	\$26,440,000

Figure 35: Breakdown of estimated Cap construction budget.

Non-federal public funds committed to larger effort to reconnect the Hill

The Project is part of a larger effort to reconnect the Hill with Downtown. If the non-federal funds committed to this effort were recognized for the TIGER VIII project application, the non-federal share would be as follows. (Figure 36)

⁵ If necessary, it is possible to include only minimal surface improvements (e.g., 3 feet of soil, grass and a concrete pathway), and construct remaining pathways and surface finishes at a later date. This could reduce the Project construction cost to \$21,466,667. Such bifurcation and delay, however, would ultimately increase the final cost by \$1M due to the costs of remobilization and interim work that would be redone.

	SOURCES	PUBLIC FUNDING
Adjacent 28-acre development site		
<i>Site clearance / site preparation</i>	\$6,248,216	Local
<i>Design and construction of new street grid</i>	\$17,420,000	State / Local
Street improvements surrounding Cap / 28-acre development site		
<i>Intersection – Street 1 and Centre Avenue</i>	\$550,000	Local
<i>Centre Avenue storm separation</i>	\$2,106,000	State / Local
Design of Cap	\$618,000	Local
Sub-total	\$26,942,216	
TIGER VIII Project (Non-Federal)	\$12,000,000	State / Local
Total	\$38,942,216	
	33.9%	\$20,000,000
	66.1%	\$38,942,216
		TIGER VIII Request
		Non-Federal Match
		\$58,942,216

Figure 36: Commitment to date of public non-federal funds for larger effort to reconnect Hill District.

Pending requests for additional funding

The following additional funding requests are outstanding for the Cap. ([Figure 37](#))

Multi-modal Transportation Fund - Transportation	\$3,000,000	State
Multi-modal Transportation Fund - Economic Development	\$3,000,000	State
Greenways, Trails & Recreation	\$250,000	State
Community Infrastructure Tourism Fund	\$250,000	Local
Gaming Economic Development Fund	\$500,000	State
Redevelopment Capital Assistance Program	\$5,000,000	State
Total	\$12,000,000	

Inquiries and applications are also pending with local foundations.
In addition there is a US DOT Transportation Alternatives Program (TAP) application outstanding for \$950,906.

Figure 37: Pending requests for additional funding.

There is strong support for the Project which we believe will be reflected in some of this additional funding being awarded. Schedule for review of these applications is not available at this time, but any future awards will be posted on the Project website as received (www.i-579captiger.com).

Land match

The Authority and URA are owners of parcels adjacent to the open air trench above I-579. The value of the land parcels will be used as local match. The portion of the Authority parcel (2-B-400) and the URA parcels (2-B-257, 2-B-104, 2-B-107) that are being used for the Project total approximately 1.5 acres. The value of this land is \$6,950,000, based on a May 2015 appraisal ([Attachment 5](#)), and \$5,560,000 (80% of the appraised value) will be used as local match. The future Cap structure over I-579 (1.5 acres) together with the adjacent land parcels (1.5 acres) make up the 3-acre Project site.

V. Selection Criteria

The benefits that align with US DOT's long-term outcomes are estimated as part of the Benefit Cost Analysis (BCA) and summarized below. More complete information is available in the technical appendix that accompanies this application ([Attachment 3](#)). As shown, some benefits are significant, while others are relatively small; health benefits and improved mobility are the largest categories of benefits. The following describes how USDOT's long-term outcomes criteria for TIGER grant applications relates to this Project.

Primary criteria

Safety

The completed Cap will provide for increased safety for all users in the area, including pedestrians, bicyclists, transit riders and commuters of all ages between the Hill District and Downtown corridor. Sidewalks are used where possible by existing pedestrians, but pedestrians and cyclists spend much of their trips in mixed traffic. More than 100 commuting pedestrians were observed jay-walking across busy roadways on a single day in April 2016. The Project would mitigate the insecurity felt by walkers and cyclists traveling in the area in mixed traffic. This is a relatively small benefit, estimated to be approximately \$52,000 when discounted at seven percent. This benefit and the accident reduction benefits generated by the elimination of other hazardous trips, however, results in \$1.8 million in overall safety benefits, assuming a seven percent discount rate. It should be noted that accident reduction benefits also would be expected as existing automobile drivers are induced to walk or bike to work, in lieu of driving. These benefits are not monetized nor included in the BCA, so the accident reduction benefits estimate is likely conservative.

Economic Competitiveness and Quality of Life

The Project will increase the economic competitiveness and livability for users by: reducing travel time for existing pedestrian commuters; reducing the operating costs associated with an automobile as drivers switch to cycling or walking to work; potentially increasing property values within certain distance of the Cap; and providing safe accessibility to jobs and services between the Hill, Downtown Pittsburgh, transit, and other key destinations near the Cap. New bicycle riders who are currently driving to work and other destinations, but choose to use the new Cap facility when it becomes operational, will generate savings in vehicle operating costs and reduced congestion. Based on the benefit-cost analysis conducted, these new riders will generate more than \$130,000 in reduced automobile use benefits. It should be noted that no vehicle operating cost savings were estimated for pedestrians who may divert from driving to walking to work.

In addition, bicyclists and pedestrians who currently travel in the proposed Cap vicinity, as well as new users, will benefit from the overall improvement. Existing walkers and riders will no longer need to travel more circuitous routes around the existing roadway network or traverse discontinuous or deteriorated sidewalks. Pedestrian time savings associated with being able to walk over the Cap, rather than around, are included in the BCA. Because of limited data, time savings for cyclists were not included in the BCA. New users are expected to be induced to use

the new accessible pathways because of the improved facility, addition of green space, and other public amenities. Approximately 10 percent of these new cyclists are likely transitioning from driving to this more active transportation mode. Mobility benefits per commuter cyclist are derived from estimates on the willingness to spend time to reach the safer and more directly connected trail. The improved experience for new cyclists only is estimated to generate \$10.1 million in societal benefits. Presumably, the pedestrian experience would also be enhanced, though no benefits were estimated for these users. The travel time savings generated by existing walkers because they will be able to cross over the Cap rather than take a more circuitous route are estimated to be \$4.2 million. Because walking and biking to work is also a form of exercise, as well as a mobility option, the benefit-cost analysis estimates health benefits of \$5.6 million will be accrued by new cyclists and pedestrians, assuming a discount rate of seven percent.

The addition of green space in the urban core is expected to increase property values within 800-1,500 feet of the Cap. This is supported by several studies that suggest an increase in property value of between one and three percent associated with proximity to green space. In the BCA, it is assumed that the urban park on the Cap will increase property values by approximately \$342,000.

To better quantify the potential impact of this Project, from an economic competitiveness standpoint, an estimate of jobs generated by the investment is made. The Council of Economic Advisors' (CEA) methodology as presented in a 2011 analysis assumes that for every \$92,136 of government spending, one job-year is created. Using the total cost estimate of \$26.44 million, this Project investment is expected to support 344 job years.

State of Good Repair & Environmental Sustainability

The Cap will provide some savings by reducing emissions and wear and tear on roadways due to reduced vehicle miles, and other benefits by implementing sustainability initiatives. With the improved facility, a portion of existing automobile drivers will choose to bike rather than drive to work and to other destinations. These new riders generate a savings in pavement maintenance because they are no longer driving on the roadways. They also reduce emissions by not driving an automobile. The savings associated with reduced wear and tear on the roadways and reduced emissions is estimated to be relatively small at approximately \$309,000. It should be noted, however, that other state of good repair and environmental sustainability benefits not easily quantified will be generated. For example, no public benefits related to emissions reductions and pavement maintenance savings were estimated for pedestrians who divert from their automobile. This is due to limited data and methodologies available to do so in a rigorous manner. As a result, the sustainability and state-of-good-repair benefits estimated in this BCA are likely conservative. The addition of green space on the Cap will support environmental sustainability directly, but the impact of this on air quality, storm water run-off, and other environmental considerations was not estimated.

Secondary Criteria

Innovation

The Mayor of the City recently issued an executive order in April 2015 to create a complete streets policy for the City to include improvements over the next five years aimed at making streets and other public spaces more accessible for pedestrians, bicyclists and public transportation

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. The disciplines involved include engineering, land use planning, economic development, housing, public safety, legal, funding and others. A list of entities and disciplines can be found under the Project Parties section of the application. The Authority has successfully worked with a similar set of cross-sector parties on past projects. The Project is the product of a robust interdisciplinary coordination and long-term planning process that has included the primary and supporting parties in addition to other local, state and federal agencies, legislators, community development organizations, community residents and businesses, and related stakeholders. State and local match of 37.5% indicates a strong level of commitment from partners.

VI. Results of Benefit-Cost Analysis

The valuation of benefits estimated for this Project is based on the US DOT guidance on the preparation of TIGER applications. It should be noted that benefits are primarily generated by new users who are induced to use the new Cap facility rather than drive their personal vehicle. Specifically, new cyclists and pedestrians will generate health benefits, as well as costs avoided that are associated with automobile travel.

In addition, existing riders and walkers generate safety benefits. Existing pedestrians also generate travel time savings; the Cap shortens the walk for people who walk today but are forced to take more circuitous routes to access their destinations. Walkers and riders are assumed to include commuters and travelers who are, for example, running errands, going to/from doctor's appointments and similar destinations.

The table below presents results for the Project. Using the discount rate recommended in the TIGER VIII Grant Program guidance (7%), the corridor improvements will result in:

- Total benefits of \$22.5 million in present value terms
- Total costs of \$23.8 million in present value terms
- Total net present value of (\$1.3) million, with a benefit-cost ratio (**BCR**) of 0.95.
- Internal rate of return of 6%.

Assuming a discount rate of three percent (3%) yields a BCR of 1.86, indicating that a \$1 investment in the Project will yield \$1.86 in societal benefits. The following presents the benefits monetized and discounted at seven and three percent ([Figure 38](#)).

A full discussion of the methodology, assumptions, and results of the analysis is provided as an attachment to this application in the Benefit-Cost Analysis Technical Memorandum. ([Attachment 3](#))

BENEFIT		7%	BENEFIT		3%
Safety		\$1,800,000	Safety		\$3,300,000
Economic Competitiveness & Livability		\$20,400,000	Economic Competitiveness & Livability		\$47,000,000
State of Good Repair & Environmental Sustainability		\$300,000	State of Good Repair & Environmental Sustainability		\$800,000
Present Value (PV) of Total Benefits		\$22,500,000	Present Value (PV) of Total Benefits		\$51,100,000
COSTS		7%	COSTS		3%
Capital Costs		\$22,100,000	Capital Costs		\$24,400,000
Maintenance Costs		\$1,700,000	Maintenance Costs		\$3,100,000
PV of Total Costs		\$23,800,000	PV of Total Costs		\$27,500,000
Net Present Value (NPV)		-\$1,300,000	Net Present Value (NPV)		\$23,600,000
Benefit Cost Ratio (BCR)		0.95	Benefit Cost Ratio (BCR)		1.86

Figure 38: Results of Benefit Cost Analysis for Project

VII. Project Readiness

The Project is currently in final design. All pre-construction activities for the Project, including local, state, and federal requirements, are scheduled to be completed by May 2017. With approval of funding, construction is anticipated to begin in 3Q 2017, and will last 24 months.

The Design Field View (DFV) and Type, Size and Location (TS&L) submissions for the Project have been reviewed by FHWA and approved by PennDOT, including Lou Ruzzi, PE (PennDOT District 11-0 Bridge Engineer and chair of AASHTO Subcommittee on Bridges and Structures - T-20 Tunnels). It has been determined that the structure is considered a bridge structure and not a tunnel. Nevertheless, certain tunnel design aspects will be considered and have been included in the Project budget, such as lighting, fire suppression, and signage.

The Authority is working with PennDOT and FHWA on the Project. I-579 is under the jurisdiction of PennDOT. PennDOT will permit the construction of the Project in the air rights above I-579 through a license agreement among the Commonwealth of Pennsylvania, acting through PennDOT, the Authority and the City ([Attachment 6](#)). The Project meets all the requirements for environmental categorical exclusions. The Project is a Class II federal action requiring a Level 1B Categorical Exclusion Evaluation (CEE). The Level 1B CEE was approved October 2, 2015. By action of the Southwestern Pennsylvania Commission (SPC) of September 28, 2015, the Project was added to the fiscally-constrained project list of the *Mapping the Future: The Southwestern Pennsylvania Plan* (the SPC Long-Range Plan).

Financial Feasibility

There is \$12 million committed in state, local and private sources. (There are additional funding applications pending which if received would improve the non-federal match for the Project (see pages 26-27).) The TIGER VIII request, if awarded, will complete the funding needed to construct the Cap project.

Technical Feasibility; Assessment of Project Risks and Mitigation Strategies

The Project does not present any technical risks or challenges, or known issues with respect to right-of-way acquisition, permitting, necessary agency approvals. The Project is being managed through PennDOT's Engineering and Construction Management System (ECMS) protocols for design review and construction procurement.

VIII. Federal Wage Rate Certification

Federal wage rate certification signed by Authority (requirements of subchapter IV of chapter 31 of title 40, US Code) is included as ([Attachment 8](#)).

IX. Attachments

This narrative and attachments referenced in this TIGER VIII application and other supporting information can be found at the [I-579 Cap Urban Connector Project website](#), or by visiting www.i-579captiger.com. The attachments are:

Attachment 1:	Narrative
Attachment 2:	Project Information Sheet
Attachment 3:	Benefit Cost Analysis (BCA)
Attachment 4:	Lower Hill Planning Documents
Attachment 5:	Funding Acknowledgments; Land Appraisal
Attachment 6:	Project Engineering Documents; Site Control
Attachment 7:	Related Planning Documents of Hill District
Attachment 8:	Federal Wage Rate Certification
Attachment 9:	Letters of Support
Attachment 10:	Related Information