

A: Peer Cities Highway Capping Memo

B: **Committee Members**

Community Vision Workshop #1 Board Displays and Summary C:

D: Survey #1 Summary

E: Vine Street Aerial

F: Community Vision Workshop #2 Board Displays and Summary

G: Survey #2 Summary

H: **Decision Matrix**

Traffic Modeling Summary I:

J: **Equity Analysis**

K: Maintenance and Operations Memo

APPENDIX A:

PEER CITIES HIGHWAY CAPPING MEMO

Infrastructure Program Coordination
Office of Transportation, Infrastructure & Sustainability
1401 JFK Boulevard, 9th Floor
Philadelphia, PA 19102

Peer Cities Highway Capping Memo

To: FILE, Chinatown Stitch project

From: Megan Clarkin, Chris Puchalsky, Jonathan Zisk, Bailey Bradford

Date: May 23, 2023

Purpose

Cities across the country continue to grapple lasting impacts of highway construction that divided downtowns from neighborhoods and disrupted many established minority communities. Neighborhood groups and advocates across the country highlight the need to physically reconnect communities by building "caps" or "stitches" over highways. A cap or stich is any structure that covers a highway, and can include suspended decks, land bridges, or complete lids that can host parks and retail or simply decrease the visual presence of a highway.

This memo explores several peer cities' capping projects based on available public data. Information will be refined as interviews are conducted with appropriate staff from each city. Particular attention is paid to the impetus for each project, whether they were driven by community groups, government agencies, or private institutions. Similarly, this memo details each project's construction phasing and permitting. Costs for completed projects are listed at their original price, as well as in 2023 dollars per the FHWA's National Highway Construction Cost Index, where \$1 dollar in Q1 2003 is \$2.79 in Q3 2022.

This information will benefit Philadelphia as the city embarks on a feasibility study for capping portions of the Vine Street Expressway between Broad Street and 8th Steet. Lessons from peer cities will assist the project team in anticipating risks and strategizing for successful design, construction, and maintenance of capping projects in Philadelphia.

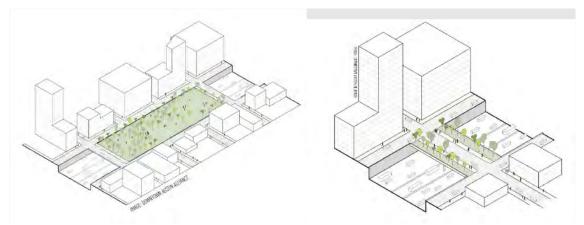


Figure 1: Basic rendering of a full highway cap (left) and a partial highway cap (right) (Source: Downtown Austin Alliance)

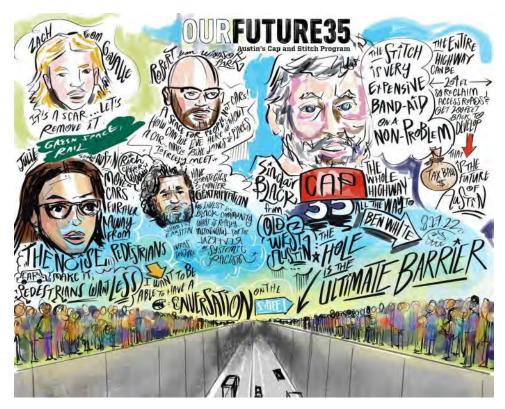


Figure 1.1: Our Future 35 Community Vision Artwork (Source: OurFuture35 / Ami PLasse)

Project Name: Our Future 35 – Austin's Cap and Stitch Program

Project Status: Developing Environmental Impact Statement

Estimated Design Completion Date: 2025

Estimated Cost Per Square Foot: \$416 per sq ft (see Figure 1.2)

Project Team: City of Austin, Texas DOT and Downtown Austin Alliance

- City of Austin Responsible for determining location of caps and stitches, designing enhancements and coordinating funding
- Texas DOT Responsible for obtaining environmental clearance for improvements, accommodating construction and coordinating funding
- Downtown Austin Alliance Responsible for <u>coordinating the community vision</u> by engaging stakeholders and advocating for downtown access.

Project Background: Before it was I-35, Austin's East Avenue was a large boulevard that served as a gathering place for ethnic communities. However, its 1950s transformation to an interstate displaced homes and businesses, removed green spaces, and created a socioeconomic barrier between East Austin and downtown. Today, the I-35 corridor is ranked as the second most gridlocked in Texas.

Project Description: TxDOT's I-35 Capital Express Central Project and partial reconstruction of I-35 offer an opportunity to reunite the community and provide spaces for all people to enjoy. Sections of I-35 adjacent to downtown will be sunk, making space for caps across the highway.

Engagement Process: The City went through the Urban Land Institute's process to receive initial recommendations on location, connectivity, and equity. After the release of the <u>ULI report</u>, public feedback was collected through formal community outreach. Similarly, TxDOT held public meetings and produced an online survey to identify public preferences for achieving equitable outcomes, bringing back green space and reconnecting communities to downtown.

Use Limitations:

- Buildings Potential uses on the cap can include food vending, farmers markets, working
 classrooms etc. The potential for these uses requires additional evaluations for structural
 impacts, height limitations, construction materials, parking, loading zones, and ADA accessibility.
- **Green Space** Potential caps will provide space for outdoor classes, lawn games, art fairs, story times, market days, and public recreation.

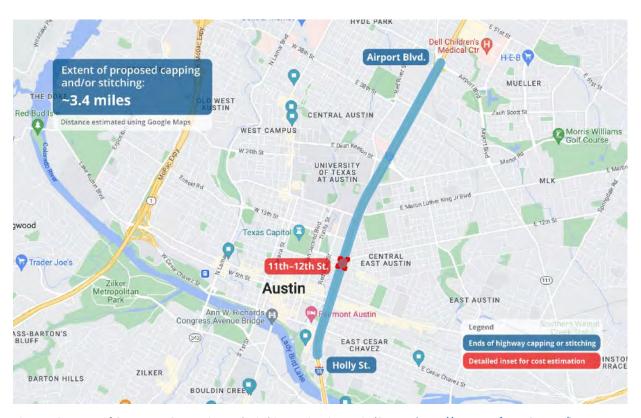


Figure 1.2: Extent of Our Future 35 capping and stitching project in Austin (Source: https://www.ourfuture35.com/)



Figure 1.3: Closer look at I-35 between 11th and 12th St. for capping cost estimation (Source: Engineer's Opinion of Probable Construction Cost (EOPCC) as prepared by <u>CAS, page 16</u>)



Figure 1.1: Promotional graphics for the Atlanta Stitch (Source: https://thestitchatl.com)

Project Name: The Stitch

Project Status: Planning

Estimated Design Completion Date: 2026

Estimated Cost Per Square Foot: \$1,100 (\$713 million / 610,000 Sq. Ft)

Project Team: Atlanta Downtown Improvement District (ADID), The City of Atlanta

Project Background: The construction of I-75/85 in the 1960s, known as the "Downtown Connector", effectively destroyed communities and disconnected many neighborhoods from Downtown Atlanta. In the early 2000s, Atlanta's master plan included a recommendation to cap the Downtown Connector. The plan was supported by neighborhood groups and downtown landowners, and eventually lead to the Vision Plan in 2015 that continues to guide planning processes for building the Atlanta "Stitch."

Project Description: The Stitch is in the last year of its planning phase and is expected to undergo engineering and design from 2024-2026. Current proposals include the construction of three different public spaces on top of the cap, including "Hospital Square," "Peachtree Green," and "Energy Park." Future community and stakeholder input will shape the nature of those spaces, but the project is expected to result in the creation of 14 new acres green space, enhancements to bus and rail transit networks, and increased opportunities for affordable housing and commercial use.

Engagement Process: After the Vision Plan of 2015, the Atlanta Downtown Improvement District (ADID) formed an advisory committee of stakeholders and funding partners to oversee feasibility studies and alternatives for implementation. The Vision Plan contains recommendations for conducting additional

stakeholder and visioning workshops to establish a clearer path forward for engagement activities. Similarly, the development of a public engagement plan and strategic communications plan is also recommended in order to successfully instill a sense of ownership in the project.

Use Limitations: The City is looking to pursue **air rights development** above the cap structure, which will require leasing considerations and agreement of terms with USDOT in order to realize a vision of affordable housing and commercial development.

The **Vision Plan evaluated maintenance and operational models** for other cap projects and determined that income sources for the parks (festivals, concerts, vending and special events) would not cover the total costs; additional sources such as assessments, sponsorships, public or private funding would be required.

Technical feasibility is being explored in the current phase. The structural integrity of the cap will likely require significant investment in order to support multi-story buildings above the tunnel. The potential for construction on the cap will be reflective of the load-bearing capacity of the tie-back walls that support the interstate.

Costs: Total estimated costs for the Stitch are roughly \$713 million, including the cost of buildings on top of the cap. Initial funding for planning, design and engineering were secured through grant awards (Atlanta Regional Commission, HUD and USDOT). A Reconnecting Communities grant application was submitted, which will include matching funds from the City of Atlanta and ADID.

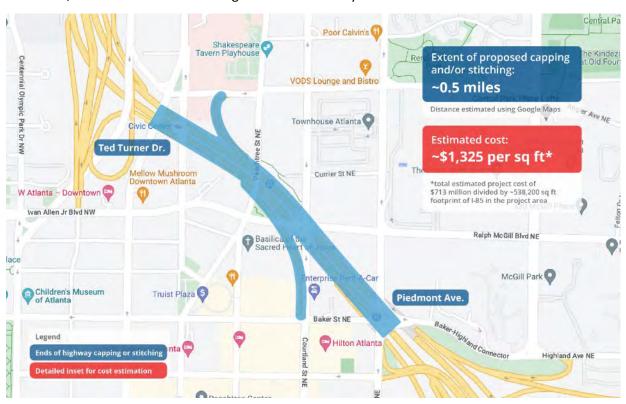


Figure 1.2: Approximate extent of The Stitch in Downtown Atlanta (Source: https://thestitchatl.com/project)



Figure 3.1: The completed Rose Kennedy Greenway, atop the Big Dig

Project Name: The Central Artery/ Third Harbor Tunnel Project, aka The Big Dig

Project Status: Completed

Project Team: Massachusetts Turnpike Authority, City of Boston, Bechtel/Parsons Brinckerhoff and Rose Kennedy Greenway Conservancy

- Massachusetts Turnpike Authority Responsible for overall project management.
- Bechtel/Parsons Brinckerhoff Responsible for design and construction.
- Rose Kennedy Greenway Conservancy Responsible for managing all aspects of the Rose Kennedy Greenway, including horticulture, programming, public art, maintenance and capital improvements.

Project Background: A six-lane elevated highway (I-93), known as the Central Artery, became one of the most congested in the United States by the early 1990s. In addition to accident rates four times the national average, the highway displaced over 20,000 residents and separated the North End and Waterfront neighborhoods from the downtown. To avoid further congestion and inefficient mobility in the future, the Massachusetts Turnpike Authority conceived of the Central Artery/ Third Harbor Tunnel Project.

Project Description: The Central Artery/Tunnel project involved two components: 1) Replacement of the 6-lane highway with an underground expressway beneath the existing roadway, ending at a bridge crossing of the Charles River and 2) the extension of I-90 through a tunnel beneath South Boston and Boston Harbor to Logan Airport. Significant engineering challenges plagued the project, including

<u>inaccuracies and unknowns associated with the subsurface soil conditions</u>. The project team encountered uncharted utilities, weak soil, unfavorable ground-water conditions, archeological discoveries and environmental issues that made tunnel construction complex and lengthy. Additionally, the project included the construction of four major highway interchanges and replacement of bridges.

At the completion of construction, the project established 45 parks and public plazas with water features and other amenities along the historic path of the Central Artery. Known as the Rose Kennedy Greenway, this element of the project opened in 2008 and is funded primarily via private donations to the Conservancy. The Greenway boasts historical and interpretative markers as well as maps throughout the parks. Most of the 30 acres downtown will remain open space, although 25% is set aside for development opportunities. The Conservancy, the Commonwealth of Massachusetts, the City of Boston and property owners adjacent to the park negotiated a BID to support park operations.

In addition to the Greenway, the project included other parks and landscaping along the Charles River and East Boston, shoreline restoration, and the construction of sections of Boston's Harborwalk.

Engagement Process: Based on the available public literature, it appears that City and State officials garnered support from stakeholders, organizations and neighbors who expressed concerns about the project prior to moving forward with design and construction.

Use Limitations: Prior to achieving a clean slate for public amenities and park space, the project team had to consider how to construct the tunnel underneath the existing elevated Central Artery without compromising the structure. Approximately one third of the project budget was dedicated to construction mitigation efforts in the community, which included keeping businesses open and operating and maintaining traffic capacity.

Costs: A post-construction analysis conducted through Boston University's Mega-Project Research Program found that the majority of cost escalations resulted from a lack of project integration in its design and construction. Significantly, the City's design-bid-build model hindered the ability of contractors to collaborate to the degree required. The project featured 118 construction contracts involved in the heavily technical, legal, regulatory, and economic issues surrounding design and construction. Looking back, the cost of conducting communication campaigns with adjacent communities, the public, regulatory agencies, and the public was underestimated.



Figure 3.1: Extent of the Big Dig in Boston and total project cost by estimated square footage Source: Boston.com)

Columbus, Ohio #1

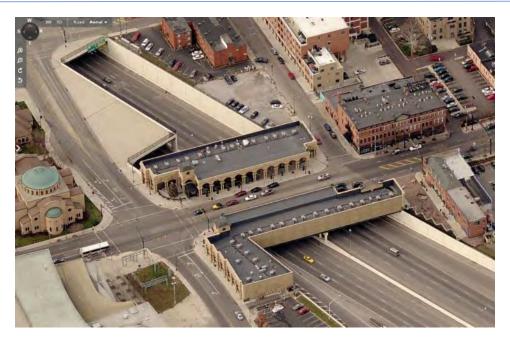


Figure 4.1: Union Station Cap in Columbus, OH

Project Name: Cap at Union Station

Project Status: Completed (2004)

Estimated Cost Per Square Foot: \$230 (\$460 per sq ft in 2023 \$)

Project Team: City of Columbus, ODOT and Continental Real Estate

- City of Columbus Responsible for coordinating between ODOT and property owners. Secured air rights for the property.
- **ODOT** Responsible for construction oversight.
- o **Continental Real Estate** Responsible for developing and constructing the project.

Project Background: Revitalization of the neighborhoods north of the I-670 corridor spurred the feasibility of the capping project as commercial interests solidified. Reconnecting the newly thriving commercial areas to Columbus' downtown became viable in 1996 when the Ohio Department of Transportation (ODOT) and municipal officials met with neighborhood groups to discuss widening I-670 from four to eight lanes. The Short North Business Association, specifically, wanted to ensure that business generated through the Convention Center would flow into the neighborhoods north of the highway. They requested more pedestrian-friendly interventions to encourage the crossing of the 200-foot-long spans across I-670. Over the next three years, city officials revised the scope to include an expanded bridge area along High Street and worked with Continental Real Estate to sign a Memorandum of Understanding (MOU) to develop the project.

Project Description: The Cap at Union Station represents a <u>commercial development project</u> encompassing three separate bridges across Ohio's Interstate I-670. One bridge permits through-traffic across the highway while **the two structures on either side of High Street support retail structures.** The project cost \$7.8 million and constructed 25,496 square feet of leasable space that re-imagined the existing "dead zone" as a seamless streetscape, complete with nine retails shops and restaurants.

Engagement Process: Efforts to plan and build the cap were led by the Columbus Downtown Development Corporation (CDDC). The group was founded in 2002 to pursue the recommendations in the Strategic Business Plan for Downtown Columbus. The final tenants of the cap were selected to draw business from crowds at the Convention Center and include a Cold Stone Creamery and luxury steakhouse.

Project Agreements and Easements: The MOU required permission from ODOT and Federal Highway Administration (FHWA) to construct the cap platforms as well as the <u>City obtaining clear title to air rights above the highway</u>. Once secured, Continental Real Estate would enter a ground lease for the platforms and construct the commercial facilities.

In order to obtain the required easements, the City agreed not to impede ODOT's ability to operate the interstate, including their ability to shutdown and evacuate the capped areas in case of emergency. Additional conditions include removal of windows on the rear of the buildings (facing the highway), restricted access to roof areas, and a prohibition on lighted signs or advertising visible to highway drivers.

Use Limitations: Obtaining required permitting from FHWA proved challenging, with the agency requiring fair market rent for use of the cap platforms, as they were going to be used for non-transportation purposes. The City came to an agreement, where Continental leased the platforms for \$1 per year in exchange for 10% of the development's ongoing profits funneled into City coffers. In case of future sale, the City would receive 10% of the sales price. Continental signed a 20-year lease with eight five-year renewal options.

The commercial uses atop the two bridge structures are designed to withstand vibrations from the highway below and a flexible joint allows the section of building on the bridge to move and the part anchored to the ground to stay in place. An insulated and heated concrete bay was designed to carry all the utilities (water, stormwater, sewer, gas, electric and communications) and maintenance access is provided in the buildings' interiors.

Costs: The City spent \$115,000 in preliminary architecture services to ensure the cap platforms were compatible with the highway design, with a reimbursement of \$75,000 by Continental as part of the MOU. ODOT contributed close to \$1.3 million for the construction of the cap platforms. In order to provide the required utilities, the City paid \$325,000 to extend the connections across the bridge.

All told the cap cost \$7.5 million in 2004, or \$19 million in 2022. At approximately 41,300 sq ft, the project would cost \$460 per sq ft today.



Figure 4.2: Extent of the Union Station Cap in Columbus, OH and total project cost by estimated square footage (Source: FHWA)

Columbus, Ohio #2

Project Name: Columbus Crossroads Project

Project Status: Planning

Project Team: City of Columbus, ODOT and MS Consultants

 City of Columbus – Responsible for determining location of caps and stitches, designing enhancements and coordinating funding

- ODOT Responsible for obtaining environmental clearance for improvements, accommodating construction and coordinating funding
- MS Consultants Responsible for coordinating the community vision by engaging stakeholders and advocating for downtown access

Project Background: Interstates I-70 and I-71 run through Columbus, Ohio's central business district. The two-mile long overlap of these highways is one of Ohio's most crash prone locations and is characterized by significant congestion.

Project Description: Columbus Crossroads is a \$1.3 billion undertaking to replace aging freeways and bridges, alleviate traffic congestion, reduce safety risks, and reconnect neighborhoods at the intersection and overlap of Interstates 70 and 71. Phase 4 of the Columbus Crossroads Project will reconnect downtown with Southside neighborhoods by expanding and improving three overpass bridges along High, Third, and Fourth Streets. The High and Third Street bridge caps will include onstreet parking, public art, green space and/or commercial development.

Engagement Process: ODOT contractor ms consultants facilitated over 400 stakeholder, community, and public meetings to develop Columbus' South Innerbelt Study. That plan is not yet publicly available.

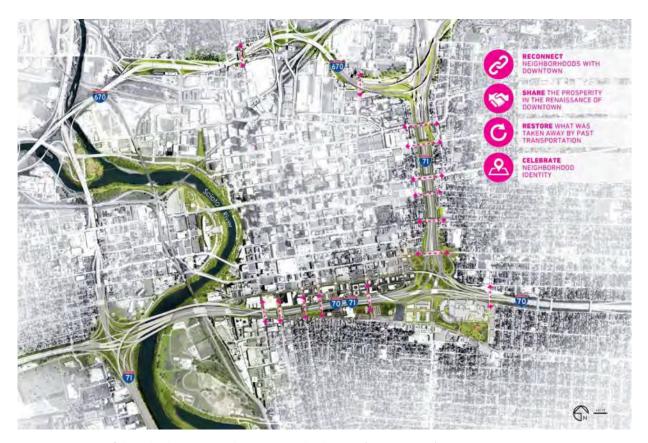


Figure 5.1: Extent of the Columbus Crossroads project in Columbus, OH (Source: ODOT)



Figure 5.2: Detail of the Columbus Crossroads project, Phase 4 bridges (Source: MKSK)

Dallas, Texas

Project Name: Klyde Warren Park

Project Status: Completed (2013)

Estimated Cost Per Square Foot: \$505 (\$839 per sq ft in 2023 \$)

Project Team: Texas Department of Transportation, City of Dallas and The Woodall Rodgers Park Foundation (Foundation)

- City of Dallas Owner of Klyde Warren Park
- o **TxDOT** Provided funding and contractor selection for the deck
- Woodall Rodgers Park Foundation Operates and manages Klyde Warren Park

Project Background: In the 1960s, the 366 Spur was built through a predominantly Black Uptown neighborhood on the edge of Dallas' downtown. This led to decades of decline in the area until the late 1980s, when real estate companies began to build on cheap vacant land in the neighborhood and established Dallas' first TIF to improve streetscapes and infrastructure. In the early 2000s, the Dallas real estate community raised \$1million for a feasibility study on capping the highway between their new buildings in Uptown and Dallas' downtown. Further interest from Texas Capital bank generated another \$2 million in donations to the project, and in 2004, the Woodall Rodgers Park Foundation was created to lead the project from design to operation.

Project Description: The capping over Woodall Rodgers Freeway created a <u>5-acre park</u> that acts as Dallas' "town square" and connects Uptown's arts district with the downtown business district. The park opened in 2012 and welcomes more than a million visitors each year and hosts 1,000 events annually.

The deck structure utilizes an innovative approach to support the park's uses, where 100 trenches act as planter boxes to accommodate tree root-balls and well as utility lines. The park also incorporates sustainable design elements, including LED light poles with solar panels, double purification systems for all five water features, and geothermal energy for cooling and heating its café and restaurant.

The City of Dallas owns the land and amenities, though the Woodal Rodgers Park Foundation has a 50-year contract to manage the park and its \$3 million annual operating budget.

Engagement Process: Not many details of the engagement process are available, but one article mentioned tension with near neighbors that had to be overcome. The project was broadly supported by local business interests to increase commercial connectivity within downtown, so there were few immediately impacted residential stakeholders.

Use Limitations: Once all the decking beams were in place, the depressed expressway became a tunnel. Although most of the provisions of creating a "tunnel" were accounted for during the design process, a code change required a fireproofing layer on the bottom of the structure. The tunnel design also included sprinklers and 28 jet exhaust fans in order to protect the structure and the park in case of fire.

In order to create a seamless patron experience of the park, the design included the closure of through streets and subsequent 18-foot-wide enhanced crosswalks at the park's four corners to assist people in accessing the site.

Costs: In total, cap and park cost \$110 million dollars, or \$193 million in 2023. At approximately 230,000 sq ft, the park would cost \$839 / sq ft today.

Through a public-private partnership, the project received \$20 million from the city, \$20 million in state highway funds, and \$16.7 million in stimulus funding. The remaining \$50 million were collected through private donations directly to the Foundation, including \$10 million from donor Kelcy Warren.

The Dallas Arts District Public Improvement District (PID) generates an estimated \$15.5 million annually to support the operations of Klyde Warren Park by assessing a tax of 25¢/\$100 on the \$6.2 billion of assessed property value in the district. The PID term was recently renewed and will run through 2031.



Figure 6.1: Extent of Klyde Warren Park in Dallas, TX and total project cost by estimated square footage.



Figure 6.2: Before and after view of Klyde Warren Park in Dallas, TX (Congress for a New Urbanism).

Pittsburgh, Pennsylvania

Project Name: Urban Connector Project aka Frankie Pace Park

Project Status: Completed (2021)

Estimated Cost Per Square Foot: \$260 (\$353 per square foot in 2023\$)

Project Team: Pennsylvania Department of Transportation, City of Pittsburgh and the Sports and Exhibition Authority of Pittsburgh and Allegheny County (Authority)

- City of Pittsburgh Responsible for the construction contract as well as ultimate ownership and operation of Frankie Pace Park.
- Sports and Exhibition Authority Responsible for coordinating with the City on administration of the project.
- o **PennDOT** Responsible for construction management and oversight.

Project Background: The three-acre park spans the recessed Interstate 579/Crosstown Boulevard reunites Pittsburgh's <u>Lower Hill District</u> with its downtown. In the 1950s and 60s, highway construction raised dozens of homes and businesses in the historically Black section of Lower Hill.

Project Description: The capping over Interstate 579/Crosstown Boulevard, created a 3-acre (123,000 sq ft) park that reconnects the Hill District to employment centers, educational opportunities, and services in Downtown Pittsburgh, while also acting as a community amenity. The bridge structure is comprised of pre-stressed concrete adjacent box beams and is designed for pedestrian loading. Columns were placed within the existing I-579 medians to support the overhead structure. Construction benefited from significantly reduced traffic due to the pandemic, which allowed for more aggressive scheduling.

The park utilizes green stormwater infrastructure strategies, where rain gardens and tree planters are incorporated into the park space to minimize runoff. The structure minimizes urban heat island effects while also mitigating noise and air pollution generated by the highway.

The park includes ADA-accessible pedestrian and bike paths, active recreation spaces, performance and education areas and a small classroom garden. New connections to the nearby subway station and pedestrian and bicycle routes were also established.

<u>Local artists played an integral role in the park's design</u>, creating a large public art installation. The community also wanted to ensure that their history also had a place in the park, where story walls feature local figures.

Engagement Process: Stakeholders and residents of the Hill District participated in the design process, with the first public meetings held in March, May and June 2016. A smaller subcommittee of eight volunteers from the community was more directly involved in decision-making. Public art and local history played a large role in the design of the park. As a result, a four-day design charette was held in December later that year in order to identify four artists to work on the project.

Costs: Federal funding through the TIGER Discretionary grant (\$20 million), state, local and private funding as well as a land match to make up the \$32 million total cost, or \$46 million in 2023. At approximately 130,000 sq ft, the cap would cost \$353 per square foot today.

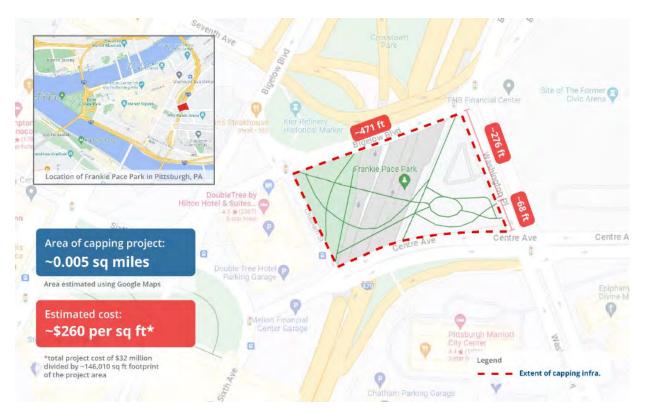


Figure 7.1: Extent of Frankie Pace Park in Pittsburgh, PA and total project cost by estimated square footage (Source: [])



Figure 7.2: Frankie Pace Park, Pittsburgh (City of Pittsburgh)

Project Status: Completed (2018)

Estimated Cost Per Square Foot: \$220 (\$468 per square foot in 2023\$)

Project Team: Pennsylvania Department of Transportation, City of Philadelphia, Parkway Council Foundation

- o **PennDOT** Responsible for planning, construction management, and oversight.
- City of Philadelphia Development and maintenance of parks.
- o Parkway Council -- Collected surveys on preferred uses for Logan Circle

Project Background: In the 1960s, the Vine Street Expressway, now I-676, was constructed from the Schuylkill to 18th Street. This phase of construction cut across the north side of Logan Circle, one of Philadelphia's five original squares and the southern terminus of the Benjamin Franklin Parkway. This severed Center City from cultural institutions and destinations on Logan Circle, including the Free Library's Parkway Central branch and Philadelphia's family courthouse.

Project Description: In the early 2000s, PennDOT determined that six bridges across I-676 between 22nd St and 19th St were in need of replacement. They decided the replace those six bridges with five new bridges that reimagined the flow of pedestrians and vehicles through the complicated intersection of the Benjamin Franklin Parkway and cultural institutions including the Philadelphia Free Library and the Barnes Museum. 21st St and 22nd St were replaced with conventional road bridges, while one large span was constructed to carry traffic along the Parkway, 20th St, and pedestrian traffic to the Free Library. A further two conventional road spans (with room for streetside planters) were built along 18th St and 19th St, while a pedestrian-only span between them connected Logan Square to the historic family courthouse via a new park.

Engagement Process: The Bridges over 676 project was notable for the minimal involvement of local advocates. While community groups including those from Chinatown and the Center City District have advocated for caps over I-676, their efforts were not directed towards the area in the scope of PennDOT's Bridges Over 676 Project. While some groups including Plan Philly cited projects including Dallas' Klyde Warren Park and Chicago's Millenium Park to advocate for a more extensive cap, PennDOT cited the cost tunnel-length cap as too high for their capital budget.

Costs: PennDot spend \$64.8 million on the project, equivalent to around \$103 million in 2023. At approximately 220,000 sq ft, the project would cost \$468 per sq ft today.



Figure 8.1: Extent of the Bridges over 676 Project, including Shakespeare Park and Pennypacker Park



Figure 8.2: Bridges over 676, including Shakespeare Park and Pennypacker Park (Ground Reconsidered)



Figure 8.3: Pennypacker Park, renovated Family Court Bridge (Ground Reconsidered)

Philadelphia, Pennsylvania

Project Name: Park at Penn's Landing

Project Status: Design, Construction Starting 2023

Estimated Cost Per Square Foot: \$630

Project Team: Pennsylvania Department of Transportation, City of Philadelphia, Parkway Council Foundation

- PennDOT Responsible for planning, construction management, and oversight of cap construction.
- o City of Philadelphia Responsible for Park Construction on cap.
- Delaware River Waterfront Development Corportation (DRWDC) -- Coordinated original master plan, early planning, and public outreach. Responsible for part of park construction and maintenance.

Project Background: In the mid 20th Century, the construction of I-95 separated Philadelpha's street grid from the Delaware River waterfront. Where bustling docks had once driven the city's economy, the social and economic center of Philadelphia had since shifted inland, to Center City. Thorough the 21st century, the Delaware River Waterfront remained isolated from the rest of the city. In 2011, the

Delaware River Waterfront Development Corporation published a <u>Master Plan</u> for the Central Delaware that focused on strategies for reconnecting Philadelphia's neighborhood to the Delaware and on building a "truly Philadelphia" waterfront that reflected the culture and desires of the city.

Project Description: PennDOT is undergoing a decades-long project to reconstruct I-95 through Philadelphia. Sector B of the project includes two project sections, one rebuilding I-95 from Central to South Philadelphia, and the other the Penn's Landing improvement project, which includes the construction of a 12-acre cap over I-95, spanning an entire city block from Walnut St to Chestnut St and from Front St to the waterfront. The park would span both 1-95 and Columbus Blvd.

Engagement Process: The planning and design for the cap at Penn's Landing was conducted by DRWDC and split into three phases: A New Vision, Gathering Community Input, and Updated Park Design. The first phase examined the history of the site, the next phase was run by PennPraxis and included engagement with community partners SEAMAAC, Make the World Better Foundation, The Village of Arts and Humanities, and Little Giant Creative, and the final phase is ongoing, and includes publicly sharing detailed plans for the park.

Costs: \$328.9 million



Figure 9.1:Extent of caping project for the Park at Penn's Landing (DRWDC)



Figure 9.2: Rendering of the Park at Penn's Landing Cap (DRWDC)

APPENDIX B:

COMMITTEE MEMBERS



Chinatown Stitch Committee Steering Committee (SC)

Name	Organization	Title
Lou Belmonte, Jr., P.E	Pennsylvania Department of Transportation, District 6	District Executive
Mike Carroll	City of Philadelphia, Office of Transportation, Infrastructure, and Sustainability	Deputy Manager Director
John Chin	Philadelphia Chinatown Development Corporation	Executive Director
Charles Davies	Pennsylvania Department of Transportation, District 6	Assistant District Executive of Design
Anne Fadullon	Philadelphia Chinatown Development Corporation	Director
Vadim Fleysh	City of Philadelphia, Streets Department	Chief Engineer
Shammy Jones	Pennsylvania Convention Center Philadelphia	General Counsel
Richard Montanez	City of Philadelphia, Streets Department	Deputy Commissioner of Transportation
David Nasatir, Esquire	Pennsylvania Convention Center Philadelphia	Chair of the Board
Barry Seymour	Delaware Valley Regional Planning Commission	Executive Director
Eleanor Sharpe	Philadelphia Chinatown Development Corporation	Deputy Director



Chinatown Stitch Committee Technical Committee (TC)

Name	Organization	Title
Ariel Ben Amos	Philadelphia Water Department, Green Stormwater Infrastructure	Partnership Specialist, Transportation
Chuck Davies	Pennsylvania Department of Transportation, District 6	Assistant District Executive of Design
Martine Decamp	Philadelphia City Planning Commission	Deputy Executive Director
Kristin Del Rossi	City of Philadelphia, Department of Parks and Recreation	Transportation Director of Operations
William Dobbins	Philadelphia Water Department, Division of Engineering	Water Engineering Projects Manager, Design Unit Manager
David Fecteau	Philadelphia City Planning Commission	Lower North District Planner
Vadim Fleysh	City of Philadelphia, Streets Department	Chief Engineer
Ryan Judge	SEPTA, Strategic Planning & Analysis	Director of Planning
David Kanthor	Philadelphia City Planning Commission, Policy and Analysis	Transportation Planner
Elizabeth Lankenau	City of Philadelphia, Office of Transportation, Infrastructure, and Sustainability	Director of Infrastructure Program Coordination
Ian Litwin	Philadelphia City Planning Commission	Central District Planner
Kelsey McElduff	Delaware Valley Regional Planning Commission	Senior Transportation Engineer
Lou Milan	NJ Transit, Capital Planning	Senior Director
Sarah Moran	Delaware Valley Regional Planning Commission, Office of Mobility Analysis and Design	Manager
Amy Nieves	Mayor's Office for People with Disabilities	Executive Director



Name	Organization	Title
Ashwin Patel	Pennsylvania Department of Transportation, District 6	Senior Manager, Traffic Engineering and Safety Division
Thom Stead	Delaware Valley Regional Planning Commission, Office of Mobility, Analysis, and Design	Assistant Manager
Dennis Weldon	Philadelphia Parking Authority	Acting Executive Director
Caroline Aung	Philadelphia Chinatown Development Corporation	Neighborhood Planning & Project Manager
Kelley Yemen	City of Philadelphia, Office of Transportation, Infrastructure, and Sustainability	Director of Complete Streets



Chinatown Stitch Committee Community Collaboration Committee

Name	Organization	Title
Tom Betz	Holy Redeemer Chinese Catholic Church and School	Pastor
Rev. Joseph Bongard	Roman Catholic High School of Philadelphia	President, and Rector
Nicole Brunet	Bicycle Coalition of Philadelphia	Policy Director
Rebecca Cordes Chan	Friends of the Rail Park	Executive Director
Kate Esposito	Center City Organized for Responsible Development	
Anne Ishii	Asian Arts Initiative	Executive Director
Harry Leong	Chinese Christian Church and Center	Center Director
Kevin Ma	Chinese Benevolent Association of Greater Philadelphia	Chair
Sarah McEneaney	Callowhill Neighborhood Association	Board President
Holly Meng	Philadelphia Chinese Community Organizations United	Secretary
Jeremy Montgomery	Philly House (formerly Sunday Breakfast)	President & CEO
Amy Needle	Historic Philadelphia (Franklin Square)	President and CEO
Najja Orr	Philadelphia Corporation for the Aging	President and CEO
Neeta Patel	Asian Americans United Interim ED	
Anna Perng	Chinatown Disabilities Project	Founder
Ellen Somekawa	FACTS Charter School	Executive Director
Shalimar Thomas	North Broad Renaissance	Executive Director
Dan Tsao	Philadelphia Chinatown Business Association	President
Ignatius Wang	Chinatown Advocacy Group	Representative
Eddie Wong	On Lok Senior House	House Administrator
Carol Wong	Chinatown Learning Center	Executive Director



Chinatown Stitch Committee Chinatown Advocacy Group (CAG)

Name	Organization	Title
Jenny Chen	Asian Americans United	Project Manager
Glenn Hing		Community Member
Shen Huang		Property Owner
Kai Huang		Property Owner
Joshua Hui		Resident
Helen Hui		Community Member
Dave Kyu	Asian Arts Initiative	Director of Programs
Philip Lai	Philadelphia Corporation for Aging	Senior Advocate
Harry Leong	Philadelphia SUNS	President
Martin Louie		Community Member
Shirley Moy		Resident
Robert Moy		Community Member
Lawrance Moy		Community Member
Anna Perng	Chinatown Disabilities Project	Founder
Benjamin She		Resident
Ellen Somekawa	FACTS Charter School	Executive Director
Ignatius Wang		Resident
Gerry Wang		Resident
Yatsun Wen		Property Owner
Eddie Wong	On Lok Senior House	Administrator
Carol Wong	Chinatown Learning Center	President
Mae Wong		Resident
Betsy Wong		Resident
Melody Wong		Community Member
Mary Yee		Community Member
Cecilia Yep		Resident
Sarah Yeung		Advocate
Selena Yip	Philadelphia Asian American Film Festival	Director
Shirley Young		Resident

APPENDIX C:

COMMUNITY VISION
WORKSHOP #1
BOARD DISPLAYS AND
SUMMARY



Community Vision Workshop #1: April 26, 2023

About Community Vision Workshop #1

The Chinatown Stitch: Reconnecting Philadelphia to Vine Street is a concept study looking at building a cap on top of the Vine Street Expressway between Broad Street and 8th Street to reconnect Chinatown and Chinatown North in Philadelphia. The study is a partnership between the City of Philadelphia's Office of Transportation Infrastructure and Sustainability (OTIS) and the Philadelphia Chinatown Development Corporation (PCDC).

On April 26, 2023, the first of two in-person Community Visioning Workshops was held at Chinese Christian Church and Center (1101 Vine Street) from 6:00 PM to 8:00 PM. This workshop was held as an open house so community members could stop by any time during the event to view display boards and talk one-on-one with project team members.

The purpose of Community Vision Workshop #1 was to educate attendees about the Chinatown Stitch study, the history of the Vine Street Expressway, previous planning efforts to address its impacts, and highway caps. Attendees gave feedback on the community vision and goals for the Chinatown Stitch cap, safety issues they face in the study area, their preferred cap amenities, and trade-offs.



Community Vision #1 Workshop had educational and interactive displays boards set up around the event space.

Fifty-seven (57) people signed into the Community Vision Workshop, which was promoted through the following methods:

- Simplified Chinese and English flyers placed in Chinatown businesses
- Postcard mailing to 1,115 residences within the study area
- City of Philadelphia, PCDC, DVRPC, and partner social media posts
- Project website
- Press release/local media coverage

There were eight display boards translated into Simplified Chinese and English. Of these boards, three were educational and five were interactive. Project team members were stationed at each display to explain the display topics and answer questions. PCDC provided 2 Mandarin and 2 Cantonese translators.

Overall, participants expressed interested in a one-block cap with a modern, neighborhood feel that prioritizes green space/park amenities and bike and pedestrian safety improvements. If buildings are included, they should be small-scale buildings with public facilities.



Display Board Feedback Results

Community Vision and Goals

Which of these options would you prefer as goals for the design of the Chinatown Stitch? On a sticky note, write what this goal means to you.

Design Goal	Total Votes	Comment Examples
Vibrant	11	Chinatown needs vibrant third spaces with mixed-use for intergenerational community building.
Calming	9	It is already so vibrant a calm serene grass space would bring balance. A lot of elderly and children live in the area, so we need to slow down traffic.

Design Goal	Total Votes	Comment Examples
Modern	10	Want modern design, but bold
		Chinatown personality
Traditional	ς	Show Chinatown can grow without
	3	losing its identity

Design Goal	Total Votes	Comment Examples
Neighborhood Feel	13	Safe, community gathering place for elders, especially for elders who live alone
Philadelphia Landmark	4	I hope this place will be more accessible, allowing more people from various places to use it



Workshop attendees shared their visions for the Chinatown Stitch cap.



Tell Us About Vine Street

On a sticky note, please share your issues or ideas for the Vine Street study area and then place them on the map.

Issues	Total Comments	Example Comments
Street Safety	19	 Unsafe to bike. Super fast traffic on Vine Street Local. Plenty of trash, dark, and unsafe for children underneath overpass. Light too short for pedestrians to cross Vine Street safely.
Noise	4	Noise from cars and trucks.Too loud.
Lack of resources for unhomed populations.	3	Homeless people sleeping here where children play.

Ideas	Total Comments	Example Comments
Green Space/Park	14	 Trees. Dog park. More space for seniors. Multi-use park. Gardens. Playground.
Bike and Pedestrian Safety Improvements	14	 Parking protected bike lane on Vine Street. Increase pedestrian crossings from 10th St to 12th St. Delayed red lights so pedestrians can cross first and slow down traffic.
Changes to Road Design	8	Road diet.Bump out all curbs to slow local traffic.
General Comments	13	 A Chinatown History Museum. Café. Use buildings that surround gathering spaces to block out traffic noise.
No Land Tax	4	No land tax





Workshop attendees used sticky notes to identify issues and ideas on a map of the study area.



What Would You Put on a Highway Cap?

Grab a game piece to test what types of amenities could fit on a future cap.



Cut outs of potential cap amenities, like a community garden, spray park, and pickleball court, were used by attendees to see what could potentially fit on top of the Vine Street Expressway.





Chinatown Stitch Study Trade-offs

A trade-off is balancing two factors that cannot be attained at the same time. To use resources as efficiently as possible, decision-making around tradeoffs is necessary to design a preferred alternative that benefits Chinatown residents, business owners, and visitors. Please us dot stickers to vote on which trade-off you prefer.

Not all of the Vine Street Expressway between Broad Street and 8th Street can be capped. Do you prefer one full cap or multiple partial caps?

Trade-offs Votes

Trade-offs	Votes
One Block Cap	40
Multiple Partial Caps	8

Do you prefer the cap(s) to be developed with building or park space?			
Trade-offs Votes			
Park Space	28		
Buildings and Park Space	22		
Buildings	3		

If the cap(s) are developed with park space, do you prefer parks landscaped with gardens and trees of plazas/courtyards.

Trade-offs	Votes
Landscaped Garden/Trees	35
Plaza/Courtyard	9
Both	7

If the cap(s) are developed with park space, do you prefer a park focused on nature or a park focused on activities?

Trade-offs	Votes	
Nature	21	
Activities	16	
Both	13	

If the cap(s) are developed with buildings, do you prefer smaller-scale, medium-scale, or larger-scale development?

Trade-offs	Votes	
Smaller-scale	30	
Medium-scale	12	
Larger-scale	1	



If the cap(s) are developed with buildings, do you prefer businesses, housing, or public facilities?		
Trade-offs Votes		
Public Facilities	25	
Housing	6	
Business	2	
No Preference	1	



Attendees used dot stickers to vote on their preferred trade-off.





Do you have additional thoughts or feedback you would like to share with us?

If so, please write them on a sticky note and post them to the board.

Feedback examples

Please start as soon as possible.

Place for kids to play, ping pong for adults, and kids' yoga or friendly fitness activities.

Slow down Vine Street local traffic way down!!

Trash and bathrooms are an issue.

Storm drains or other measures to address the elements along 10th and 11th often huge puddles driving in the rain.

Chinatown historic museum/public Asian art performance space for artists, musicians, and poets.

Anything to damper loud noises of traffic, water fountain or waterway.

Entire Vine Street Expressway capped!

Lighting and safety.

More third space for Chinatown, like parks and libraries, etc.

Coffee shop.

Garden for planting.

Add some night lights, making the nightlife more vibrant.



This display board allowed attendees to leave open-ended comments about the Chinatown Stitch.



Coloring page

Children and adults used their imagination to draw what they would like to see on the Chinatown Stitch cap.





"缝合华埠"项目计划在万安街高速公路上方进行 封顶。

您希望在封顶区域看到什么?

The Chinatown Stitch will cover the Vine Street Expressway with a cap.

What would you like to see on the cap?

姓名:	Name: EVIC LILL
年龄:	Age:





"缝合华埠"项目计划在万安街高速公路上方进行 封顶。

您希望在封顶区域看到什么?

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What would you like to see on the cap?



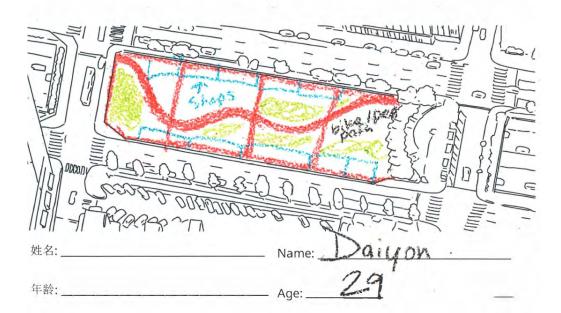
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	11111	華 埠 town Stitch

"缝合华埠"项目计划在万安街高速公路上方进行 封顶。

您希望在封顶区域看到什么?

The Chinatown Stitch will cover the Vine Street Expressway with a cap.

What would you like to see on the cap?





The input received from Community Visioning Workshop #1, three pop-up events, and the online survey will be used to develop three design concepts for the Chinatown Stitch. This summer, the concepts will be shared with the public for their feedback.

For more information on the Chinatown Stitch study, visit https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/.

You can submit comments online at https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/submit-a-comment/ or by emailing otis@phila.gov.

Stay up-to-date on project news by subscribing for email updates at https://phila.us21.list-manage.com/subscribe?u=aa027a1be06913479854af614&id=1bc6623b61.



Community Vision Workshop April 26, 2023 Exit Survey

Fifty-seven people signed into the Community Vision Workshop. Of those attendees, 44 people completed an exit survey. The City of Philadelphia is committed to equity, and we want to ensure that feedback we receive on our projects is representative of the diversity of Philadelphia residents. Therefore, people were asked to self-select their demographic data so that we understand who has provided feedback.

1. What is your age?			
Age Range	Total	Percent	
Under 18	0	0%	
18-29	14	32%	
30-39	8	18%	
40-49	2	5%	
50-59	7	16%	
60-69	7	16%	
70-79	5	11%	
80+	0	0%	
Prefer not to say	1	2%	

2. What is your race/ethnicity? (Select all that apply to you.)			
Race/Ethnicity	Total	Percent	
American Indian/Alaska Native	0	0%	
Asian	21	48%	
Black/African American	1	2%	
Hispanic/Latinx	1	2%	
Middle Eastern	0	0%	
Native Hawaiian or Other Pacific Islander	0	0%	
White (non-Hispanic)	21	48%	
Other (please specify)	0	0%	
Prefer not to say	0	0%	

3. To which gender do you most identify?		
Gender	Total	Percent
Female	18	41%
Male	25	25%
Non-binary	0	0%
Genderqueer	0	0%
Other (please specify)	0	0%
Prefer not to say	1	2%

4. What is your household income range?			
Household Income Range	Total	Percent	
Less than \$14,999	3	7%	
\$15,000 – \$24,999	1	2%	
\$25,000 – \$34,999	3	7%	
\$35,000 – \$49,999	7	16%	
\$50,000 – \$74,999	11	25%	
\$75,000 – \$99,999	10	23%	
\$100,000+	9	20%	
Prefer not to say	3	7%	



5. What is your home ZIP code?			
Zip Code	Total	Percent	
19107	15	34%	
Prefer not to say	9	20%	
19123	4	9%	
19104	3	7%	
19143	3	7%	
19128	2	5%	
19010	1	2%	
19102	1	2%	
19103	1	2%	
19106	1	2%	
19130	1	2%	
19147	1	2%	
19149	1	2%	
94612	1	2%	

6. How did you hear about this Workshop? (Circle all that apply)				
Promotion	Total	Percent		
Neighbor or Friend	13	28%		
Postcard	7	15%		
Project Website	7	15%		
PCDC	5	11%		
Social Media	5	11%		
City of Philadelphia	3	6%		
Organization	2	4%		
Chinese Christian Church and Center	1	2%		
On Community Collaboration Committee	1	2%		
Pennoni	1	2%		
Press Release or News	1	2%		
University of Pennsylvania	1	2%		

Do you have other ideas about how we can advertise this project in your neighborhood?

- Billboards
- Community Facebook page
- Community Meetings/ tabling at events
- **Email Newsletter**
- Fairmount CDC
- **Flyers**
- Involve Bicycle Coalition of Greater Philadelphia
- **Local News**
- Mailing was effective!

Number of email subscribers: 25 (57%)

- Nextdoor.com
- Notices in apartment buildings, supermarkets, and property elevators
- Reach out to all local regions and community organizations
- Social Media
- Tabling in the summer, outdoors, and at Rail Park on June 10
- TV advertisements



Vine Street

ABOUT THE CHINATOWN STITCH PROJECT

关于缝合 华埠项目

The Vine Street Expressway has long divided Chinatown. The Chinatown Stitch: Reconnecting Philadelphia to Vine Street is a concept study looking at building a cap on top of the Vine Street Expressway between Broad Street and 8th Street. We are calling this cap "The Chinatown Stitch" because it could help reconnect Chinatown and Chinatown North by making the Vine Street Expressway less of a barrier.

The project team includes:

- · The City of Philadelphia
- · Philadelphia Chinatown Development Corporation (PCDC)
- Pennsylvania Department of Transportation (PennDOT)

长期以来,万安街高速公路一直将华埠社区一分为二。"缝合华埠:重新连接被万安街高速公路分离的华埠 社区"是一项概念研究,目标是在万安街高速公路的上方进行封顶,研究重点是宽街至8街之间的路段。 我们把这个封顶项目命名为"缝合华埠",因为封顶区域可以通过减少万安街高速公路带来的障碍,帮助重 新连接分离已久的华埠南北社区。

项目团队包括

- 费城市政府
- · 费城华埠发展会 (PCDC)
- · 宾夕法尼亚州运输部 (PennDOT)

What is a cap?

A cap is a platform on top of a highway that creates new space for parks, businesses, or housing.

什么是封顶?

"封顶"是指在高速公路的上方搭建平 台,将此空间用于建设新的公园、商业 用房或民用住宅。



Project Schedule 项目进度计划

2023

Community Engagement Phase 1: Co-Learning 社区参与阶段 1: 了解信息

January 2023 - April 2023

Public Engagement began with a survey to understand the community's vision for the cap.

Host Community Visioning Workshop #1.

2023年1月-2023年4月

公众参与从开展调查开始,以了解社区对封顶的愿景。

举行第1次社区愿景研讨会。

Community Engagement Phase 2: Community Collaboration 社区参与阶段 2:社区合作

May 2023 - August 2023

Share design concepts for the cap and get feedback through Survey #2 and Community Visioning Workshop #2.

September 2023

Share preferred design concept and final report for the Chinatown Stitch at a community open house.

2023年5月-2023年8月

通过第2次调查和第2次社区愿景研讨会,分享设计理念并获得反馈。

2023年9月

在社区开放日分享首选的设计理念和最终报告。

2024

Design, Engineering, and Construction 设计、工程和施工

Design and Engineering 设计和工程

City submits an application for federal funding through the Infrastructure Investment and Jobs Act (IIJA) Construction grant.

Anticipated construction start date.

After 2026 年后

费城市政府通过《基础设施投资和就业法案》(IIJA)的建设拨款申请联邦资金。

短针开工日期

Funding The City of Philadelphia has received funding from the following sources for this effort:

- \$1.8M in US Department of Transportation grant funding for community engagement
- \$2.2M matching funds from the City, PennDOT, the Knight Foundation and other local partners for planning and preliminary engineering.
- · Funding for construction of a cap has not been secured

费城市政府已从以下来源获得了这项工作的资金:

- · 美国运输部拨款 180 万美元用于社区参与
- · 费城市政府、PennDOT、Knight 基金会以及其他地方合作伙 伴提供220万美元的配比基金用于规划和初步工程。
- 封顶区域的施工资金尚未到位







Reconnecting Philadelphia's

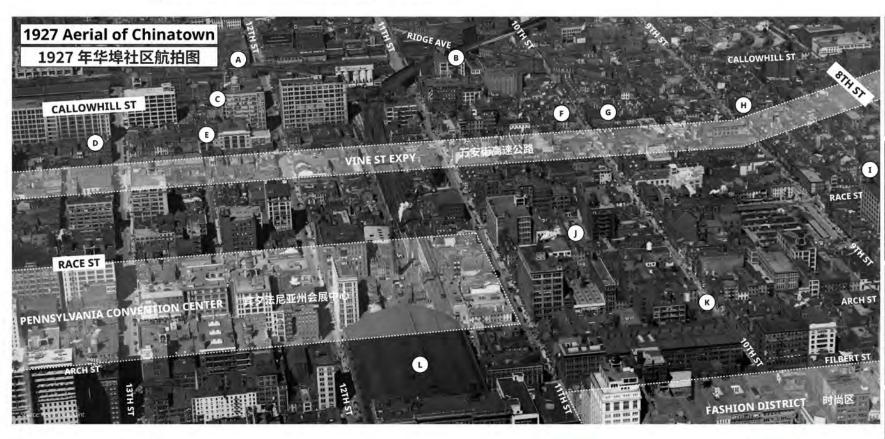
Vine Street

HISTORY AND PAST PLANNING

The Vine Street Expressway and local roads separate the Chinatown community, acting as a physical barrier between the Chinatown and Chinatown North neighborhoods. The community has made continued efforts to mitigate the expressway's negative impacts, which include fast-moving traffic, congestion, air pollution, and noise. There have been numerous studies and plans over the past 20 years that analyzed how to improve connections between Chinatown and Chinatown North and make the local Vine Street roads safer. The Chinatown Stitch builds on these plans and studies.

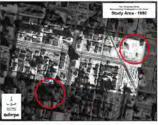
历史及过往规划

万安街高速公路和多条地方街道将华埠社区一分为二,在华埠南北社区之间建立了一道物理 屏障。高速公路建成后,社区一直在努力减轻其带来的负面影响,包括车速快造成的安全隐患、 交通拥堵、空气污染以及噪音。在过去的20年里,许多研究和计划就万安街高速公路的情况进 行了分析,包括如何加强华埠南北社区之间的联系,并提高地方街道万安街的安全性。缝合华 埠项目就是在这些研究和计划的基础上开展的。













- H) PHILADELPHIA CHINATOWN DEVELOPMENT CORP (PCDC)
- (I) CHINATOWN BSL STATION
- () CHINATOWN SQUARE
- (K) CHINATOWN ARCH
- (L) READING TERMINAL MARKET

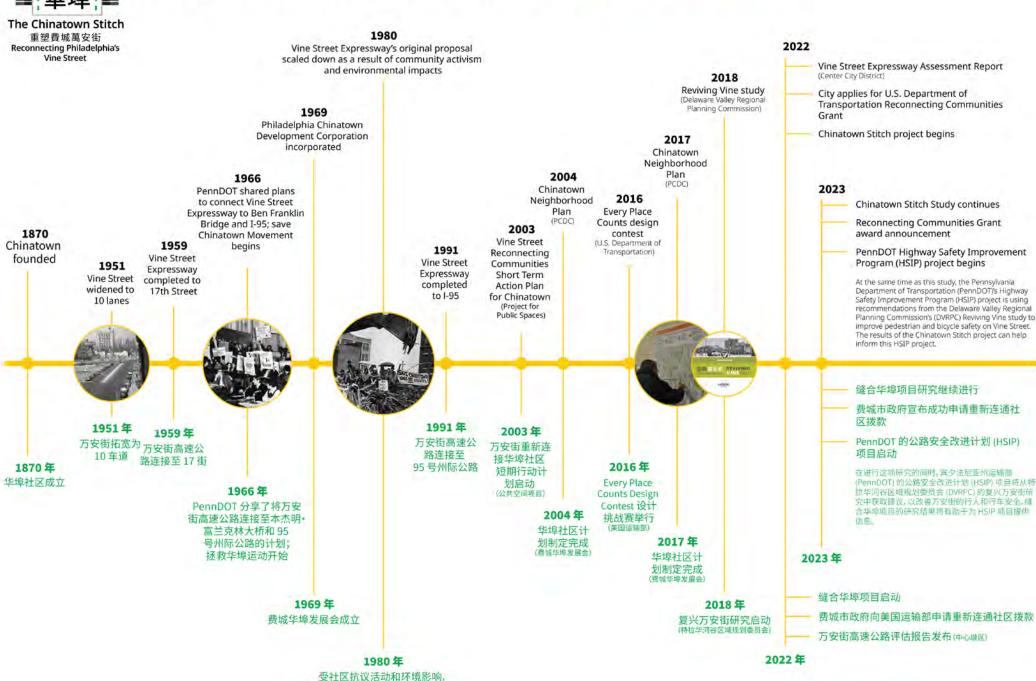
- A) 铁路公园
- B)民艺特许学校
- c 地下艺术中心
- D 费城之家
- E 亚洲艺术促进会
- F 鼎华居公寓

- G 华人天主教堂
- H) 费城华埠发展会 (PCDC)
- (1) 宽街线华埠站
- () 华埠广场
- K 华埠拱门
- L 端汀车站市场

- A) RAIL PARK
- B FOLKS ARTS-CULTURAL TREASURES CHARTER SCHOOL
- C UNDERGROUND ARTS
- D PHILLY HOUSE
- **E** ASIAN ARTS INITIATIVE
- F CRANE BUILDING
- G HOLY REDEEMER CHINESE CATHOLIC CHURCH

HISTORY AND PAST PLANNING 历史及过往规划

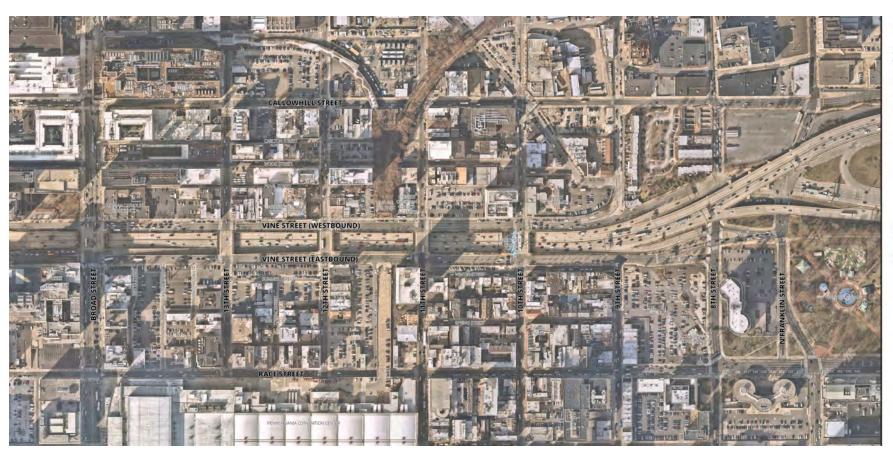
万安街高速公路的初始提案规模缩小





COMMUNITY VISION AND GOALS 社区目标和愿景

The Chinatown Stitch Which of these options would you prefer as goals for the design of The Chinatown Stitch? On a sticky note, write what this goal means to you. Goals 您认为以下哪些选项更适合作为缝合华埠项目的设计目标?在便签上写下这个目标对您的意义。 Calming Modern Traditional Neighborhood feel Philadelphia landmark **Vibrant** 活力 沉稳 现代 费城地标 传统 费城社区



TELL US ABOUT VINE STREET







On a sticky note, please share your ISSUES or IDEAS for the Vine Street study area and place them on the map.

帮助我们了解万安街

如何提供信息



请在便利贴上输入您对万安 街研究区域的问题,然后将其 拖放到地图上。



The Chinatown Stitch 重塑費城萬安街 Reconnecting Philadelphia's Vine Street

HIGHWAY CAP EXAMPLES

What is a Cap?

A cap is a platform on top of a highway that creates new space for parks, businesses, or housing and connects streets and communities separated by a highway. Cities across American have pursued capping projects to address the impacts of highway construction, like the division, removal, or disruption of established minority communities.

The Chinatown Stitch Study is analyzing the possibility of building partial or full caps across the Vine Street Expressway from Broad Street to 8th Street and Callowhill Street to Race Street.

高速公路封顶示例

什么是封顶?

"封顶"是指在高速公路的上方搭建平台,将此空间用于建设新的公园、商业用房或民用住宅,并连接被高速公路分离的街道和社区。美国各地的多个城市都已经推行了封顶项目,以消除高速公路建设带来的影响,比如现有少数民族社区的分裂、迁移或破坏。

"缝合华埠"研究旨在分析在万安街高速公路从宽街到8街及卡洛希尔街至礼士街之间的部分或全部路段上方进行封顶的可能性。

NAME: The Park at Penn's Landing

(under construction)

LOCATION: Philadelphia, PA

TYPE: Full Cap

项目名称:佩恩码头公园(建设中)

地点:宾夕法尼亚州,费城

类型:全路段封顶



Photo before construction.

NAME: Klyde Warren Park LOCATION: Dallas, TX TYPE: Full Cap

项目名称:克莱德·沃伦公园 地点:德克萨斯州,达拉斯

类型:全路段封顶



Photo before construction.

NAME: Cap at Union Station LOCATION: Columbus, OH TYPE: Partial Cap

TTPE. Partial Cap

项目名称:联合车站封顶 地点:俄亥俄州,哥伦布 类型:部分路段封顶



Photo before construction.





This park will bridge over I-95 between Walnut Street and Chestnut Street and slope downward to reconnect Old City to the Delaware River. This new park will include a new skating rink, water features, a play area, and a café.

这座公园将成为95号州际公路在核桃街和栗树街之间路段上方的桥梁,并且向下倾斜,将老城区与特拉华河重新连接起来。这个新公园将包括一个新的滑冰场,几处水景、一个游乐区和一个咖啡性





A 5-acre deck park over Woodall Rodgers Freeway (Texas State Highway Spur 366), a recessed eight-lane freeway.

这座公园占地5英亩,建在伍德尔罗杰斯高速公路(德克萨斯州366号公路)上,这是一条地埋式八车道高速公路。





A 25,500 square-foot retail development over Interstate 670, reconnecting the downtown with the Short North arts and entertainment district.

该封顶区域位于 670 号州际公路上方,占地 25500 平方英尺,用于开发零售行业,旨在将市中心与 短北艺术和娱乐区重新连接起来。



WHAT WOULD YOU PUT ON THE HIGHWAY CAP?

您希望将高速公路封顶 区域作何用途?

Grab a game piece to test what types of amenities could fit on a future cap.

点击不同的游戏块,看看 什么类型的设施可能适 合未来的封顶区域。



nall-scale Building (Columbus, OH)



Krosk and Seating Area (Dilworth Park 原享和休息区 (迪尔沃思公园)



Playground (Franklin Square) 遊艇场际 (富兰克林广场)



Plaza (Shakespeare Park) 广场(莎士比亚公园)



直球场(华埠社区)



赤板公园(百内公园)



ennis / Pickleball Court (Penn Par 阅读/匹克球场 (佩墨公园)



Medium-scale Building (Pearl - 111 N. 9th St.) 中型建筑 (垃圾公寓 — 111 号北节西)



Large-scale Building (The Crane) 大型建筑(飛筝應公寓)



Community Garden (The Spring Gard 社区范围(中国)



Spray Park (Dilworth Park) 理象公園 (迪尔沃思公園)



Dog Park (Rob Stuart Dog Park) 逻辑公园(罗伯·斯图尔特定输公园)

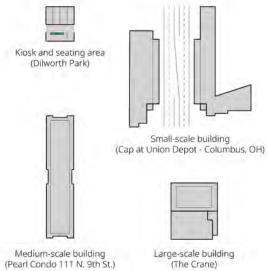


清冰场(侧图码头)



awn (Independence Mall 無理 (独立广场)







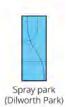








Plaza (Shakespeare Park)





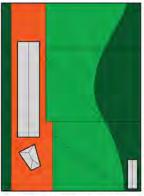
Playground (Franklin Square)



Community garden (The Spring Gardens)



Skatepark (Paine's Park)



Lawn (Independence Mall)

CHINATOWN STITCH STUDY TRADE-OFFS 缝合华埠研究权衡

What is a trade-off?

A trade-off is balancing two factors that cannot be attained at the same time. To use resources as efficiently as possible, decision-making around

tradeoffs is necessary in order to design a preferred alternative that benefits Chinatown residents, business owners, workers, and visitors. For example, do you prefer the cap(s) to be developed with buildings or a park? There are advantages and disadvantages to both options.

Please use dot stickers to vote on which trade-offs you prefer. 请点击选项前的圆点,选择您更希望我们采用的权衡方案。



Not all of the Vine Street Expressway between Broad Street and 8th Street can be capped. Do you prefer one full cap or multiple partial caps?

在万安街高速公路在宽街和8街之间的路段,并非所有路 段都可以进行封顶。您更希望我们一次封顶全路段,还是 封顶多个部分路段?

Do you prefer the cap(s) to be developed with buildings or with park space?

您更希望我们将封顶区域开发成建筑还是公园空间?

If the cap(s) are developed with park space, do you prefer parks landscaped with gardens and trees or plazas/courtyards?

如果我们将封顶区域开发成公园空间, 您更希 望是有花园和树木的景观公园还是广场/庭院?

One Block Cap 一次封顶全路段





Buildings

建筑

Park Space 公园空间



Buildings & Park Space 二者兼有



Landscaped Gardens/Trees 有花园和树木的景观公园



Plaza/Courtyard 广场/庭院



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CHINATOWN STITCH STUDY TRADE-OFFS

缝合华埠研究权衡

什么是权衡?

权衡是指在两个无法同时满足的因素之间取 得平衡。为了尽可能有效地利用资源,在决策 过程中进行权衡很有必要,这样我们才能设

计出一个首选替代方案, 既有利于华埠社区 居民,又有益于企业主、工人和游客。例如,

您更希望我们将封顶区域开发成建筑还是 公园?这两种选择各有利弊。

The Chinatown Stitch

If the cap(s) are developed with park space, do you prefer a park focused on nature or a park focused on activities?

如果我们将封顶区域开发成公园空间, 您更

If the cap(s) are developed with buildings, do you prefer smaller-scale, medium-scale, or larger-scale development?

如果我们将封顶区域开发成建筑, 您更希

If the cap(s) are developed with buildings, do you prefer businesses, housing, or public facilities?

如果我们将封顶区域开发成建筑, 您更希

希望是自然主题公园	还是人文主题公园?	望是小型建筑、中型建筑, 还是大型建筑?		是人文主题公园?		望是商业用房、民用住		用房、民用住宅,还是公		
Nature 自然	Activities 人文		um-scale Large 型建筑 大型	er-scale 型建筑	Businesses 商业用房	Housing 民用住宅	Public Facilities 公共设施			
No Preference	无偏好	No Preference		无偏好	No Preference		无偏好 〇〇〇〇〇 〇〇〇〇〇			



Reconnecting Philadelphia's Vine Street

Do you have additional thoughts or feedback you would like to share with us?

If so, please write them on a sticky note and post them to the board.



您是否还有其他 想法或反馈想与 我们分享?

如果有,请在便利贴上输入您的想法,并将其拖放到留言板上。

APPENDIX D:

SURVEY #1 SUMMARY



Survey 1 Summary

About the Survey

The Chinatown Stitch: Reconnecting Philadelphia to Vine Street is a concept study looking at building a cap on top of the Vine Street Expressway between Broad Street and 8th Street to reconnect Chinatown and Chinatown North in Philadelphia. The study is a partnership between the City of Philadelphia's Office of Transportation Infrastructure and Sustainability (OTIS) and the Philadelphia Chinatown Development Corporation (PCDC).

As part of the study, the City and PCDC released a survey to gather input on the community's vision and goals for the proposed cap. The survey was released electronically in three languages: English, Simplified Chinese, and Spanish. The electronic survey had 15 questions, including five demographic questions and one question that collected email addresses to receive updates about the project. Questions 1, 2, 4, 11, and 14 were required. PCDC supplemented the electronic survey with a shorter 8-question paper survey (including three demographic questions) that was distributed at three pop-up events in Chinatown as well as at some of the housing developments in Chinatown (e.g., On Lok House for seniors).

Survey Advertising

The survey was promoted via:

- Simplified Chinese and English flyers placed in Chinatown businesses
- Postcard mailing to 1,115 residences within the study area
- City of Philadelphia, PCDC, DVRPC, and partner social media posts
- Project website
- Press release/local media coverage
- PCDC-distributed paper surveys to community connections, Chinatown businesses, and clients.

Number of Responses

The survey received 2,335 responses between March 2023 and May 2023.

	English	Simplified Chinese	Spanish	Format Total
Electronic	1,538	101	1	1,640
Paper	114	581	0	695
Language Total	1,652	682	1	2,335

Additional Analysis

The study area is in ZIP Code 19107 and Chinatown North is in ZIP Code 19123. The study team chose to analyze the responses from these ZIP Codes in additional detail. The study team was also



particularly interested in whether responses from the Asian community differed from the overall survey responses.

Asian in 19107 or 19123	Asian Outside 19107 or 19123	Non-Asian in 19107 or 19123	Non-Asian Outside of 19107 and 19123	No ZIP Code or Race Provided
344	687	185	1,098	21

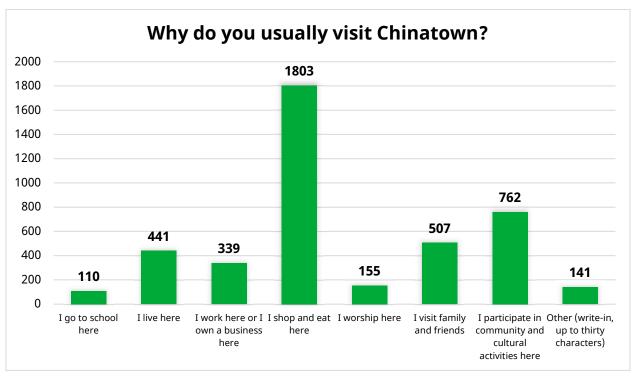
Vision Statement

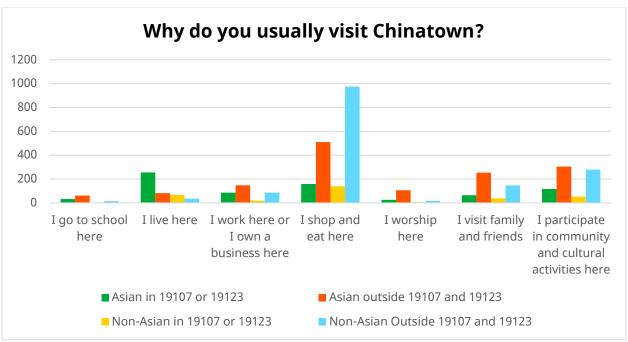
The Chinatown Stitch will be a safe, inviting green space surrounded by wide sidewalks and streets with fewer lanes and slower traffic that prioritize people walking and biking.



1. Why do you usually visit Chinatown? (Select all that apply to you.)

Respondents indicated that they primarily visited Chinatown to shop and eat, followed by participating in community and cultural events, and visiting friends and family.

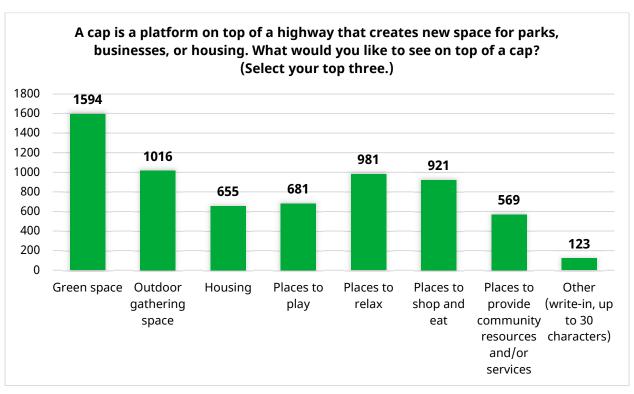




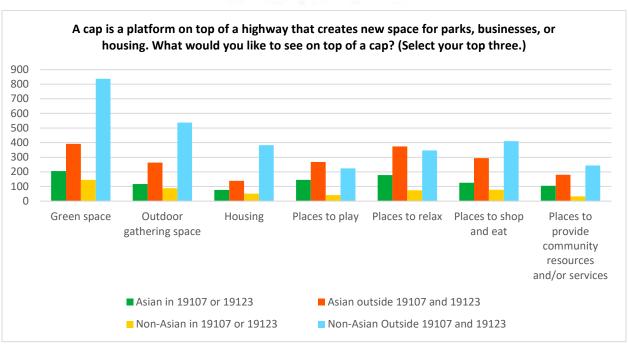


2. A cap is a platform on top of a highway that creates new space for parks, businesses, or housing. What would you like to see on top of a cap? (Select your top three.)

Overall, respondents were mostly interested in seeing green space on top of a future cap, followed by outdoor gathering space, places to relax, and places to shop and eat. Places to relax were more important to Asian respondents than non-Asian respondents.



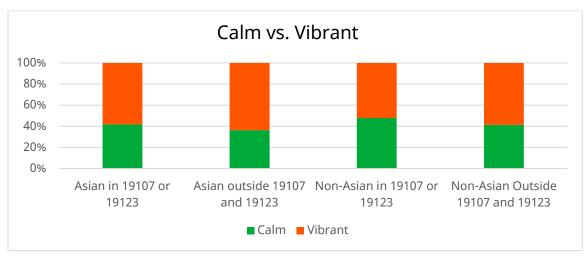


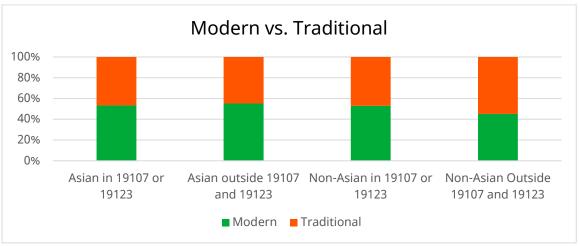




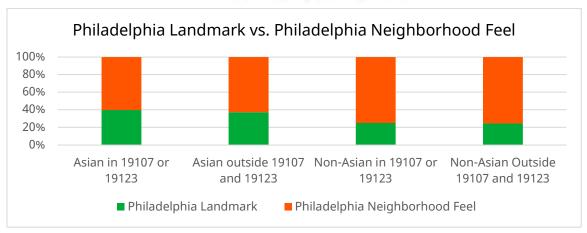
3. Which of these options would you prefer as goals for the design of The Chinatown Stitch?

Approximately 60% of all groups preferred a vibrant space over a calm space. There was a slight preference for a modern space over a traditional space in all groups except non-Asians who live outside of 19107 and 19123. In general, there was a preference for a space with a Philadelphia neighborhood feel over a Philadelphia landmark feel.



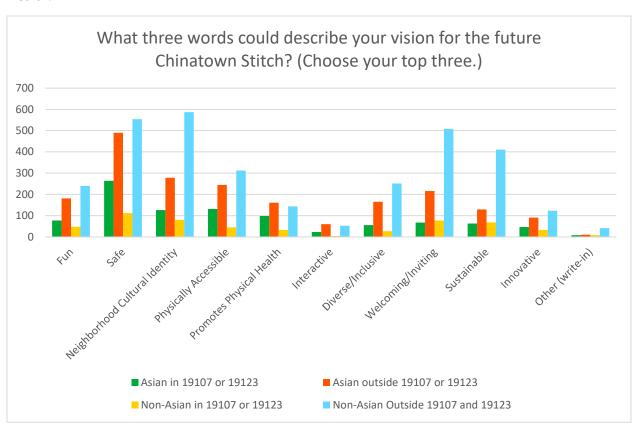






4. What three words could describe your vision for the future Chinatown Stitch? (Choose your top three.)

The three most popular words among all respondents were: "Safe," "Neighborhood Cultural Identity" and "Welcoming/Inviting." "Neighborhood Cultural Identity" was the top word for non-Asians outside the study area. After "Safe," Asians in the study area wanted the space to be "Physically Accessible," celebrate their "Neighborhood Cultural Identity," and "Promote Physical Health."

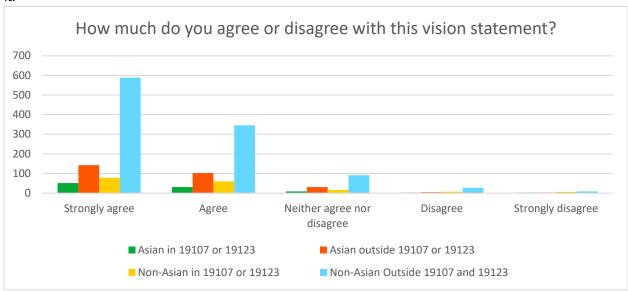




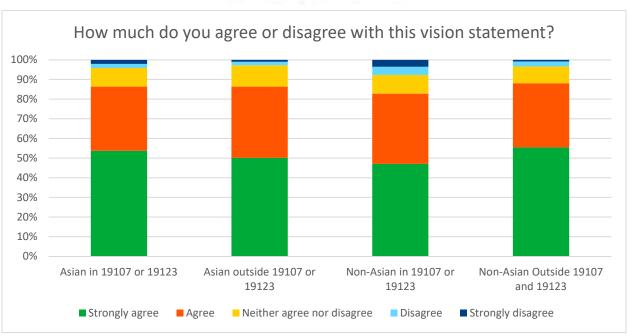
5. Neighborhood residents and community organizations developed the vision statement below for the Vine Street area as part of the United State Department of Transportation (US DOT) Every Place Counts Design Challenge in 2016. The Design Challenge gathered federal advisors, state agencies, local officials, community organizations, and neighborhood residents to explore design and policy approaches to creating connected, economically prosperous, and environmentally and physically healthy communities. How much do you agree or disagree with this vision statement?

"Reimagine the Vine Street corridor to improve neighborhood connections, create equitable mixed-use development opportunities, and inclusive mobility options." - US Department of Transportation, Every Place Counts Design Challenge

Over 80% of respondents "strongly agreed" or "agreed" with the vision statement, however, people in the 19107 and 19123 ZIP codes were more likely to "disagree" or "strongly disagree" with it.









6. What other thoughts do you have about the Chinatown Stitch project? Feel free to elaborate on any of your answers above. (Tell us in up to 250 words.)

Question 6 received a total of 709 open-ended comments, 158 of which (22.2%) came from people who self-identified as Asian.¹ Of the open-ended comments:

- 538 expressed support for the project
- 151 were neutral
- 20 expressed opposition to the project

The open-ended responses mentioned the following topics. (Note: responses that touched on multiple categories were tagged with each topic, so the total number of categorized comments may be higher than the number of comments received.) The topics that were most important to people who identified as Asian in terms of the number of responses were: green space/public space, personal safety (crime, unhoused, drug addicts), community connection, biking and walking, street safety, and justice/righting historic wrongs. Topics where responses from Asian people made up over half of the total responses on a particular topic were: sound barrier/protection from noise, parking, personal safety (crime, unhoused, drug addicts), and place to exercise.

Number of Responses	Number of Responses from People Who Self-Identified as Asian	Торіс
147	29	Green Space / Public space
104	22	Community Connection
65	14	Biking and walking
57	12	Street Safety (speeding, reckless drivers, etc.)
56	7	Affordable housing
47	5	Cap whole expressway / Vine Street
45	18	Keep Culture / Chinatown First
43	23	Personal Safety (Crime, unhoused, drug addicts)
37	10	Justice / Righting Historic Wrongs
36	9	Supportive
35	7	Amenity / Nice addition
30	8	Shopping, Businesses, and Food / Restaurants
26	6	Stadium
25	2	Rail Park / Connecting more roads
21	17	N/A
20	7	Placemaking
15	1	Get Rid of 676
14	8	Parking
11	2	Trees

¹ Nearly all (93.8%) of the respondents who filled out the paper survey identified as Asian, however, many of the respondents who filled out paper surveys did not answer the open-ended question.



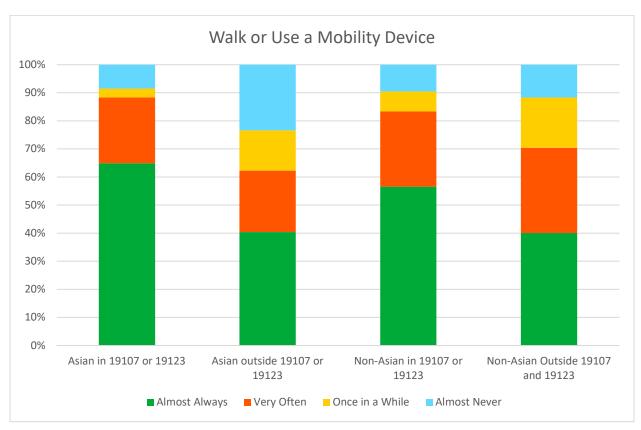
8	3	Children
7	2	Transit
6	1	Community Garden
6	3	Place to exercise (Tai Chi, Qigong)
6	1	Project Details
5	3	Sound barrier / Protection from noise
5	1	Elders



7. How do you travel around the area? (Choose one for each category.)²

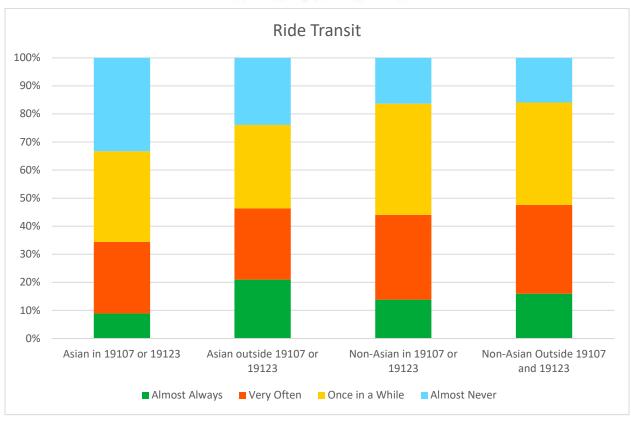
Over 80% of the respondents in the 19107 and 19123 ZIP Codes said they "almost always" or "very often" walked in the study area. Respondents outside of the 19107 and 19123 ZIP Codes were less likely to walk or use a mobility device, with over 20% of Asians outside of 19107 and 19123 saying they "almost never walk."

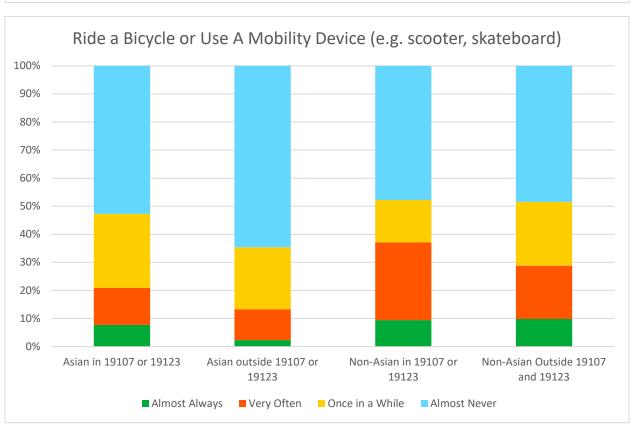
Asians in 19107 or 19123 took transit less often in the study area. Bicycle use is lowest among Asians living outside of the 19107 and 19123 ZIP Codes. Approximately 40% of Asians who live outside of the 19107 and 19123 ZIP Codes "almost always" or "very often" drive into the study area—either alone or with others. Cab/Lyft/Uber use is higher among non-Asians than it is among Asians.



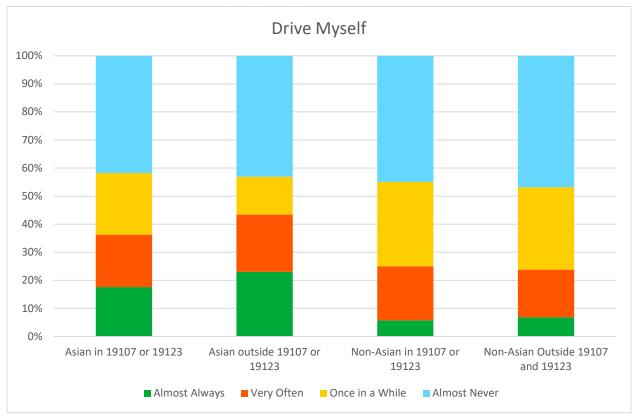
² Note: this question was not asked on the paper survey, so these results are based on fewer responses.

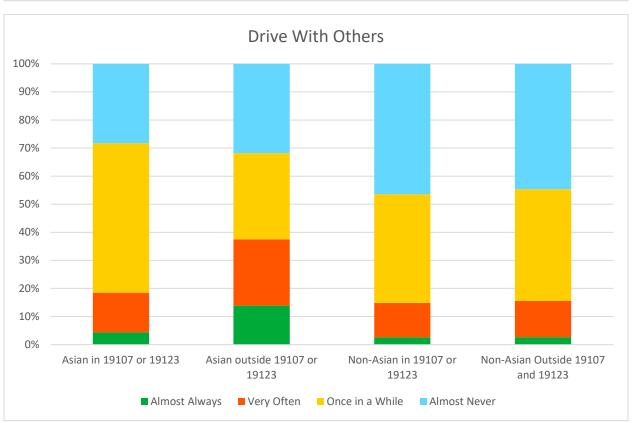




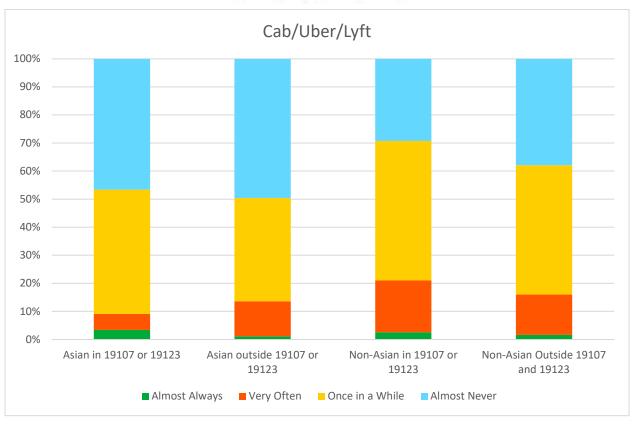














8. Who should be prioritized on the streets going around and through the future Chinatown Stitch project? (Rank them in your desired order).³

This question was not asked on the paper survey, so these responses are only based on the electronic survey responses. Both respondents who took the survey in Chinese and in English prioritized people walking or using mobility aids, such as wheelchairs or walkers. For respondents who took the survey in Chinese, people driving came next, then people biking or using scooters/skateboards, followed by people using transit, people making deliveries, and finally using the road space for shopping, dining, or socializing. For respondents who took the survey in English, the ranked order was: people walking or using mobility aids, people biking/scooting/skating, people using transit, using the road space for shopping/dining/socializing, people making deliveries, people driving, and finally people parking.

Chinese	People	People	People	People using	People	People	Use road
	biking or	driving	parking	public	walking or	making	space for
	using other			transportatio	using	deliveries to	shopping,
	mobility			n	mobility	homes or	dining,
	devices				aids (e.g.,	businesses	socializing
	(e.g.,				wheelchair,		
	scooter,				walker)		
	skateboard)						
1	15	13	16	15	<mark>20</mark>	0	11
2	15	<mark>19</mark>	14	10	17	2	13
3	<mark>24</mark>	13	15	19	7	7	5
4	16	13	15	<mark>16</mark>	13	7	10
5	13	8	13	17	<mark>20</mark>	14	5
6	4	12	12	9	10	<mark>37</mark>	6
7	3	12	5	4	3	23	<mark>40</mark>

English	People biking or using other mobility devices (e.g., scooter, skateboard)	People driving	People parking	People using public transportatio n	People walking or using mobility aids (e.g., wheelchair, walker)	People making deliveries to homes or businesses	Use road space for shopping, dining, socializing
1	190	42	10	83	<mark>989</mark>	5	139
2	<mark>638</mark>	63	42	310	241	14	150
3	351	59	68	<mark>556</mark>	106	59	259
4	156	98	82	361	48	224	<mark>489</mark>
5	63	211	156	91	50	<mark>718</mark>	169
6	29	<mark>641</mark>	440	43	17	218	70
7	31	344	<mark>660</mark>	14	7	220	182

16

³ Note: this question was not asked on the paper survey, so these results are based on fewer responses.



9. How could Vine Street be better? By "Vine Street" we mean the two local streets to the north and south of the Vine Street Expressway shown on the map at the beginning of the survey. (Tell us in up to 250 words.)⁴

Question 9 received a total of 765 open-ended comments, 176 of which (23%) were from people who self-identified as Asian. The open-ended responses mentioned the following topics. (Note: responses that touched on multiple categories were tagged with each topic, so the total number of categorized comments may be higher than the number of comments received.)

The eight topics that were most important to people who self-identified as Asian in terms of the number of responses were: safe, slow/reduce traffic (e.g., road diet, speed cushions), trees/parks/green space, Main Street/businesses/mixed use, more sidewalks/wider sidewalks, lane restrictions/less space for cars, parking, and easier to cross.

The topics that were most important to people who self-identified as Asian as a percentage of the total number of responses on a topic were: parking, preserving/honoring Chinatown, safety, congestion, more sidewalks/wider sidewalks, and slowing/reducing traffic (e.g., road diet/speed cushions).

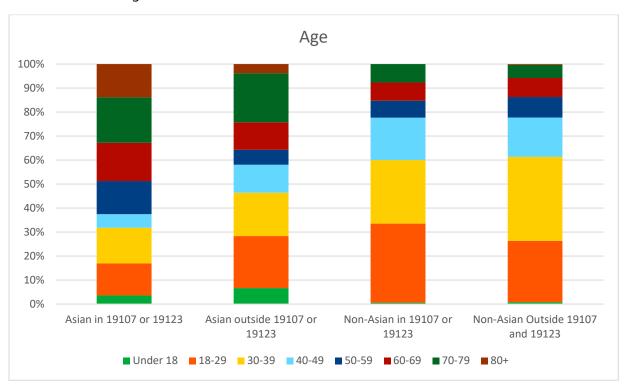
Number of Responses	Number of Responses from People Who Self- Identified as Asian	Торіс
205	9	Pedestrian / Bike Lane protection
182	38	Slow / Reduce Traffic (Road diet / Speed cushions)
138	41	Safe
125	22	Trees / Park / Green Space
107	20	Main Street / Businesses / Mixed Use
77	14	Lane Reductions / Less Space for Cars
75	19	More Sidewalks / Wider Sidewalks
58	11	Easier to cross
57	9	Prioritize Pedestrians (Delayed Red Light for Drivers) /
		Public Transit
38	7	Clean
30	5	Connection (to other side or Vine / Rail Park)
29	9	Preserve and Honoring Chinatown
27	12	Parking
14	4	Congestion
9	0	Сар

⁴ Note: this question was not asked on the paper survey, so these results are based on fewer responses. Nearly all (93.8%) of the respondents who filled out the paper survey identified as Asian, so these responses likely undercount issues of importance to the Asian community.



10. What is your age? (Select one option.)

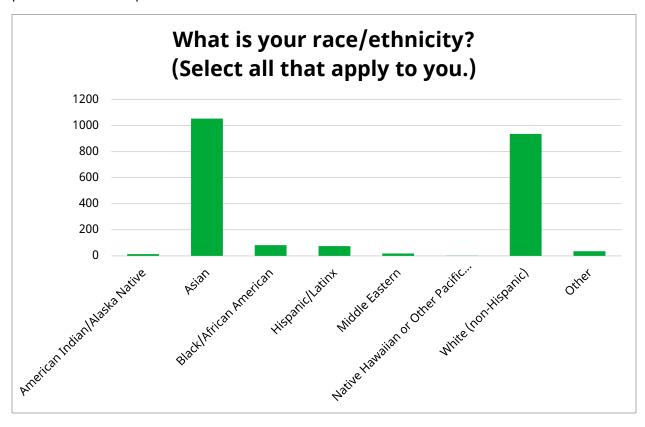
Asian respondents tended to be older than Non-Asian respondents. For example, nearly 50% of the Asians in the 19107 or 19123 ZIP Codes were 60 years or older, while only approximately 15% of non-Asian respondents were over the age of 60. There were 560 survey respondents who preferred not to reveal their age.





11. What is your race/ethnicity? (Select all that apply to you.)

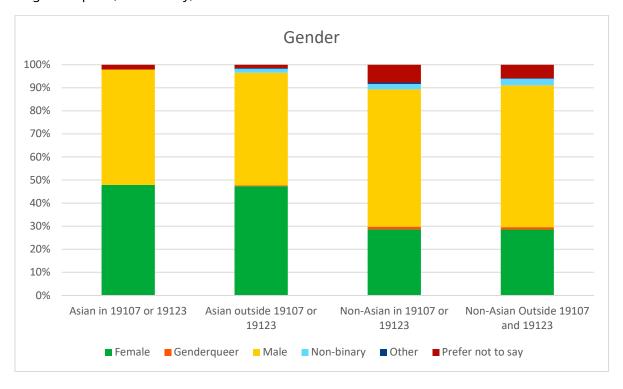
Respondents were overwhelmingly Asian (1,052) and White (935). There were 119 respondents who preferred not to respond.





12. What gender do you most identify as? (Select one option.)5

The paper survey did not include a question about gender, so there were only 1,522 responses to the gender question. Asian survey respondents were more evenly split between male and female, with fewer respondents identifying as genderqueer, non-binary, or other. For the non-Asians, respondents were more likely to identify as male (approximately 60%), one third as female, and 4% as genderqueer, non-binary, or other.

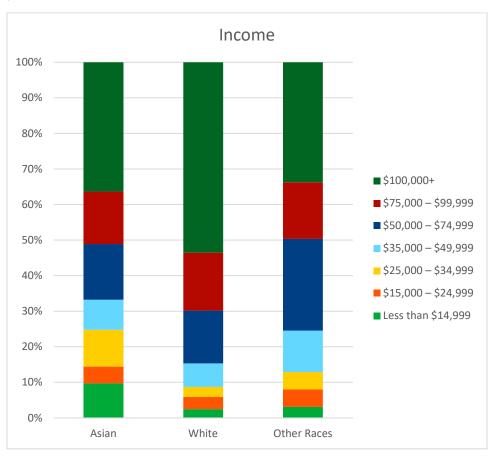


⁵ Note: this question was not asked on the paper survey, so these results are based on fewer responses.



13. What is your household income range?

White respondents tended to be wealthier, with 70% making more than \$75,000 and over 50% making more than \$100,000. Approximately 10% of Asian respondents made less than \$14,999 and approximately a third made less than \$50,000. For comparison, Philadelphia's median household income was \$52,649 in 2021 dollars according to the Census Bureau. This question was not asked on the paper survey so there were 1,047 respondents who either left this question blank or preferred not to answer.





14. What is your home ZIP Code?

2,219 respondents provided their home ZIP Code. There were 177 unique ZIP codes and 2 responses which were either letters or had fewer than 5 digits. There were 125 ZIP Codes that were in Philadelphia (which has ZIP Codes that start with "19"). The 19107 and 19123 ZIP codes were the first and third highest number of responses, respectively. The ZIP Codes that had more than 10 responses were:

19107 379 19147 177 19123 150 19148 138 19130 104 19103 102 19104 95 19146 83 19125 72 19106 47 19122 47 19145 47 19149 45 19128 44
19123 150 19148 138 19130 104 19103 102 19104 95 19146 83 19125 72 19106 47 19122 47 19145 47 19149 45
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19120 15
19129 13
19020 12
19118 12
19139 12
19096 11
19114 11
19052 10
19115 10
19124 10



15. If you would like project updates, please leave your email:

The email question was added after the survey was distributed. A total of 164 email addresses were collected. If you took the survey before the email question was added, please stay up-to-date on project news by subscribing for email updates at this link.

People Who Work or Own a Business in Chinatown

A total of 337 people indicated that they either work or own a business in Chinatown.

	Asian in 19107	Asian outside	Non-Asian in	Non-Asian Outside
	or 19123	19107 or 19123	19107 or 19123	19107 and 19123
I work here or I own a business here	85	147	19	86

For Question 4, What three words could describe your vision for the future Chinatown Stitch? (Choose your top three.), those who work or own a business in Chinatown ranked the top four words similar to the ranking of all responses with the third and fourth words switched.

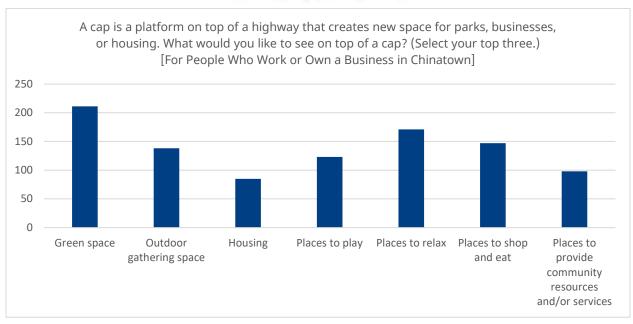
I work here or I own a business here	All Responses
Safe	Safe
Neighborhood Cultural Identity	Neighborhood Cultural Identity
Physically Accessible	Welcoming/Inviting
Welcoming/Inviting	Physically Accessible

For Question 8, Who should be prioritized on the streets going around and through the future Chinatown Stitch project? (Rank them in your desired order), the average ranking for workers/businesses owners is similar to the average ranking for all responses. Workers/business owners were slightly more likely to prioritize "people driving" and "people parking" compared to all respondents.

Average Ranking	I work here or I own a business here	All Responses
People walking or using mobility aids (e.g. wheelchair, walker)	1.89	1.74
People biking or using other mobility devices (e.g. scooter, skateboard)	2.75	2.67
People using public transportation	3.43	3.20
Use road space for shopping, dining, socializing	4.30	3.97
People driving	5.02	5.42
People making deliveries to homes or businesses	5.27	5.20
People parking	5.35	5.80

Chinatown workers and business owners were most interested in green space on the future cap, followed by places to relax, places to shop and eat, and outdoor gathering space.





Next Steps

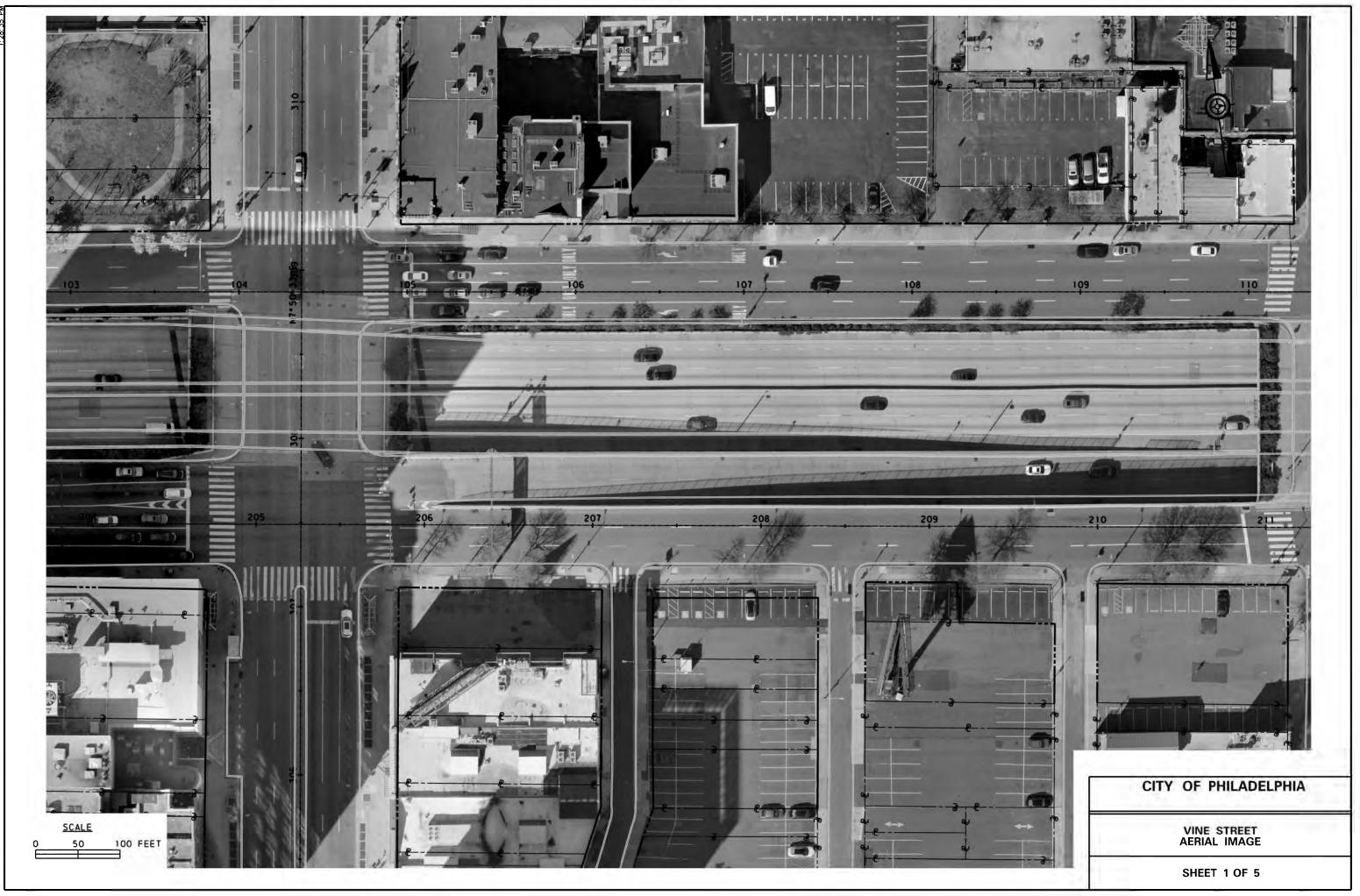
The survey input will be combined with the feedback received from Community Visioning Workshop #1 to develop three design concepts for the Chinatown Stitch. This summer, the concepts will be shared with the public for their feedback.

For more information on the Chinatown Stitch study, visit https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/.

You can submit comments online at https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/submit-a-comment/ or by emailing otis@phila.gov.

APPENDIX E:

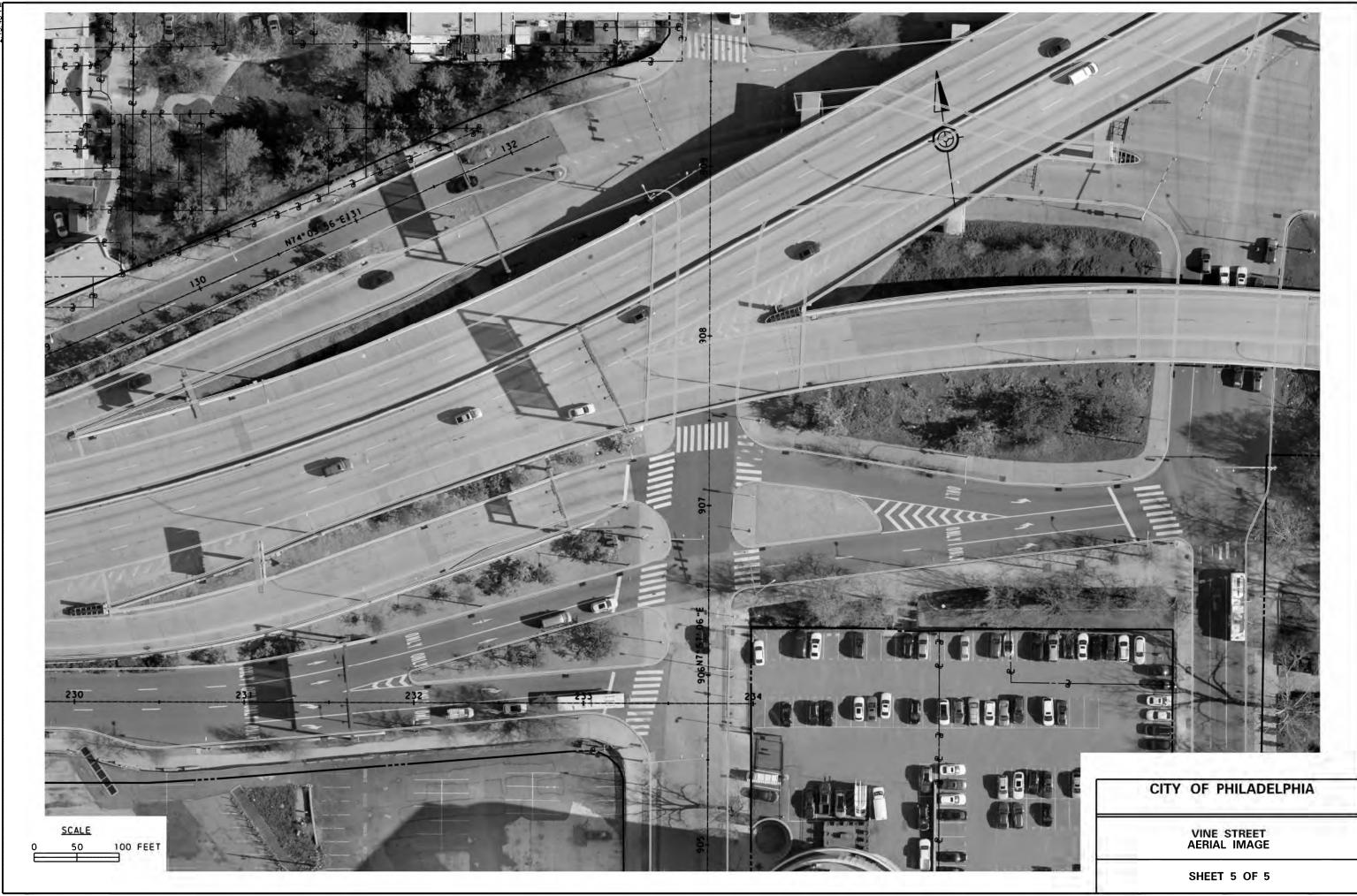
VINE STREET AERIAL











APPENDIX F:

COMMUNITY VISION
WORKSHOP #2
BOARD DISPLAYS AND
SUMMARY



Community Vision Workshop #2: September 18, 2023

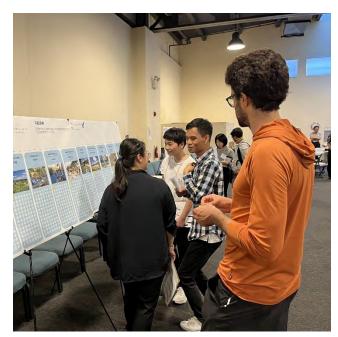
About Community Vision Workshop #2

The Chinatown Stitch: Reconnecting Philadelphia to Vine Street is a concept study looking at building a cap on top of the Vine Street Expressway between Broad Street and 8th Street to reconnect Chinatown and Chinatown North in Philadelphia. The study is a partnership between the City of Philadelphia's Office of Transportation Infrastructure and Sustainability (OTIS) and the Philadelphia

Chinatown Development Corporation (PCDC).

On September 18, 2023, the second of two inperson Community Visioning Workshops was held at Chinese Christian Church and Center (1101 Vine Street) from 6:00 PM to 8:00 PM. This workshop was held as an open house so community members could stop by any time during the event to view display boards and talk one-on-one with project team members.

The purpose of Community Vision Workshop #2 was to solicit public feedback about the three design concepts for the Chinatown Stitch (Two-Block; Three-Block; and Three-Bock: Vine Street Westbound to the Middle). Attendees gave feedback on their preferred design alternative, what they liked and disliked about each design alternative, and which amenities they would like to have on each cap.



Community Vision #2 Workshop had educational and interactive displays boards set up around the event space.

Thirty-nine (39) people signed into the Community Vision Workshop, which was promoted through the following methods:

- Simplified Chinese and English flyers placed in Chinatown businesses and apartment buildings
- Postcard mailing to 1,115 residences within the study area
- City of Philadelphia, PCDC, DVRPC, and partner social media posts
- Project website
- Press release/local media coverage

There were eleven display boards translated into Simplified Chinese and English. Of these boards, six were educational and five were interactive. Project team members were stationed at each



display to explain the display topics and answer questions. PCDC provided 2 Mandarin and 2 Cantonese translators.

Overall, participants expressed interest in a two block cap or three block cap with full coverage. They like that the concepts have green space, a connection to the Rail Park, and the pedestrian bridge. They dislike turning the cap into a tunnel, the removal of sound barriers, and any potential for increased traffic congestion. Participants' top amenity choices are a market space, picnic/seating area, and a community garden, and the factors that are most important to them are improving the pedestrian environment, adding green space and public plazas, and minimizing construction duration and impact on community.

Display Board Feedback Results

Two Block Cap

What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

Likes

- Green space
- Connection to Rail Park
- The cap is not a tunnel
- The cap connects both sides of the street

Dislikes

- Too much green space
- Lack of transit hub
- Removal of sound barriers

<u>Additional Notes:</u> While one resident liked that there would be no parking on the cap, several others—including business owners--expressed a desire for additional parking. Another resident expressed concern about vehicles speeding and running red lights.

Three Block Cap: Full Coverage

What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

Likes

- Green space
- Connection to Rail Park
- Pedestrian bridge
- Maximizing the space

Dislikes

- Too much green space
- Lack of transit hub
- This would turn the cap into a tunnel
- The cap would have to be raised and the tunnel would need an exhaust release mechanism
- Removal of sound barriers
- Vehicles would be challenged to turn onto the Convention Center ramp

<u>Additional Notes:</u> Several residents expressed a desire for parking and security. Another resident expressed a desire for a road diet on Vine Street.



Three Block Cap: Vine Street Westbound to the Middle

What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

Likes

- Connection to Rail Park
- Pedestrian bridge
- Consolidation of road space

Dislikes

- Narrow surface lanes
- Potential danger of crossing a wide street
- Removal of sound barriers
- Breaking up/fragmentation of space
- Potential for increased vehicle traffic congestion and noise





Workshop attendees shared what they liked and disliked about the Chinatown Cap concepts.



How Much Do You Like the Concepts?

Use one dot sticker to vote on how much you like or dislike each concept.

Concept	# of stars	Votes
Two Block Cap	*	3
	**	3
	***	5
	***	18
	****	9

Total Votes = 38 Average Rating = 3.7105

Concept	# of stars	Votes
Three Block Cap: Full Coverage	*	0
	**	2
	***	15
	***	14
	****	11

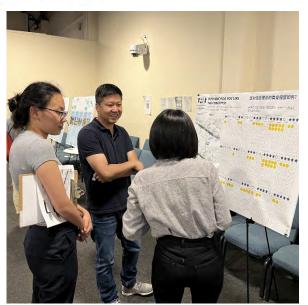
Total Votes = 42 Average Rating = 3.8095

Concept	# of stars	Votes
Three Block Cap: Vine Street	<u></u> ★	21
Westbound to the Middle	**	4
	***	8
	***	3
	****	2

Total Votes = 38 Average Rating = 1.9737







Attendees ranked each concept on a one- to five-star scale.

Chinatown Stitch Park Amenities

Which park amenities would you like to see on top of the cap? Use dot stickers to vote on your top three.

Amenity	Votes
Market Space	22
Picnic/Seating Area	15
Community Garden	13
Exercise Space	11
Performance Stage	8
Water Feature	8
Playground	9
Athletic Courts	8
Dog Park	6
Game Tables	4









Chinatown Stitch Park Amenities - Other

Write your idea on a sticky note.

The top comments for additional amenities were categorized as follows: cultural representation, parking, and solutions to address unhoused people.

Amenity Idea	Votes	Comment examples
Cultural representation	6	Emphasis on culture
Parking	3	Residence parking
Address lack of resources for	3	Must provide measures for
unhomed populations.		misuse by homeless.
Connect to Rail Park	2	Connection with Rail Park
		can provide some of these
		amenities.
Activities	2	I'll bring the games.
Security	1	Everything needs security.
Transit hub	1	Transit hub
Cafes	1	Cafes





Attendees voted on the cap amenities they would like to see most.



Ranking of Factors

Please rank how important these factors are to you from 1 to 6 (1-most important to you, 6-least important to you).

Attendees were asked to complete a Ranking of Factors sheet to rank the six key factors of the concept designs. Based on the average score for each factor, below is the final ranking of the importance of each factor to participants:

- 1. Improve the pedestrian environment
- 2. Add green space and public plazas
- 3. Minimize construction duration and impact on community
- 4. Add potential buildings along or on the cap
- 5. Minimize construction cost
- 6. Add connection to Rail Park

In contrast to ranking adding a connection to the Rail Park as the least important factor overall in the exit survey, participants expressed that they liked this connection via sticky notes on the concept display boards.

Factor	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Average	Final
	Votes	Votes	Votes	Votes	Votes	Votes		Rank
Minimize construction duration and impact on community	6	4	5	7	6	1	3.21	3
Improve the pedestrian environment	12	7	6	1	1	2	2.24	1
Add potential buildings along or on the cap	1	2	8	9	3	6	4.00	4
Add green space and public plazas	9	9	5	2	2	2	2.48	2
Minimize construction cost	4	5	1	2	9	8	4.07	5
Add connection to Rail Park	1	1	7	7	6	7	4.28	6



Exit Survey Feedback

Attendees were asked to complete an exit survey to collect demographic data about the individuals who provided feedback during the workshop. The City of Philadelphia is committed to equity, and we want to ensure that feedback we receive on our projects is representative of the diversity of Philadelphia residents. Therefore, people were asked to self-select their demographic data so that we understand who has provided feedback. A total of 28 people filled out the Exit Survey.

1. What is your age?				
Age Range	Total	Percent		
Under 18	0	0%		
18-29	3	10.7%		
30-39	9	32.1%		
40-49	2	7.1%		
50-59	6	21.4%		
60-69	5	17.9%		
70-79	3	10.7%		
80+	0	0%		
Prefer not to say	0	0%		

2. What is your race/ethnicity? (Select all that apply to you.)			
Race/Ethnicity	Total	Percent	
American Indian/Alaska Native	0	0%	
Asian	15	53.6%	
Black/African American	0	0%	
Hispanic/Latinx	1	3.6%	
Middle Eastern	1	3.6%	
Native Hawaiian or Other Pacific Islander	0	0%	
White (non-Hispanic)	9	32.1%	
Other (please specify)	0	0%	
Prefer not to say	0	0%	

3. To which gender do you most identify?			
Gender	Total	Percent	
Female	9	32%	
Male	18	64%	
Non-binary	0	0%	
Genderqueer	0	0%	
Other (please specify)	0	0%	
Prefer not to say	1	4%	

4. What is your household income range?			
Household Income Range	Total	Percent	
Less than \$14,999	0	0%	
\$15,000 – \$24,999	2	7.1%	
\$25,000 – \$34,999	0	0%	
\$35,000 – \$49,999	0	0%	
\$50,000 – \$74,999	6	21.4%	
\$75,000 – \$99,999	9	32.1%	
\$100,000+	5	17.9%	
Prefer not to say	6	21.4%	



5. What is your home ZIP code?				
Zip Code	Total	Percent		
19107	7	25.0%		
19104	3	10.7%		
19123	2	7.1%		
19134	1	3.6%		
19146	1	3.6%		
19147	1	3.6%		
19149	1	3.6%		
N/A (no permanent	1	3.6%		
home)				
Prefer not to say	11	39.29%		

6. How did you hear about this Workshop? (Circle all that apply)				
Promotion	Total	Percent		
Social Media	4	36.4%		
Neighbor or Friend	3	27.3%		
PCDC	3	27.3%		
Press Release or News	3	27.3%		
Project Website	3	27.3%		
Postcard	2	18.2%		
Email	1	9.1%		
Organization	1	9.1%		

Do you have other ideas about how we can advertise this project in your neighborhood?

Community leaders to have get togethers with residents

Yes! Build off the 76 Place drama to propose something that people actually want. Leverage the public's opinion.

Add resident parking

Flyers on lamp posts and contacting West Poplar neighborhood associations and schools. I have not seen any outreach in that area at all.

Neighborhood RCO, Planning/zoning groups, Facebook neighborhood groups are very active.

Put display board around Chinatown fire station

Social media, connect with Callowhill neighbors and Railpark

Flyers at local businesses i.e. Cliffs, Love City Brewery

Go to Temple, Upenn, Drexel, Moore, Philly Community College for feedback

We Chat - social media

Nextdoor, Facebook, Instagram, Tiktok

Distribute the postcard to restaurant goers.

Design flyers to distribute at Chinese restaurants, teahouses, bubble teas, bakery and grocery stores and supermarket.

All local news channels, PCDC, other Chinatown Associations, Social Media (FB, IG, etc.)

Number of email subscribers: 12 (42.8%)



Next Steps

The input received from Community Visioning Workshop #2, two September pop-up events, and the online survey will be used to develop a final design concept for the Chinatown Stitch.

For more information on the Chinatown Stitch study, visit https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/.

You can submit comments online at https://www.phila.gov/programs/complete-streets/projects/the-chinatown-stitch-reconnecting-philadelphia-to-vine-street/submit-a-comment/ or by emailing otis@phila.gov.

Stay up-to-date on project news by subscribing for email updates at https://phila.us21.list-manage.com/subscribe?u=aa027a1be06913479854af614&id=1bc6623b61.



The Chinatown Stitch 重塑費城萬安街 Reconnecting Philadelphia's Vine Street

Chinatown Stitch Cap Concepts

Three cap concepts were developed based on your feedback and constraints, such as highway on-ramps, underground utilities, and highway grade changes.



- A Active spaces along north-south cross streets
- B Rail Park connection to green space on cap
- Remove sound barrier wall for wider sidewalk
- Improve key intersection
- **E** Explore pedestrian connection



- A Active spaces along north-south cross streets
- B Rail Park connection to green space on cap
- © Remove sound barrier wall for wider sidewalk
- Improve key intersection
- **E** Explore pedestrian connection

Three Block Cap: Vine Street Westbound to the Middle



- A Re-locate westbound Vine Street over highway cap
- **B** Shorter crossing distance
- C Active spaces along north-south cross streets
- Rail Park connection to green space on cap
- **E** Convention Center ramp access
- Remove sound barrier wall for wider sidewalk
- **G** Improve key intersection
- **B** Explore pedestrian connection

Learn more about the project: www.phila.gov/complete-streets/chinatown-stitch

Sign up for project updates: https://tinyurl.com/StitchSubscribe



Chinatown Stitch Cap Concepts

Three cap concepts were developed based on your feedback and constraints, such as highway on-ramps, underground utilities, and highway grade changes.



- A 沿南北向十字街设置活动空间
- B 铁路公园 (Rail Park) 连接至顶盖上的绿地
- **c** 拆除隔音墙,加宽人行道
- D 改进关键交叉路口
- **E** 开发行人通道



- A 沿南北向十字街设置活动空间
- B 铁路公园 (Rail Park) 连接至顶盖上的绿地
- **C** 拆除隔音墙,加宽人行道
- D 改进关键交叉路口
- **E** 开发行人通道

Three Block Cap: Vine Street Westbound to the Middle



- A 将万安街 的西行线重新迁至公路顶盖
- B 缩短过街距离
- c 沿南北向十字街设置活动空间
- D 铁路公园 连接至顶盖上的绿地
- **E** 会议中心 匝道通道
- F 拆除隔音墙,加宽人行道
- G 改进关键交叉路口
- **H** 开发行人通道

访问项目网站:

www.phila.gov/complete-streets/chinatown-stitch

注册以接收项目最新信息:

https://tinyurl.com/StitchSubscribe



重塑費城萬安街

Reconnecting Philadelphia's

Vine Street

ABOUTTHE CHINATOWN STITCH PROJECT

The Vine Street Expressway has long divided Chinatown. The Chinatown Stitch: Reconnecting Philadelphia to Vine Street is a concept study looking at building a cap on top of the Vine Street Expressway between Broad Street and 8th Street. We are calling this cap "The Chinatown Stitch" because it could help reconnect Chinatown and Chinatown North by making the Vine Street Expressway less of a barrier.

The project team includes:

- The City of Philadelphia
- Philadelphia Chinatown Development Corporation (PCDC)
- Pennsylvania Department of Transportation (PennDOT)

长期以来,万安街高速公路一直将华埠社区一分为二。"缝合华埠:重新连接被万安街高速公路分离的华埠 社区"是一项概念研究,目标是在万安街高速公路的上方进行封顶,研究重点是宽街至8街之间的路段。 我们把这个封顶项目命名为"缝合华埠",因为封顶区域可以通过减少万安街高速公路带来的障碍,帮助重 新连接分离已久的华埠南北社区。

项目团队包括

- 费城市政府
- · 费城华埠发展会 (PCDC)
- · 宾夕法尼亚州运输部 (PennDOT)

What is a cap?

A cap is a platform on top of a highway that creates new space for parks, businesses, or housing.

什么是封顶?

"封顶"是指在高速公路的上方搭建平 台,将此空间用于建设新的公园、商业 用房或民用住宅。



Project Schedule 项目进度计划

Community Engagement Phase 1: Co-Learning 社区参与阶段 1:了解信息

January 2023 - April 2023

Public Engagement began with a survey to understand the community's vision for the cap.

Host Community Visioning Workshop #1.

2023年1月—2023年4月

公众参与从开展调查开始,以了解社区对封顶的愿景。

举行第1次社区愿景研讨会。

Community Engagement Phase 2: **Community Collaboration** 社区参与阶段 2:社区合作

May 2023 - August 2023

Share design concepts for the cap and get feedback through Survey #2 and Community Visioning Workshop #2.

September 2023

Share preferred design concept and final report for the Chinatown Stitch at a community open house.

2023年5月-2023年8月

通过第2次调查和第2次社区愿景研讨会,分享设计理念并获得反馈。

2023年9月

在社区开放日分享首选的设计理念和最终报告。

Design, Engineering, and Construction 设计、工程和施工

Design and Engineering 设计和工程

After 2026 年后

City submits an application for federal funding through the Infrastructure Investment and Jobs Act (IIJA) Construction grant.

Anticipated construction start date.

费城市政府通过《基础设施投资和就业法案》(IIJA)的建设拨款申请联邦资金。

预计开工日期

Funding The City of Philadelphia has received funding from the following sources for this effort:
•\$1.8M in US Department of Transportation grant funding for community engagement

- \$2.2M matching funds from the City, PennDOT, the Knight Foundation and other local partners for planning and preliminary engineering.
- Funding for construction of a cap has not been secured

费城市政府已从以下来源获得了这项工作的资金:

- 美国运输部拨款 180 万美元用于社区参与
- · 费城市政府、PennDOT、Knight 基金会以及其他地方合作伙 伴提供220万美元的配比基金用于规划和初步工程。
- 封顶区域的施工资金尚未到位





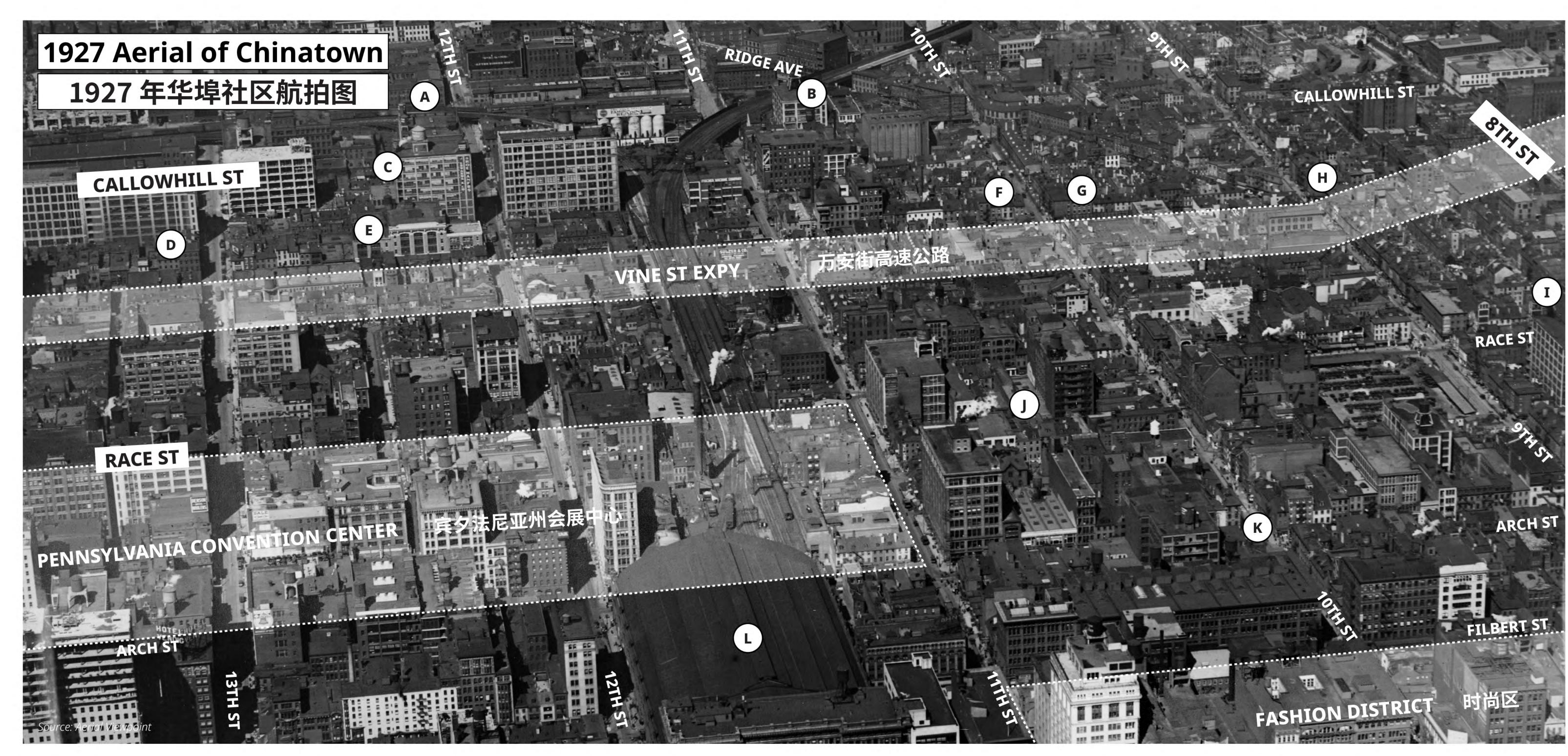
縫合 華埠

HISTORY AND PAST PLANNING

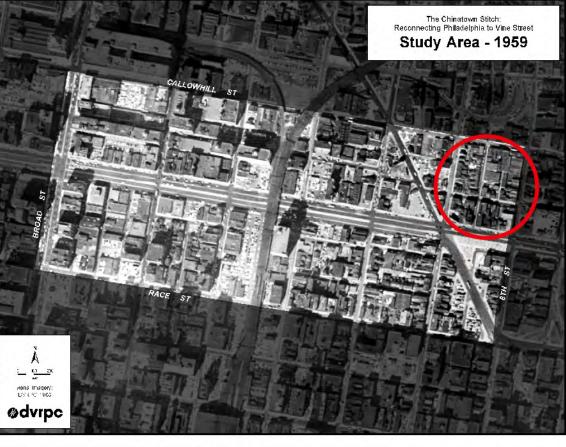
历史及过往规划

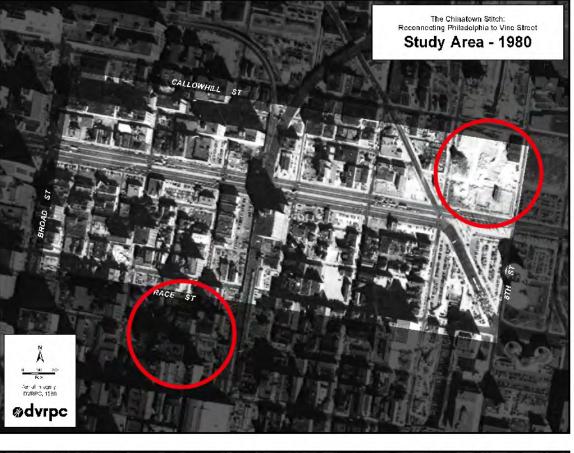
The Chinatown Stitch 重塑費城萬安街 Reconnecting Philadelphia's Vine Street The Vine Street Expressway and local roads separate the Chinatown community, acting as a physical barrier between the Chinatown and Chinatown North neighborhoods. The community has made continued efforts to mitigate the expressway's negative impacts, which include fast-moving traffic, congestion, air pollution, and noise. There have been numerous studies and plans over the past 20 years that analyzed how to improve connections between Chinatown and Chinatown North and make the local Vine Street roads safer. The Chinatown Stitch builds on these plans and studies.

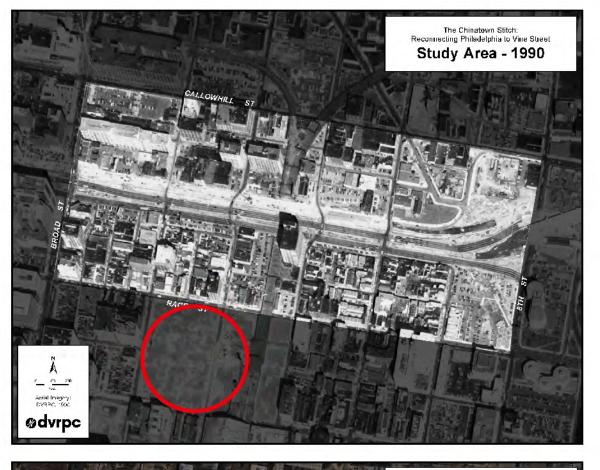
万安街高速公路和多条地方街道将华埠社区一分为二,在华埠南北社区之间建立了一道物理屏障。高速公路建成后,社区一直在努力减轻其带来的负面影响,包括车速快造成的安全隐患、交通拥堵、空气污染以及噪音。在过去的 20 年里,许多研究和计划就万安街高速公路的情况进行了分析,包括如何加强华埠南北社区之间的联系,并提高地方街道万安街的安全性。缝合华埠项目就是在这些研究和计划的基础上开展的。

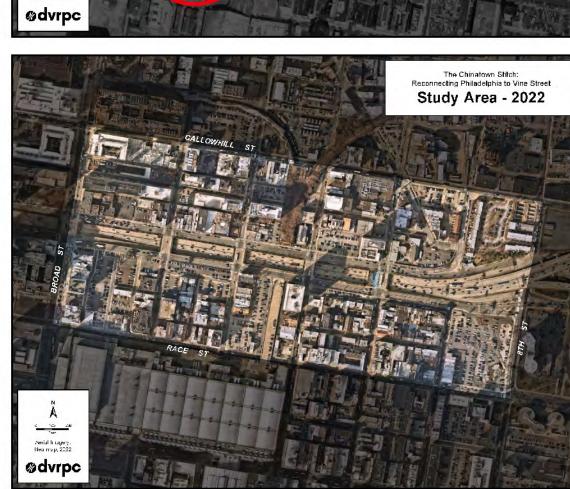












- A RAIL PARK
- B FOLKS ARTS-CULTURAL TREASURES CHARTER SCHOOL
- (c) UNDERGROUND ARTS
- D PHILLY HOUSE
- (E) ASIAN ARTS INITIATIVE
- F CRANE BUILDING
- G HOLY REDEEMER CHINESE CATHOLIC CHURCH

- H PHILADELPHIA CHINATOWN DEVELOPMENT CORP (PCDC)
- 1 CHINATOWN BSL STATION
- J CHINATOWN SQUARE
- (K) CHINATOWN ARCH
- (L) READING TERMINAL MARKET

- A)铁路公园
- B)民艺特许学校
- c 地下艺术中心
- (D) 费城之家
- E 亚洲艺术促进会
- F 鼎华居公寓

- G 华人天主教堂
- H 费城华埠发展会 (PCDC)
- I 宽街线华埠站
- (」) 华埠广场
- (K) 华埠拱门
- (L) 瑞汀车站市场

HISTORY AND PAST PLANNING

1969

1966

PennDOT shared plans

to connect Vine Street

Expressway to Ben Franklin

Bridge and I-95; save

Chinatown Movement

begins

1966年

PennDOT 分享了将万安

街高速公路连接至本杰明•

富兰克林大桥和 95

号州际公路的计划;

拯救华埠运动开始

1959

Vine Street

Expressway

completed to

17th Street

1959年

路连接至17街

1951

Vine Street

widened to

10 lanes

1951年

10 车道

万安街拓宽为万安街高速公

历史及过往规划

划制定完成

(费城华埠发展会)

2018年

复兴万安街研究启动

(特拉华河谷区域规划委员会)



Vine Street

1870

Chinatown

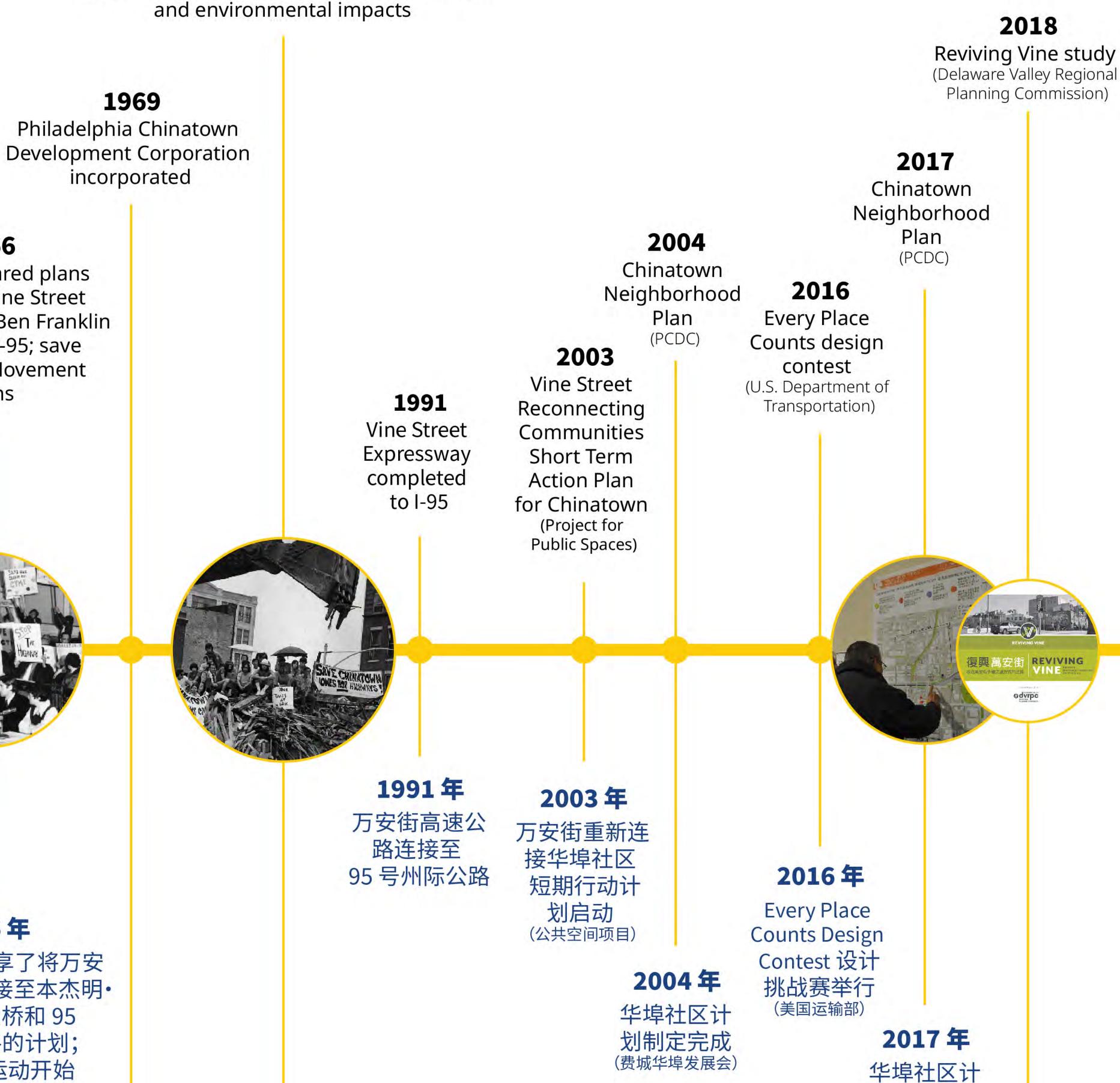
founded

1870年

华埠社区成立



Vine Street Expressway's original proposal scaled down as a result of community activism and environmental impacts



1969年

费城华埠发展会成立

2023年

2022

(Center City District)

Grant

2023

Vine Street Expressway Assessment Report

Transportation Reconnecting Communities

Chinatown Stitch Study continues

Reconnecting Communities Grant

Program (HSIP) project begins

缝合华埠项目研究继续进行

PennDOT Highway Safety Improvement

Department of Transportation (PennDOT)'s Highway

Safety Improvement Program (HSIP) project is using

recommendations from the Delaware Valley Regional

improve pedestrian and bicycle safety on Vine Street.

The results of the Chinatown Stitch project can help

费城市政府宣布成功申请重新连通社

PennDOT 的公路安全改进计划 (HSIP)

在进行这项研究的同时,宾夕法尼亚州运输部

(PennDOT) 的公路安全改进计划 (HSIP) 项目将从特

拉华河谷区域规划委员会 (DVRPC) 的复兴万安街研

究中获取建议,以改善万安街的行人和行车安全。缝

合华埠项目的研究结果将有助于为 HSIP 项目提供

Planning Commission's (DVRPC) Reviving Vine study to

At the same time as this study, the Pennsylvania

award announcement

inform this HSIP project.

区拨款

项目启动

City applies for U.S. Department of

Chinatown Stitch project begins

缝合华埠项目启动

信息。

费城市政府向美国运输部申请重新连通社区拨款

万安街高速公路评估报告发布(中心城区)

2022年

1980年

受社区抗议活动和环境影响, 万安街高速公路的初始提案规模缩小



Reconnecting Philadelphia's

Vine Street

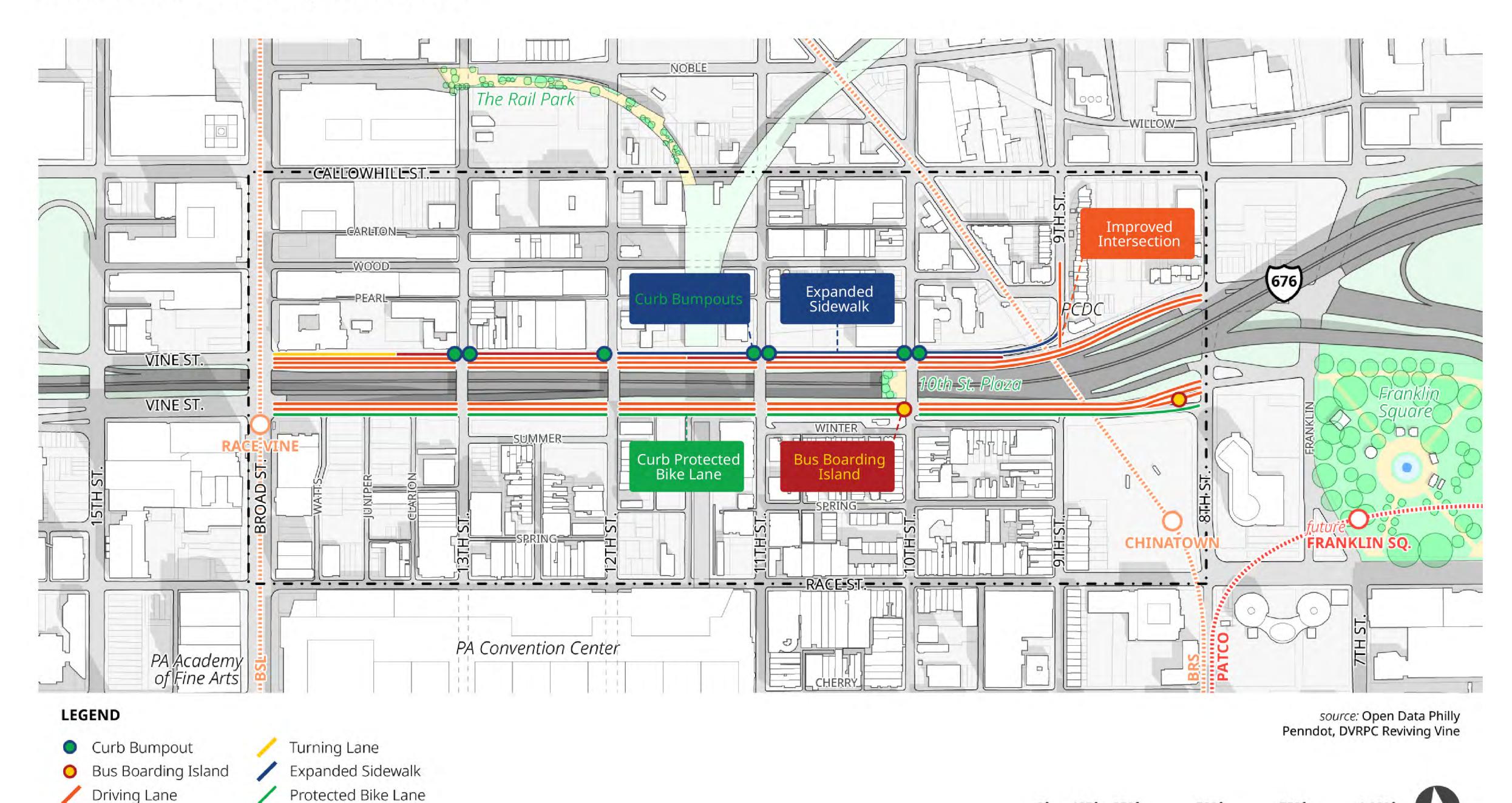
PA Department of Transportation Local Vine Street Improvements

The Pennsylvania Department of Transportation (PennDOT) is implementing recommendations from the Delaware Valley Regional Planning Commission's (DVRPC) Reviving Vine: Improving Multimodal Connections on Vine Street study, which was published in 2018. Improvements will include a road diet, curb bump outs, and bike lanes.

PA Department of Transportation Local Vine Street Improvements

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Local Vine Street Improvements



What is a road diet?

A "road diet" reduces the number of travel lanes or the width of a roadway to allow for effective safety improvements. Benefits include:

- Fewer travel lanes for vehicles
- Reduced vehicle speeds
- Shorter crossing distances for people walking
- Wider sidewalks
- A curb-protected bike lane

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- Wider sidewalks
- A curb-protected bike lane

Curb Bumpout

Parking Lane



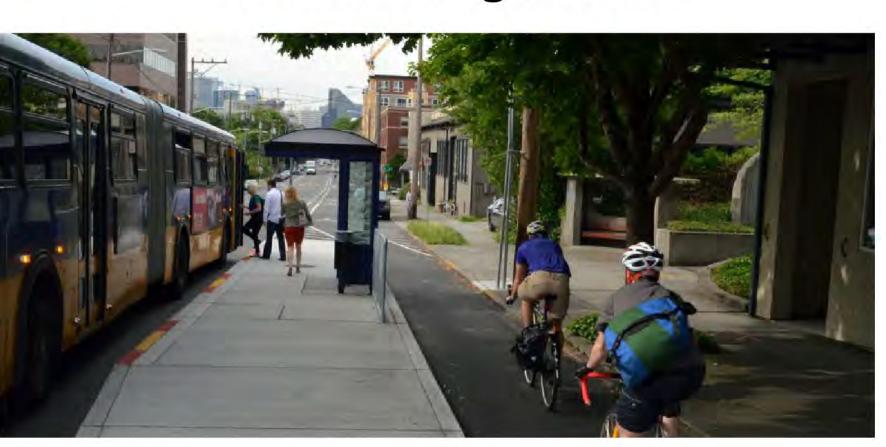
Expanded Sidewalk



Protected Bike Lanes



Bus Boarding Island





The Chinatown Stitch 重塑費城萬安街 Reconnecting Philadelphia's Vine Street

HIGHWAY CAP EXAMPLES

What is a Cap?

A cap is a platform on top of a highway that creates new space for parks, businesses, or housing and connects streets and communities separated by a highway. Cities across American have pursued capping projects to address the impacts of highway construction, like the division, removal, or disruption of established minority communities.

The Chinatown Stitch Study is analyzing the possibility of building partial or full caps across the Vine Street Expressway from Broad Street to 8th Street and Callowhill Street to Race Street.

什么是封顶?

高速公路封顶示例

"封顶"是指在高速公路的上方搭建平台,将此空间用于建设新的公园、商业用房或民用住宅,并连接被高速公路分离的街道和社区。美国各地的多个城市都已经推行了封顶项目,以消除高速公路建设带来的影响,比如现有少数民族社区的分裂、迁移或破坏。

"缝合华埠"研究旨在分析在万安街高速公路从宽街到8街及卡洛希尔街至礼士街之间的部分或全部路段上方进行封顶的可能性。

NAME: The Park at Penn's Landing

(under construction)

LOCATION: Philadelphia, PA

TYPE: Full Cap

项目名称:佩恩码头公园(建设中)

地点:宾夕法尼亚州,费城

类型:全路段封顶

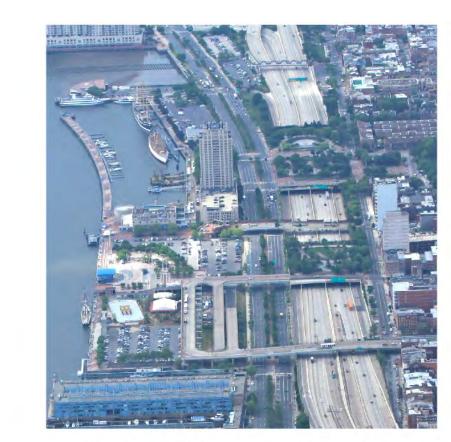


Photo before construction.

NAME: Klyde Warren Park LOCATION: Dallas, TX TYPE: Full Cap

项目名称:克莱德·沃伦公园 地点:德克萨斯州,达拉斯 类型:全路段封顶

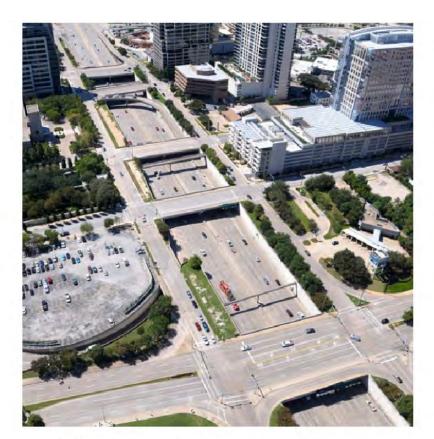


Photo before construction.

NAME: Cap at Union Station LOCATION: Columbus, OH

TYPE: Partial Cap

项目名称:联合车站封顶 地点:俄亥俄州,哥伦布 类型:部分路段封顶



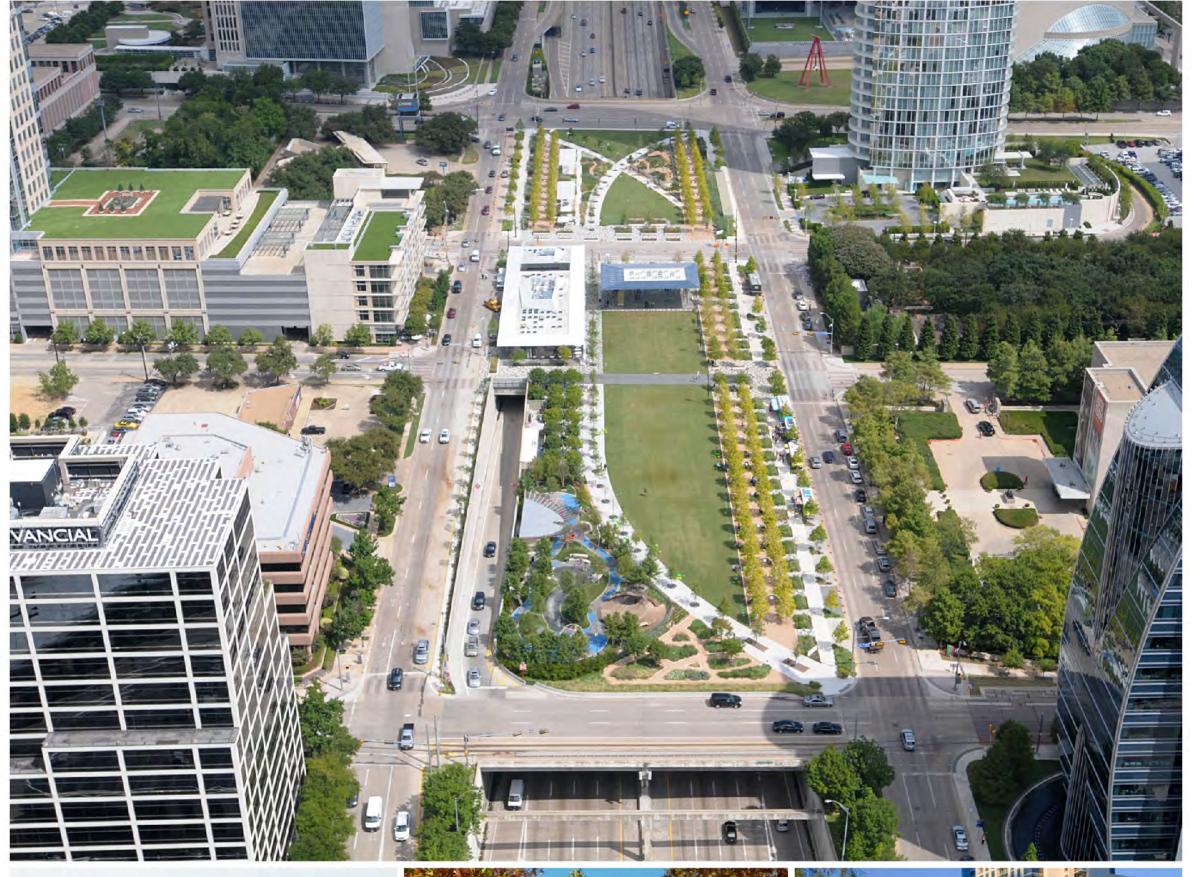
Photo before construction.





This park will bridge over I-95 between Walnut Street and Chestnut Street and slope downward to reconnect Old City to the Delaware River. This new park will include a new skating rink, water features, a play area, and a café.

这座公园将成为95号州际公路在核桃街和栗树街之间路段上方的桥梁,并且向下倾斜,将老城区与特拉华河重新连接起来。这个新公园将包括一个新的滑冰场、几处水景、一个游乐区和一个咖啡馆

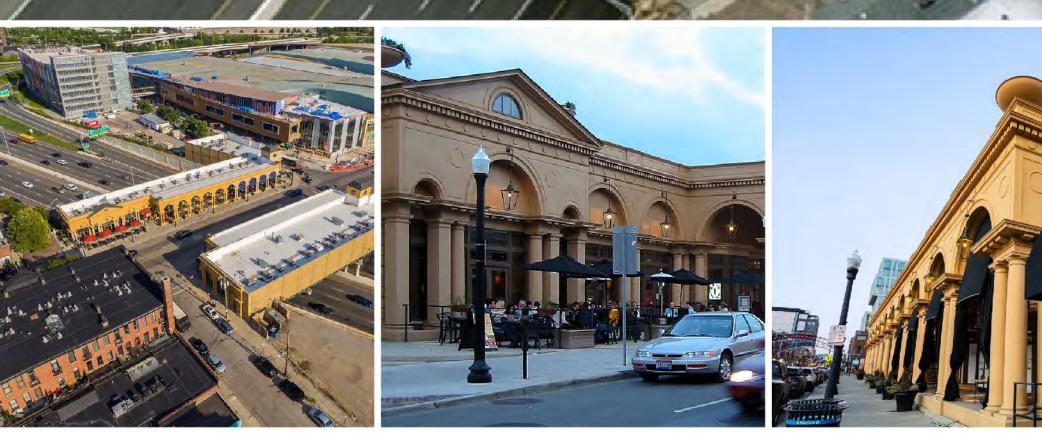




A 5-acre deck park over Woodall Rodgers Freeway (Texas State Highway Spur 366), a recessed eight-lane freeway.

这座公园占地5英亩,建在伍德尔罗杰斯高速公路(德克萨斯州366号公路)上,这是一条地埋式八车道高速公路。





A 25,500 square-foot retail development over Interstate 670, reconnecting the downtown with the Short North arts and entertainment district.

该封顶区域位于670号州际公路上方,占地25500平方英尺,用于开发零售行业,旨在将市中心与短北艺术和娱乐区重新连接起来。

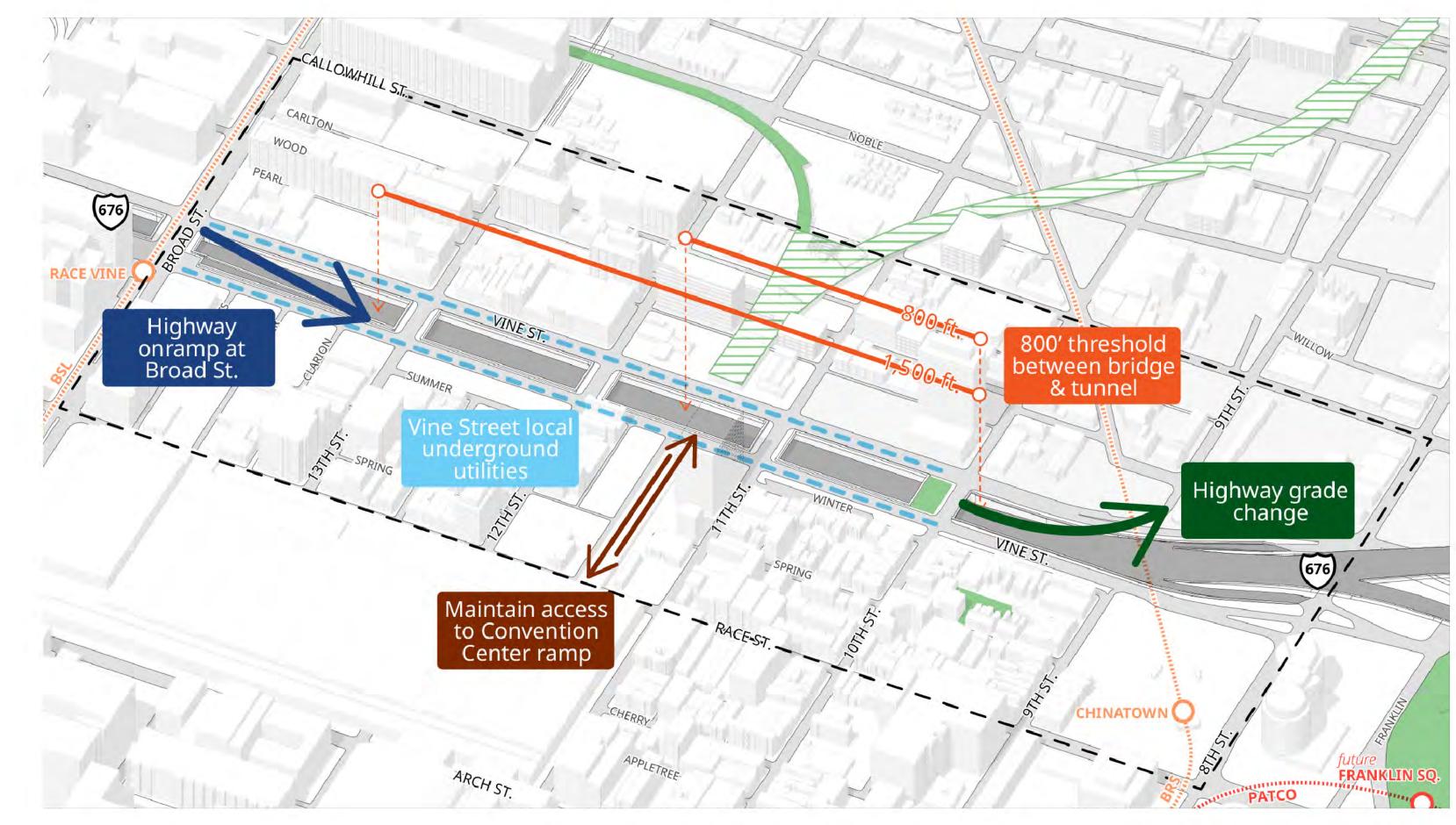


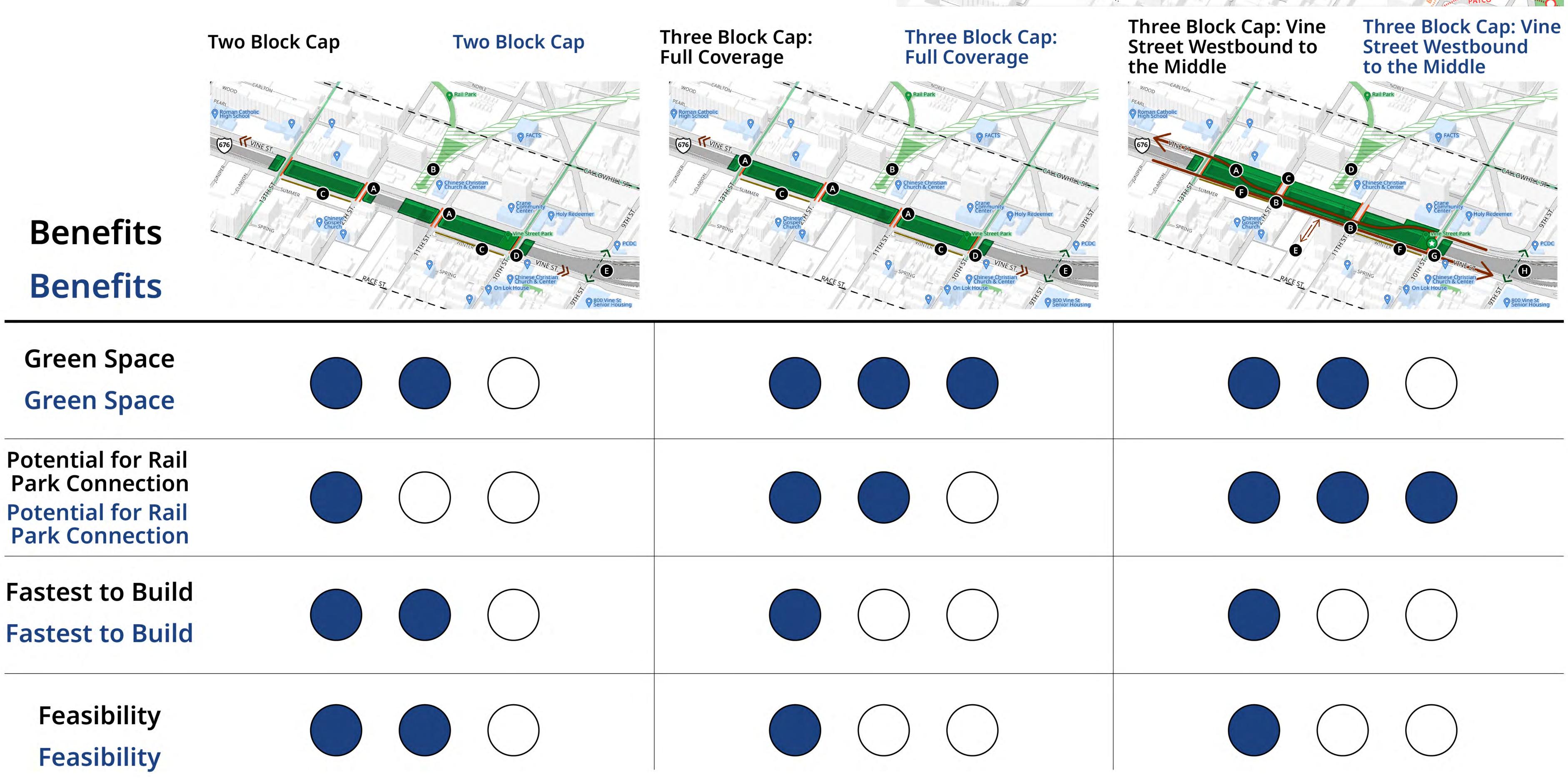
Chinatown Stitch Cap Concepts

Three cap concepts were developed based on your feedback and constraints, such as highway on-ramps, underground utilities, and highway grade changes.

Chinatown Stitch Cap Concepts

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Two-Block

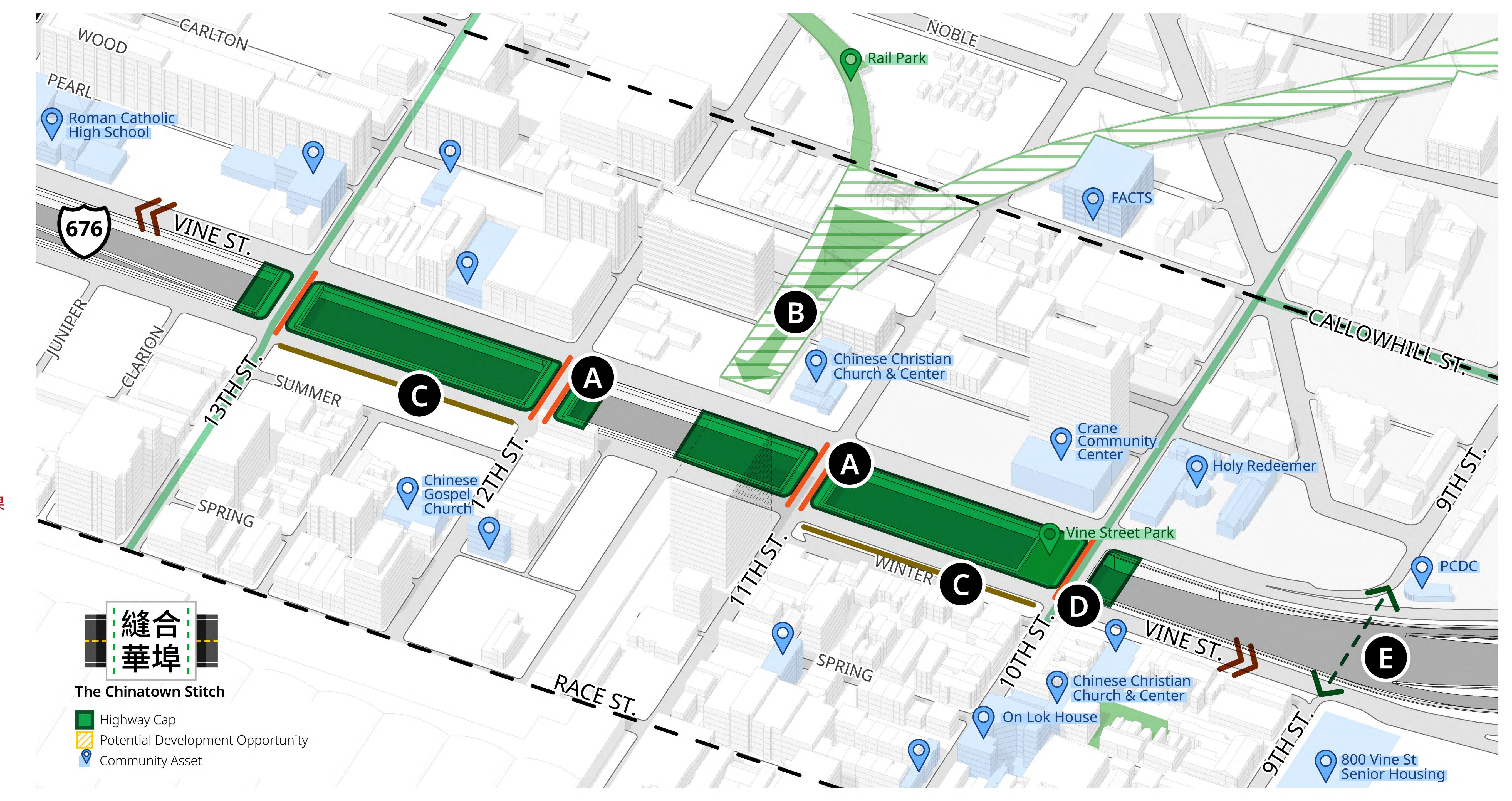
What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

- Active spaces along north-south cross streets
- B Rail Park connection to green space on cap
- Remove sound barrier wall for wider sidewalk
- Improve key intersection
- **Explore pedestrian connection**

一个街区的顶盖

您喜歡和不喜歡這個概念的哪些方面?使用綠色便利貼寫下您喜歡的內容。使用黃色便利貼寫下您不喜歡的內容。將便簽貼在地圖上您喜歡或不喜歡的內容旁邊。如果您在便利貼上看到您同意的評論,請在其旁邊放置一顆銀星。

- A沿南北向十字街设置活动空间
- B 铁路公园 (Rail Park) 连接至顶盖上的绿地
- f 拆除隔音墙,加宽人行道
- D 改进关键交叉路口
- 日 开发行人通道



Three Block Cap: Full Coverage

What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

- Active spaces along north-south cross streets
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- Remove sound barrier wall for wider sidewalk
- Improve key intersection
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- A沿南北向十字街设置活动空间
- B 铁路公园 (Rail Park) 连接至顶盖上的绿地
- f 拆除隔音墙,加宽人行道
- D改进关键交叉路口
- 日 开发行人通道



Three Block Cap: Vine Street Westbound to the Middle

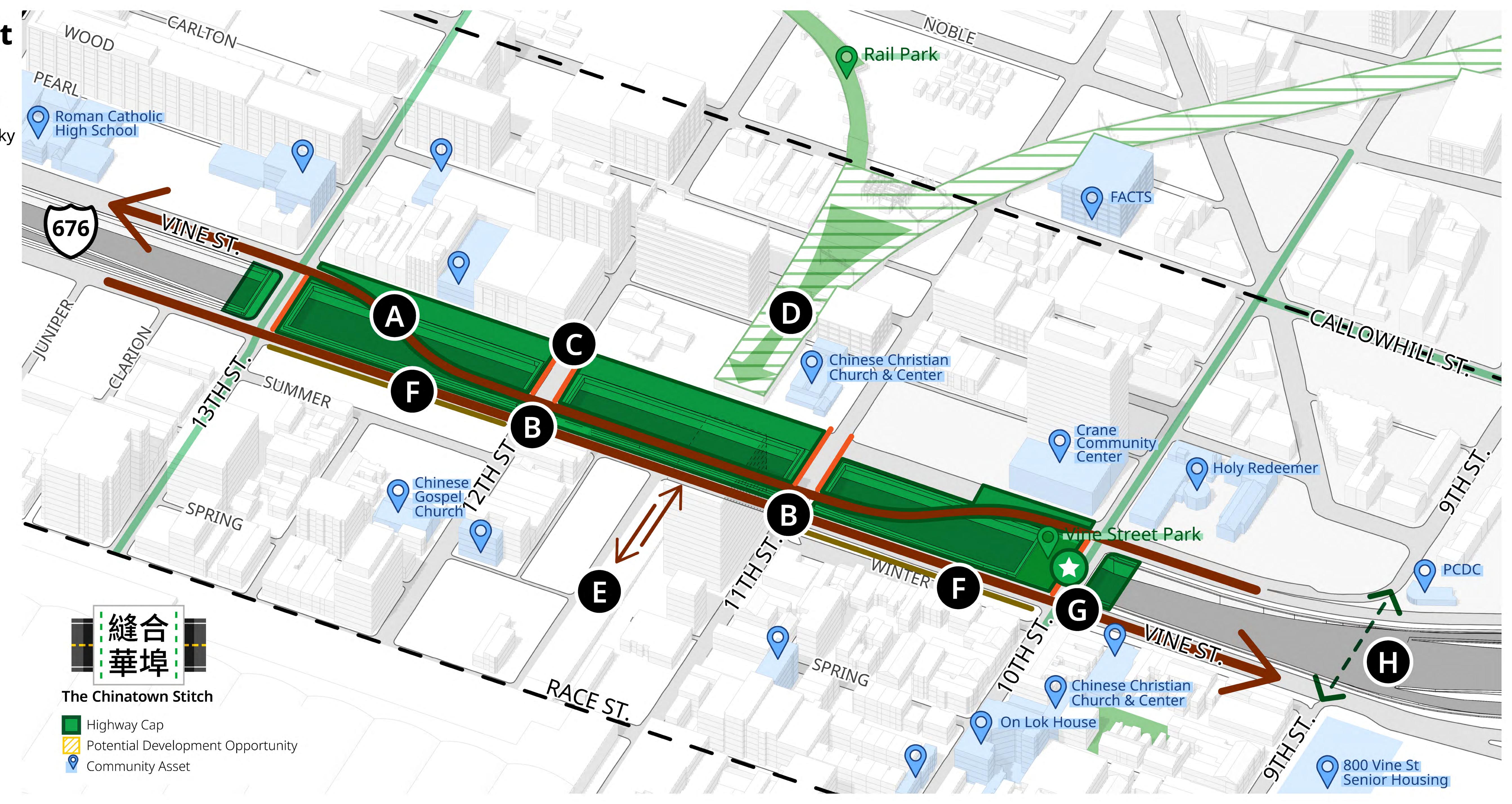
What do you like and dislike about this concept? Use green sticky notes to write what you like. Use yellow sticky notes to write what you dislike. Place your sticky notes on the map next to what you like or dislike.

- Re-locate westbound Vine Street over highway cap
- B Shorter crossing distance
- Active spaces along north-south cross streets
- Rail Park connection to green space on cap
- **E** Convention Center ramp access
- Remove sound barrier wall for wider sidewalk
- **G** Improve key intersection
- Explore pedestrian connection

一个街区的顶盖

您喜歡和不喜歡這個概念的哪些方面?使用綠色便利貼寫下您喜歡的內容。使用黃色便利貼寫下您不喜歡的內容。將便簽貼在地圖上您喜歡或不喜歡的內容旁邊。

- A 将万安街 的西行线重新迁至公路顶盖
- B缩短过街距离
- C沿南北向十字街设置活动空间
- **D** 铁路公园连接至顶盖上的绿地
- 会议中心 匝道通道
- 1 拆除隔音墙,加宽人行道
- G改进关键交叉路口
- 田 开发行人通道





PARK AMENITIES

Which park amenities would you like to see on top of the cap? Use dot stickers to vote on your top three.

高速公路封顶示例

什么是封顶?

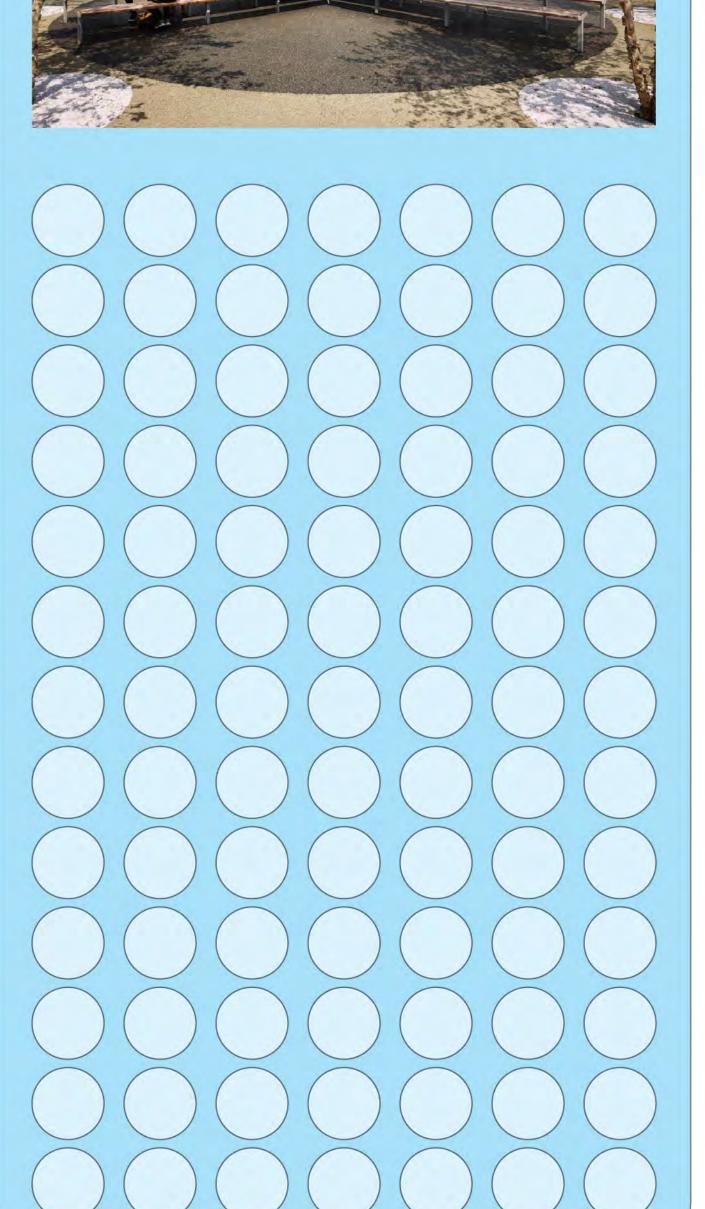
"封顶"是指在高速公路的上方搭建平台,将此空间用于建设新的公园、商业用房或民用住宅,并连接被高速公路分离的街道和社区。美国各地的多个城市都已经推行了封顶项目,以消除高速公路建设带来的影响,比如现有少数民族社区的分裂、迁移或破坏。

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AMENITY: Picnic/Seating Area

AMENITY: Picnic/Seating Area

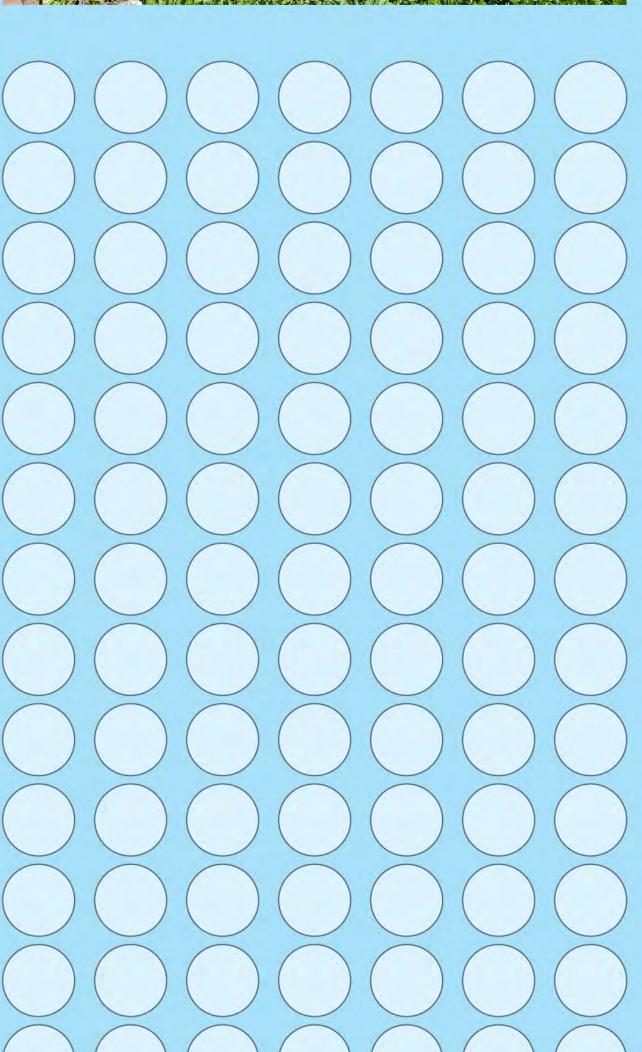




AMENITY: Community Garden

AMENITY: Community Garden

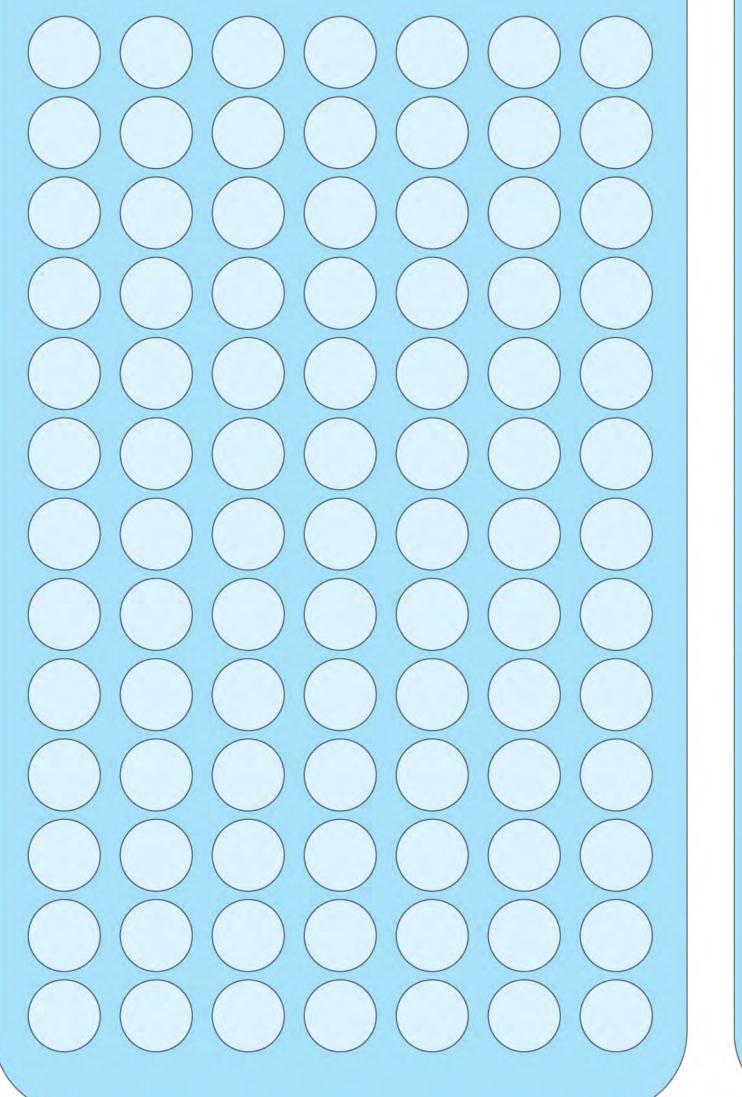




AMENITY: Playground

AMENITY: Playground





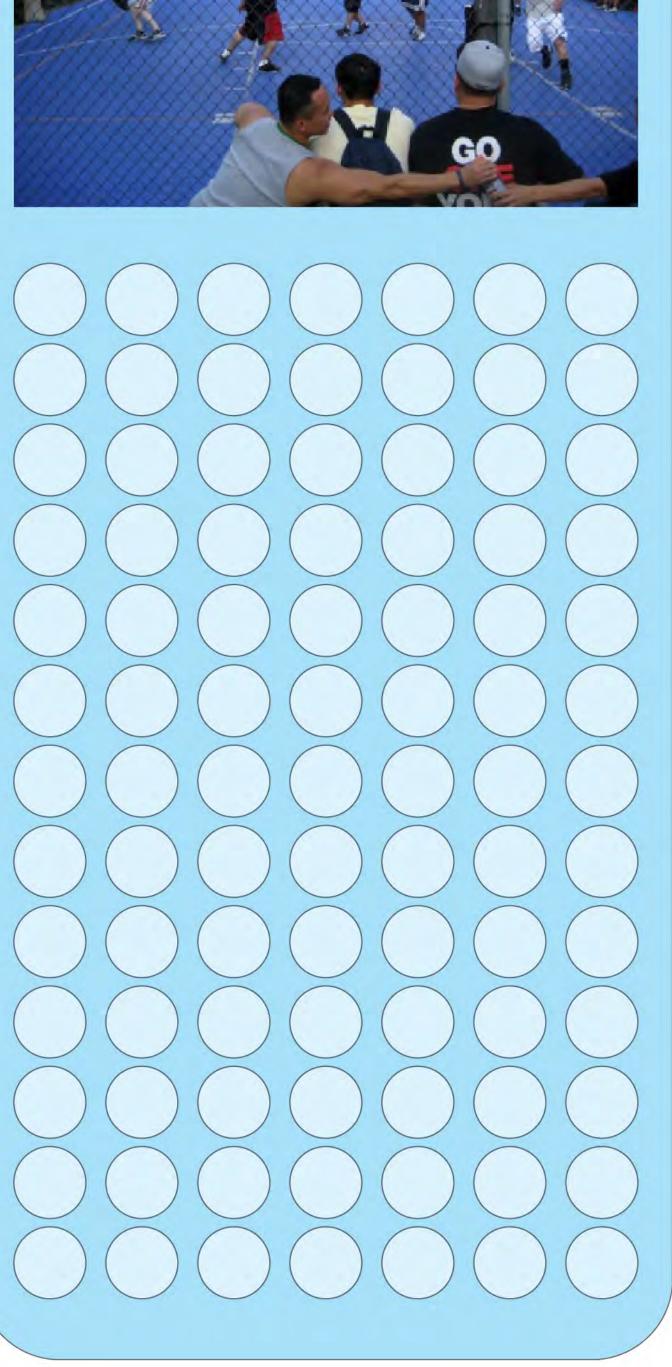
AMENITY: Athletic Courts

(for basketball, soccer, tennis, pickleball, etc.)

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(for basketball, soccer, tennis, pickleball, etc.)





AMENITY: Exercise Space

(for tai chi, dance, or yoga)

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(for tai chi, dance, or yoga)

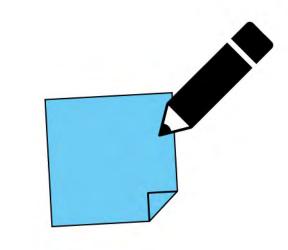


Other:

Write your idea on a sticky note

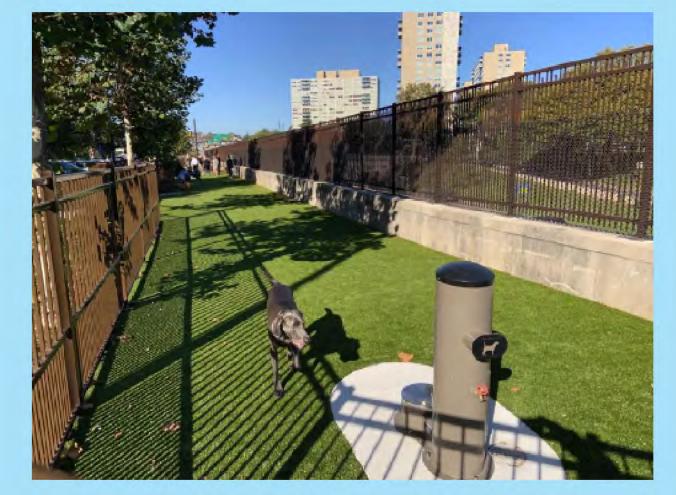


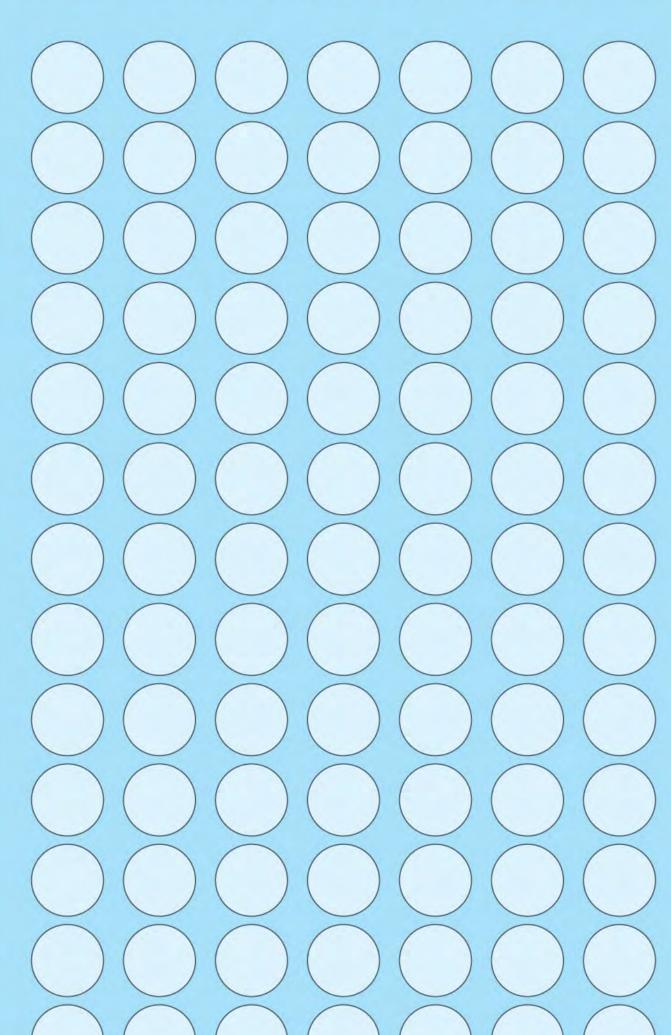
Write your idea on a sticky note



AMENITY: Dogpark

AMENITY: Dogpark





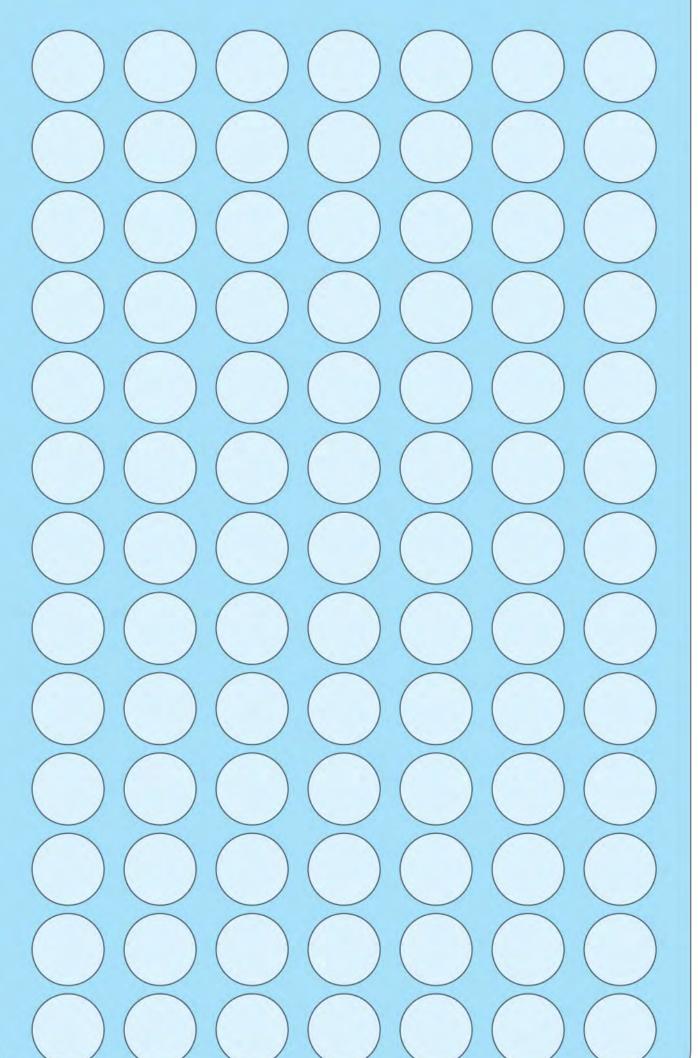
AMENITY: Performance Stage

(Small Ampitheater for concerts)

AMENITY: Performance Stage

(Small Ampitheater for concerts)



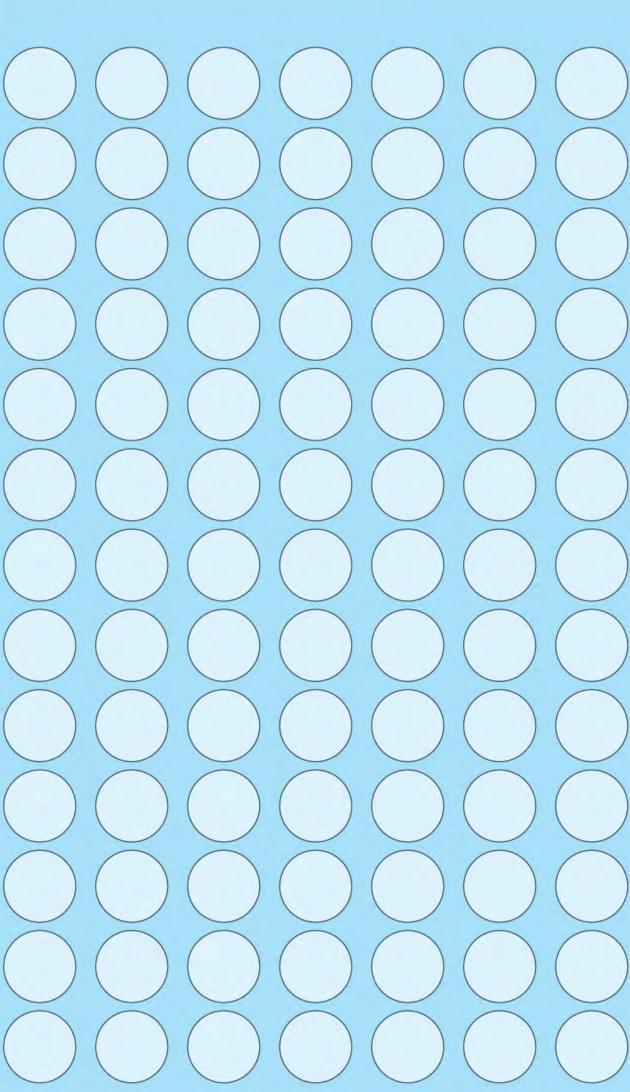


AMENITY: Game Tables

(for ping pong, chess, or checkers)

AMENITY: Game Tables
(for ping pong, chess, or checkers)





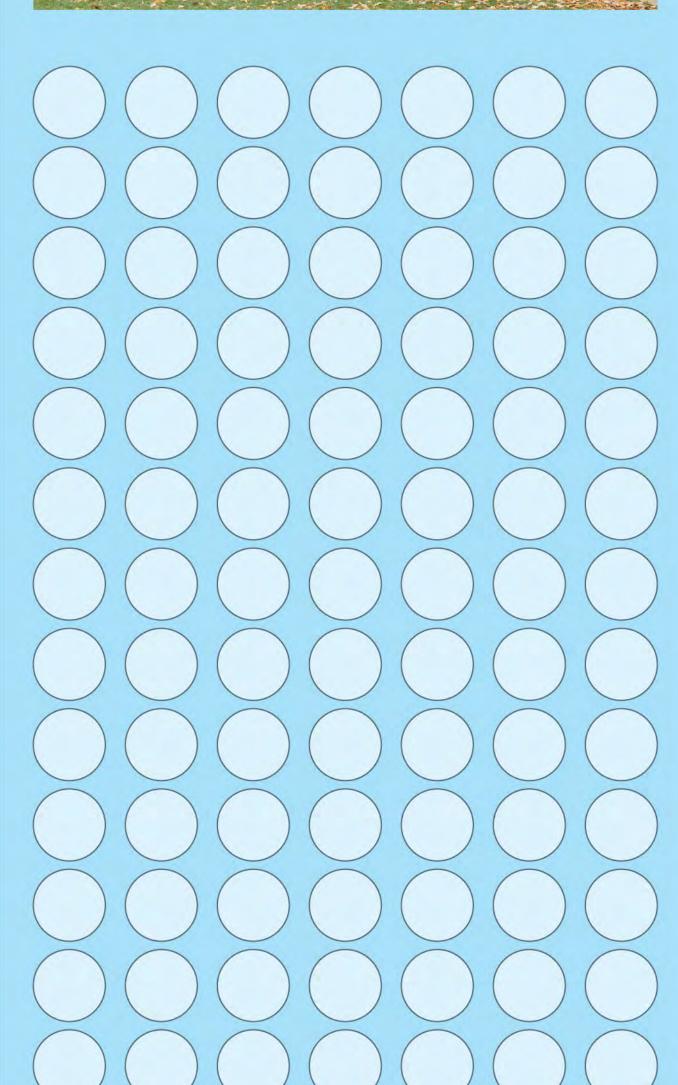
AMENITY: Market Space

(for selling food or crafts)

AMENITY: Market Space

(for selling food or crafts)

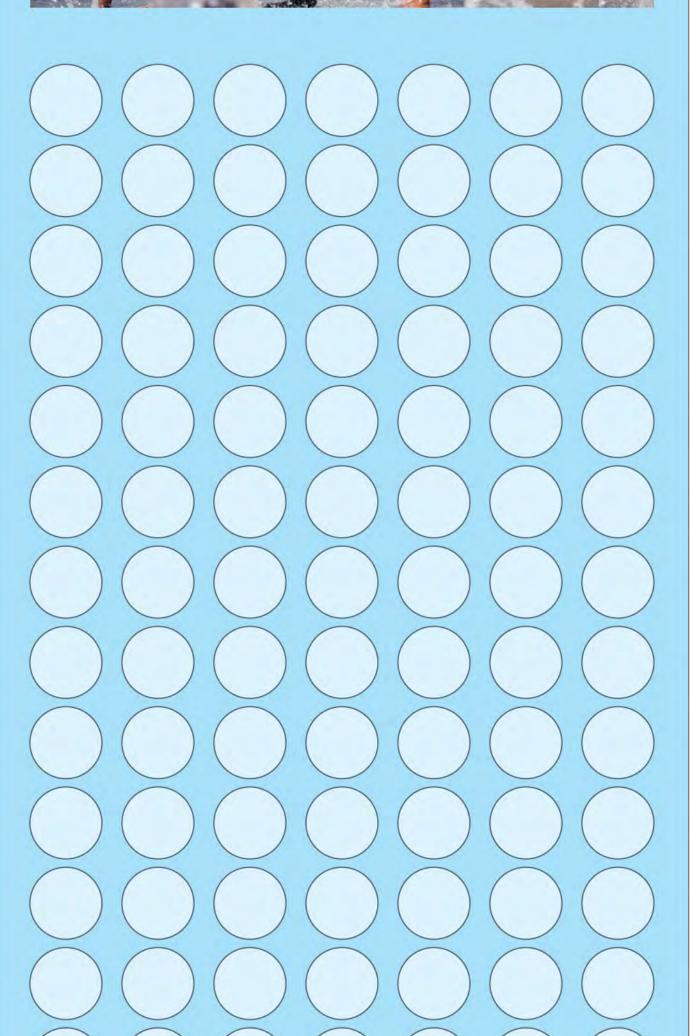




AMENITY: Water Feature

AMENITY: Water Feature







重塑費城萬安街

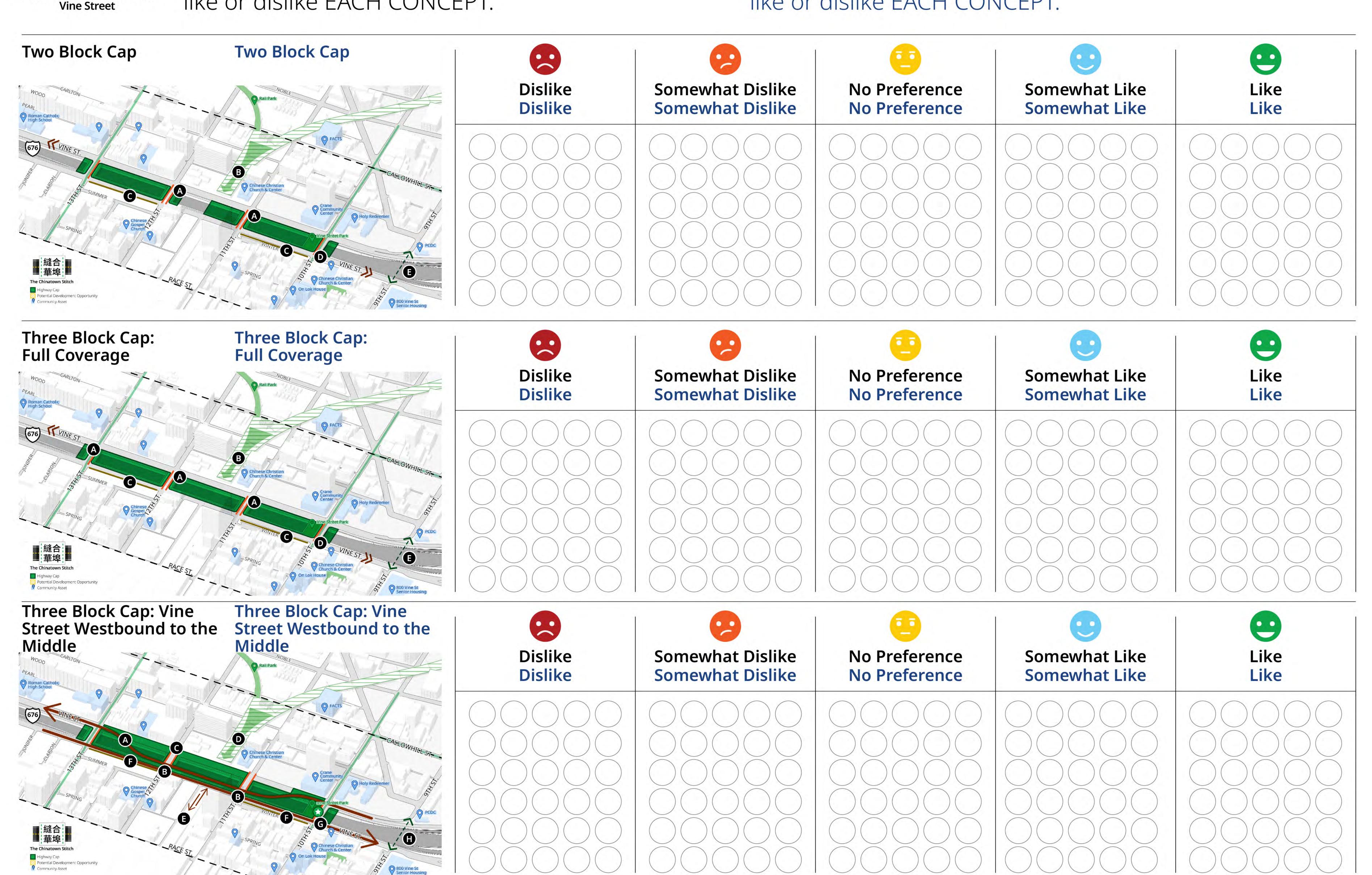
Reconnecting Philadelphia's

HOW MUCH DO YOU LIKE THE CONCEPTS?

Use one dot sticker to vote on how much you like or dislike EACH CONCEPT.

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Use one dot sticker to vote on how much you like or dislike EACH CONCEPT.



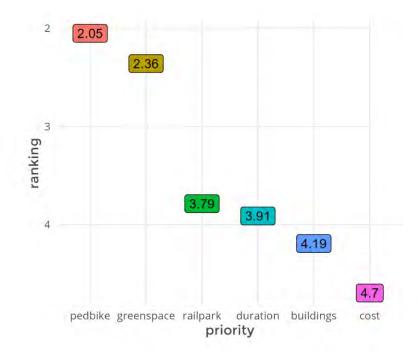
APPENDIX G:

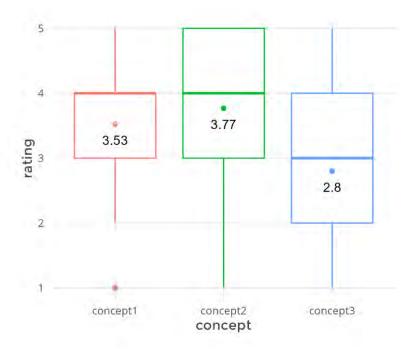
SURVEY #2 SUMMARY



Survey summary

- English591 online, 68 paper
- Chinese13 online, 55 paper
- Total # with non-missing priority rankings or concept ratings:
 726





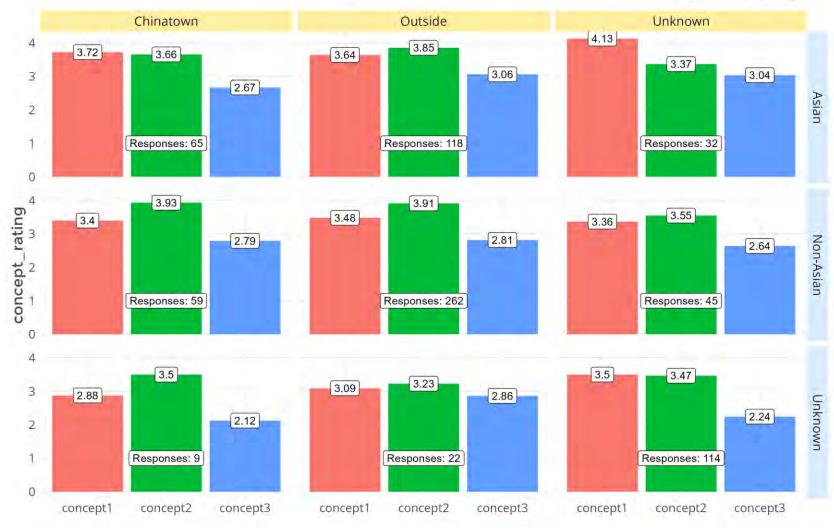


Averaged Concept Ratings by Home Location & Race

Chinatown Stitch Survey 2

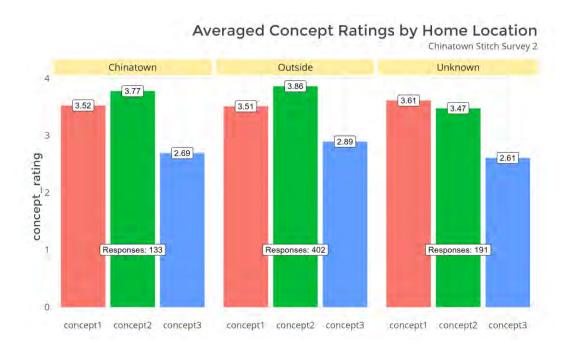
Crosstabs: Concept Ratings

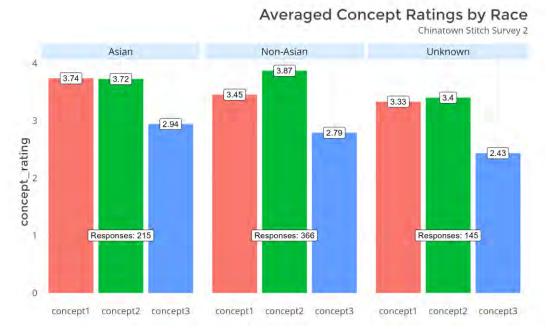
- Asian responses rated Concept 1 and 2 around the same
- All others rated Concept 2 slightly higher
- Consistently lower scores for Concept 3
- Standard deviations for all ratings quite similar





Crosstabs: Concept Ratings





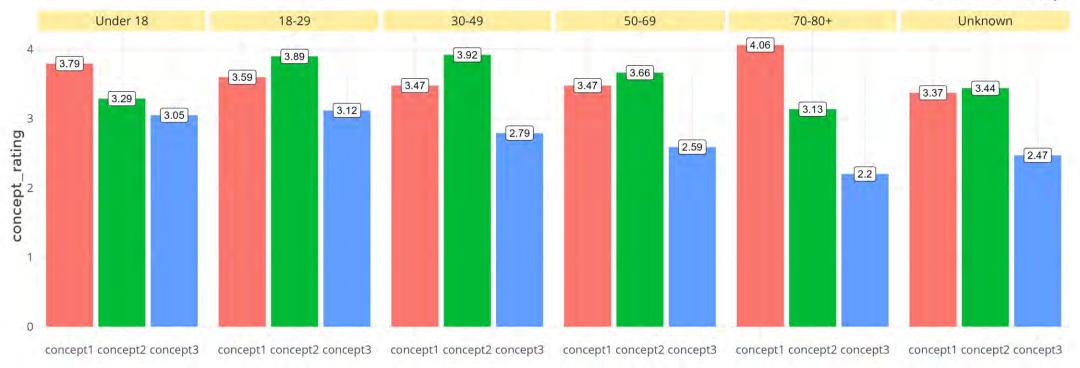
Same bar chart, averaged down or across axis



Crosstabs: Concept Ratings

Averaged Concept Ratings by Age

Chinatown Stitch Survey 2



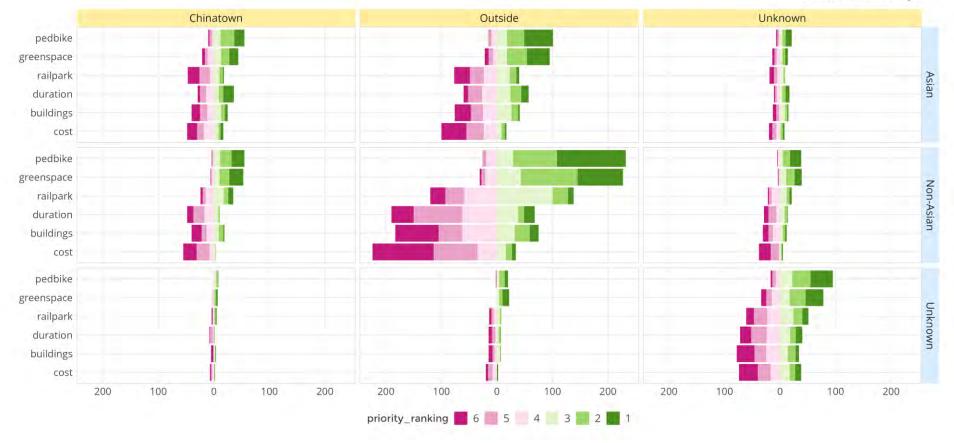
Concept 3 rating decreases with age



- This stacked diverging bar chart shows every ranking ordered & stacked from least (6) to most (1) important
- Counts much higher outside Chinatown than inside; shows priority for ped/bike and green space, less cost and buildings
- Chinatown + Asian: some priority for duration

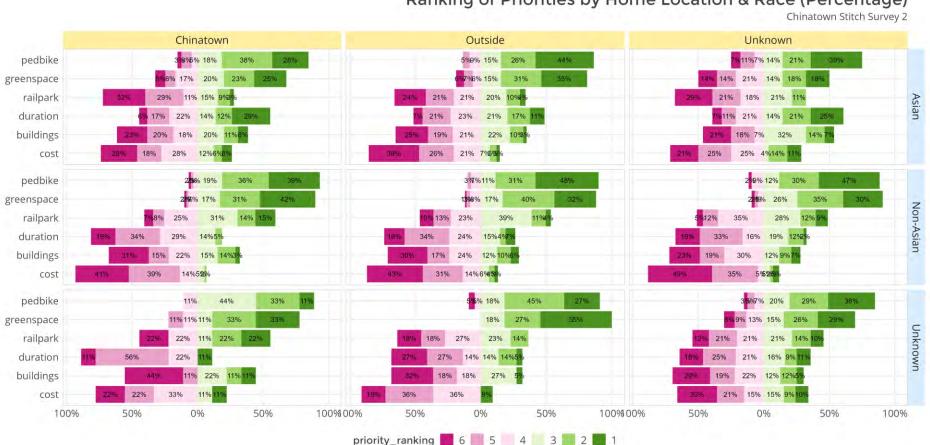
Ranking of Priorities by Home Location & Race (Raw Count)

Chinatown Stitch Survey 2





Ranking of Priorities by Home Location & Race (Percentage)

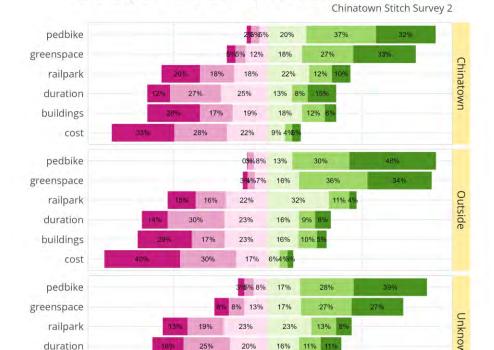


Ranking percentages expands low-n results. Can see general priority shift towards ped/bike, green space



Very similar priorities by location or race

Ranking of Priorities by Location (Percentage)



15% 12% 5%

50%

0%

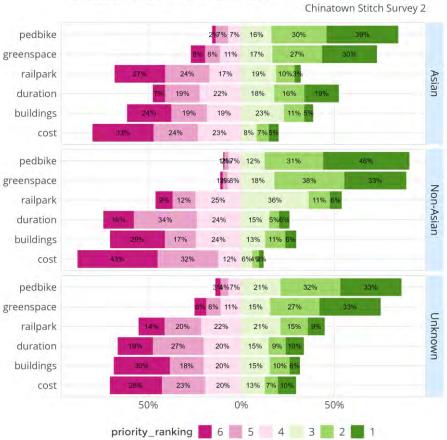
priority_ranking 6 5 4 3 2 1

buildings

cost

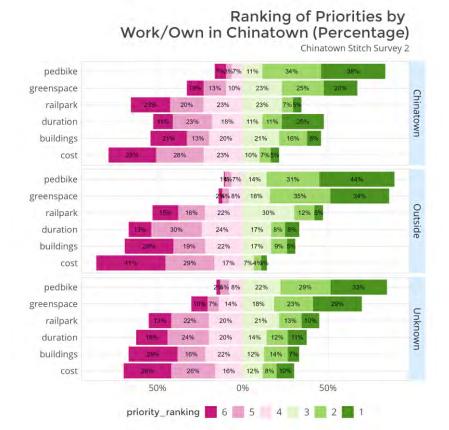
50%

Ranking of Priorities by Race (Percentage)



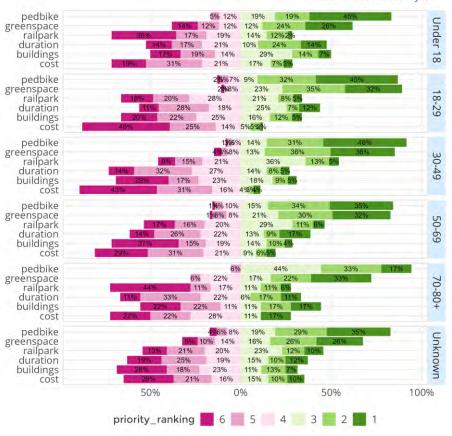


- Work/Own: uptick in construction duration in within Chinatown
- Age: uptick in public buildings in 70-80+



Ranking of Priorities by Age (Percentage)

Chinatown Stitch Survey 2





Other stats on residence and work/own

- For those who live & work/own in Chinatown, plurality put construction duration as #1 priority (36%)
- From first survey, looked at live ~ work crosstabs averages
 - "People driving": live & work respondents slightly higher priority, but still less than 4 out of 7
 - "People parking": highest priority is only 5 out of 7

People driving

Row Labels	I live here	(blank)	Average
I work here or I own a business here	4.69	5.11	5.02
(blank)	5.38	5.47	5.46
Average	5.23	5.44	5.42

People parking

Row Labels	I live here	(blank) /	Average
I work here or I own a business he	re	5.00	5.44	5.35
(blank)		5.47	5.89	5.86
Average		5.36	5.85	5.80



APPENDIX H:

DECISION MATRIX



WEIGHTED **Decision Matrix**

100%

78.31%

The three design concepts were ranked by thirteen criteria on a 1 to 4 scale.

1 = Meets the criteria least 3 = Meets the criteria some what

2 Block Cap

2 = Meets the criteria very little

4 = Meets the criteria the most

3 Block Cap: Vine St WB to Middle

69.59%

3 Block Cap: Full

74.94%

Decision Mati										
CRITERIA - 🍪	WEIGHT	RATING	TOTAL	DESCRIPTION	RATING	TOTAL	DESCRIPTION	RATING	TOTAL	DESCRIPTION
Goal: Create an inviting park space with landscapes and public plazas	10%	3	7.50%	Least amount of open/green space (sq ft) and disconnected by a gap.	4	10.00%	Most continuuous green space.	3	7.50%	Most amount of green space (sq ft), but green space is fragmented by Vine St.
Goal: Include public civic buildings, facilities, and businesses that serve community needs	10%	2	5.00%	Least amount of developable land adjacent to Vine Street.	3	7.50%	Amount of developable land adjacent to Vine St is same as 3 Block Cap: Vine St WB to Middle.	3	7.50%	Amount of developable land adjacent to Vine St is equal to 3 Block Cap: Full.
Goal: Prioritize the elderly, young, and those with disabilities	10%	4	10.00%	Survey Result	4	10.00%	Survey Result	3	7.50%	Survey Result
Goal: Create a safe street design that extends the Chinatown neighborhood feel	10%	4	10.00%	Local Vine St road diet from 10th to 13th. St. Shorter crossing distances for pedestrians.	4	10.00%	Local Vine St road diet from 10th to 13th. St. Shorter crossing distances for pedestrians.	3	7.50%	Local Vine St road diet and one less road crossing for pedestrians on 11th and 12th Streets, however the crossings at 11th and 12th are wider for pedestrians.
Rail Park Connection	7.5%	3	5.63%	Possible Rail Park Connection.	3	5.63%	Opportunity for possible Rail Park Connection to be to a larger green space.	4	7.50%	Easiest to connection Rail Park.
Least Construction Duration/Impact	7.5%	4	7.50%	Shortest construction time/least amount of construction impact on the Chinatown community. No tunnel needed.	2	3.75%	Long construction timeline as tunnel is needed.	1	1.88%	Longest construction time/most amount of impact on the Chinatown community. Tunnel needed. Requires moving Vine St.
Lowest Construction Cost	7.5%	3	5.63%	Lowest esimated cost.	2	3.75%	Second highest construction cost.	1	1.88%	Highest construction cost.
Lowest Operations & Maintenance Needs	7.5%	3	5.63%	Least amount of Cap and green space to maintain. No tunnel infrastructure to maintain.	1	1.88%	Green space, amenties, and tunnel infrastructure to maintain.	1	1.88%	Most amount of green space and tunnel infrastructure to maintain.
Ranking from Asian Respondents	7.5%	2.96	5.55%	Survey Result	2.96	5.55%	Survey Result	3.625	6.80%	Survey Result
Ranking from Chinatown Business Owners & Workers	7.5%	2.848	5.34%	Survey Result	3.032	5.69%	Survey Result	3.625	6.80%	Survey Result
Ranking from Chinatown Residents	7.5%	2.8	5.25%	Survey Result	2.96	5.55%	Survey Result	3.3625	6.30%	Survey Result
Ranking from Overall Survey Respondents	7.5%	2.824	5.30%	Survey Result	3.016	5.66%	Survey Result	3.5	6.56%	Survey Result
	max		TOTAL 2 Block Ca	ap		TOTAL 3 Block Cap:	Full	3 Bloc	TOTAL k Cap: Vine St V	WB to Middle

APPENDIX I:

TRAFFIC MODELING SUMMARY

Chinatown Stitch

Traffic Modeling Summary

Purpose

This analysis was performed in conjunction with <u>The Chinatown Stitch: Reconnecting Philadelphia to Vine Street</u>, a project that explores capping a portion of the Vine Street Expressway. Alongside the proposed highway cap, there is potential for road dieting of the local Vine Streets to further improve safety for all roadway users. This study analyzes potential proposed build alternatives for Vine Street and their impact on the local roadway network.

Existing Conditions

Study Area

The proposed highway cap would be located over I-676 (Vine Street Expressway) and is limited to between 13th Street and 10th Street due to vertical constraints of the highway. For the analysis of the impact of changes to the local roadway, the study area was expanded several blocks.

The study area includes the two Vine Street local roadways (Vine Street Eastbound and Vine Street Westbound), Callowhill Street to the north, and Race Street to the south. All numbered streets between 8th Street and 15th Street are included, making a total of 32 study intersections. **Figure 1** shows the study area intersections and links.

Figure 1: Study Area



Traffic Counts

DVRPC has a substantial library of historic traffic counts. The Reviving Vine report was published by DVRPC in 2018 and included turning movement counts from 2017 at all Vine Street intersections included in our study area, with the exception of 15th Street & Vine Street WB and 15th Street & Vine Street EB, which were counted in 2020. The intersections of 15th Street & Callowhill Street and Broad Street & Callowhill Street were counted in 2018 and the intersections of 9th Street & Callowhill Street and 8th Street & Callowhill Street were counted in 2016. All other study intersections were counted at the onset of this project in 2022.

In order to create an existing conditions model reflective of current, Post-COVID travel conditions, turning movement volumes were balanced between intersections, with more reliance on the intersections most recently counted. The network peak hours were determined to be 8:00AM - 9:00AM (AM Peak Hour) and 4:30PM to 5:30PM (PM Peak Hour).

Due to limitations in the data, heavy vehicle percentages were assumed to be 2% throughout the network and pedestrian information was not incorporated.

Traffic Signals

The existing traffic signals within the study all operate on coordinated, pretimed timing schedules. The signals along Vine Street Eastbound (EB) and Vine Street Westbound (WB) are clustered at each numbered street intersection. During the AM Peak Hour all signals on Callowhill Street and the signals at 15th Street & Vine Street EB/WB operate on a 90-second cycle, all signals on Race Street operate on a 60-second cycle length. The signals at Broad Street & Vine Street EB/WB operate on a 120-second cycle length. The remaining signals along Vine Street EB/WB operate on a 100-second cycle length. During the PM Peak Hour, all signals on Callowhill Street and Race Street, as well as the two signals at 15th Street & Vine Street EB/WB, maintain the same timing schedules as in the AM Peak Hour. The timing splits slightly change at Broad Street & Vine Street EB/WB and the cycle length at the remaining Vine Street intersections is changed to 100 seconds.

2050 No Build Conditions

The existing conditions model was then modified to anticipate future traffic in the study area in the year 2050 without the proposed highway cap project. DVRPC's regional model, which incorporates predicted employment and housing information, was used to determine traffic volume growth rates for the AM and PM peak hours. Compared to the year 2019, the regional model anticipates a 6.13% increase in traffic during the AM Peak Hour and a 3.10% increase during the PM Peak Hour within the study area. These growth rates were applied to all volumes within the network.

Planned transportation projects in the study area were also incorporated into the 2050 No Build Conditions model. Through the Highway Safety Improvement Program (HSIP) the City of Philadelphia and Urban Engineers are developing plans for a road diet along Vine Street Eastbound and Westbound, anticipated to be built by 2030. These plans include removing one lane of traffic from 8th Street to Broad Street on both Vine Street EB and WB, as well as signal updates. This plan is based on DVRPC's Reviving Vine report, published in 2018. The 2050 No Build Conditions model includes the proposed road diet, as well as a realignment of the intersection of 8th Street and Vine Street Eastbound. The hourly traffic volumes for the 2050 No Build Conditions are shown in Figures 2 and 3.

Figure 2: Traffic Volumes - No Build - AM Peak Hour

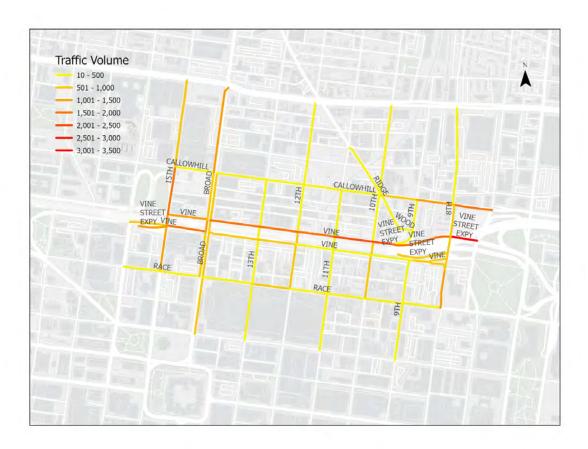
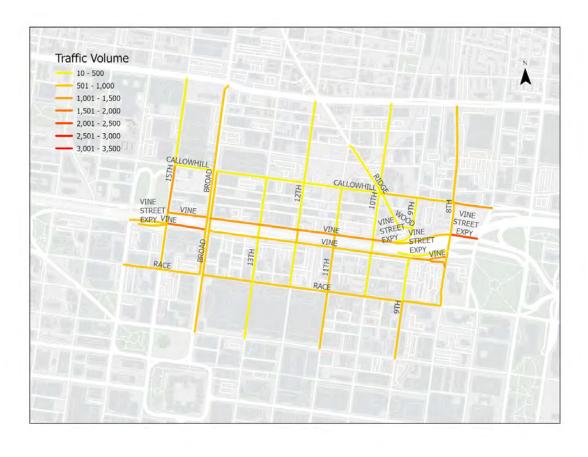


Figure 3: Traffic Volumes - No Build - PM Peak Hour



Synchro Results

Under the 2050 No Build Conditions, all intersections within the study area operate at levels of service D or better during both peak hours, with the exception of 11th Street & Vine Street WB, which fails during the AM peak hour, 11th Street & Vine Street EB, which fails during the PM peak hour, and 10th Street & Vine Street WB, which has an LOS E during the AM peak hour. The synchro results by approach are shown in **Table 1**. Detailed synchro reports are appended.

Table 1: 2050 No Build Conditions Synchro Results

	*indicates H	CM 2000	2050 N	lo Build A	AM Pe	eak Hour	2050 N	o Build	PM I	Peak Hour
	Intersection	Approach	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)
		EB Callowhill	-	0	Α	0	-	0	Α	0
	15th & Callowhill	WB Callowhill	464	38	D	460	255	30.9	С	265
1	15th & Callowniii	SB 15th	585	20.6	С	395	424	16.5	В	262
		OVERALL	1,049	28.3	С		679	21.9	С	
		EB Callowhill	-	0	Α	-	-	0	Α	-
		WB Callowhill	311	17.1	В	104	262	16.1	В	78
2*	Broad & Callowhill	NB Broad	690	10.3	В	90	717	9.4	Α	89
		SB Broad	1,173	11.6	В	145	879	9.6	Α	102
		OVERALL	2,174	12	В		1,858	10.4	В	
		WB Callowhill	361	21.7	С	175	309	21.4	С	155
3	13th & Callowhill	NB 13th	331	22.2	С	240	268	21.3	С	208
		OVERALL	692	21.9	С		577	21.4	С	
		WB Callowhill	441	22.8	С	222	389	23.6	С	192
4	12th & Callowhill	SB 12th	339	20.4	С	127	400	18.6	В	140
		OVERALL	780	21.8	С		789	21.1	С	
		WB Callowhill	443	25.3	С	225	385	24.6	С	195
5	11th & Callowhill	NB 11th	331	19	В	222	389	20.1	С	260
		OVERALL	774	22.6	С		774	22.3	С	
		WB Callowhill	792	20.7	С	285	748	20.5	С	222
		SB 10th	164	35.3	D	152	238	40.4	D	209
6*	10th & Callowhill	SEB Ridge	161	35.1	D	148	129	32.8	С	116
		NWB Ridge	10	27.9	С	19	20	28.3	С	28
		OVERALL	1,127	24.9	С		1,135	26.2	С	
7	9th & Callowhill	WB Callowhill	1,250	0	а	0	947	0	а	0
7	Jui & Callownill	OVERALL	1,250	0	а		947	0	а	
		WB Callowhill	1,628	6.7	Α	222	1,263	13.8	В	245
8	8th & Callowhill	SB 8th	483	43.5	D	265	598	23.8	С	228
		OVERALL	2,111	15.1	В		1,861	17	В	

		WB Vine	1,339	12.4	В	220	1,028	37	D	450
9	15th & Vine WB	SB 15th	1,569	37	D	345	1,206	27	С	322
		OVERALL	2,908	25.7	С		2,234	31.6	С	
		EB Vine	937	15.2	В	230	680	25.4	С	260
		SB 15th	1,480	11.6	В	158	940	4.2	Α	25
10*	15th & Vine EB	NEB 676EB Off-Ramp	1,002	13.4	В	139	946	28.9	С	372
		OVERALL	3,419	13.1	В		2,566	18.9	В	
		WB Vine	1,681	39.3	D	584	1,268	34.7	С	390
		NB Broad	553	24.5	С	202	509	15.1	В	158
11*	Broad & Vine WB	SB Broad	967	26.2	С	181	819	21.9	С	134
		OVERALL	3,201	32.8	С		2,596	26.8	С	
		EB Vine	1,698	37.8	D	468	1,705	24.4	С	215
		NB Broad	556	34.3	С	117	799	41	D	386
12*	Broad & Vine EB	SB Broad	1,170	15.3	В	149	852	17	В	134
		OVERALL	3,424	29.5	С		3,356	26.5	С	
		WB Vine	1,698	28.2	С	528	1,157	32.2	С	378
13	13th & Vine WB	NB 13th	313	37	D	268	380	23.9	С	188
		OVERALL	2,011	29.6	С		1,537	30.1	С	
		EB Vine	658	10.8	В	188	641	20.7	С	235
14	13th & Vine EB	NB 13th	252	27.2	С	182	391	15	В	190
		OVERALL	910	15.3	В		1,032	18.5	В	
		WB Vine	1,959	33.1	С	618	1,210	32.6	С	395
15	12th & Vine WB	SB 12th	420	31.3	С	318	480	27.7	С	350
		OVERALL	2,379	32.8	С		1,690	31.2	С	
		EB Vine	597	25	С	302	652	33.3	С	328
16	12th & Vine EB	SB 12th	681	44.7	D	570	532	23.6	С	305
		OVERALL	1,278	35.5	D		1,184	28.9	С	
		WB Vine	2,021	108.9	F	1,485	1,050	38.9	D	500
17	11th & Vine WB	NB 11th	269	28	С	192	549	24.5	С	282
		OVERALL	2,290	99.4	F		1,599	34	С	
		EB Vine	469	24.5	С	250	776	24.2	С	375
18	11th & Vine EB	NB 11th	282	24.8	С	235	698	144.5	F	1,208
		OVERALL	751	24.6	С		1,474	81.2	F	
		WB Vine	2,156	61.3	E	1,232	1,043	22.9	С	362
19	10th & Vine WB	SB 10th	439	29.1	С	310	456	27.8	С	330
		OVERALL	2,595	55.9	E		1,499	24.4	С	
		EB Vine	482	25.2	С	252	925	37.6	D	445
20	10th & Vine EB	SB 10th	574	37.8	D	468	448	23.1	С	262
		OVERALL	1,056	32	С		1,373	32.9	С	

		WB Vine	1,803	0	а	0	908	0	а	0
21	9th & Vine WB	SB 9th	352	0	а	0	134	0	а	0
		OVERALL	2,155	0	а		1,042	0	а	
		EB Vine	464	0	а	0	941	0	а	0
22	9th & Vine EB	NB 9th	117	12	а	18	328	12	а	192
		OVERALL	581	2.4	а		1,269	3.1	а	
		WB 676 Off-Ramp	3,092	16.4	В	567	2,381	13.3	В	348
23*	8th & Vine WB	SB 8th	861	31.4	С	222	913	29.6	С	230
		OVERALL	3,953	19.6	В		3,294	17.8	В	
		EB Vine	581	47.6	D	192	1,269	65	E	374
24*	8th & Vine EB	SB 8th	700	43.4	D	187	597	35.4	D	148
24	Stil & Ville LD	SEB 676 Off-Ramp	601	35.3	D	318	209	30	С	120
		OVERALL	1,882	42.1	D		2,075	52.9	D	
		EB Race	450	13.1	В	100	824	16.2	В	200
25	15th & Race	SB 15th	1,459	16	В	252	840	12.3	В	120
		OVERALL	1,909	15.3	В		1,664	14.2	В	
		EB Race	400	20	В	140	775	24.7	С	280
26	Broad & Race	NB Broad	583	14.2	В	90	688	14.7	В	108
	Di dad a Nacc	SB Broad	941	15.1	В	125	603	13.9	В	72
		OVERALL	1,924	15.8	В		2,066	18.2	В	
		EB Race	490	15.4	В	150	686	17	В	217
27	13th & Race	NB 13th	293	15.8	В	88	442	17.6	В	158
		OVERALL	783	15.6	В		1,128	17.2	В	
		EB Race	531	18	В	140	737	19.2	В	192
28	12th & Race	SB 12th	808	15.7	В	190	409	12.5	В	82
		OVERALL	1,339	16.6	В		1,146	16.8	В	
		EB Race	371	18.3	В	115	639	21.1	С	215
29	11th & Race	NB 11th	306	12	В	92	788	19.7	В	322
		OVERALL	677	15.4	В		1,427	20.3	С	
		EB Race	395	18.7	В	135	729	22	С	258
30	10th & Race	SB 10th	591	19.7	В	310	432	15.3	В	200
		OVERALL	986	19.3	В		1,161	19.5	В	
		EB Race	329	17.7	В	98	696	21.8	С	238
31	9th & Race	NB 9th	268	13	В	110	613	25.5	С	345
		OVERALL	597	15.6	В		1,309	23.5	С	
		EB Race	480	17.4	В	110	999	21.3	С	285
32	8th & Race	SB 8th	1,158	15	В	238	917	12.8	В	165
		OVERALL	1,638	15.7	В		1,916	17.2	В	

2050 Build Alternative 1

The 2050 No Build model is then modified to include potential further road dieting Vine Street adjacent to the proposed highway cap. The first build alternative includes dieting Vine Street Eastbound and Westbound to one lane in each direction. Vine Street EB is reduced to one through lane with turning lanes from the approach at 13th Street to 10th Street. Vine Street WB is reduced to one through lane with turning lanes from the approach at 10th Street to 15th Street..

This model also includes the installation of a traffic signal at 9th Street and Vine Street WB, creating the opportunity for a pedestrian crossing and a potential pedestrian bridge. The traffic signal timing along Vine Street was adjusted to improve coordination and optimize delay. Appended Synchro reports detail the timing alterations.

Volume Change

The Build Alternative 1 road diet along Vine Street was input into DVRPC's regional model to anticipate any rerouting of traffic that might occur given the reduced capacity. **Figures 4** and **5** show the volume changes in traffic compared to the 2050 No Build Conditions. As they serve as parallel alternative routes, Callowhill Street and Race Street experience increases in volume when the capacity along Vine Street is reduced. The AM Peak Hour has greater changes in volume compared to the PM Peak Hour, as the network is closer to capacity during the morning.

Figure 4: Volume Change - No Build to Build Alternative 1 - AM Peak Hour



Figure 5: Volume Change - No Build to Build Alternative 1 - PM Peak Hour



Synchro Results

With the proposed road dieting in Build Alternative 1, all intersections within the study area operate at levels of service D or better during both peak hours. Although increases in volume are anticipated along Callowhill Street due to the reduction in capacity along Vine Street, levels of service are maintained. Results by intersection approach are shown in **Table 2**. Detailed synchro reports are appended.

Table 2: 2050 Build Alternative 1 Synchro Results

	*indicates H	CM 2000	2050	Build 1 A	M Pe	ak Hour	2050 Build 1 PM Peak Hour				
	Intersection	Approach	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)	
		EB Callowhill	-	0	0	0	-	0	0	0	
1	15th & Callowhill	WB Callowhill	587	46.9	D	605	395	36.9	D	398	
_	15th & Callowniii	SB 15th	579	20.4	С	388	423	16.5	В	260	
		OVERALL	1,166	33.7	С		818	26.4	С		
		EB Callowhill	=	0	Α	-	-	0	Α	-	
		WB Callowhill	503	39	D	259	435	25.5	C	178	
2*	Broad & Callowhill	NB Broad	731	10.4	В	87	669	8.8	Α	80	
		SB Broad	1,168	11.6	В	132	811	8.9	Α	86	
		OVERALL	2,402	17	В		1,915	12.6	В		
		WB Callowhill	495	22.5	С	240	420	22	С	215	
3	13th & Callowhill	NB 13th	333	21.6	С	242	321	21.9	C	248	
		OVERALL	828	22.1	С		741	22	С		
		WB Callowhill	609	26.6	С	302	509	24.3	С	252	
4	12th & Callowhill	SB 12th	377	17.9	В	132	470	18.5	В	165	
		OVERALL	986	23.3	С		979	21.5	С		
		WB Callowhill	617	26.8	С	300	408	24.3	С	205	
5	11th & Callowhill	NB 11th	338	18.5	В	228	454	21.3	С	315	
		OVERALL	955	23.9	С		862	22.7	С		
		WB Callowhill	875	22.5	С	285	793	21	С	238	
		SB 10th	162	36.1	D	153	237	40.4	D	209	
6*	10th & Callowhill	SEB Ridge	90	29.8	С	83	129	31.6	С	114	
		NWB Ridge	10	27.1	С	19	20	27.4	С	28	
		OVERALL	1,137	25.1	С		1,179	26.2	С		
7	Oth & Callowhill	WB Callowhill	1,380	0	а	0	1,841	0	а	0	
7	9th & Callowhill	OVERALL	1,380	0	а		1,841	0	а		
		WB Callowhill	1,656	16.9	В	410	1,271	13.8	В	248	
8	8th & Callowhill	SB 8th	573	23.8	С	230	609	23.9	С	233	
		OVERALL	2,229	18.6	В		1,880	17.1	В		
9	15th & Vine WB	WB Vine	974	32	С	210	944	32.1	С	62	

		SB 15th	1,751	62	Е	622	1,266	57.2	Е	432
		OVERALL	2,725	51.3	D		2,210	46.5	D	
		EB Vine	938	19.2	В	214	681	11.2	В	153
		SB 15th	1,409	5.9	Α	58	959	3.9	Α	24
10*	15th & Vine EB	NEB 676EB Off-Ramp	1,056	17.1	В	136	946	12.5	В	219
		OVERALL	3,403	13	В		2,586	9	Α	
		WB Vine	1,140	17.6	В	612	1,108	16.8	В	411
sh		NB Broad	580	14.9	В	132	483	12.8	В	42
11*	Broad & Vine WB	SB Broad	1,082	32.5	С	181	753	30.7	С	116
		OVERALL	2,802	22.8	С		2,344	20.4	С	
		EB Vine	1,723	12.1	В	160	1,702	16.9	В	170
12*	Duned Q Vine FD	NB Broad	556	38.3	D	136	776	37.8	D	313
12"	Broad & Vine EB	SB Broad	1,123	8.4	Α	144	740	13.4	В	135
		OVERALL	3,402	15.2	В		3,218	21.1	С	
		WB Vine	1,109	32.4	С	910	990	28.1	С	792
13	13th & Vine WB	NB 13th	343	47.7	D	312	427	46.2	D	265
		OVERALL	1,452	36	D		1,417	33.6	C	
		EB Vine	681	25.3	С	145	560	30.1	С	60
14	13th & Vine EB	NB 13th	279	29.9	С	208	420	23.7	С	265
		OVERALL	960	26.6	С		980	27.4	С	
		WB Vine	1,296	34	С	248	981	33.8	С	108
15	12th & Vine WB	SB 12th	463	42.6	D	400	505	34.1	С	372
		OVERALL	1,759	36.3	D		1,486	33.9	C	
		EB Vine	619	35.1	D	355	563	28.2	С	480
16	12th & Vine EB	SB 12th	655	30	С	495	503	35.9	D	340
		OVERALL	1,274	32.5	С		1,066	31.8	С	
		WB Vine	1,328	37.2	D	1,098	938	27.4	С	670
17	11th & Vine WB	NB 11th	274	43.9	D	222	521	42.6	D	328
		OVERALL	1,602	38.3	D		1,459	32.8	С	
		EB Vine	473	26.1	С	52	649	40	D	62
18	11th & Vine EB	NB 11th	284	25.6	С	240	668	29.3	С	558
		OVERALL	757	25.9	С		1,317	34.6	С	
		WB Vine	1,772	19.3	В	138	937	14.9	В	30
19	10th & Vine WB	SB 10th	170	36.6	D	150	456	33.3	С	330
		OVERALL	1,942	20.8	С		1,393	21	С	
		EB Vine	482	32.1	С	358	799	27.3	С	610
20	10th & Vine EB	SB 10th	574	30.5	С	445	448	40	D	318
		OVERALL	1,056	31.2	С		1,247	31.8	С	
21	9th & Vine WB	WB Vine	1,482	9.7	Α	125	912	4.1	Α	67

		SB 9th	392	40.7	D	383	113	36.5	D	113
		OVERALL	1,874	16.2	В		1,025	7.7	Α	
		EB Vine	464	0	а	0	834	0	a	0
22	9th & Vine EB	NB 9th	117	11	а	731	324	28.2	d	150
		OVERALL	581	2.2	а		1,158	7.9	а	
		WB 676 Off-Ramp	2,992	10.6	В	344	2,365	10.4	В	317
23*	8th & Vine WB	SB 8th	860	36.1	D	236	925	37	D	248
		OVERALL	3,852	16.3	В		3,290	17.9	В	
		EB Vine	561	11.5	В	136	1,159	40.4	D	710
24*	Oth O Vinc ED	SB 8th	981	40.5	D	149	670	9.9	Α	57
24"	8th & Vine EB	SEB 676 Off-Ramp	481	62.3	Е	349	210	38.3	D	140
		OVERALL	2,023	37.6	D		2,039	30.1	С	
		EB Race	442	13	В	98	824	16.2	В	200
25	15th & Race	SB 15th	1,433	15.7	В	245	861	12.4	В	125
		OVERALL	1,875	15.1	В		1,685	14.3	В	
		EB Race	393	20	В	138	774	24.7	С	280
26	Broad & Race	NB Broad	583	14.2	В	90	665	14.6	В	105
26	вгоай & касе	SB Broad	882	14.8	В	115	552	13.7	В	68
		OVERALL	1,858	15.7	В		1,991	18.3	В	
		EB Race	482	15.3	В	145	686	17	В	217
27	13th & Race	NB 13th	294	15.9	В	88	475	18	В	172
		OVERALL	776	15.5	В		1,161	17.4	В	
		EB Race	523	18	В	138	737	19.2	В	192
28	12th & Race	SB 12th	813	15.8	В	190	409	12.5	В	82
		OVERALL	1,336	16.7	В		1,146	16.8	В	
		EB Race	382	18.4	В	120	639	21.1	С	215
29	11th & Race	NB 11th	303	12	В	90	784	19.6	В	320
		OVERALL	685	15.6	В		1,423	20.3	С	
		EB Race	400	18.7	В	138	744	22.2	С	262
30	10th & Race	SB 10th	571	18.9	В	295	416	14.9	В	190
		OVERALL	971	18.8	В		1,160	19.6	В	
		EB Race	335	17.8	В	98	696	21.8	С	238
31	9th & Race	NB 9th	260	12.9	В	108	604	24.6	С	332
		OVERALL	595	15.7	В		1,300	23.1	С	
		EB Race	481	17.4	В	110	999	21.3	С	285
32	8th & Race	SB 8th	1,290	16.6	В	280	914	12.8	В	165
		OVERALL	1,771	16.8	В		1,913	17.2	В	

2050 Build Alternative 2

The second build alternative includes dieting Vine Street Westbound to two lanes and Vine Street Eastbound to one lane. Vine Street EB is reduced to one through lane with turning lanes from the approach at 13th Street to 10th Street. Vine Street WB is reduced to two through lanes with turning lanes from the approach at 8th Street to 15th Street.

This model also includes the installation of a traffic signal at 9th Street and Vine Street WB, creating the opportunity for a pedestrian crossing and a potential pedestrian bridge. The traffic signal timing along Vine Street was adjusted to improve coordination and optimize delay. Appended Synchro reports detail the timing alterations.

Volume Change

The Build Alternative 2 road diet along Vine Street was input into DVRPC's regional model to anticipate any rerouting of traffic that might occur given the reduced capacity. **Figures 6** and **7** show the volume changes in traffic compared to the 2050 No Build Conditions. Similarly to the first build alternative, some traffic is rerouted from Vine Street to Callowhill Street, but there is less of a change compared to the No Build conditions.

Figure 6: Volume Change - No Build to Build Alternative 2 - AM Peak Hour



Figure 7: Volume Change - No Build to Build Alternative 2 - PM Peak Hour



Synchro Results

With the proposed road dieting in Build Alternative 2, all intersections within the study area operate at levels of service C or better during both peak hours. Although increases in volume are anticipated along Callowhill Street due to the reduction in capacity along Vine Street, levels of service are maintained. Results by intersection approach are shown in **Table 3**. Detailed synchro reports are appended.

Table 3: 2050 Build Alternative 2 Synchro Results

	*indicates H	CM 2000	2050	Build 2 A	M Pe	ak Hour	2050 E	Build 2	PM P	eak Hour
	Intersection	Approach	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)	Volume (veh)	Delay (s)	LOS	95th %ile Queue (ft)
		EB Callowhill	-	0	Α	0	-	0	Α	0
1	15th & Callowhill	WB Callowhill	565	44.8	D	575	297	32.4	С	305
1	15th & Callowilli	SB 15th	578	20.3	С	388	424	16.5	В	262
		OVERALL	1,143	32.4	С		721	23	С	
		EB Callowhill	-	0	Α	-	-	0	Α	-
		WB Callowhill	364	20.2	С	130	314	17.7	В	104
2*	Broad & Callowhill	NB Broad	690	10.3	В	90	682	9.3	Α	84
		SB Broad	1,168	11.5	В	142	811	9.5	Α	94
		OVERALL	2,222	12.5	В		1,807	10.8	В	
		WB Callowhill	393	22	С	192	334	21.7	С	170
3	13th & Callowhill	NB 13th	331	22.2	С	240	320	22.4	С	245
		OVERALL	724	22.1	С		654	22	С	
		WB Callowhill	462	23.1	С	233	380	23.5	С	190
4	12th & Callowhill	SB 12th	371	20.7	С	142	451	19.1	В	160
		OVERALL	833	22	С		831	21.1	С	
		WB Callowhill	472	25.6	С	240	385	24.6	С	195
5	11th & Callowhill	NB 11th	331	19	В	222	381	30.8	С	358
		OVERALL	803	22.9	С		766	27.7	С	
		WB Callowhill	901	22.5	С	336	748	20.5	С	222
		SB 10th	162	35.1	D	151	237	40.4	D	430
6*	10th & Callowhill	SEB Ridge	231	42.7	D	228	129	32.8	С	116
		NWB Ridge	10	27.9	С	19	20	28.3	С	28
		OVERALL	1,304	27.7	С		1,134	26.2	С	
_	Oth O Calla Lill	WB Callowhill	1,380	0	а	0	1,380	0	а	0
7	9th & Callowhill	OVERALL	1,380	0	а		1,380	0	а	
		WB Callowhill	1,640	6.7	Α	212	1,264	13.8	В	245
8	8th & Callowhill	SB 8th	424	40.1	D	230	624	24.1	С	238
		OVERALL	2,064	13.6	В		1,888	17.2	В	
9	15th & Vine WB	WB Vine	1,174	31.3	С	210	1,018	14	В	38

		SB 15th	1,676	25.9	С	325	1,244	26.4	С	255
		OVERALL	2,850	28.1	С	323	2,262	20.4	С	255
		EB Vine	937	19.2	В	274	681	10.7	В	143
		SB 15th	1,472	6.4	A	56	1,037	5.9	A	28
10*	15th & Vine EB	NEB 676EB Off-Ramp			В		946	12.1		204
		-	999	16.8		164			В	204
		OVERALL	3,408	13	В		2,664	9.4	A	221
		WB Vine	1,565	13.3	В	156	1,228	17.2	В	261
11*	Broad & Vine WB	NB Broad	552	11.1	В	52	484	11.9	В	47
		SB Broad	942	22.7	С	147	753	26.6	С	136
		OVERALL	3,059	15.8	В		2,465	19.1	В	
		EB Vine	1,694	13.2	В	371	1,714	41.3	D	591
12*	Broad & Vine EB	NB Broad	556	38.3	D	151	775	35.5	D	305
		SB Broad	1,161	23	С	292	756	8.8	Α	166
		OVERALL	3,411	20.6	С		3,245	32.3	С	
		WB Vine	1,579	29.7	C	698	1,114	24.8	С	478
13	13th & Vine WB	NB 13th	313	41.8	D	278	426	35.3	D	233
		OVERALL	1,892	31.7	С		1,540	27.7	С	
		EB Vine	642	28.8	С	355	571	21.1	С	217
14	13th & Vine EB	NB 13th	252	20.7	С	155	394	14.5	В	200
		OVERALL	894	26.5	С		965	18.4	В	
		WB Vine	1,842	30.1	С	290	1,166	28.2	С	123
15	12th & Vine WB	SB 12th	431	31.3	С	322	485	31.7	С	365
		OVERALL	2,273	30.3	С		1,651	29.2	С	
		EB Vine	583	36.3	D	342	548	26.7	С	432
16	12th & Vine EB	SB 12th	692	28.8	С	515	537	31.9	С	330
		OVERALL	1,275	32.2	С		1,085	29.3	С	
		WB Vine	1,899	28.5	С	760	1,000	26.2	С	398
17	11th & Vine WB	NB 11th	269	41.9	D	215	548	31.4	С	298
		OVERALL	2,168	30.2	С		1,548	28	С	
		EB Vine	466	26.4	С	52	657	37.4	D	57
18	11th & Vine EB	NB 11th	283	25.5	С	240	691	31.5	С	560
		OVERALL	749	26.1	С		1,348	34.4	С	
		WB Vine	1,927	21.2	С	652	990	30.4	С	453
19	10th & Vine WB	SB 10th	528	38.5	D	375	456	30.9	С	340
		OVERALL	2,455	24.9	С		1,446	30.5	С	
		EB Vine	479	31.9	С	352	804	25.3	С	562
20	10th & Vine EB	SB 10th	567	30.4	С	440	442	36.2	D	288
	-: ·• 	OVERALL	1,046	31.1	С		1,246	29.2	С	
21	9th & Vine WB	WB Vine	1,782	1.7	A	18	885	10.7	В	256
	3	VID VIIIC	2,702			10	003	20.7		

		SB 9th	145	35.2	D	127	129	24.4	С	33
		OVERALL	1,927	4.2	A	127	1,014	12.4	В	33
		EB Vine	464	0	а	0	855	0	a	0
22	9th & Vine EB	NB 9th	117	11	b	173	337	31.8	ď	173
	0 00 00 00 00 00	OVERALL	581	6.4	а		1,192	9	a	
		WB 676 Off-Ramp	3,092	10.8	В	448	2,437	11.3	В	326
23*	8th & Vine WB	SB 8th	862	41.2	D	247	946	21.4	c	127
		OVERALL	3,954	17.4	В		3,383	14.1	В	
		EB Vine	581	22.6	С	247	1,164	47.1	D	652
		SB 8th	715	10.3	В	42	669	6.8	A	37
24*	8th & Vine EB	SEB 676 Off-Ramp	602	26.4	С	308	210	32.3	С	125
		OVERALL	1,898	19.2	В		2,043	32.4	С	
		EB Race	442	13	В	98	824	16.2	В	200
25	15th & Race	SB 15th	1,454	15.9	В	250	842	12.3	В	123
		OVERALL	1,896	15.2	В		1,666	14.2	В	
		EB Race	392	20	В	135	774	24.7	С	280
		NB Broad	583	14.2	В	90	663	14.6	В	105
26	Broad & Race	SB Broad	992	15.3	В	132	576	11	В	55
		OVERALL	1,967	15.9	В		2,013	17.4	В	
		EB Race	494	15.4	В	150	686	17	В	217
27	13th & Race	NB 13th	293	15.8	В	88	445	17.6	В	158
		OVERALL	787	15.6	В		1,131	17.2	В	
		EB Race	535	18.1	В	142	737	19.2	В	192
28	12th & Race	SB 12th	808	15.7	В	190	415	12.5	В	85
		OVERALL	1,343	16.7	В		1,152	16.8	В	
		EB Race	371	18.3	В	115	639	21.1	С	215
29	11th & Race	NB 11th	306	12	В	92	793	19.8	В	328
		OVERALL	677	15.4	В		1,432	20.4	С	
		EB Race	395	18.7	В	135	739	22.1	С	260
30	10th & Race	SB 10th	581	19.3	В	302	416	14.9	В	190
		OVERALL	976	19.1	В		1,155	19.5	В	
		EB Race	328	17.7	В	95	696	21.8	С	238
31	9th & Race	NB 9th	268	13	В	110	621	26.2	С	352
		OVERALL	596	15.6	В		1,317	23.9	С	
		EB Race	479	17.4	В	110	999	21.3	С	285
32	8th & Race	SB 8th	1,176	15.1	В	240	908	12.7	В	162
		OVERALL	1,655	15.8	В		1,907	17.2	В	

Summary

The Chinatown Stitch project includes a proposed highway cap over I-676. Adjacent to the highway cap, road dieting of the local Vine Streets is proposed to improve safety for all roadway users. A study area surrounding the proposed highway cap was selected to analyze the impact of road dieting to the local roadway network. Traffic volumes within the study area during the year 2050 were estimated, and local transportation projects were included to develop the **2050 No Build Conditions**. Two reconfigurations of Vine Street were proposed as build alternatives:

- Build Alternative 1: 1 lane along Vine Street EB and 1 lane along Vine Street WB
- Build Alternative 2: 1 lane along Vine Street EB and 2 lanes along Vine Street WB

Potential rerouting due to capacity reduction was estimated using DVRPC's regional model. The installation of a traffic signal at 9th Street & Vine Street WB, as well as intersection realignment at 8th Street & Vine Street EB were included in both build alternatives. Signal optimization was performed along both Vine Street EB and Vine Street WB in the build models.

Under the 2050 No Build Conditions, all intersections within the study area operate at levels of service D or better during both peak hours, with the exception of 11th Street & Vine Street WB, which fails during the AM peak hour, 11th Street & Vine Street EB, which fails during the PM peak hour, and 10th Street & Vine Street WB, which has an LOS E during the AM peak hour. All intersections in Build Alternative 1 operate at levels of service D or better during both peak hours. All intersections in Build Alternative 2 operate at levels of service C or better during both peak hours. **Table X** shows the results comparison between the 2050 No Build Conditions and both build alternatives. Detailed Synchro reports are appended.

Table 4: Intersection Results Comparison

	Scenario	20	50 N	o Build		2050 Build Alternative 1				2050 Build Alternative 2							
	Time Period	AM Pe		PM Pe Hou		AM Pe		PM Po			No Build elay		AM Peak PM Peak Hour		Build 2 - De		
	Intersection	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	AM Peak	PM Peak	Delay	LOS	Delay	LOS	AM Peak	PM Peak
1	15th & Callowhill	28.3	С	21.9	С	33.7	С	26.4	С	5.4	4.4	32.4	С	23	С	4.1	1.1
2*	Broad & Callowhill	12	В	10.4	В	17	В	12.6	В	5	2.2	12.5	В	10.8	В	0.6	0.4
3	13th & Callowhill	21.9	С	21.4	С	22.1	C	22	C	0.2	0.6	22.1	С	22	С	0.2	0.7
4	12th & Callowhill	21.8	С	21.1	С	23.3	C	21.5	C	1.5	0.5	22	С	21.1	С	0.3	0
5	11th & Callowhill	22.6	С	22.3	С	23.9	C	22.7	C	1.3	0.4	22.9	С	27.7	С	0.3	5.3
6*	10th & Callowhill	24.9	С	26.2	С	25.1	C	26.2	C	0.1	0	27.7	С	26.2	С	2.7	0
7	9th & Callowhill	0	а	0	а	0	а	0	а	0	0	0	а	0	а	0	0
8	8th & Callowhill	15.1	В	17	В	18.6	В	17.1	В	3.5	0.1	13.6	В	17.2	В	-1.5	0.2
9	15th & Vine WB	25.7	С	31.6	С	51.3	D	46.5	D	25.6	14.9	28.1	С	20.8	С	2.4	-10.8
10*	15th & Vine EB	13.1	В	18.9	В	13	В	9	Α	-0.1	-10	13	В	9.4	Α	-0.1	-9.6
11*	Broad & Vine WB	32.8	С	26.8	С	22.8	C	20.4	C	-10	-6.4	15.8	В	19.1	В	-17	-7.8
12*	Broad & Vine EB	29.5	С	26.5	С	15.2	В	21.1	C	-14.3	-5.4	20.6	С	32.3	С	-8.9	5.8
13	13th & Vine WB	29.6	С	30.1	С	36	D	33.6	С	6.4	3.4	31.7	С	27.7	С	2.1	-2.4
14	13th & Vine EB	15.3	В	18.5	В	26.6	С	27.4	С	11.3	8.8	26.5	С	18.4	В	11.2	-0.1
15	12th & Vine WB	32.8	С	31.2	С	36.3	D	33.9	С	3.5	2.7	30.3	С	29.2	С	-2.5	-2
16	12th & Vine EB	35.5	D	28.9	С	32.5	С	31.8	С	-3	2.9	32.2	С	29.3	С	-3.2	0.3
17	11th & Vine WB	99.4	F	34	С	38.3	D	32.8	С	-61.1	-1.1	30.2	С	28	С	-69.2	-5.9
18	11th & Vine EB	24.6	С	81.2	F	25.9	С	34.6	С	1.3	-46.6	26.1	С	34.4	С	1.5	-46.8
19	10th & Vine WB	55.9	Е	24.4	С	20.8	С	21	С	-35	-3.4	24.9	С	30.5	С	-30.9	6.2
20	10th & Vine EB	32	С	32.9	С	31.2	С	31.8	С	-0.8	-1	31.1	С	29.2	С	-0.9	-3.7
21	9th & Vine WB	0	а	0	а	16.2	В	7.7	Α	16.2	7.7	4.2	Α	12.4	В	4.2	12.4
22	9th & Vine EB	2.4	а	3.1	а	2.2	а	7.9	а	-0.2	4.8	2.2	а	9	а	-0.2	5.9
23*	8th & Vine WB	19.6	В	17.8	В	16.3	В	17.9	В	-3.3	0.1	17.4	В	14.1	В	-2.2	-3.7
24*	8th & Vine EB	42.1	D	52.9	D	37.6	D	30.1	С	-4.4	-22.8	19.2	В	32.4	С	-22.9	-20.6
25	15th & Race	15.3	В	14.2	В	15.1	В	14.3	В	-0.3	0	15.2	В	14.2	В	-0.1	0
26	Broad & Race	15.8	В	18.2	В	15.7	В	18.3	В	-0.1	0.1	15.9	В	17.4	В	0.1	-0.8
27	13th & Race	15.6	В	17.2	В	15.5	В	17.4	В	0	0.2	15.6	В	17.2	В	0	0
28	12th & Race	16.6	В	16.8	В	16.7	В	16.8	В	0	0	16.7	В	16.8	В	0	0
29	11th & Race	15.4	В	20.3	С	15.6	В	20.3	С	0.1	0	15.4	В	20.4	С	0	0.1
30	10th & Race	19.3	В	19.5	В	18.8	В	19.6	В	-0.5	0.1	19.1	В	19.5	В	-0.2	0
31	9th & Race	15.6	В	23.5	С	15.7	В	23.1	С	0.1	-0.4	15.6	В	23.9	С	0	0.3
32	8th & Race	15.7	В	17.2	В	16.8	В	17.2	В	1.1	0	15.8	В	17.2	В	0.1	0

APPENDIX J:

EQUITY ANALYSIS

I. Results of Equity Analysis

<u>Introduction</u>

The City of Philadelphia plans to construct a cap over several blocks of the Vine Street Expressway that would connect the northern and southern parts of the Chinatown neighborhood. Currently, Chinatown and Chinatown North are split by the expressway, which, since its construction in 1991, has negatively impacted and intensified the social and economic divide between the two areas. The project includes the creation of green space on the highway cap, traffic safety improvements, and a pedestrian bridge connecting the area to a currently under-development recreation network.

This equity analysis was conducted to analyze the extent to which the planned infrastructure project will benefit underserved communities and disproportionately affected areas.

This analysis involves the comparison of demographics at multiple geographic levels around the planned improvements. This analysis takes guidance from Title VI of the Civil Rights Act² and the Executive Order on Environmental Justice³ to identify population groups and measures relevant to this equity analysis.

Project Description

The City of Philadelphia is currently planning the development of the Chinatown Stitch, which will cap the Vine Street Expressway for an area spanning just east of 10th Street to roughly halfway between 11th and 12th Streets. The caps will consist of green space and pathways to facilitate movement throughout the area and enhance cohesion of Chinatown and the surrounding area.

In conjunction with this new park space, the project will improve roadway conditions along Vine Street from 9th Street to Broad Street through the introduction of a road diet, various traffic calming measures, and improvements to pedestrian and cyclist infrastructure. The project also includes a pedestrian bridge over 9th Street, and a pedestrian bridge connecting Chinatown to the Rail Park across Vine Street. These bridges will fully separate pedestrian traffic from the roadway, and provide a connection to an expansive park and recreation space currently under development. Overall, the project will reconnect the Chinatown neighborhood, which was split by the completion of the Vine Street Expressway in 1991. Instead of a loud, difficult to cross complex of surface roads and highway, the complete project will create a welcoming open space. Benefits from the planned improvements include significant safety benefits, positive impacts to quality of life and health outcomes, state of good repair for essential infrastructure, and increased connections between Chinatown and Chinatown North.

<u>Improvement Users – Populations for Comparison</u>

The Chinatown Cap will primarily benefit Chinatown residents. Visitors to the neighborhood—which includes a popular commercial corridor—will also benefit, however this analysis focuses on residents of census tracts that include Chinatown as this population is expected to experience the greatest positive

¹ https://www.phila.gov/2023-03-08-learn-about-the-chinatown-stitch/

² Title VI of the Civil Rights Act of 1964. https://www.justice.gov/crt/fcs/TitleVI-Overview

³ Executive Order 12898, February 11, 1994. https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf.

impact. This analysis includes census tracts 2 and 376, which include Chinatown and surrounding neighborhoods. This area is bounded to the north by Green Street to the east by 6th and 7th streets, to the south by Arch Street, and to the east by Broad Street. Population and demographic data for the study area, Philadelphia, and Pennsylvania comes from the U.S. Census. This analysis includes additional indexes provided by the U.S. Department of Transportation⁴ and U.S. Environmental Protection Agency.⁵

Minority and Low-Income Populations

Title VI and Environmental Justice guidance, and their application to transportation and infrastructure investments, establishes that such investments should promote access and opportunity to low-income and minority communities.⁶ Local residents are projected to derive significant benefit from these improvements. Using data from the American Community Survey (ACS)⁷, the demographic composition of the project area is compared to Philadelphia and the Commonwealth. The analysis shows that the proportion of racial minority population groups are on par with Philadelphia, and notably more heavily concentrated around improvements than Pennsylvania overall. (see Table 1).⁸

Table 1 – Racial and Ethnic Minorities In Project Area

	Chinatown Stitch	Philadelphia	Pennsylvania
Population Count	6,919	1,596,865	12,970,650
Racial Minority	60%	62%	22%
Ethnic Minority	8%	15%	8%

Using the same data, the composition of low-income households is compared for the same geographies. In addition to the federal poverty rate, this analysis also includes a regional measure of household income. The area near the Chinatown Stitch has a higher median income than the city or the state and fewer families are living at under 200 percent of the federal poverty level. (see Table 2).

⁴ https://www.transportation.gov/RAISEgrants/raise-app-hdc

⁵ This data was pulled using the EJScreen tool, which reports Environmental Justice indexes by census tract in percentiles comparable to the state and nation. https://ejscreen.epa.gov/mapper/

⁶ See: Environmental Justice Policy Guidance for Federal Transit Administration Recipients, 2012; Federal Highway Administration Guidance on Environmental Justice,

https://www.fhwa.dot.gov/environment/environmental_justice/equity/; and Rich Stolz, Race, Poverty and Transportation, 2000.

⁷ Data used is from the 2017-2021 ACS 5-Year estimates.

⁸ For this analysis, "Racial Minority" is defined as all racial groups excluding white individuals. "Ethnic Minority" is defined as anyone of Hispanic or Latino origin, regardless of race. Therefore, total minority population is the sum of these two groups, encompassing all individuals except non-Hispanic whites. This follows guidance from U.S. DOT Order 5610.2(a), Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. https://www.transportation.gov/sites/dot.gov/files/docs/mission/transportation-policy/environmental-justice/339501/dot56102a.pdf.

Table 2 – Low Income Households in Project Area

	Chinatown Stitch	Philadelphia	Pennsylvania
Households	3,344	646,608	5,147,783
Average Median Household Income	\$92,733	\$52,649	\$67,587
Families Under 200% of Poverty Level	18%	37%	21%

U.S. DOT and the Bipartisan Infrastructure Law define Historically Disadvantaged Communities and Areas of Persistent Poverty. These indexes can be used to identify places that have experienced barriers to opportunity or disadvantages over an extended period of time and incorporate multiple variables, including income. While neither tract in the study area have been identified as historically disadvantaged, both tracts in the study area have been identified as Areas of Persistent Poverty. (see Table 3).

Table 3 – Indexes of Historic Disadvantage and Persistent Poverty in Project Area

		Chinatown Stitch	Philadelphia	Pennsylvania
Historically Disadvantaged	Percent of Tracts	0%	60%	18%
Community (2010 Tracts)	Percent of Total Area	0%	49%	3%
Area of Persistent Poverty	Percent of Tracts	100%	55%	22%
(2010 Tracts)	Percent of Total Area	100%	39%	4%

By making walking more appealing, this project has the potential to reduce vehicle traffic. Such a mode shift would reduce vehicle emissions, leading to improved air quality. The addition of green space, in place of an open freeway, is also expected to improve air quality. The U.S. EPA tracks measures of Environmental Justice— efforts that seeks to address inequities of environmental protection facing communities with large minority or low-income populations. These indexes show air quality in the area near the Chinatown Stitch is much poorer than the commonwealth and the nation. (Please see Table 5).

Table 5 – Environmental Justice in Project Area

	Project	Project Area
	Area (State	(Nationwide
	Percentile)	Percentile)
Diesel particulate matter	99	92
Air Toxics Cancer Risk	81	83

Transportation Needs

Additional considerations for an equity analysis are the transportation needs of the population, access to those needs, and differences in those factors among different population groups. Using ACS data on

⁹ https://www.transportation.gov/RAISEgrants/raise-app-hdc

¹⁰ https://www.epa.gov/environmentaljustice

¹¹ https://www.epa.gov/ejscreen/ej-and-supplemental-indexes-ejscreen

vehicle ownership, the percent of households without vehicles near the project area is higher than in Philadelphia and the commonwealth (see Table 6).

Table 6 - Vehicle Availability by Tenure in Project Area

	Chinatown Stitch	Philadelphia	Pennsylvania
Households	3,344	646,608	5,147,783
No vehicle available	36%	29%	11%
Owner occupied:	1,352	336,236	3,551,970
No vehicle available	31%	18%	5%
Renter occupied:	1,992	310,372	1,595,813
No vehicle available	40%	41%	24%

Transportation needs can also be assessed through data on commuting patterns. In the project area, fewer people drive to work and more people walk compared to Philadelphia and Pennsylvania (see Table 7).

Table 7 - Means of Transportation in Project Area

	Chinatown		
	Stitch	Philadelphia	Pennsylvania
Workers 16 years and over	4,292	710,964	6,173,679
Drove alone	23%	48%	73%
Drove (Carpooled)	3%	8%	8%
Public transportation (excluding taxicab)	17%	21%	5%
Walked	31%	8%	3%
Taxicab, motorcycle, bicycle, or other means	3%	2%	1%
Worked from home	19%	11%	10%

This analysis has shown that the project will directly benefit minority populations and areas of persistent poverty, contributing to safe and equitable connection within a community and to opportunity. To demonstrate equitable benefits, this analysis should show that those populations have a direct need for the type of project described in this analysis. For this project, this means that people living in the area around the Chinatown Stitch have a greater need for pedestrian infrastructure than the overall population.

Additionally, the analysis in the table below clearly shows that minority and low-income groups in the Philadelphia MSA have a much higher reliance on walking and other modes such as public transportation, and a much lower reliance on vehicles than the overall population in Philadelphia (see Table 8).

Table 8 – Means of Transportation by Minority and Low-Income Status for the Philadelphia MSA

	Total	Minority	Below 100 percent of the poverty level
Total:	100%	100%	100%
Car, truck, or van - drove alone	70%	62%	52%
Car, truck, or van - carpooled	7%	10%	11%
Public transportation (excluding taxicab)	9%	17%	19%
Walked	3%	4%	8%
Taxicab, motorcycle, bicycle, or other means	2%	0.3%	2%
Worked from home	8%	6%	8%

Given the above factors, minority populations and low-income populations, with a heavy reliance on multi-modal transportation, will benefit at a high rate due to the location and nature of the project.

APPENDIX K:

MAINTENANCE AND OPERATIONS MEMO



Chinatown Stitch: Maintenance and Operations Memo

Purpose

A significant element of the Chinatown Stitch's long-term success is the implementation of a reliable and sustainable operation and maintenance framework. As a first step toward solidifying a framework, the project team hosted a brainstorming workshop on Wednesday, October 25, 2023, from 10:00 AM to 11:30 AM with key stakeholders to better understand maintenance and operations needs and identify potential revenue sources for future examination. The City of Philadelphia presented on how the I-95 CAP will incorporate operations and maintenance as well as a summary of peer cities' revenue sources for similar highway capping projects. The purpose of this memo is to memorialize the meeting discussion and clearly articulate next steps for the project team.

October 25, 2023 Meeting Attendees							
First							
Name	Last Name	Title	Organization				
Megan	Clarkin	Director, Infrastructure Program Coordination	City of Philadelphia - OTIS				
Chris	Puchalsky	Director of Policy and Strategic Initiatives	City of Philadelphia - OTIS				
Andrew	Jacobs	Urban Designer	Center City District				
Ashwin	Patel	Senior Manager, Traffic Engineering and Safety	PennDOT District 6				
Neil	Garry	Recycling Planner	City of Philadelphia - Streets				
Katrina	Budischak	Project Manager, Transportation Planning	McCormick Taylor				
Erika	Morgan	Planner III	McCormick Taylor				
Mark	Squilla	Councilmember District 1	City of Philadelphia				
Ian	Bowen	Associate Director	Econsult Solutions, Inc.				
Charles	Davies	ADE of Design	PennDOT District 6				
Peter	Angelides	President and Principal	Econsult Solutions, Inc.				
John	Chin	Executive Director	Philadelphia Chinatown Development Corporation				



Case Study: I-95 CAP, Delaware River Waterfront Corporation (DRWC)

The I-95 CAP is led by Pennsylvania Department of Transportation (PennDOT), the City of Philadelphia, and the Delaware River Waterfront Corporation (DRWC). There is a joint use lease agreement between the City of Philadelphia and PennDOT and a sublease that transfers responsibilities for operations and maintenance (O&M) to DRWC. The CAP has two main components:

- A new 11.5-acre park and civic space at Penn's Landing between Chestnut Street and Walnut Street, Front Street to the river, connecting the city to the waterfront. This new park will include a new skating rink, water features, a café and a variety of other active and passive uses.
- A new signature bridge at South Street, both of which will also extend over Columbus
 Boulevard to connect cyclists and pedestrians to the newly completed Delaware River Trail.

I-95 CAP Maintenance and Operations

DRWC and the City of Philadelphia are currently in the process of executing a sublease to the joint-use lease agreement (JULA) between PennDOT and the City. Maintenance and operation needs include:

- Maintaining, developing, operating, and policing the surface of the leased premises
- o Maintaining the area free of weeds, debris, and inflammable materials
- Paving, security fencing, lighting inlets, guiderails, bollards, landscaping, surface treatments, and wall elements
- Landscaping mowing, fertilizing, watering, weeding, and replacement of dead/diseased plant materials
- Sidewall street trees, tree pits, planter box landscaping, pruning, spraying, fertilizing, and watering
- Graffiti and snow removal
- Trash removal

Chinatown Stitch: Types of Maintenance

Maintenance for the Chinatown Stitch will include the cap "topside" amenities and the cap structure. Demarcated as anything above the waterproof layer, the "topside" is owned by the City who will be responsible for day-to-day maintenance. Anything below the waterproof layer will most likely be the responsibility of PennDOT.

In addition to the I-95 CAP maintenance needs listed above, the following activities apply to the Chinatown Stitch's topside amenities:

- Security and lighting
- o Hazardous materials/drug paraphernalia (expensive and requires specialized equipment)
- Outreach to people who are unhoused
- Vandalism/destructive behavior
- Public trash cans being used as household trash cans



Considerations for public communication regarding maintenance needs and activities will be critical. Any O&M framework should include methods for receiving public comments. Existing landscaping activities on Vine Street should also be folded into the proposed framework to ensure continuity of service.

Structure Maintenance includes:

- o Tunnel
- Mechanical systems that need to be operated
- Drainage

In addition to structure maintenance, the project team should be aware of the need for rehabilitation of small components, like lighting and rusted fence pieces will be required. These activities fall into a separate category from O&M but directly contribute toward keeping the overall asset in a good state of repair.



Chinatown Stitch: Solutions - Peer City Practice

Сар	Location	Project Status	Project Description	Maintenance Structure	Operating Budget	Revenue Sources
Klyde Warren Park	Dallas, Texas	Completed	The capping over Woodall Rodgers Freeway created a 5-acre park that acts as Dallas' "town square".	City of Dallas: Owner of Klyde Warren Park Woodall Rodgers Park Foundation: Operates and manages Klyde Warren Park (50 year contract)	\$3,000,000	Philanthropic assistance for maintenance (endowment). Cap is within a Business Improvement District (BID).
Cap at Union Station	Colombus, Ohio	Completed	The Cap at Union Station represents a commercial development project encompassing three separate bridges across Ohio's Interstate I-670.	City of Columbus: Has clear title and air rights. Continental Real Estate: Long term development lease with City to construct and lease the buildings.		City receives 10% of the development's ongoing profits.
The Central Artery/ Third Harbor Tunnel Project aka The Big Dig	Boston, Massachusetts	Completed	The Central Artery/Tunnel project involved two components:	Rose Kennedy Greenway Conservancy: Responsible for managing all aspects of the		The Conservancy, Massachusetts, the City of Boston and property owners adjacent to the park



Сар	Location	Project Status	Project Description	Maintenance Structure	Operating Budget	Revenue Sources
			1) Replacement of	Rose Kennedy		negotiated a BID
			the 6-lane	Greenway,		to support park
			highway with an	including		operations.
			underground	horticulture,		
			expressway	programming,		City, BID, State
			beneath the	public art,		DOT funds go
			existing roadway,	maintenance and		towards
			ending a bridge	capital		maintenance and
			crossing of the	improvements.		operations.
			Charles River			
			2) The extension			
			of I-90 through a			
			tunnel beneath			
			South Boston and			
			Boston Harbor to			
			Logan Airport.			
						Located within
			Once completed,			the Atlanta
			the project will			Downtown
			include 14-acres			Improvement
			of urban green			District (ADID).
			space,			
The Stitch	Atlanta, Georgia	Planning	transportation			The City is looking
			enhancements,			to pursue air
			and opportunities			rights
			for affordable			development
			housing and			above the cap
			commercial uses.			structure, which
						will require



Сар	Location	Project Status	Project Description	Maintenance Structure	Operating Budget	Revenue Sources
						leasing considerations and agreement of terms with USDOT in order to realize a vision of affordable housing and commercial development.
Dilworth Plaza	Philadelphia, Pennsylvania	Completed	A flexible park space located above SEPTA's City Hall station on the west side of City Hall.	Center City District - Long term lease with the City and responsible for maintenance and operations.	\$5,000,000 (includes programing) Operational costs: 50% Safety: 26% Landscape maintenance: 24% Per Planter maintenance: \$1,500	Revenue generation onsite, like concessions, currently covers 30-40% of maintenance costs (prior to COVID-19 pandemic 50%).
The Rail Park: Phase 1	Philadelphia, Pennsylvania	Completed	A passive linear park with landscaping and programming	The CCD maintains the park in partnership with	\$175,000 Highest maintenance	



Сар	Location	Project Status	Project	Maintenance	Operating Budget	Revenue Sources
			Description	Structure		
			built on top of the	the Department	cost: cleaning and	
			defunct Reading	of Parks and	security	
			Railroad viaduct.	Recreation. Parks		
				and Recreation	Second highest	
				shares the cost of	maintenance	
				cleaning crews	cost: Landscape	
				supervised by		
				CCD. CCD		
				provides routine		
				patrols with its		
				Community		
				Service		
				Representatives,		
				and Parks and		
				Recreation		
				handles		
				landscape		
				maintenance.		



Chinatown Stitch: Operation and Maintenance Frameworks

Cap amenities should be designed with an understanding of maintenance requirements. Similarly, the proposed O&M framework must provide stability and a sound financial structure in order to sustain this valuable community asset in a state of good repair.

Possible options for Chinatown Stitch's top side:

- o *City Department*, like Parks and Recreation (similar to Shakespeare Park, the cap in front of the Free Library of Philadelphia's Parkway Central Library branch).
- o Special purpose entity created for the Chinatown Stitch.
- Partnerships with existing stakeholders or organizations, such as CCD, Interstate Land Management Corporation (ILMC), or the Philadelphia Chinatown Development Corporation (PCDC).
 - PCDC has an eight person maintenance/cleaning team and also works with Community Life Improvement Program (CLIP) to assist with cleaning and maintenance.
 - CCD can assist with graffiti removal (outside of CCD boundaries, but have the infrastructure in place to assist).
 - Existing partner support needs to go hand in hand with dedicated funding sources.
- o *Business leasees* may be responsible for some maintenance, like commercial building and the area around it.
- o *"Friends Of" groups* may be supportive, but not fully responsible for maintenance and operations.
- Community involvement or governance in how Chinatown Stitch is programmed and operated.

Chinatown Stitch: Operation and Maintenance Revenue Sources

It is important to have reliable revenue sources in place to understand the budget. It is possible that initial operations and maintenance funds will need to be generated in advance.

Possible options for Chinatown Stitch's top side:

- Lease payments From structures/businesses that rent space on the cap or long-term development partner responsible for leasing.
- Concessions
 - The Federal Highway Administration (FHWA) Pennsylvania Division office is resistant to revenue generation on top of a cap. Will take groundwork and early conversations.
- Special events and programming/sponsorship activities
- Fundraising
- Tax Increment Financing (TIF)
 - TIF is usually used to finance large structures. In this situation it would be used in post construction scenario, which is legal.



- Business Improvement District (BID)
 - Capture the real estate appreciation that will happen as result of the Stitch.
 - The BID would have to benefit Stitch and businessowners
- Transit-oriented Development (TOD)
- o Public sources Revenue allocated from City or Commonwealth.
- Parkway institution partnerships
- Parking revenue:
 - On-street metered parking
 - Structured or garage
- Combination of revenue resources

Possible options for Chinatown Stitch's structure:

It is also important to recognize the difference between what will be considered maintenance and what efforts will be considered rehabilitation. There are many programs available for rehabilitation. Such as:

- PA State Secretary's Discretionary Funding (capitol funding)
- Transportation Alternatives (TA) grant

