



Cesar Chavez East Community Design Plan

FINAL REPORT, FEBRUARY 2012

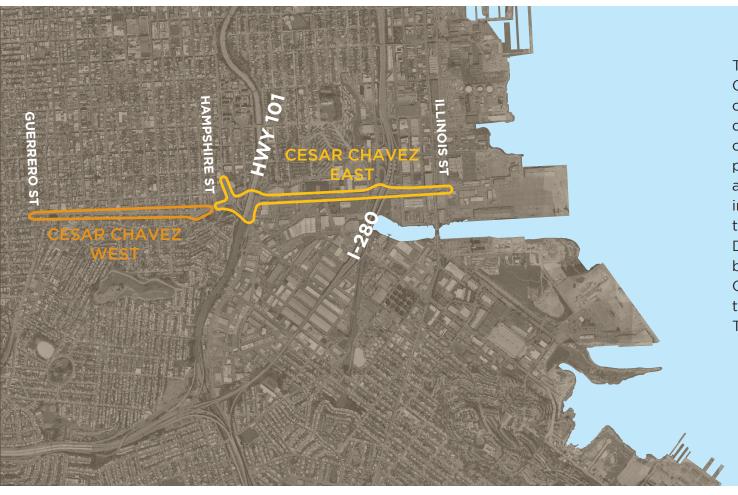
This project is funded in part by a grant from the Environmental Justice:

Context Sensitive Planning program of the California Department of Transportation

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Project Overview



The Cesar Chavez East
Community Design Plan is a
community-based concept
design for the eastern portion
of Cesar Chavez Street that
promotes safety, comfort
and accessibility to all. The
interagency effort led by
the San Francisco Planning
Department is funded in part
by the Environmental Justice:
Context Sensitive Planning of
the California Department of
Transportation.

Cesar Chavez West Streetscape project (currently under construction) and Cesar Chavez East Community Design plan area, subject of this study.

MISSION

The main goal of the Cesar Chavez East Community Design Plan is to develop a community-supported vision and a design for a street that is safe, comfortable and accessible to all modes of transportation. As an important east/west connector. Cesar Chavez brings together the Mission, Potrero, Bernal Heights, Bayview and Dogpatch neighborhoods and is also a vital link to the Blue Greenway and the Bay.

The project poses these questions:

- What is environmental justice in one of the last industrial areas of the city shared everyday by workers and residents alike?
- How to transform Cesar Chavez Street from a neglected industrial arterial into an innovative and inclusive hybrid corridor?
- How to integrate pedestrians, bicycles, cars, and trucks and offer recreational, ecological and cultural opportunities for people who live and work in the area while preserving the industrial character of the area?

WHAT IS ENVIRONMENTAL JUSTICE?

As defined by the Caltrans Environmental Justice Program, environmental justice is the 'fair distribution of environmental burdens and benefits across communities impacted by transportation projects." Environmental justice is thus based on five main elements:

- Access to affordable transportation options, jobs, employment opportunities
- Frequent transit service
- Pedestrian and bicycle safety
- Air quality and noise control
- Access to affordable housing

OUTCOMES

- A strong community vision
- Short-term and long-term streetscape designs from Kansas Street to Illinois Street
- A series of concept designs to improve connections under the 101 freeway to the newly rebuilt Cesar Chavez Street on the west side.

PARTNERSHIPS

Agencies

San Francisco Department of Public Works (DPW) San Francisco Municipal Transportation Authority (MTA) San Francisco Public Utilities Commission (PUC)

San Francisco County Transportation Authority (SFCTA)

Port of San Francisco

San Francisco Office of Economic and Workforce Development Caltrans

Community Partners

DPW Maintenance Yard CC Puede Veritable Vegetable Rebuild Potrero Bernal Heights Neighborhood Association Centro Legal de La Raza Walk SF San Francisco Bicycle Coalition

Academic partners

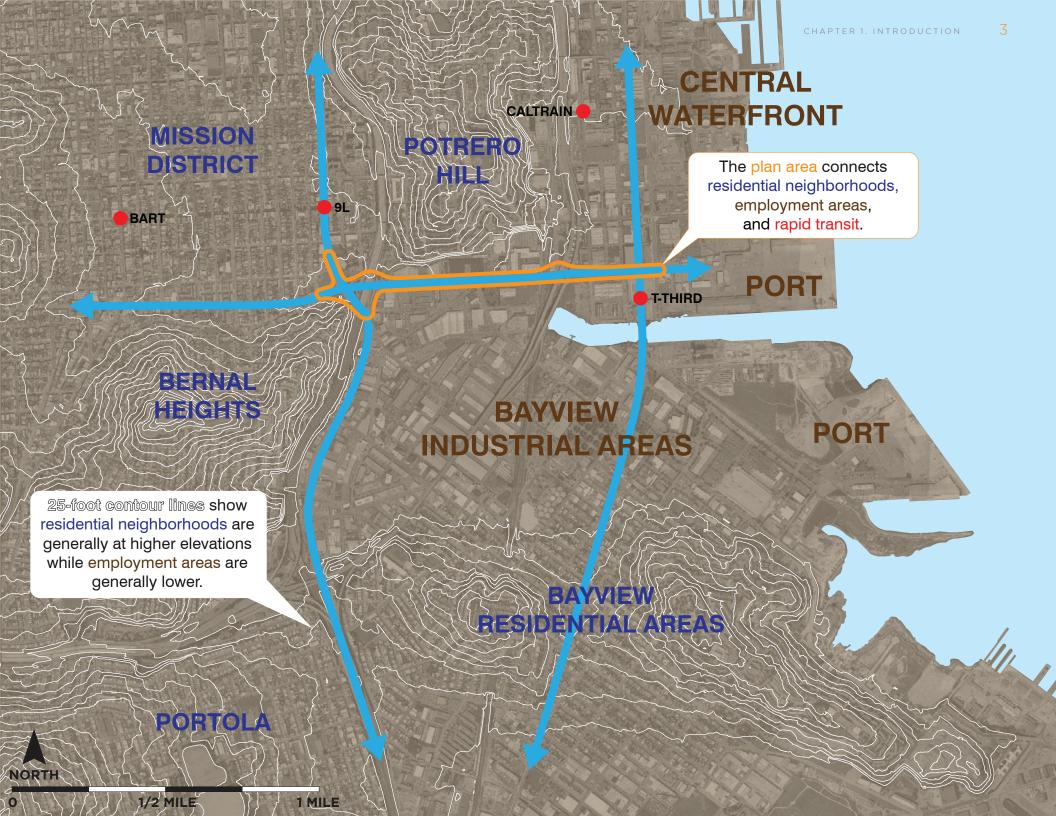
Willie Brown Scholarship Program University of San Francisco, Art and Architecture Program

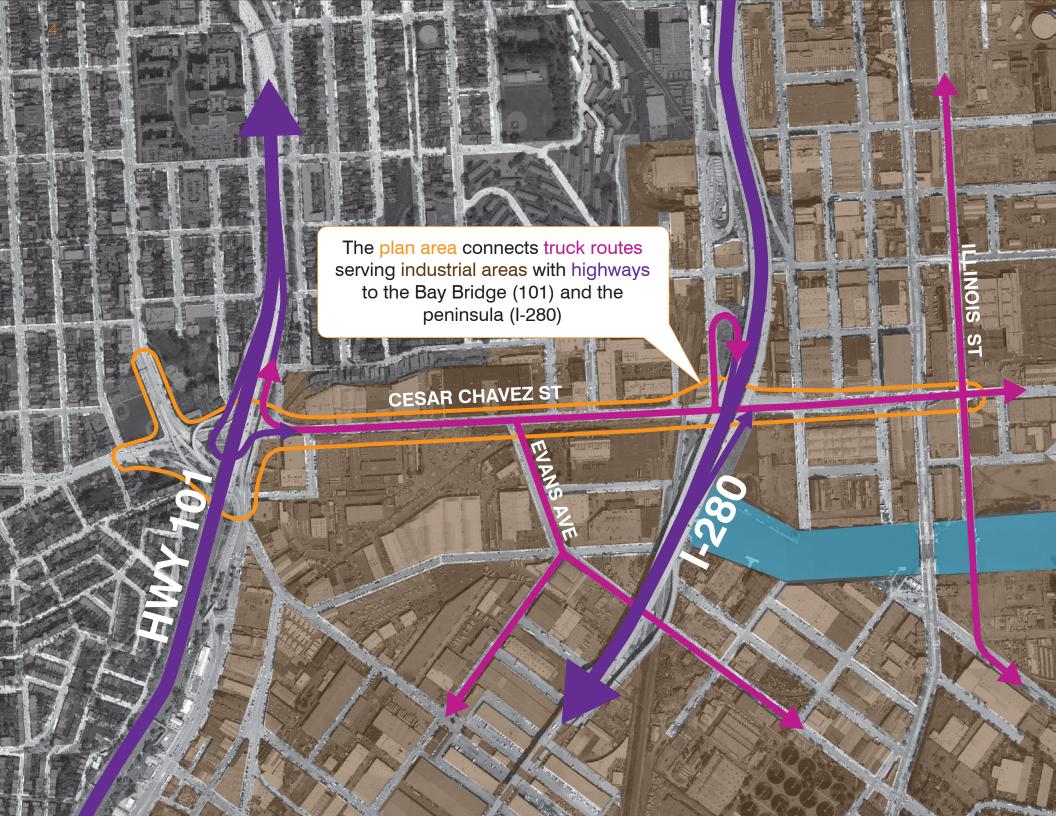


Subject of this study: Cesar Chavez East Community Design plan area (Hampshire Street to Illinois Street).



Introduction





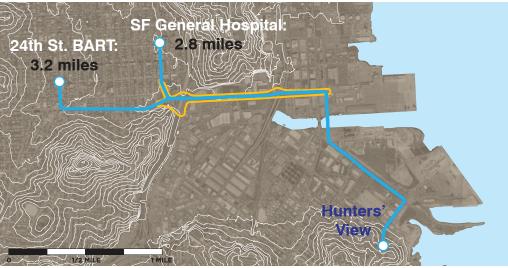
A multi-faceted street

The Cesar Chavez East Community Design Plan area comprises approximately one mile of Cesar Chavez Street in San Francisco's southeast quadrant. The plan area includes access points to two freeways (Highway 101 and I-280) and intersections with several other major city streets (Potrero Avenue, Bayshore Boulevard, 3rd Street), and is close to stops of several rapid transit lines (Caltrain, BART, and MUNI 9L and T-3rd).

While the westernmost portion of the plan area is surrounded by residential neighborhoods and city parks, most of the eastern part of Cesar Chavez Street is a vital truck route connecting the City's main industrial districts to highways leading to the Bay Bridge and to the peninsula. However, due to the area's complex topography and discontinuous street network, the industrial part of the plan area is also a crucial link between residential neighborhoods and vital destinations such as regional transit stops, parks, hospitals, educational institutions and food markets.

RIGHT: Maps indicating routes (cyan lines) between selected public housing (blue lettering) near the plan area and selected destinations, with distance indicated. 25-foot contour lines are shown in white. All connections shown are on official bicycle routes. Improving low-income communities' access to transit, parks and key destinations is an important environmental justice goal.





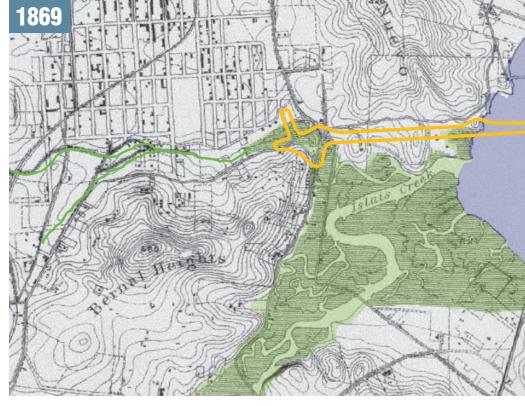


History

Traveling along the eastern portion of Cesar Chavez Street it is difficult to imagine what the area could have looked like before development, but today's landscape was largely determined by the original topography.

The flat industrial land east of I-280 was originally part of San Francisco bay – Islais Channel is the last remnant of the open water that once covered the area. Shortly after the Gold Rush, a long bridge was built to connect the growing city to the peninsula-- it became today's 3rd Street. This route was soon lined with industrial uses: ironworks and other heavy industry dominated today's Central Waterfront area, while slaughterhouses and tanneries clustered over the tidal marshes south of Islais Creek Channel. The flat industrial land south of Cesar Chavez Street between I-280 and Highway 101 was once a vast system of marshes at the mouth of the Islais Creek watersheds. While residential neighborhoods on surrounding high ground were developed early, this area remained a polluted marsh crisscrossed by multiple rail lines until the first half of the 20th century. Poor connectivity between the surrounding neighborhoods is partially a legacy of the late development of this area, which favored large blocks served by a network of rail lines rather than the well-connected street network found in the rest of the city. Finally, the area under Highway 101 is a narrow gap between hills where Precita creek, the northern branch of the watershed, entered the Islais Creek marshes – originally the largest wetlands in the city.

The plan area has long been the productive engine of the city, where "long-shoremen, warehouse employees, sailors, building trade artisans, and other-(...) made the city a great metropolis between the Gold Rush of the 1850s and the recent past." The main symbol of this vital labor activity is the Copra Crane, a fifty-four ton, 5-story tall structure on Pier 84 in Islais Channel. The crane, now under restoration, was operative until the mid-1970s, "pressing copra from Philippine islands into coconut oil and copra-based animal feed." Recently updated zoning aims to maintain the industrial character of the area. The Cesar Chavez East Community Design Plan aims to support the continuing vitality of this area and to celebrate its cultural and ecological heritage through a series of public space interventions along the corridor.



TOP LEFT: 1869 map showing the original shoreline, Islais Creek, and marshes. The angled vertical line in the bay is today's 3rd Street. Plan area is outlined in yellow.

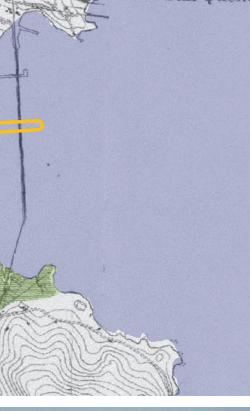
TOP RIGHT: 1915 map showing industrial areas developing along 3rd street on bay and marsh fill, and residential areas in higher elevations.

BOTTOM RIGHT: 2010 aerial with overlay of original shoreline, marshes and creeks. RIGHT: Islais Creek Channel and the Copra crane today, with I-280 in the background.



^{1.} Schwartz, Harvey "Building a Labor-Community Alliance. San Francisco unionists and the Coalition to save the Copra Crane", in Labor Studies Journal, Vol.33, n. 2, June 2008. pg.203.

^{2.} Ibid. pg.204.





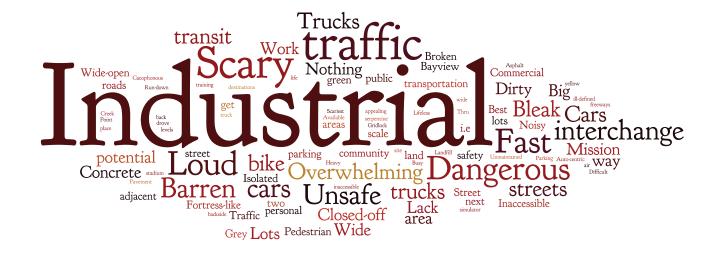






Existing Conditions: A Walk Along Cesar Chavez Street

What are the first words that come to mind when you think about the Cesar Chavez East area?



This question was posed to people during workshops, surveys, focus groups and in-depth interviews. The graphic above is an aggregation of all answers.

We started our analysis with a series of walking tours with the goal to observe, listen and get inspired along the way.

At each stop, we asked participants to annotate their impressions and ideas about the place.

Additionally, students from University of San Francisco collaborated with our team on the site analysis: their participation in the project helped to strengthen our understanding of the site. Students summarized their analysis in six videos interviewing different people who regularly use the site-- residents, commuters, workers and visitors. Their voices and everyday experiences of Cesar Chavez Street helped to bring the street to life, transforming its image of a forgotten industrial street into a vital east/west corridor, a place where people live and work everyday.

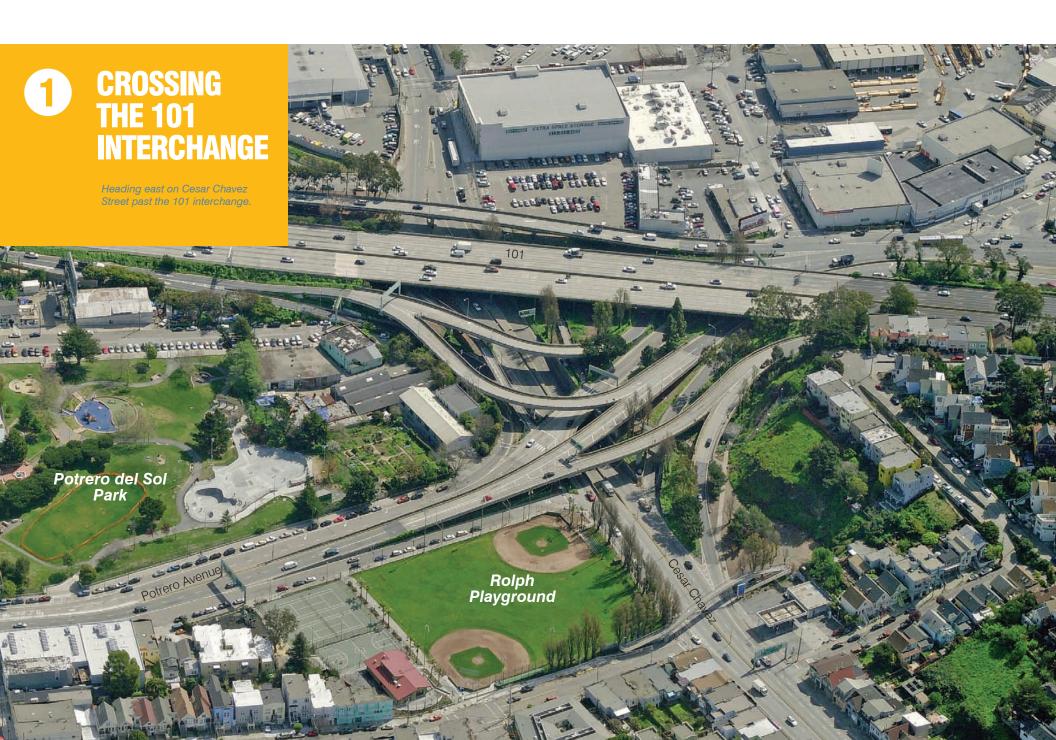
Their individual stories take us for a walk along Cesar Chavez, pointing to what is usually lost during the commute drive, the fast bike ride or the uncomfortable walk: a place where history, ecology and everyday poetry survive in spite of harshness and neglect.

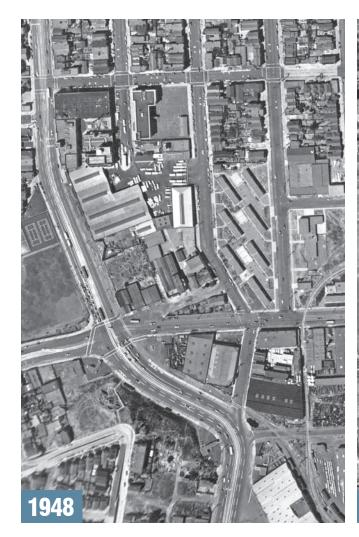


Walking along Cesar Chavez Street from west to east...

to listen, look and get inspired.

- 1. CROSSING THE 101 INTERCHANGE
- 2. KANSAS TO EVANS
- 3. EVANS/CONNECTICUT TO MISSOURI
- 4. MISSOURI TO I-280
- **5. I-280 TO INDIANA**
- 6. ISLAIS CHANNEL





Before Highway 101, the intersection of Potrero, Bayshore and Cesar Chavez was relatively simple.



Highway 101 is built. A large traffic circle connects the highway and area streets, but pedestrians are accommodated.



Highway 101 is wider, ramps connect it directly to area streets: the present-day "Hairball".



Students leaving Madison-Livingston private school, nestled under the 101 ramps at Potrero Avenue (looking north)



Blind corner by crosswalk where the southbound 101 ramp meets Potrero Avenue (looking south east)



Under the 101 structure: crossing west is very difficult for pedestrians.









TOP: Under the 101 structure: fenced-off open space areas under the freeway are broken into and used as sleeping encampments.

Multi-use path: both bikers and pedestrians use this as main east/ west connection. (looking East).



Crossing east toward Kansas Street: the 101 off-ramp is not signalized and it creates a conflict point between cars and pedestrians or bikes at the crosswalk.



The official bike path, squeezed between two chain link fences, is often clogged with bikes, peds and people pushing carts to and from the recycling center on Bayshore Boulevard nearby.



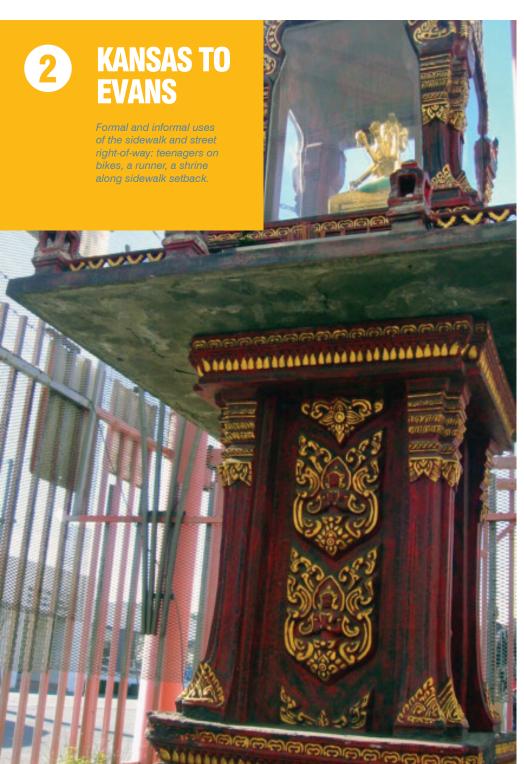


The walk along the north side of Cesar Chavez street is abruptly interrupted by the 101 freeway ramp: pedestrians are not supposed to continue westward here although they do to get quickly across the interchange through the bike-only bridge.

On the way to the bike bridge, the traffic island of the 101 ramp is often used as a passive recreation space.

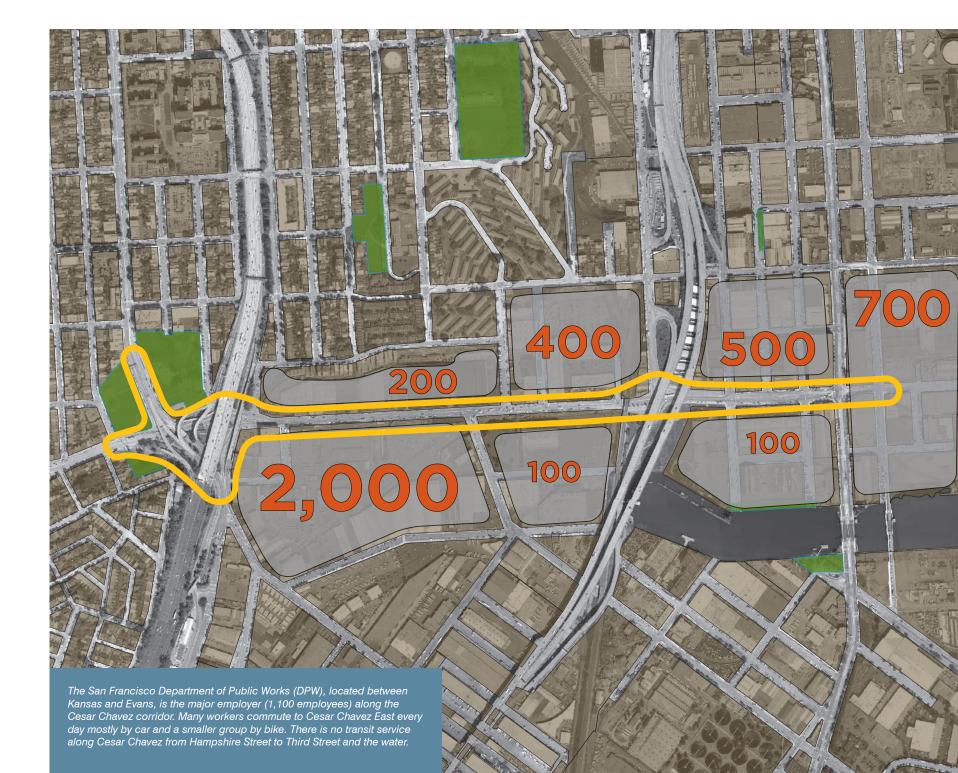
The one-way, bike-only pedestrian bridge, informally used by pedestrians to get quickly and safely across the 101 interchange.









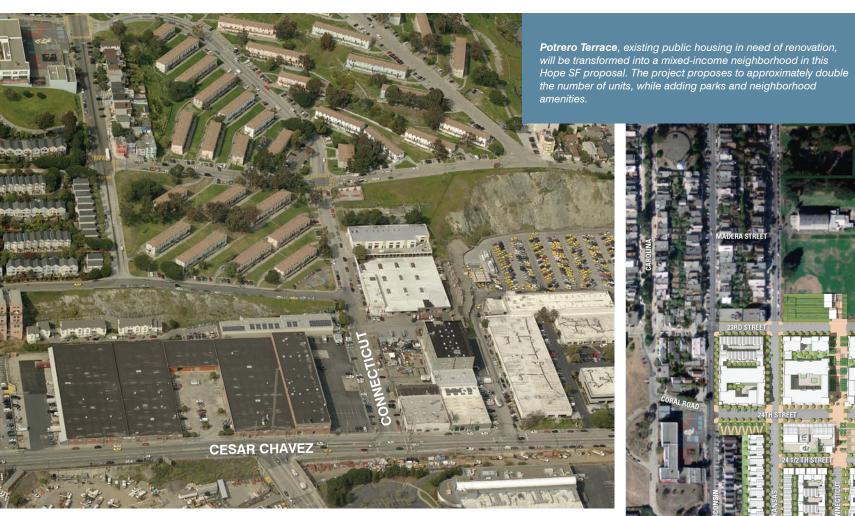




PREVIOUS PAGE: View of Cesar Chavez at Evans today. A portion of the sidewalk west of Evans is cantilevered over the DPW property below. A natural outcrop slopes on the side where native plants have started to recolonize the site. DPW currently uses the land below for vehicle storage and parking.



The stretch of Cesar Chavez between Evans and Connecticut is the most constrained of the corridor. Sidewalks --narrow and obstructed by utilities poles-- are not adequate for circulation; traffic is heavy with trucks and cars turning south into Evans Street.



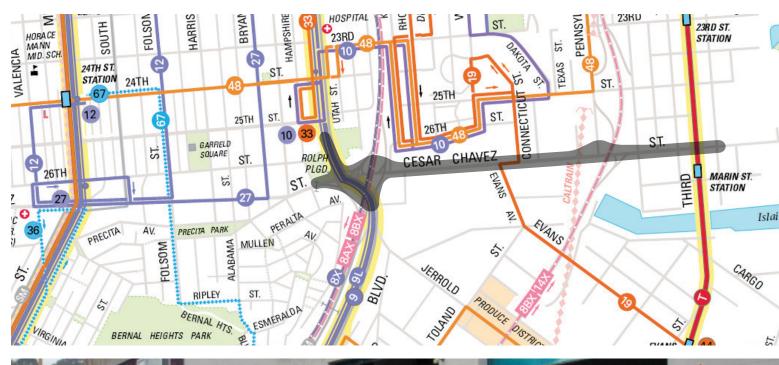
TOP LEFT: Aerial view of existing Potrero Terrace housing.

TOP RIGHT: Hope SF "Rebuild Potrero" proposal. RIGHT: Cars parked on sidewalk at Connecticut Street at Cesar Chavez Street.









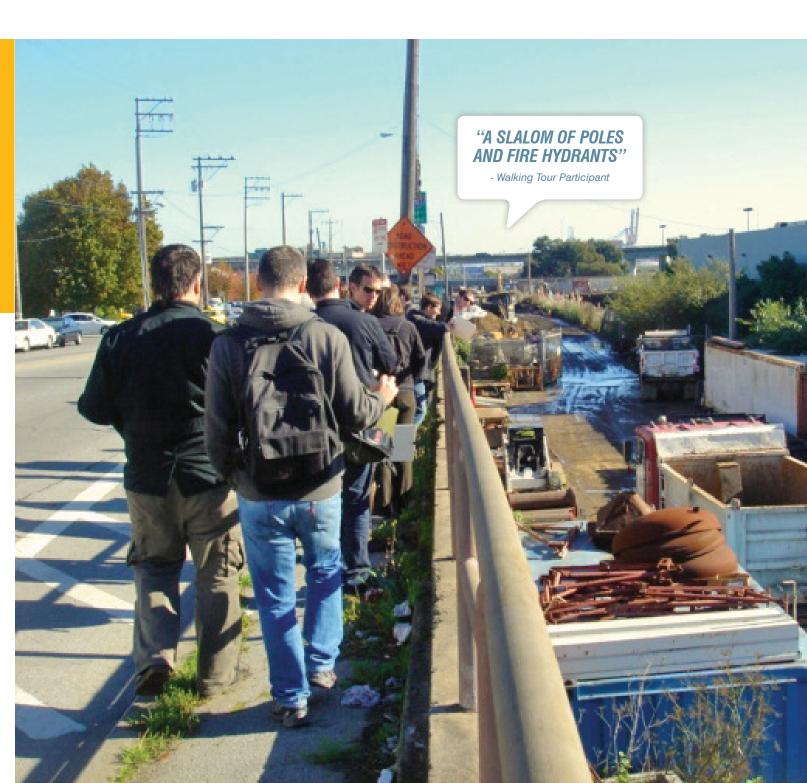
RIGHT: The 19 bus stop on Connecticut is occupied by parked cars mostly from the adjacent car repair. The bus 19 is an important line connecting the Bayshore neighborhood to Potrero Hill-- ridership might increase once Potrero Terrace, a few blocks up Connecticut Street, is rebuilt.



4

MISSOURI TO I-280

East of Connecticut Street, the conditions and width of the sidewalk rapidly deteriorate: the retaining wall on the south side and the parked cars on the other squeeze pedestrians in a barely three-foot wide path overrun with weeds.











I-280 TO INDIANA

Approaching I-280 freeway and Pennsylvania Street the sidewalk widens to a wide path. The 22nd Street Caltrain station, a few blocks from here, is an important connection to jobs in the South Bay.





The area under I-280 freeway on the south side of Cesar Chavez has great potential for open space -its proximity to the water could make it ecologically significant. Note the historic Copra Crane on Islais Creek channel in the background.

The left turn onto Pennsylvania Street leading to I-280 (north) is a very stressful conflict point for pedestrians trying to cross.













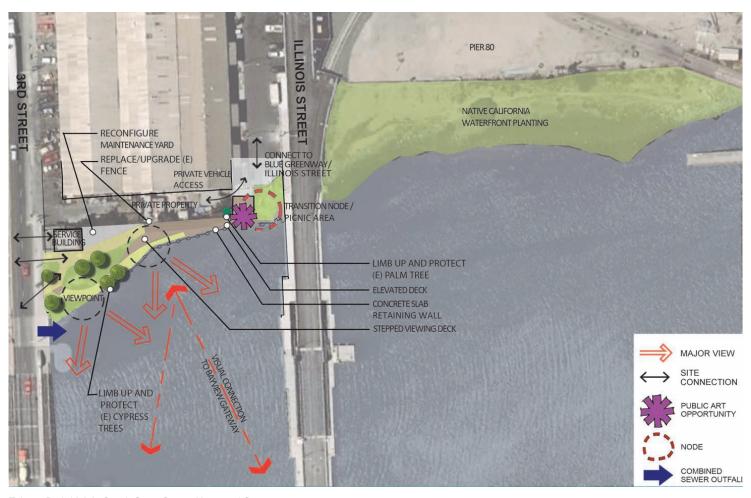
TOP LEFT: The taco truck at Cesar Chavez and Indiana Streets is one of the few food options along the corridor.

TOP RIGHT: Employees from wholesale distributor Veritable Vegetable bring their own lunch for the lack of destinations around their workplace.

LEFT: In the future the demand for food destinations will increase with the development of the new Muni facility at Indiana and Cesar Chavez Streets which will bring several hundred of new workers to the area.

6 ISLAIS CREEK CHANNEL

A series of new open spaces along Islais Creek offers an opportunity to rethink Cesar Chavez East as a new green street connecting workers and residents in the area to new open space destinations.



Tulares Park / Islais Creek Open Space Uses and Concepts Map courtesy of Port of San Francisco.



LEFT: A concrete promenade over a PUC water infrastructure offers a respite from the noise, traffic and industrial fabric of the Cesar Chavez corridor. Here one can enjoy views of the water and reconnect with the ecological and historical landscape. The Copra Crane (background) --in the process of being designated an historic landmarkis one of the remnants of the productive landscape of the area.

BELOW: Third Street Bridge Opening Day, 1950.



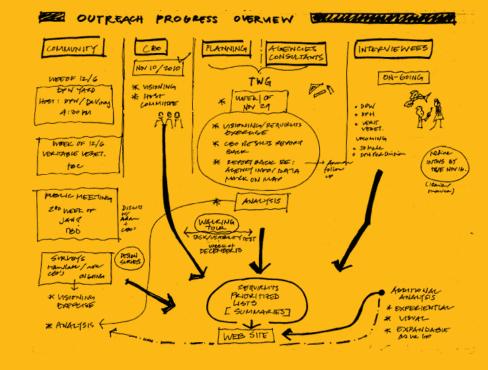
Image Courtesy of San Francisco Public Library.



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Community Vision









LEFT TO RIGHT:

Walking tour

Site visit

Walking tour participants









Focus group at Veritable Vegetable

Workshop 2 presentation

Workshop 2 discussion







LEFT TO RIGHT:

Workshop 2 attendance table

Workshop 2 presentation

Workshop 3 discussion

Community process at a glance

PROJECT GOALS:

The intent of the Cesar Chavez East Community Design Plan (CCE) is to develop a community-supported vision and design for a street that is safe, comfortable and accessible to all modes of transportation. As an important connector, Cesar Chavez brings together the Mission, Potrero, Bernal Heights, Bayview and Dogpatch neighborhoods and is also a vital link to the Blue Greenway and the Bay.

The project re-thinks Cesar Chavez Street as a truly multimodal corridor and that can accommodate pedestrians, bicycles, cars, and trucks and that can offer recreational, ecological and cultural opportunities to create new public spaces for people who live and work in the area.

PROJECT MILESTONES:

Vision

- Stakeholder interviews
- 8 focus groups with local users of the corridor to discuss perceived opportunities, constraints and preliminary ideas toward a vision for the corridor.
- 2 walking tours of the corridor with stakeholders, city agencies and consultants.
- Survey interviewing

Workshop 1

Building a Community Vision - February 10, 2012. About 80 community members, citizens, and representatives from local organizations in attendance.

Workshop 2

Developing Ideas for an Inclusive Street - June 27, 2011. Over 50 meeting participants gave extensive feedback regarding the long-term plans for Cesar Chavez Street and the MTA's near-term restriping project.

Workshop 3

Refining the Designs - August 24, 2011. Over 50 meeting participants gave extensive feedback regarding the long-term plans for Cesar Chavez Street and the MTA's near-term restriping project.

Open House

Final Designs - February 21, 2012

PROJECT OUTCOMES:

- A community-driven vision. Local stakeholders and organizations drafted a vision together to create a base for an inclusive design proposal for the corridor. The vision was based on interviews, focus groups and an interactive workshop on February 10, 2011.
- Cesar Chavez, Potrero, Bayshore intersection designs. Designs for a safer, more direct and more legible east/ west pedestrian, bicycle and automobile connection under the 101 Freeway.
- Long-term designs for the corridor from Kansas to Illinois. Concept plans and sections illustrating designs for a truly inclusive multi-modal corridor that can accommodate a safe and enticing public realm for pedestrians, a state of the art bicycle facility, and can maintain capacity for cars and truck circulation.

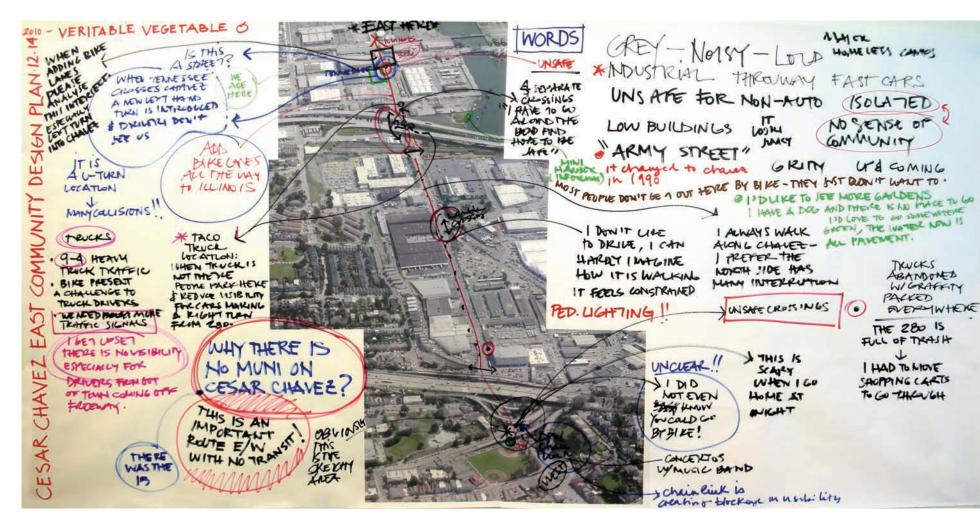




While working toward a vision for Cesar Chavez Street we organized eight focus groups (host meetings) and interviews with various stakeholders, organizations and tenants along the corridor.

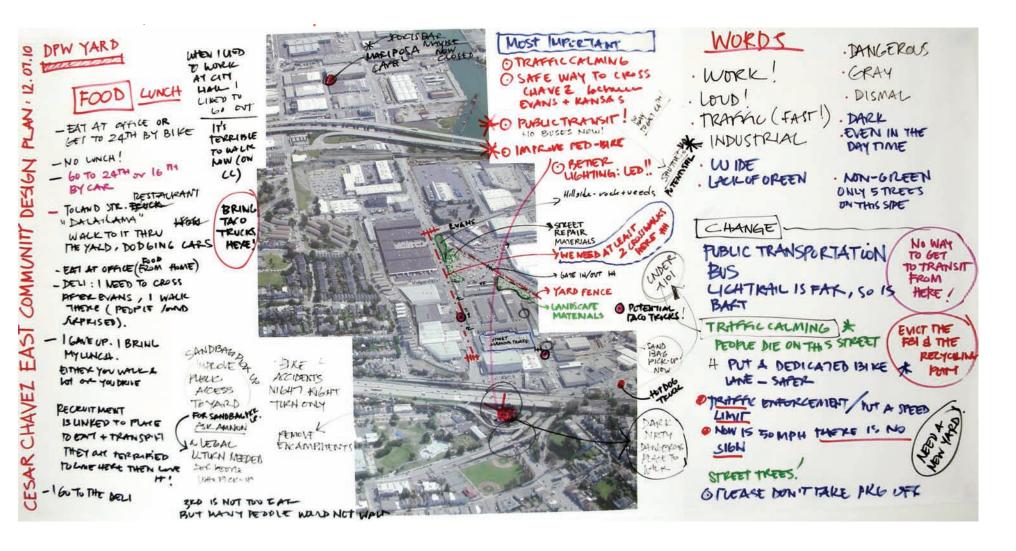


To start the discussion we asked participants to fill out a questionnaire about their experience of the corridor and their vision for its future; we then started a group discussion and recorded all comments on large scale aerial maps.



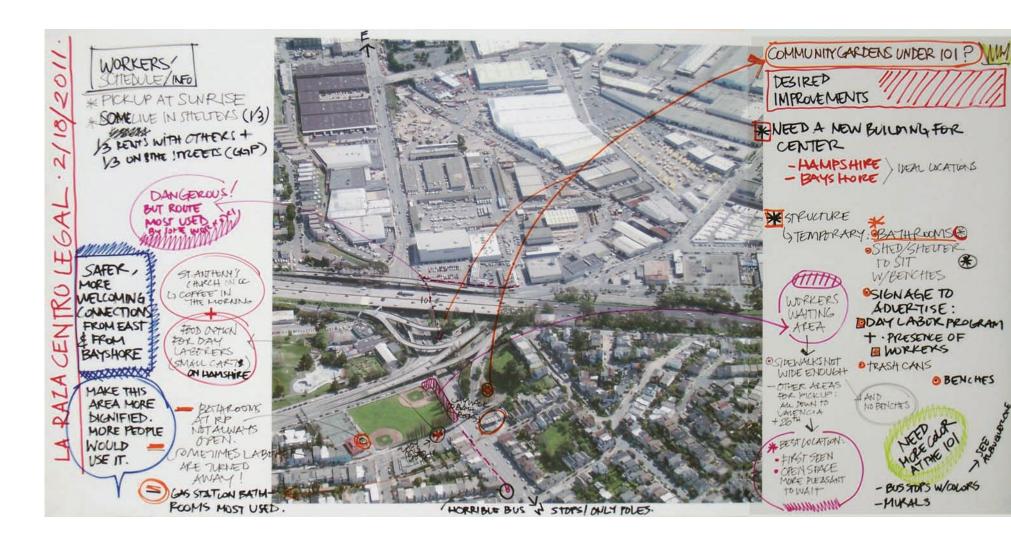
VISION MAP FROM VERITABLE VEGETABLE 'HOST MEETING' NOVEMBER 30, 2010 VERITABLE VEGETABLE

Vision map from Veritable Vegetable, a wholesale distributor at Cesar Chavez and Indiana; Above: visioning process at Department of Public Works Maintenance Yard at Cesar Chavez and Kansas.



VISION MAP FROM DEPARTMENT OF PUBLIC WORKS 'HOST MEETING'
DECEMBER 7, 2010
DPW OPERATIONS YARD

Vision map from Department of Public Works Maintenance Yard, located at Cesar Chavez and Kansas Streets. The maintenance yard is a major employer, open 24 hours, with approximately 1,100 employees.



VISION MAP FROM CENTRO LEGAL DE LA RAZA 'HOST MEETING' FEBRUARY 18, 2011 CENTRO LEGAL DE LA RAZA OFFICE

Vision map from Centro Legal de la Raza, a center supporting San Francisco day laborers. At the time of this study, day laborers were mostly using the area around the 101 Freeway at Cesar Chavez and Hampshire Streets as a place to gather, rest and wait for daily job opportunities.

Community Vision

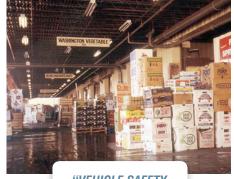
WRONG

A connector, not a divider, of neighborhoods and communities.

"CONNECTIONS EVERY WHICH WAY - THE HAIRBALL IS SUCH A BARRIER WE NEED TO MAKE SURE THAT STREETS ARE CONNECTING AND NOT DIVIDING COMMUNITIES AND NEIGHBORS"















Safe and convenient for all modes of travel.



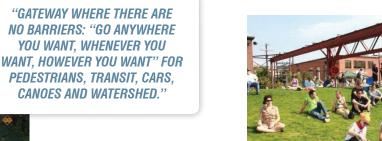
More green, less gray.



POCKET PARKS AND PONDS, RIVERS, FLOWING CREEK, TREES, GARDENS, WINDMILL, MANY SPECIES"

"COLOR CHANGE-- LESS GRAY, BRING MORE (...)





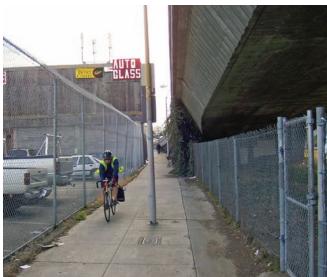


"A PLACE TO SEE CHILDREN AND ADULTS--



A place to be in (not just to go through).



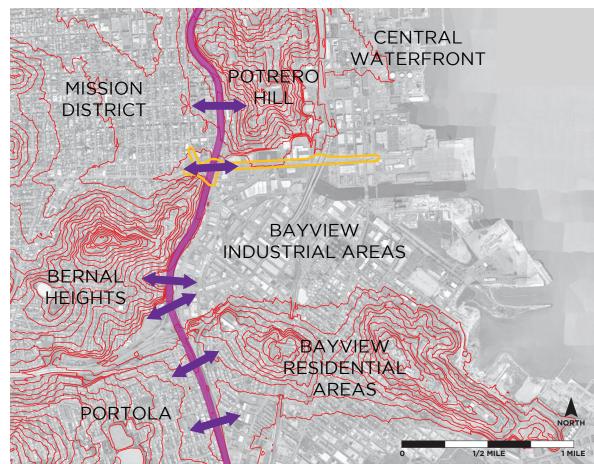




A connector, not a divider, of neighborhoods and communities.

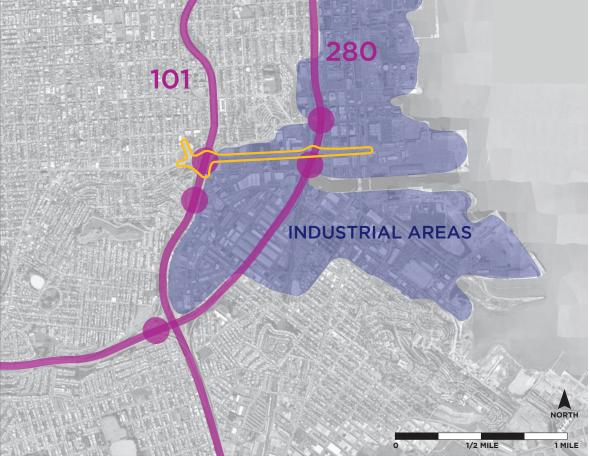
CONNECTING NEIGHBORHOODS

- The plan should transform Cesar Chavez Street from a neglected industrial arterial into an innovative and inclusive hybrid corridor.
- Safe pedestrian connections should be reestablished where neighborhoods, connected before the construction of the 101 Freeway project, are now isolated from each other.









A vital part of a thriving industrial zone.

PRESERVING THE INDUSTRIAL IDENTITY OF THE NEIGHBORHOOD

- The corridor's labor history should be preserved and celebrated; the recent rezoning to Production, Distribution, Repair (PDR) through the Eastern Neighborhood Plan effort has created a strategy to preserve and strengthen a vital area contributing to San Francisco's economy.
- Cesar Chavez Street is a major truck route and its design should preserve the functions and needs of the truck community.





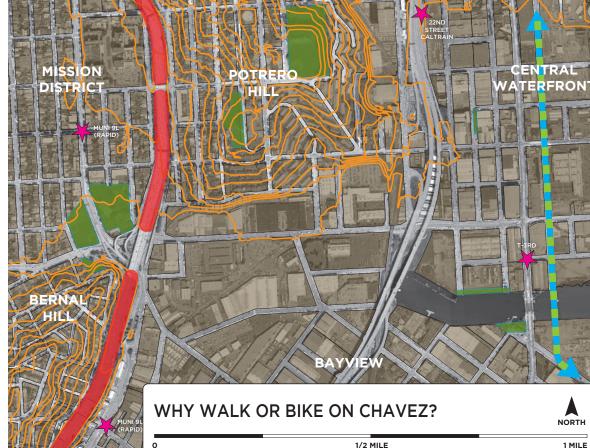


Safe and convenient for all modes of travel.

CREATING A SAFE, WEST/EAST CONNECTION FOR PEDESTRIANS, BIKES, TRUCKS AND CARS.

The redesign of Cesar Chavez East Street needs to balance all modes of travel:

- Pedestrian circulation needs to be addressed with a wide, safe and comfortable sidewalk and better marked crosswalks.
- Car drivers need legibility of the street especially when crossing the two freeway interchanges: currently a number of on and off ramps are creating a complicated driving environment for drivers using the corridor.
- Bikers need a safe and continuous connection from Hampshire Street to the water.
- Transit users should be able to have bus service along the Cesar Chavez Street corridor connecting the west side to the Third Street corridor.











More green, less gray.

CREATING AN ECOLOGICAL SYSTEM CONNECTED TO THE WATER.

- From a green sidewalk to the entire watershed, the new design of Cesar Chavez Street should include state-of-the-art stormwater management and should address, both physically and symbolically, the vital role of Islais Creek in the area.
- The grey character of the street should be improved with a linear green edge, and new green connections to the water should be established through green paths and new open space.



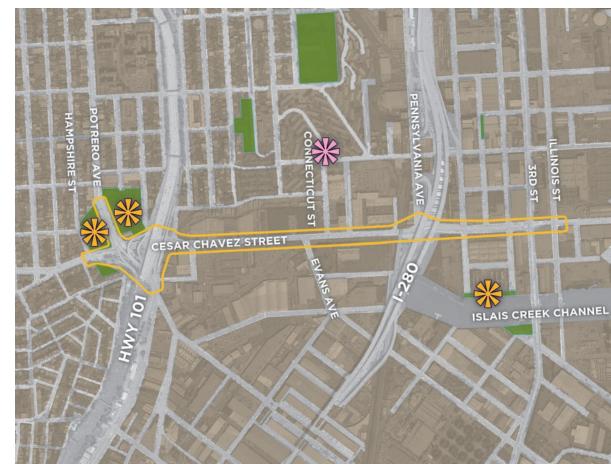




A place to be in (not just to go through).

TRANSFORMING UNDERUTILIZED LAND INTO NEW PUBLIC SPACE.

- Celebrate the history and ecology of the area in a network of open spaces that will take residents and visitors to the Bay.
- Create opportunities for people to gather either at lunch time or during a visit, the daily commute or a field trip to the area.

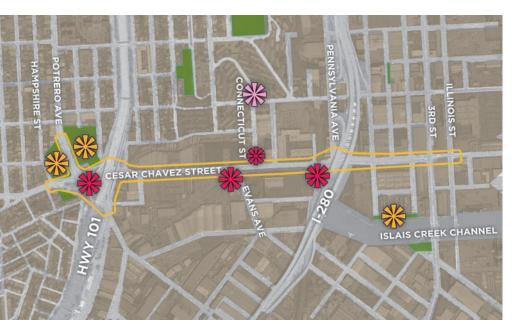




Framework Plans

Once the community vision was established, we developed a design framework. Three main systems were established: a public space network, addressing the need to gather and be in the public realm; a cultural network addressing the rich history of the area and creating opportunities for its celebration; and an ecological network addressing the need to make ecological values an integral part of the final design of the corridor.

Existing Public Space Network



Public Space Network







Rolph Playground

Rolph Playground, located on the west side of the 101 Freeway between Hampshire Street and Potrero Avenue, offers opportunities for children's play and baseball games.



Potrero del Sol Park, located along Potrero Avenue by the 101 Freeway ramps, features a skateboard park with a citywide draw.



The Copra Crane on Islais Channel, at the Eastern end of the site, is an important remnant of the area's labor history. Here, one can connect visually to the water.



Skateboarders at Potrero del Sol Park.



Children playground at Potrero del Sol Park.



Copra Crane on Islais Creek Channel.

New Public Space Network

Placemaking is one of the key community goals emerged from the visioning process.

The design intent of the proposed public space network is to connect the existing public spaces (Potrero Del Sol Park and Rolph Playground on the west, the Copra Crane area on Islais Creek on the east) with a new series of public spaces to create a continuous network. These new places would offer opportunities to sit and gather, to explore art and local history, and to access more food choices when taking a weekday lunch break or a weekend trip to the open spaces on the Bay.

Evans Avenue vista point

The narrow sidewalk and the outcrop at the intersection of Evans and Cesar Chavez Streets could be integrated and become a vista point/ mini-plaza looking over the historic industrial landscape of the area.



A redesign of the 19 bus stop could offer a comfortable area to sit, shelter from bad weather, and information and wayfinding. The entrance of Connecticut Street, a gateway to the new Potrero Terrace housing development, could also be celebrated with art and ecological features.

280 Freeway public space

The wide area under the 280 Freeway offers opportunities for a public place/ rest area for people to sit, access food trucks and have a break on their way to the Bay or to the neighborhoods to the west.



Cesar Chavez and Evans, looking west.



Connecticut and Cesar Chavez, looking west.



Cesar Chavez at the 280 Freeway looking east. The wide area around the 280 Freeway is the perfect location for a new public space



iewfinders. Photo credit: Morgan Crowles Archives





A pod of food trucks could create an "instant" public space under 280.

Art, Culture, and History Network



Art and History Network



















Interpretative Network

The design of a series of overlooks and small plazas with interpretative signage could be part of a system of historic markers where labor sites, ecology, and landscape interpretation would start retelling the local history of this important and interesting area.



◆ TOP LEFT: Evans Street from Army Street, 1940s. Image courtesy of San Francisco Public Library.

TOP CENTER: Rally at Soule Steel Company, 1740 Army Street (Cesar Chavez), 1943. Image courtesy: SF Public Library.

TOP RIGHT: Historic Copra Crane, view from Islais Creek.

BOTTOM LEFT: "Point of interest". Image courtesy of Morgan Crowles Archive.

BOTTOM CENTER: "Point of interest". Image courtesy of Morgan Crowles Archive.

BOTTOM: "Viewfinders". Image courtesy of Morgan Crowles Archive.



▶ TOP LEFT: "Oversized". Image courtesy of Morgan Crowles Archive.

TOP CENTER: Chicano Park, Logan Heights, San Diego.

FAR RIGHT: "Neighborhood Convergence", sculpture installation at Powell Street pedestrian undercrossing, I-80, Emeryville.

BOTTOM LEFT: Neighborhood Convergence", illuminated sculpture installation at Powell Street pedestrian undercrossing, I-80, Emeryville.

BOTTOM CENTER: Lighting sculptures, Sidney, Australia.











Under Highway 101 Art Opportunities

The need for more lighting, better landscaping, and a robust wayfinding system also presents opportunities for art.

Signage and large scale art installations could transform the existing path into an interesting pedestrian route.

Ecological Network



The area's rich natural history, with many ecosystems now buried under landfill and asphalt, could be revealed and celebrated in a series of small open spaces, linked by a greener street.





Multi-use path and meadow under highway 101.

Under Highway 101

Where Precita Creek once flowed into the Islais marshes, explore opportunities for habitat restoration and celebration of the water that still flows underground.

Ecological Network



PROPOSED ECOLOGICAL NODES



PROPOSED ECOLOGICAL LINK



PROPOSED GREEN SPACES (OUTSIDE PLAN)



The Farm project.



I-280 freeway underpass with views of Islais Creek in the background.



Viewfinders.

I-280 Freeway Marsh

Although the area under the I-280 freeway is landfill where once was open bay, there are opportunities for the restoration of a marsh habitat and open space.

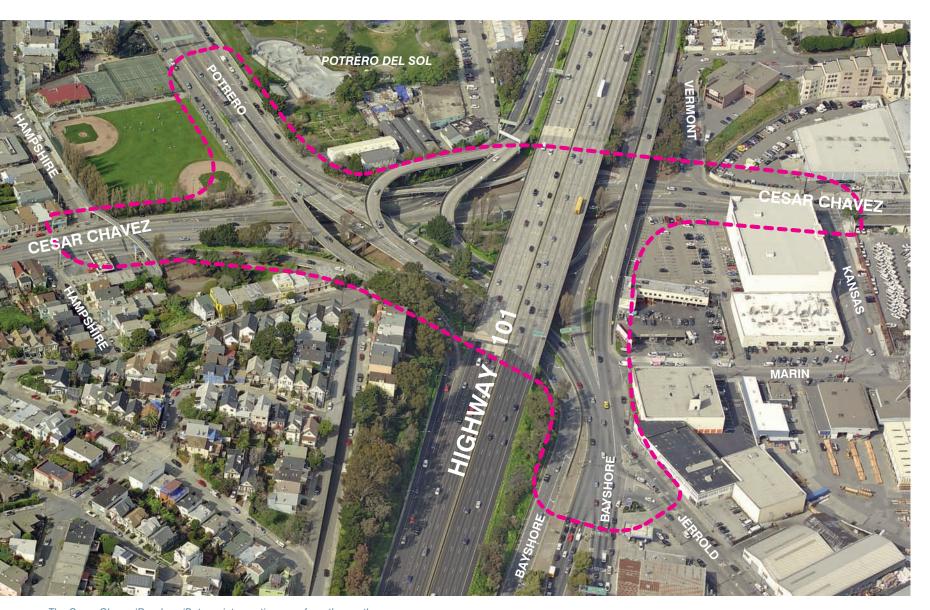


Historic shoreline, creeks and marshland.





Recommendations: Cesar Chavez/ Bayshore/Potrero Intersection

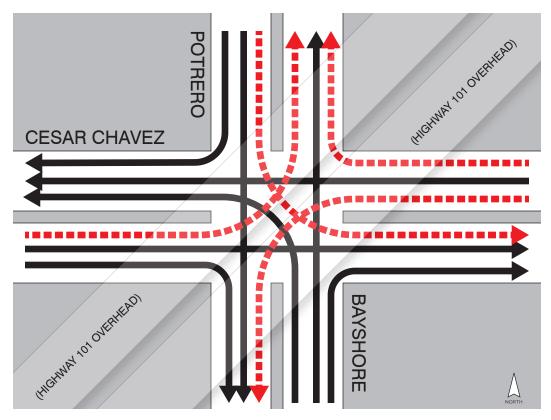


The Cesar Chavez/Bayshore/Potrero intersection area from the south.

In the Cesar Chavez/Bayshore/Potrero intersection area, Cesar Chavez Street, Bayshore Boulevard and Potrero Avenue change from ordinary city streets to a complex arrangement of bridges and ramps linking the three streets with Highway 101. The area is large, extending approximately 1,200 feet along Cesar Chavez Street from Hampshire Street east to Kansas Street, and approximately 1,200 feet north-south from Potrero Del Sol park on Potrero Avenue to the intersection of Bayshore Boulevard and Jerrold Avenue.

The intersection is built in three levels, with pedestrian and bicycle circulation generally restricted to the middle, ground level, while vehicles utilize all three: east-west traffic along Cesar Chavez Street on the lower level, the northbound connection between Bayshore Boulevard and Potrero Avenue on the middle or ground level, Highway 101 and the southbound connection between Potrero Avenue and Bayshore Boulevard on the upper level. Ramps connecting the streets and highway rise and fall between the three main levels. Because of this complex arrangement, pedestrians and cyclists do not always parallel vehicular travel lanes as in traditional streets with sidewalks and bicycle lanes.

While the intersection area is visually dominated by structures designed primarily for vehicle movement, it offers surprisingly poor connectivity for vehicles considering that it is the junction of three major city streets. Providing missing vehicular connections would require reconfiguring the entire intersection area, including highway access ramps, but relatively simple steps can be taken to improve driving conditions in the existing configuration. In the discussion that follows we first focus on pedestrian and bicycle circulation through the intersection area, then focus on vehicular circulation.



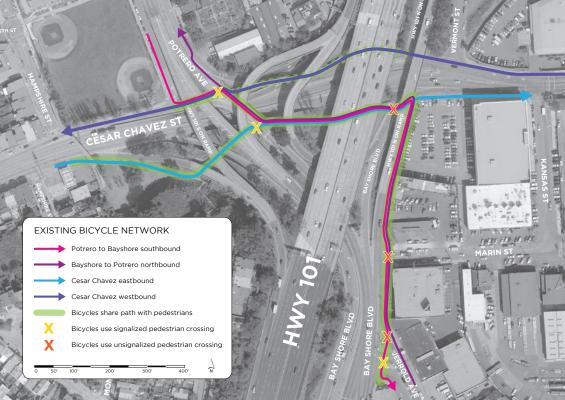
Conceptual diagram of the intersection of Cesar Chavez Street, Bayshore Boulevard and Potrero Avenue. Black arrows indicate vehicular connections through the intersection, while dashed red lines indicate connections that are not possible.

Pedestrian and Bicycle Circulation

While limited in some respects, the pedestrian and bicycle circulation network allows connections between Cesar Chavez Street, Bayshore Boulevard and Potrero Avenue that are not possible by car. Viewed in general terms, this existing network has the potential to provide a high level of connectivity to non-motorized users within the framework of the existing highly complex intersection structure. There are however many defects in the network, ranging from the very specific and localized, such as a sign obstructing the path of travel in a particular location, to the more general, such as the ineffective wayfinding system. Following a brief overview, we discuss existing conditions in specific segments of the pedestrian and bicycle network and recommend improvements to address specific problems. We then discuss more global issues and opportunities, including lighting, wayfinding, landscaping, and public amenities.

There is no officially sanctioned east-west pedestrian connection on the north side of Cesar Chavez Street, but pedestrians often use the direct westbound bicycle route despite the lack of crosswalks. There is a reasonably direct east-west pedestrian connection through the intersection area on the south side of Cesar Chavez Street, along a shared path that is also the eastbound bicycle route. A portion of this southern east-west path is the "heart" of the pedestrian and bicycle network, and is also part of the north-south route. North-south connections through the Cesar Chavez/Bayshore/Potrero intersection are less direct, as can be seen in the maps on the right. (Note that some bicycle routes through the intersection area traverse crosswalks and sidewalks where the official status of bicycles is not immediately clear. Likewise, many pedestrians use bicycle-only paths. When discussing the pedestrian and bicycle network, we are referring to observed, defacto routes, whatever their official status.)

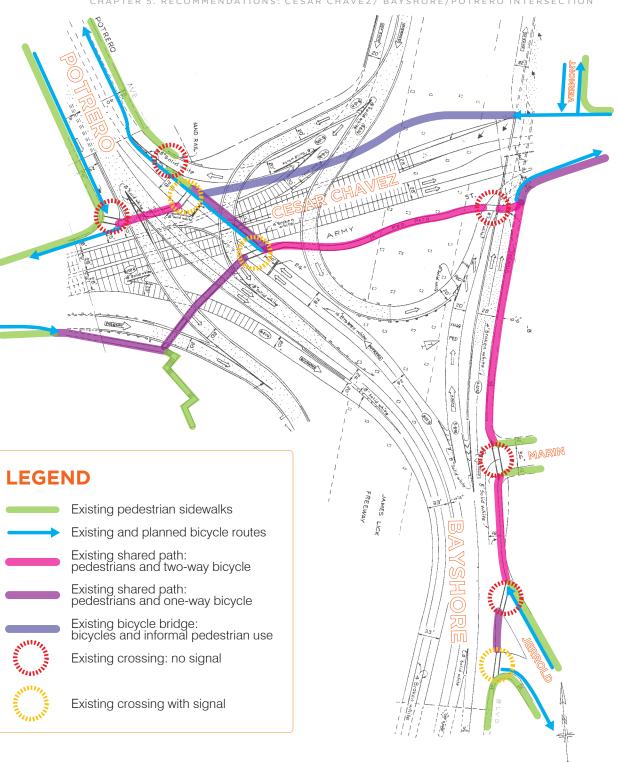




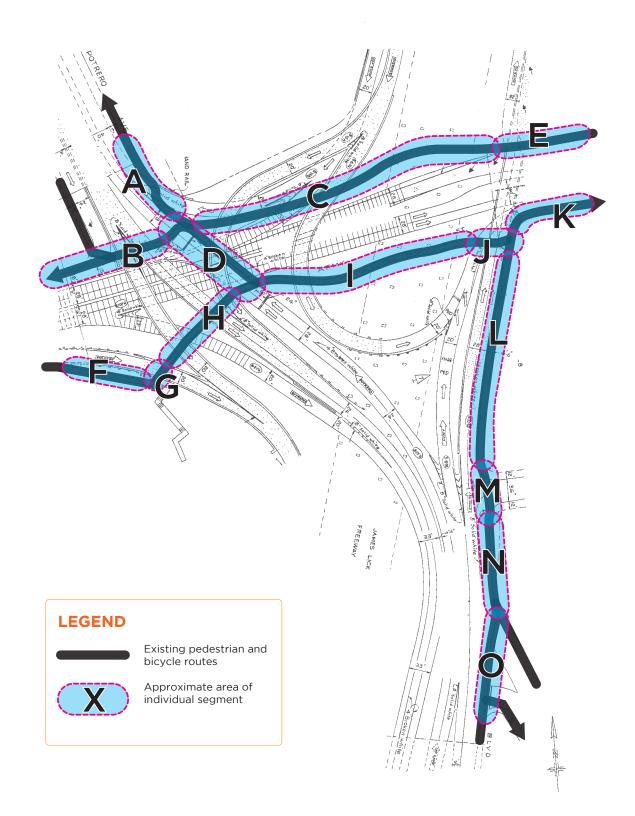
OPPOSITE PAGE, ABOVE: Existing pedestrian routes through the Cesar Chavez/Bayshore/ Potrero intersection area. Note that routes are often under ramps and bridges and are thus not visible in aerial photographs.

OPPOSITE PAGE, BELOW: Existing bicycle routes through the Cesar Chavez/Bayshore/ Potrero intersection area. Note that routes are often under ramps and bridges and are thus not visible in aerial photographs.

THIS PAGE, RIGHT: Composite map of the existing bicycle and pedestrian circulation network through the Cesar Chavez/Bayshore/Potrero intersection area. Note that most segments of the network serve both pedestrians and cyclists.



In order to discuss the pedestrian and bicycle network at a level of specificity suitable for the exploration of localized problems and solutions, the network is divided into segments of more or less uniform character. After a brief overview of existing conditions, we recommend improvements but do not specify most design details, as the SFMTA is currently developing standards for multi-use paths and cycle tracks, including dimensions and intersection layouts. We identify space for widening segments of the existing network where excess right-of-way exists, within the context of the existing ramp structures and existing number of vehicle travel lanes.



SEGMENT A

In segment A, the vehicular circulation network intersects the pedestrian and bicycle network in an environment of challenging grade changes and poor visibility. Vehicles exiting highway 101 southbound toward northbound Potrero Avenue dip below grade while making a sharp right turn. Before the off-ramp rises completely up to street level, it crosses a pedestrian crosswalk that is several steps below sidewalk grade. Pedestrians at the crosswalk can not see vehicles approaching from the off-ramp. Drivers on the ramp have little indication that they are approaching the crosswalk, which is hidden from view by a retaining wall. Following this crosswalk, vehicles must merge left, crossing the northbound bicycle lane. Vehicles have been observed travelling at near-highway speeds while crossing the crosswalk and merging across the bicycle lane.

Recommendations:

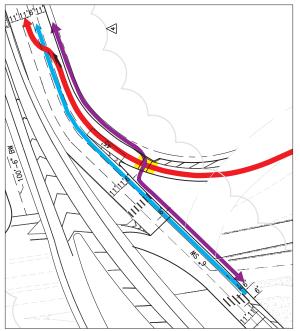
- A1 Move the crossing north of its present location to increase visibility and improve pedestrian access. This would require removing one of the two existing northbound Potrero Avenue lanes. The excess right-of-way could then be used to extend the sidewalk to the new crossing location. (Note that the diagram of proposed configuration on the right shows a minimal shifting of the crossing, approximately 60' from its present location. It would be possible to shift the crossing much further to the north-- the optimal location of the crossing should be evaluated based on visibility, accessibility, access needs of adjacent land uses, and engineering considerations.)
- A2 Install pedestrian and cyclist-activated signal at crossing.
- A3 Install rumble strips and/or flashing beacon on off ramp to alert drivers approaching crossing.



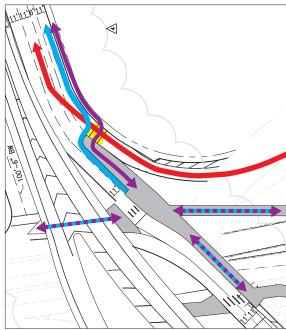
Existing Conditions: Pedestrians' perspective from Potrero Avenue sidewalk looking south. Cars exiting Highway 101 emerge from the left. Note the stairs between sidewalk and crosswalk.



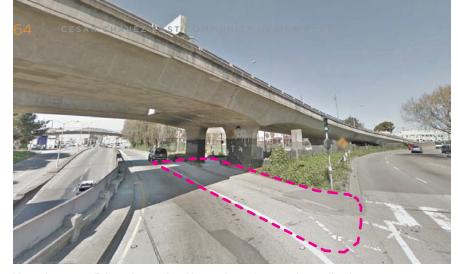
Existing Conditions: Motorists' perspective from Highway 101 off-ramp. Drivers can not see the crosswalk (shown in photo on left) less than 160 feet ahead.



Existing conditions. MTA striping diagram with color added for clarity. Crossing highlighted in yellow; Highway off-ramp traffic in red; Bicycle lane in blue; Pedestrian movements in purple.



Proposed configuration. Relocated crossing in yellow; Offramp traffic in red; Cyclists in blue; Pedestrian movements in purple. Dashed blue and purple lines indicate mixed pedestrian and cyclist movements on segments B, C and D



View of segment B from the south, with area for path expansion outlined.

SEGMENT B

Segment B caries pedestrians and cyclists between the northbound Potrero and southbound Potrero crosswalks. The existing combined bicycle and pedestrian path is a sidewalk less than 8 feet wide. Pedestrians and cyclists on this segment are vulnerable when vehicles fail to negotiate the left turn from northbound Bayshore to westbound Cesar Chavez-- a pedestrian was struck and killed by a driver on this sidewalk in December of 2011. The sidewalk from Potrero Avenue to Hampshire Street is narrow and often obstructed by vegetation. There is a pedestrian bridge across Cesar Chavez Street at Hampshire Street, but its ramps add over 350 feet to the length of the 85-foot crossing.

Recommendations:

- B1 Move the existing curb southward into the wide striped shoulder between northbound and southbound Potrero Avenue, to create a wider two-way multi-use path. Additional expansion space is available north of the existing path.
- B2 Expand existing curb ramps at the crosswalks east and west of the segment.
- B3 Protect pedestrians and cyclists by placing guardrails, bollards, or landscape elements such as boulders between the multi-use path and the vehicle lane. Consider additional traffic-calming measures for the Potrero/Chavez split.
- B4 Replace the elevated pedestrian bridge across Cesar Chavez at Hampshire with a crosswalk with pedestrian-activated signal.



Eastbound pedestrian on westbound bicycle bridge (segment C).

SEGMENT C

Segment C is a bridge intended for westbound bicycle traffic only, but is also used by many pedestrians and some eastbound cyclists. Since there is no alternative pedestrians path on the north side of Cesar Chavez street between Vermont Street and Bayshore Boulevard, and since barring pedestrians from this segment is impossible as a practical matter, the city should acknowledge that pedestrians will use the bridge.

Recommendations:

- C1 Use pavement markings and signage to increase safety for both pedestrians and cyclists, either by delineating two narrow parallel paths where cyclists and pedestrians can travel separately, or by increasing awareness of possible conflicts while keeping a single path.
- C2 The useable portion of the already narrow bridge is further constricted by the tall, unadorned chain-link fence on both sides of the structure. Investigate reconfiguring this fence to bow out, away from cyclists and pedestrians, to increase the effective width of path.

SEGMENT D

Segment D consists of an approximately 7'-4" wide sidewalk which caries pedestrians and southbound bicycles, an adjacent 6' wide curbside bicycle lane for northbound bicycles, and two crosswalks used by both pedestrians and bicyclists to cross northbound Potrero Avenue.

The northern and southern ends of the segment are major intersections of the pedestrian and bicycle networks. Presently there is not enough room for pedestrians and cyclists to maneuver safely, and sight lines between pedestrians, cyclists and motorists are obstructed. Many pedestrians and southbound cyclists use the northbound bicycle lane rather than negotiate the narrow and awkwardly configured curb ramps.

Recommendations:

D1 Move the existing curb westwards along the entire length of the segment, to combine the existing sidewalk and northbound bicycle lane into a two-way multi-use path.

- D2 Increase maneuverability and improve sight lines where segment D meets segment C by relocating or lowering existing walls and fences.
- D3 Re-align the existing crosswalk to connect segment B more directly to the intersection of segments C and D. Ensure that curb ramps are configured to accommodate all users.
- D4 Increase maneuverability and improve sight lines where segment D meets segment I by relocating or lowering existing walls and fences and paving adjacent vacant area.
- D5 Ensure that curb ramps at the crossing connecting segments D and H are configured to accommodate all users.
- D6 Consider installing red-light cameras at the traffic signals at the northern and southern ends of the segment.



Existing conditions at the southern end of segment D with location of recommended two-way multi-use path outlined. A portion of the landscaped area on the right should be incorporated into the path to increase maneuvering room and visibility at the crossing.



Existing conditions at the northern portion of segment D. Note pedestrian in bicycle lane and tight spacing of sidewalk, railings, fences and curb ramps.



Existing conditions with location of recommended two-way multi-use path outlined. Note southbound cyclist in northbound bicycle lane.



Existing conditions at the northern end of segment D with location of recommended two-way multi-use path outlined. Note the lack of maneuvering space – cyclist is waiting to cross Potrero Avenue.

SEGMENT E

Segment E is a westbound bicycle path and a missing link in the pedestrian network, spanning the gap between the north sidewalk of Cesar Chavez Street east of Vermont Street, and the bicycle bridge (also used by pedestrians) approximately 150' to the west.

Recommendations:

- E1 Provide crosswalks with pedestrian activated signals across Vermont Street and the Highway 101 northbound on-ramp, as well as a sidewalk in the landscaped area between Vermont Street and the Highway 101 northbound on-ramp.
- E2 Strengthen pavement markings delineating the existing bicycle lane to increase the visibility of cyclists to turning vehicles.

SEGMENT F

Segment F is a path carrying pedestrians and eastbound bicycles through an undeveloped city-owned lot. The existing path appears too narrow to accommodate all users. The city should further investigate recreational or other uses of this publicly owned parcel, and integrate path enhancements with better utilization of this resource.

Recommendations:

F1 Provide a wider multi-use path or separate paths for pedestrians and cyclists.



Existing conditions, segment E at northbound Highway 101 on-ramp. Pedestrians walking to bicycle bridge (segment C).



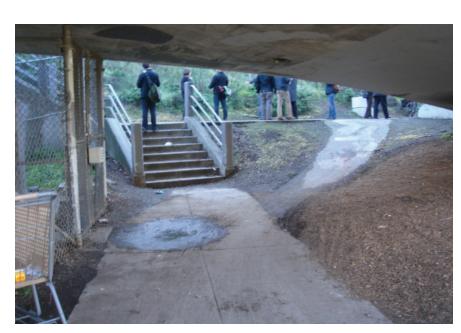
Existing conditions, segment F (level path) and segment G (stairs and ramp on right).

SEGMENT G

Segment G caries pedestrians and eastbound cyclists down a steep grade under the 101 southbound on-ramp. The path descends a flight of stairs while a parallel ramp which accommodates bicycles may be too steep for many users. The overhead on-ramp structure provides very little clearance.

Recommendations:

G1 Provide a more accessible path for pedestrians and cyclists to negotiate the elevation change. Due to the complex natural topography and ramp arrangement in this location, achieving a more gentle grade may require retaining walls.



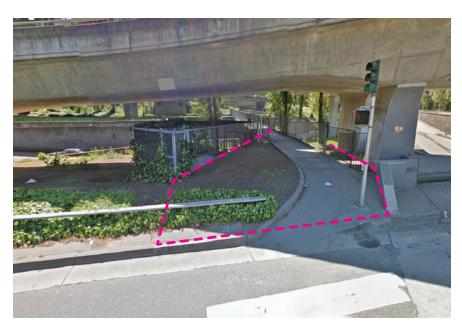
Existing conditions, segment G looking towards segment F. Note the sharp grade of the path on the right.

SEGMENT H

Segment H consists of a narrow bridge structure which caries pedestrians and eastbound cyclists under several highway ramps and over a trench carrying vehicles from Cesar Chavez Street to Bayshore Boulevard. The crosswalk at the eastern end of the segment is a crucial node connecting segments C, H and I.

- H1 Expand the pedestrian/cyclists waiting area at the northbound Potrero Avenue crossing, to increase visibility and provide maneuvering room.

 Ensure that curb ramps at this crossing are configured to accommodate all users.
- H2 Investigate options for widening the bridge structure to better accommodate pedestrians and eastbound cyclists.



Existing conditions, segment H at Potrero Avenue crossing with recommended expanded waiting area outlined. Note narrow width of the path towards the west (back of photograph).

SEGMENT I

Segments I is symbolically the "heart" of the pedestrian and bicycle circulation network, carrying pedestrians and two-way bicycle traffic through a large landscaped area and under the main freeway structure. Of all the segments, it offers the best opportunities for community amenities, but is also perceived as a magnet for unsavory activities.

Recommendations:

- If While the paved path is wider here than in other segments, there is ample room to widen it further to provide a properly marked multi-use path or separate pedestrian and bicycle paths running in parallel.
- Ensure the path is designed to allow access for maintenance, emergency response, and social services vehicles. Provide parking places where vehicles will not impede pedestrian and cyclists' movements.



Existing conditions, segment I looking east.

SEGMENT J

Segment J is an unsignalized crosswalk carrying pedestrians and two-way bicycle traffic across northbound Bayshore Boulevard between segments I, K and L.

- J1 Install pedestrian and cyclist-activated signal at the existing crossing.
- J2 Increase maneuverability and improve sight lines at the western end of the crossing by relocating or lowering existing walls and fences and paving adjacent vacant area. Widen the existing curb ramp to accommodate pedestrians and cyclists.
- J3 Increase maneuverability and improve sight lines at the eastern end of the crossing, where segment J meets segments K and L, by relocating existing fences and signs, and paving the adjacent vacant area. Widen existing curb ramp to accommodate pedestrians and cyclists.



Existing conditions, east end of segment J looking west to segment I. Traffic approaches from the left. Note lack of maneuvering room and visibility.

SEGMENT K

Segment K carries pedestrians and two-way bicycle traffic between Segment J and the intersection of Cesar Chavez and Kansas Streets. Eastbound cyclists use the wide curbside vehicle lane of Cesar Chavez Street. The San Francisco Bicycle Plan includes an eastbound curbside bicycle lane in this segment. We observed several cyclists traveling westwards on the sidewalk in segment K, then turning south on segment L heading towards Bayshore Boulevard and points south. Although there are alternative routes for cyclists headed from the east to the south of the Cesar Chavez/Potrero/Bayshore intersection area, formalizing westbound cycling on this segment would facilitate readability of the bicycle network.

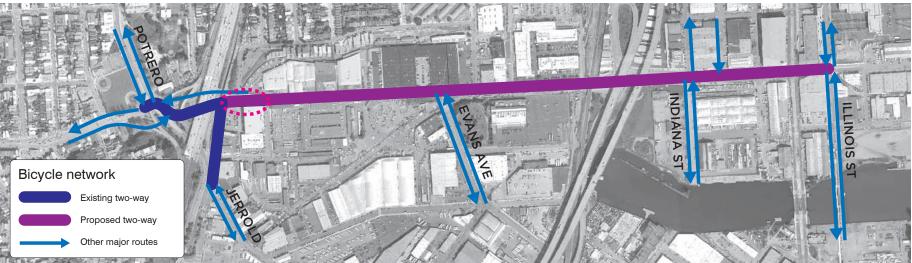
Recommendations:

K1 Construct a two-way cycle track parallel to the existing sidewalk along this segment. Narrowing the extremely wide existing vehicle travel lanes to provide room for the cycle track may also discourage speeding by vehicles approaching the Kansas Street intersection to the east.

RIGHT: In addition to eastbound cyclists, segment K (dashed magenta outline) is also used by cyclists heading from the east to the south (solid blue line), for example from the Potrero Terrace housing to the Alemany Farmers' Market. Although alternative routes are available (dashed blue line), cyclists may prefer not to use Kansas and Marin Streets due to traffic headed to the Highway 101 on-ramp.



BELOW: Segment K (dashed magenta outline) links existing two-way bicycle facilities with the proposed two-way cycle track between Kansas and Illinois Streets.



SEGMENT L

Segment L carries pedestrians and two-way bicycle traffic. The northern portion of the segment is a 10-foot wide path bordered by a city-owned surface parking lot to the east and the elevated Highway 101 northbound on-ramp to the west. The southern portion of the segment is significantly narrower, squeezed between a privately owned parcel to the east and the elevated Highway 101 northbound on-ramp approximately 7 feet to the west. The path is obstructed by several poles carrying street lights and signage.

- L1 Move poles and other obstructions out of the path of travel throughout the segment.
- L2 Widen the northern portion of segment L into the adjacent city-owned surface parking lot.
 Tightening the layout of the parking lot should provide enough space for an adequately dimensioned two-way multi-use path without reducing the number of parking spaces.
- L3 Explore options for using the area under the Highway 101 on-ramp for additional parking.
 Providing additional activity in this location may help perceptions of public safety.
- L4 Ensure the northern portion of the path is designed to allow access for maintenance and emergency response vehicles. Provide parking areas where vehicles will not impede pedestrian and cyclists' movement.
- L5 Explore opportunities to widen the southern portion of segment L by purchasing the adjacent parcel or a portion of it, should it become available.



Existing conditions, north portion of segment L looking south. City owned surface parking lot is on the left, Highway 101 on-ramp is on the right. Note light poles obstructing path.



Existing conditions, south portion of segment L looking north. Highway 101 on-ramp is on the left, privately owned parcel on the right. Note the narrow clearance and general squalor of the path.

SEGMENT M

Segment M carries pedestrians and two-way bicycle traffic across Marin Street at an unsignalized crosswalk. This is particularly dangerous since motorists turning right from Marin Street onto the Highway 101 northbound on-ramp often travel at high speeds and do not expect two-way bicycle traffic on the crosswalk. There is little clear space for pedestrians and cyclists waiting to cross, and visibility is an issue.

Recommendations:

- M1 Install pedestrian and cyclist-activated signal at the existing crosswalk.
- M2 Install corner sidewalk extensions (bulb-outs) on both sides of Marin Street to shorten the crossing, provide waiting space for pedestrians and cyclists, and discourage speeding by tightening turn radii.



Existing conditions, segment M looking north toward the entrance to segment L at the center of the photograph. The car blocking the crosswalk is turning right from Marin Street onto the Highway 101 on-ramp.

SEGMENT N

Segment N carries pedestrians and two-way bicycle traffic between Marin Street and Jerrold Avenue. Southbound cyclists currently share the 6-foot-wide side-walk with pedestrians, while northbound cyclists use the 25-foot-wide curbside combined vehicle parking and travel lane of northbound Bayshore Boulevard. The sidewalk is obstructed by street light poles, utility poles and a fire hydrant.

- N1 Move poles and other obstructions to provide adequate clearance on the existing sidewalk. Alternatively, expand the sidewalk into the extremely wide curbside lane.
- N2 Construct a two-way cycle track parallel to the sidewalk by removing curbside parking and reducing the width of the curbside lane from 25 feet to 11 feet.



Existing conditions, segment N looking north. Note the obstructed sidewalk and pedestrian and cyclist using the extremely wide vehicle travel lane, which leads to the Highway 101 on-ramp.

SEGMENT O

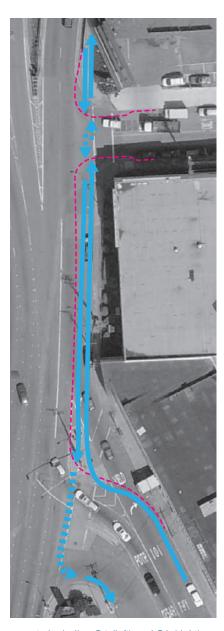
Segment O carries pedestrians and southbound cyclists across Jerrold Avenue. The existing crossing includes two crosswalks joined by a median island. The northern crossing is not signalized. Since the rightmost lane of westbound Jerrold Avenue meets northbound Bayshore Boulevard at a very shallow angle, vehicles can ignore the "yield" sign and turn right at high speeds.

- O1 Install pedestrian and cyclist-activated signal at the existing northern leg of the crosswalk, or
- O2 Alternatively, close the existing "free right" lane of Jerrold Avenue, and add a right turn lane at the existing signalized southern leg of the crosswalk. The existing median island can then joined to the north sidewalk of Jerrold Avenue.



Existing conditions, segment O. The signalized crossing is on the left, the unsignalized crossing is on the right.





Segments M, N and O with recommended improvements including O1 (left) and O2 (right). Bicycle lanes shown solid blue lines, bicycle movements at crossings shown broken blue line, new curbs shown dashed magenta.

Area-Wide Issues and Opportunities

In addition to improvements to the pedestrian and cycling networks discussed above, there are several issues that should be addressed on an area-wide basis. These include landscaping and uses of publicly owned land in the intersection, lighting, and wayfinding, all of which influence actual and perceived public safety.

LANDSCAPING & USE OF PUBLIC LAND

The Chavez/Potrero/Bayshore intersection is built on publicly owned land. Although much of the intersection area is covered by ramps, bridges and other structures, there are also many patches of open land, ranging from small, inaccessible slivers to larger, more accessible plots. The area adjacent to Segment F is the largest open area. approximately half an acre, with good access for pedestrians and cyclists but little vehicular access. In addition to areas of open land, there are also numerous sheltered areas under the highway and ramps. These covered areas also vary in size and accessibility-- the largest, approximately half an acre, is under the main highway structure adjacent to Segment I. There are no officially recognized uses for any of this public land. Open and sheltered areas are minimally landscaped, infrequently maintained, and collect refuse. Although they are mostly fenced off, many appear to be inhabited. These are frequently cited factors in the general perception of the intersection area as unpleasant and unsafe.

Physical design interventions such as landscaping, fencing, lighting etc. may improve perceived and



Some have few other options for shelter

actual safety when newly built. But in the long run, the community must be empowered to use publicly owned land in ways that ensure that there are constituencies invested in continual maintenance of the intersection area. This plan does not give detailed proposals for such uses, but enumerates ideas raised by community members and limitations that should be considered in evaluating any future proposals.

1) The intersection is built on a former creek and marshland. It may be possible to re-create portions of the now-vanished ecosystems, using water that is still present under the structure. With increased interest in watershed restoration, there are community groups who could become guardians of re-created riparian zones and wetlands.

- 2) There is demand for community gardening space (not necessarily for food production) in the area. Community gardeners in San Francisco often care deeply about the area surrounding the garden itself and could contribute to maintenance of adjacent paths and land.
- 3) There is interest in a dedicated off-leash dog park in the area. Dog parks are often run by community groups dedicated to maintaining safe and sanitary conditions in the park and adjacent paths.
- 4) While there are many well-used active recreation facilities in nearby Potrero Del Sol Park and Rolph Playground, there is interest in creating more facilities in the intersection area. We heard interest

in skateboarding facilities, freestyle bike riding facilities and basketball courts.

- 5) Perceived personal safety on paths is seldom improved by fencing off adjacent vacant areas or using dense landscaping to discourage habitation. While fences may be used to secure particular uses such as community gardens, basketball courts or off-leash dog areas, unprogrammed areas directly adjacent to a path should ideally be integrated with the path, at least visually.
- 6) Fencing and landscaping designed primarily to make sheltered areas inaccessible tend to be ineffective at discouraging habitation. Rather than excluding those who have few other options for shelter, such measures merely reduce the safety and dignity of those who inevitably manage to circumvent them. Instead of attempting to eliminate access to sheltered areas, seek to improve emergency vehicle access where possible.

LIGHTING

Lighting is an important factor in perceived and actual personal safety. Many community members consider the lighting of pedestrian and cycling paths through the intersection area to be inadequate. Paths often appear shadowy and unsafe, particularly where they diverge from the roadway or are overshadowed by bridges and ramps. Light fixture placement seems haphazard, and broken lights are not always fixed promptly. The SFPUC is developing a street lighting master plan for the City. The City should develop a lighting plan for the intersection area, addressing the specific needs of pedestrians, cyclists and motorists based on guidelines in the upcoming master plan.

WAYFINDING

Navigating the Chavez/Bayshore/Potrero intersection area can be a confusing experience for pedestrians, cyclists and drivers. For example, the turn from eastbound Cesar Chavez Street to Bayshore Boulevard is hidden from drivers' view by curving retaining walls. For pedestrians and cyclists, the intersection area is extremely difficult to understand since the paths almost never follow recognizable streets. This lack of legibility can be quite dangerous – we heard several first-hand accounts of pedestrians and cyclists who took a wrong turn and found themselves on a highway access ramp.

A robust wayfinding system is an essential element in improving the usability and safety of the existing intersection configuration. Existing signage does not provide needed wayfinding information in a legible and timely manner, particularly for pedestrians and cyclists. The city should develop a robust wayfinding system that is legible at all times of the day and points the way to specific destinations (e.g. "to waterfront", rather than "60 west"). While traditional signage can be improved, lighting, art and landscaping can also be used to improve the legibility of the pedestrian and bicycle networks.





Underpass art in Cumbernauld, UK by Bigg Designs.

ART

The intersection area is an intriguing setting for site-specific art installations. Such art installations can make the pedestrian environment more lively and interesting, increasing perceived safety by attracting positive activity to the often underpopulated paths. Furthermore, many deficiencies in the intersection area can be addressed through a holistic, environmentally conscious "functional art" approach. Community members have developed ideas for large scale art installations that address concerns such as wayfinding and personal safety while providing ecological or other benefits. The City should encourage artists and community groups to further explore opportunities for art projects, and should facilitate realization of proposals which would address needs identified in this document. The following are very brief conceptual frameworks for two such ideas, included here to illustrate the wide range of potential functional art projects.

Functional Art concept framework: Ecological/ Digital Gateway & Landscape (Bonnie Sherk, A Living Library).

The intersection area is at the convergence of three creeks of the Islais Creek watershed, which encompasses numerous San Francisco neighborhoods. The rich natural history of the site would be made explicit by bringing water from the long buried creeks to the surface and using

it to re-create the riparian environment and other ecological niches destroyed in the last century. A prominent sculptural gateway/tower, with wind and solar-powered water pumps and ruggedized digital displays, would serve as a visual marker and gateway linking people and communities throughout the watershed. Excess water could be used in adjacent playgrounds, parks and community gardens. In addition to addressing City goals for water conservation and habitat restoration, this project could aid wayfinding by providing a prominent reference point, could address personal safety issues by providing lighting and creating a more visually permeable landscape, and could provide a self-sustaining maintenance mechanism through community involvement.

Functional Art concept framework: Wayfinding Webs The numerous routes through the intersection area converge and diverge, and are thus often difficult to follow. In this concept, individual routes through the intersection area would be marked in distinct ways. The wayfinding web could grow organically, with individual art installations added periodically to address individual routes and different needs. For instance, individual routes could be lit by distinctly colored lighting, enhancing safety while increasing readability of pedestrian and bicycle routes. Since much of the pedestrian and bicycle network is under bridge structures, some of this lighting could be readable during the day.



"Invocation" by Pepe Ozan.

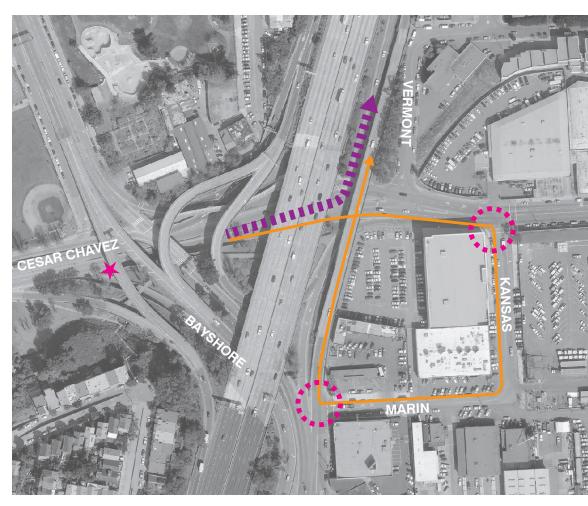
Vehicular Circulation

Although it is the junction of three major city streets, the intersection area allows only limited connections between Cesar Chavez Street, Bayshore Boulevard and Potrero Avenue. Vehicles approaching from the north cannot turn from Potrero Avenue onto eastbound Cesar Chavez Street; vehicles approaching from the east cannot turn from Cesar Chavez Street onto southbound Bayshore Boulevard or onto northbound Potrero Avenue; and vehicles approaching from the west cannot turn from Cesar Chavez Street onto northbound Potrero Avenue. Establishing these missing connections would require substantial alteration of the intersection structure, which is beyond the scope of this plan. However, it is possible to improve the driving environment by deploying a more robust wayfinding system and better lighting. Additionally, many of the recommendations for improvements to the pedestrian and bicycle circulation network would also significantly improve conditions for drivers.

Recommendations

- V1 Improve street lighting for vehicles, particularly in underpass areas.
- V2 Improve signage for vehicles. The right turn from eastbound Cesar Chavez Street onto Bayshore Boulevard is particularly easy to miss and should be more clearly signed. Consider ways to inform drivers of turns that are not possible and of available alternative routes.
- V3 Consider allowing left turns from eastbound Cesar Chavez Street directly onto the northbound Highway 101 on-ramp near Vermont Street. The existing route through Kansas and Marin Streets adds approximately 1,600 feet to each trip, and crosses the pedestrian and bicycle circulation network at two problematic locations.

Eastbound Cesar Chavez Street onto Bayshore Boulevard: The easily missed right turn is indicated by a magenta star



Eastbound Cesar Chavez Street onto northbound Highway 101: existing vehicle path in orange and potential new left turn in dashed purple. Magenta circles indicate existing conflict points between vehicles and pedestrians and cyclists.

The following recommendations for pedestrian and bicycle improvements, discussed in the pedestrian and bicycle circulation network section above, also improve conditions for drivers in the intersection area:

- A1, A2: These recommendations will benefit drivers by improving visibility of the crosswalk and providing cues for the transition from highway to city driving.
- B1, B3: These recommendations will benefit drivers by providing visual cues to reduce speed at the left turn from Bayshore Boulevard onto Cesar Chavez
- D1-D5: These recommendations will benefit drivers by improving visibility of pedestrians and cyclists waiting to use the two crosswalks, and by ameliorating existing conditions which encourage pedestrians and cyclists to travel in vehicle lanes.
- E1, E2: These recommendations will benefit drivers by highlighting the presence of cyclists on the road, and making pedestrian crossing more visible and predictable.
- H1: This recommendation will benefit drivers by improving visibility of pedestrians and cyclists waiting to use the crosswalk.
- J1-J3: These recommendations will benefit drivers by improving visibility of pedestrians and cyclists waiting to use the crosswalk and making crossing more predictable
- M1, M2: These recommendations will benefit drivers by improving visibility of pedestrians and cyclists waiting to use the crosswalk and making crossing more predictable.
- N1, N2: These recommendations will benefit drivers by ameliorating existing conditions which encourage pedestrians and cyclists to travel in vehicle lanes.
- O1, O2: These recommendations will benefit drivers by improving visibility of pedestrians and cyclists waiting to use the crosswalk and making crossing more predictable.



Northbound Bayshore Boulevard approaching Marin Street and the northbound Highway 101 on-ramp. Obstructed sidewalks, substandard curb ramps and lack of cycling facilities force pedestrians and cyclists to use vehicle travel lanes, resulting in unpredictable and potentially dangerous conditions for motorists as well as pedestrians and cyclists. Improvements to the pedestrian and cycling circulation network in the Cesar Chavez/Bayshore/Potrero intersection area can provide tangible benefits to motorists by providing a more predictable, thus safer, driving environment.

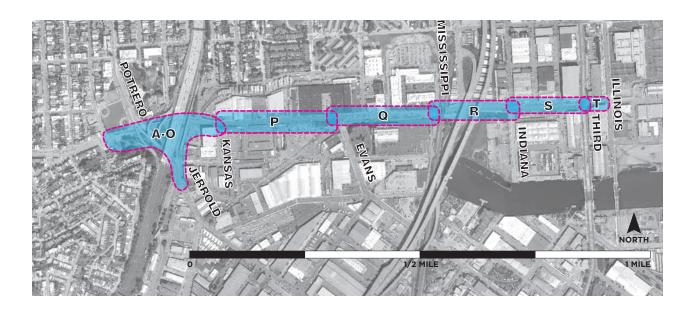




Recommendations: Kansas Street to Illinois Street

Existing Conditions and Recommendations

In contrast to the multilevel, mode-separated Chavez/Potrero/Bayshore intersection area, Cesar Chavez Street west of Kansas Street is a more familiar city street, with sidewalks, traffic lanes and cycling facilities all running in parallel within a linear public right-of-way. Since the character of the street changes along the roughly 4,500 feet from Kansas Street to Illinois Street, we begin by discussing existing conditions and general recommendations section by section. We then introduce two design concepts which were developed to implement the general recommendations, and demonstrate how a preferred option was selected. Finally, we present a conceptual design for the preferred design option.



SEGMENT P: KANSAS STREET TO EVANS AVENUE.

In segment P, Cesar Chavez Street is 75 feet wide, occupying the full right-of-way. Along the entire south frontage is a facility of the San Francisco Department of Public Works (DPW yard), housing street maintenance crews, arborists, administrators and other functions – a total of approximately 1,100 city employees. The north side of the street is fronted by one and two-story commercial buildings housing varied businesses in the Production, Distribution and Repair (PDR) sector. There are 8-foot-wide sidewalks on both sides of the street, sparsely furnished with small trees. Utility poles and boxes are generally close enough to the

curb to permit pedestrians to pass. There are two vehicle travel lanes in each direction, and the SFMTA is currently installing protected bicycle lanes. There are no marked crosswalks across Cesar Chavez between Kansas Street and Evans Avenue, a distance of over 1,400 feet, forcing many pedestrians to make a substantial detour or to attempt a dangerous dash across four lanes of often fast-moving traffic. Trucks exiting the DPW yard onto Cesar Chavez must turn right and head east, since traffic is often too heavy to permit a left turn. In the eastern portion of this segment, the DPW yard is below street level, with a difference of

elevation approaching 25 feet. This grade change is negotiated with retaining walls within the right-of-way, with the south sidewalk cantilevered south of the wall over the yard. Nearer Evans Avenue, the retaining wall is replaced by a steeply sloping rock outcropping. The south sidewalk along this stretch is frequently obstructed by utility poles and boxes.

Recommendations:

- P1 Install a mid block pedestrian crossing at the east most exit from the DPW yard, with a pedestrian-activated signal. The signal may also be activated by vehicles exiting the DPW yard, enhancing safety and enabling left turns for exiting DPW vehicles.
- P2 Improve pedestrian accessibility in the eastern portion of the south sidewalk by removing obstructions or widening the sidewalk.
- P3 Provide landscaping and stormwater retention opportunities.

SEGMENT Q: EVANS AVENUE TO MISSISSIPPI STREET

In segment Q, the north side of Cesar Chavez Street is fronted by one and two-story PDR buildings, while the south side is fronted by a narrow publicly owned parcel who's elevation is as much as 25 feet below that of the street. This parcel, formerly a rail right-of-way, now houses underground sewer infrastructure. While the 8-foot-wide north sidewalk and the 59 foot curb-to-curb distance are similar to those of segment P, the south sidewalk

tapers to less than 4 feet and is obstructed with utility poles and fire hydrants. There are bus stops on Connecticut Street and Evans Avenue near Cesar Chavez Street, but amenities at the stops are minimal, particularly at Connecticut Street. Crosswalks across Cesar Chavez Street at Connecticut Street and at Evans Avenue are signalized but are relatively long and marked only on one side. Although Connecticut Street is an important pedestrian connection to Potrero Terrace and Annex, sidewalks are often impassable due to parked cars, and there are no street trees or other pedestrian amenities.

The SFMTA is currently installing protected bicycle lanes along the entire segment and altering the lane configuration at the Evans Avenue intersection. Long-term projections for commercial and residential growth in the area suggest that additional vehicular capacity may be required at this intersection in the future.

Recommendations:

- Q1 Enhance pedestrian safety at the Connecticut Street and Evans Avenue intersections by installing corner sidewalk extensions (bulbouts) or pedestrian refuges. Consider marking the unmarked crossings at these intersections.
- Q2 Improve pedestrian conditions at the bus stops on Connecticut Street and Evans Avenue.
- Q3 Enhance the pedestrian environment on Connecticut Street from Cesar Chavez Street to
 Potrero Terrace and Annex

- Q4 Improve pedestrian accessibility of the south sidewalk by removing obstructions and widening the sidewalk.
- Q5 Provide landscaping and stormwater retention opportunities.
- Q6 Consider widening Cesar Chavez Street at the Evans Avenue intersection, should more vehicular capacity be required.

SEGMENT R: MISSISSIPPI STREET TO INDIANA STREET

In Segment R, Cesar Chavez Street occupies the 75-foot-wide right-of-way and additional publicly owned parcels to the north and to the south of the right-of-way. There are two travel lanes in each direction with additional turn pockets at intersections, bicycle lanes, curbside parking and sidewalks. The south sidewalk and eastbound bicycle lane are separated from the vehicle travel lanes as they negotiate the rail bridge and freeway columns, returning to the curbside east of the I-280 exit. The off-street cycle and pedestrian facilities between Mississippi Street and the I-280 exit are often covered by a thick layer of dirt from surrounding earth-moving activity. On the north side, Pedestrians crossing Pennsylvania Avenue must negotiate several crosswalks separated by median islands. Turning vehicles often travel at high speeds. encouraged by wide traffic lanes and turn radii. The sidewalk west of Pennsylvania Avenue towards the rail bridge is particularly narrow. Cyclists heading west must cross the right turn lane to Pennsylvania

Avenue and the southbound I-280 on-ramp, the wide dimensions of which permit vehicles to travel at near-highway speeds. The north side of Cesar Chavez Street is fronted by one-story commercial buildings near Pennsylvania Avenue and by a six-story residential and commercial building at Indiana Street. On the south side of the street are vacant publicly owned parcels, with a bus maintenance facility under construction at Indiana Streets.

Recommendations:

- R1 Tighten curb geometry along the north side of the Pennsylvania Avenue intersection to discourage speeding and enhance pedestrian and cyclist safety.
- R2 Widen the north sidewalk between Pennsylvania Avenue and the rail bridge.
- R3 Widen the off-street south side sidewalk and cycle path to allow maintenance by street cleaning equipment.

SEGMENT S: INDIANA STREET TO THIRD STREET

In Segment S, Cesar Chavez Street occupies the 75-foot-wide right-of-way and additional publicly owned parcels to the south of the right-of-way. There are two travel lanes in each direction with additional turn pockets at intersections, sporadically marked bicycle lanes, curbside parking and sidewalks. The north side of the street is fronted by one- to three-story commercial buildings housing varied PDR businesses, but the one-story commercial buildings on the south side open to side streets rather than to Cesar Chavez Street. While the crosswalks at Indiana and 3rd Streets are marked and signalized, there are no marked crosswalks at Minnesota and Tennessee Streets.

Recommendations:

- S1 Enhance pedestrian safety by adding a signalized crossing at Tennessee Street.
- S2 Ensure bicycle lanes are consistently marked.

SEGMENT T: THIRD STREET TO ILLINOIS STREET

In Segment T, the Cesar Chavez Street right of way narrows to approximately 68 feet as it approaches Illinois Street and the port. The south sidewalk is approximately 10 feet wide and the north sidewalk approximately 6 feet wide, with numerous utility poles and boxes further restricting pedestrian space. The roadway narrows to approximately 52 feet, with two eastbound travel lanes, one westbound travel lane and a left turn pocket at 3rd Street, and several LRV tracks leading from the main lines on 3rd Street to the LRV maintenance facility across Illinois Street. Although Illinois Street is a truck route, space for trucks turning between Illinois and Cesar Chavez Street appears to be very tight. Although Illinois Street is part of the Bay Trail and thus an essential bicycle route, bicycle facilities are limited to sharrow markings and cyclists must negotiate numerous crisscrossing LRV tracks in mixed traffic.

Recommendations:

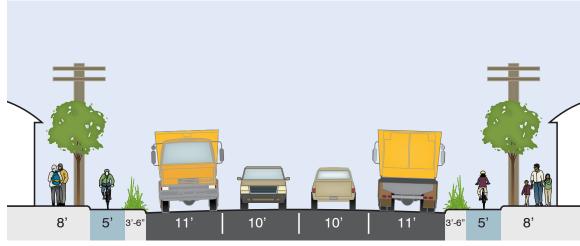
T1 Consider widening Cesar Chavez Street to better accommodate truck, pedestrian, bicycle and LRV movement between 3rd and Illinois Streets, should adjacent parcels become available.

Design Concepts

The Cesar Chavez East Community Design Plan developed two design concepts to implement the community's vision. Concept A would build on existing bicycle lanes by adding more robust landscaped buffers, and would include pedestrian improvements at selected intersections and where sidewalks are missing or impassable. Concept B would replace existing bicycle lanes with a two-way cycle track on the south side of Cesar Chavez Street, buffered by a wider landscaped buffer, and would also include pedestrian improvements at selected intersections and where sidewalks are missing or impassable.

DESIGN CONCEPT EVALUATION: PEDESTRIANS

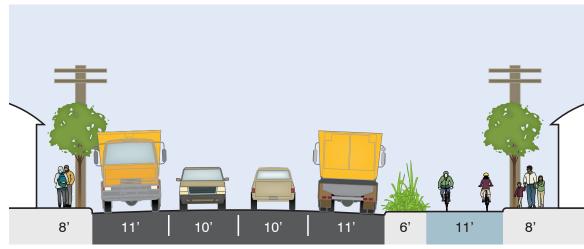
Both design concepts include signalized crossings and intersection improvements as called for in the segment-by-segment recommendations above, and both would improve the south sidewalk where it is missing or not passable. While concept A would separate both sidewalks from traffic with bicycle lanes and planted buffer strips, concept B would separate only the south sidewalk. However, the wider buffer strip of concept B could be designed to serve as a pedestrian refuge at crossings, substantially reducing the effective crossing distance.



Design concept A: section at DPW yard looking east. Build on existing bicycle lanes by adding landscaped buffers, and add pedestrian improvements at selected intersections and where sidewalks are missing or impassable.

DESIGN CONCEPT EVALUATION: BICYCLES

Both design concepts aim at providing protected cycling facilities along the entire length of the corridor, but intersections and driveways are potential conflict points between cyclists and drivers. For most trips, design concept B requires cyclists to cross fewer potentially dangerous driveways and intersections than does design concept A. As Cesar Chavez East is the main connector between residential areas and waterfront parks and trails, cycling facilities should accommodate families and other groups riding together. The wider cycle track of design concept B is more suitable for this "social riding". Finally, the wider cycle track in design concept B may be more accessible to street cleaning equipment.



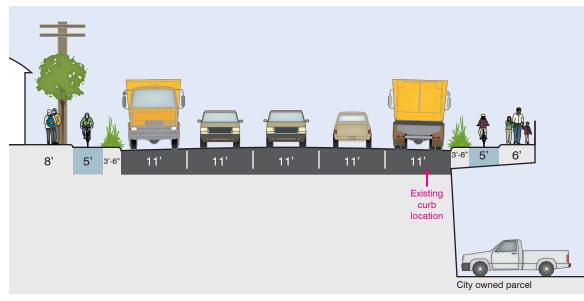
Design concept B: section at DPW yard looking east.
Replace existing bicycle lanes with a two-way cycle track and add pedestrian improvements at selected intersections and where sidewalks are missing or impassable.

DESIGN CONCEPT EVALUATION: VEHICULAR CIRCULATION

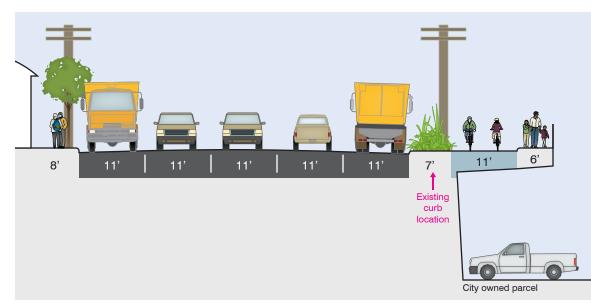
Both design concepts preserve the existing number of vehicular travel lanes. Both include signalized crossings as called for in the segment-by-segment recommendations above, and both may include additional signal phases at intersections if called for by cycle track standards currently being developed by the City. Should additional vehicular capacity be required at the Evans Avenue intersection, both concepts would allow the roadway to be expanded over the city-owned parcel south of the Cesar Chavez ROW. However, in concept A this expansion would place traffic closer to the existing retaining wall, requiring relocation of existing utilities and possibly requiring strengthening of the retaining wall. Concept B could accommodate an additional lane within the existing curbs, which may allow existing utilities to remain in place.

DESIGN CONCEPT EVALUATION: GREENING AND STORMWATER OPPORTUNITIES

The relatively narrow buffer zones of design concept A (3'-6", including curbs if any) are not suitable for trees or larger plants, and may not be suitable for stormwater retention or other LID uses. The wider single buffer zone of design concept B does provide the 5-foot minimum width required for trees, and could be more suitable for LID uses.



Design concept A: section near Evans Avenue looking east with one travel lane added. Note that the existing south curb and utilities would be removed.



Design concept B: section near Evans Avenue looking east with one travel lane added. Note that the existing south curb and utilities could be retained.

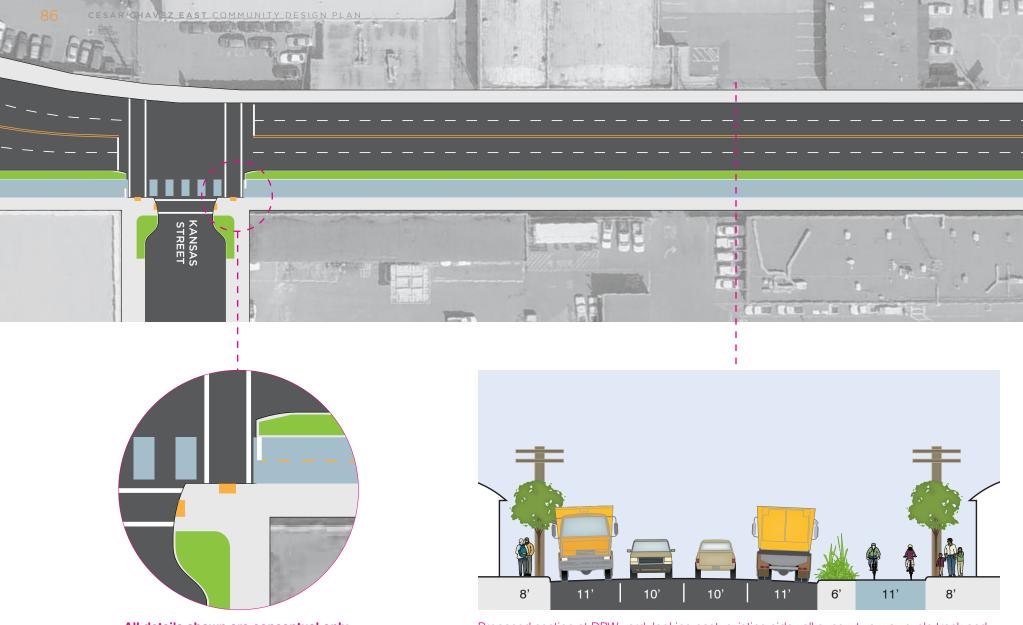


Proposed Configuration

View proposed configuration diagrams on the following pages.

The proposed configuration presented on the following pages is a conceptual plan of design concept B, including an additional lane at the Evans intersection. Design concept B was selected for its relatively superior cycling facilities and LID opportunities, and because it may present fewer challenges to adding a vehicle travel lane at the Evans interchange, should additional capacity be needed.

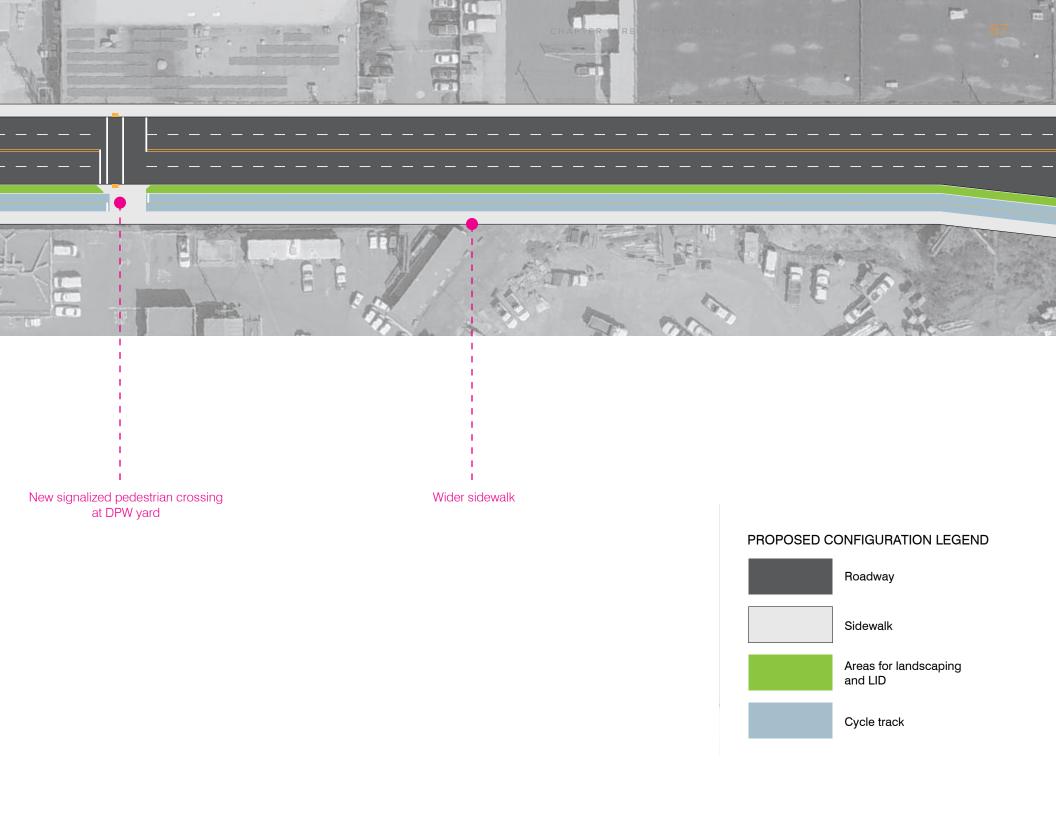
The City is developing standards for cycle tracks, including preferred dimensions and intersection details. The cycle track depicted in the proposed configuration generally follows NACTO standards for width, but the intersection details are illustrative only and should not be taken literally. The proposed configuration depicts existing vehicle travel lanes and turn pockets and includes an additional lane at the Evans intersection, but the intersection details shown are again illustrative only. Similarly, existing and proposed sidewalks and crosswalks are depicted schematically, since details affecting safety and accessibility will be developed based on more detailed surveying of the area. While we have not depicted details of landscaping or LID facilities, areas suitable for such treatment are indicated.

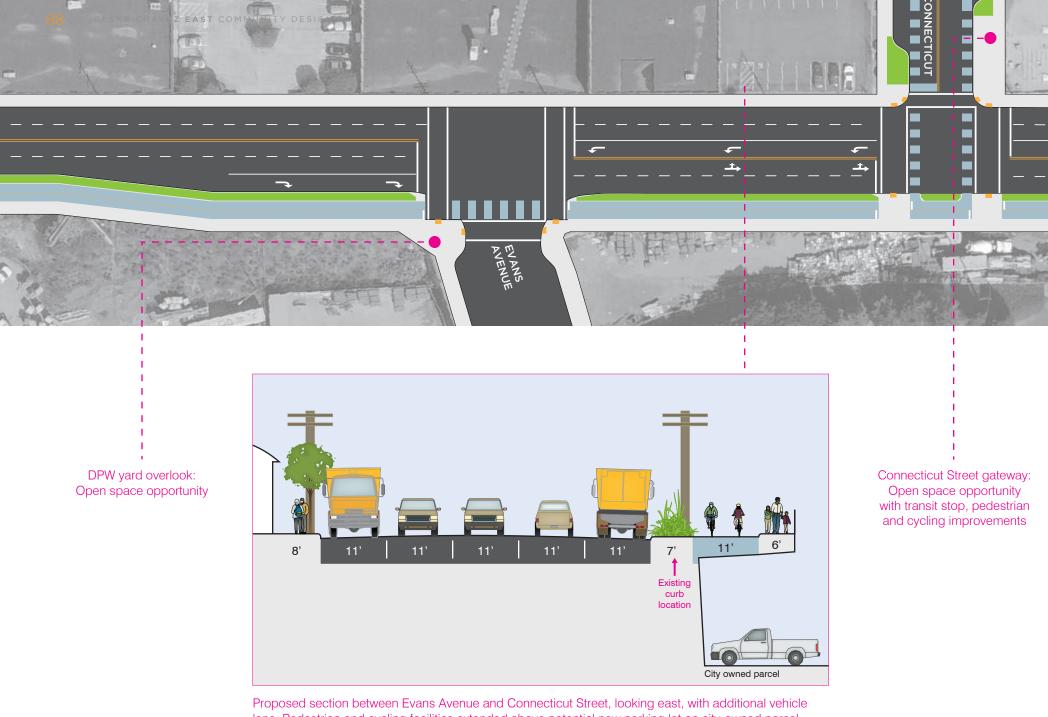


All details shown are conceptual only.

The City is developing standards for cycle tracks, including intersection details.

Proposed section at DPW yard, looking east: existing sidewalks, new two-way cycle track and landscaped buffer zone.





lane. Pedestrian and cycling facilities extended above potential new parking lot on city-owned parcel.

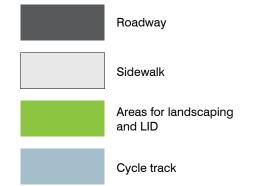


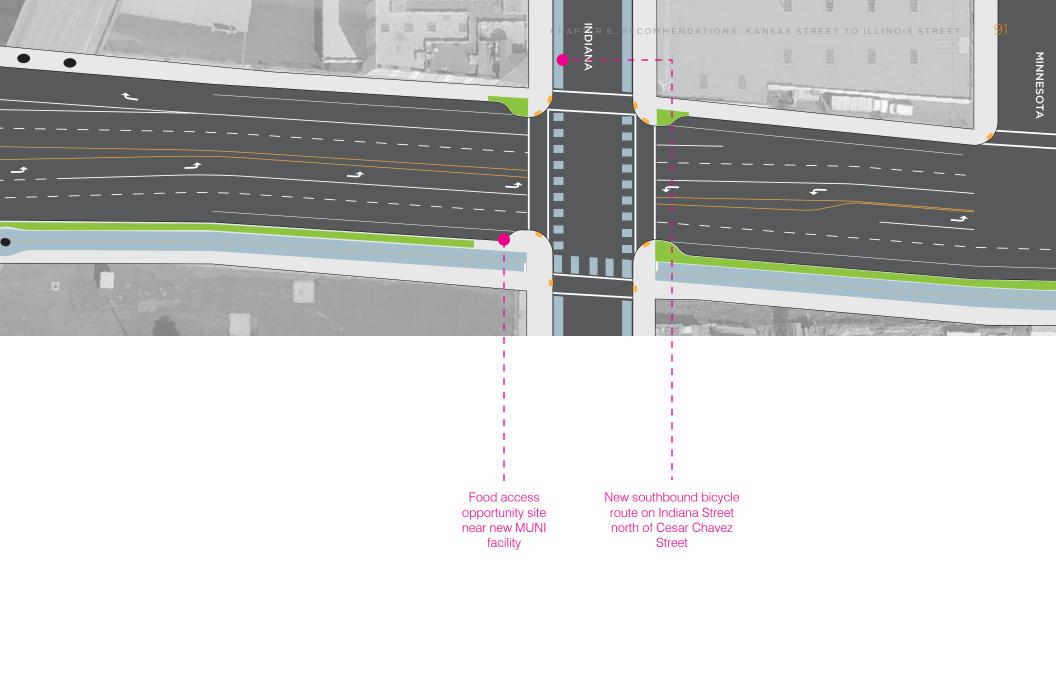




Open space opportunity

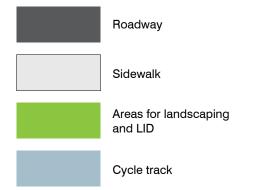
PROPOSED CONFIGURATION LEGEND

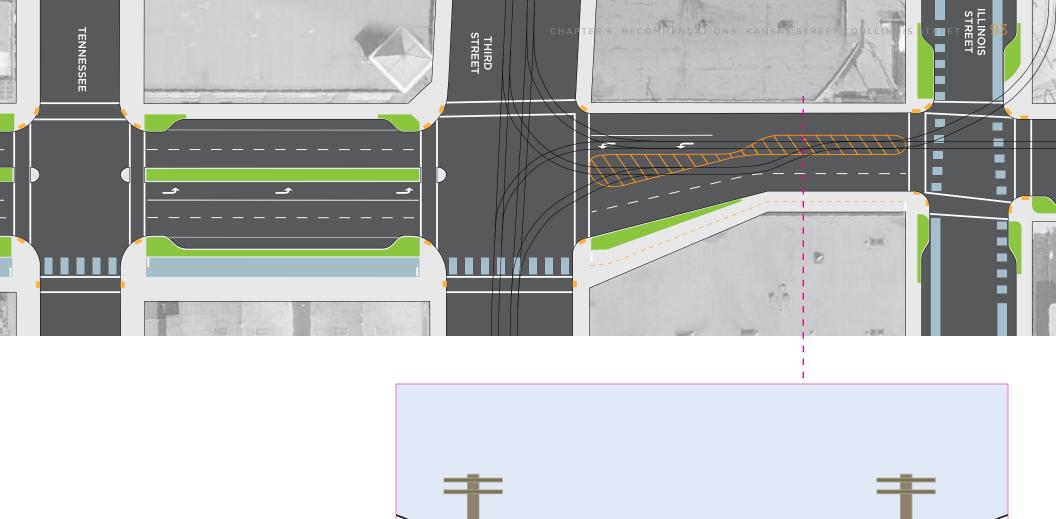






PROPOSED CONFIGURATION LEGEND





7'

14'

Proposed section near Illinois Street looking east, with existing LRV-only lane and new multi-use path. Consider widening Cesar Chavez Street in this section should the adjacent parcel become available.

14'

MUNI LRV ONLY

Acknowledgements

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