

# GREEN TI

## TERMINAL ISLAND TRANSITION PLAN

DECEMBER 2015

*This plan was funded through a Caltrans Environmental Justice Grant*



LONG BEACH  
DEVELOPMENT SERVICES  
BUILDING A BETTER LONG BEACH



# December 2015

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## Credits

*The preparation of this document has been financed, in part through the Office of Community Planning's Grant Program from the California Department of Transportation.*



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# 01

## INTRODUCTION

Poor health outcomes and conflicting land-uses around the Terminal Island Freeway prompted the City of Long Beach to apply for an Environmental Justice Grant in 2013. Environmental Justice is an effort to first recognize that communities of color, and those with a limited income are more likely to be exposed to environmental hazards; motivating cities to find innovative solutions to improve the quality of life and health outcomes in such communities. The Green TI project looks at the first/last mile of the Terminal Island Freeway, and includes the community vision, preliminary feasibility study and design concept aimed at transforming the segment of State Route 103 to a local-serving road, while increasing open space and buffering the West Long Beach neighborhood from air, noise, light and visual pollution. The design concept and future implementation strategies described in this document serve as a road-map for the project as it moves forward. Additionally, this document serves as a compilation of findings from community and port-related engagement events that were held to identify alternative and preferred design concepts for the reuse of the TI Freeway. The project is referred to as the “Green TI Plan” throughout this document.

This package presents existing conditions analysis, community feedback, conceptual designs, and an outline for the next implementation steps to continue to develop the Green TI Plan. As such, this document is intended to serve as a foundational tool for the Long Beach Department of Development Services and the Port of Long Beach to move forward with implementation of the Green TI project.

## HISTORY OF TERMINAL ISLAND

Originally referred to as the Industrial Freeway, the TI Freeway was built in 1947 by the US Navy to upgrade access to the ports and the Naval Shipyard, connecting all the way to the I-10 Freeway. Today, the TI Freeway abuts the Southern California International Gateway (SCIG) and the Edison Right of Way on the west, West Long Beach neighborhoods and schools on the east, the Port of Long Beach to the south, and the Intermodal Container Transfer Facility (ICTF) to the north.

Historically, Terminal Island itself has been referred to as Isla Raza de Buena Gente, Rattle Snake Island, and finally Terminal Island in 1918. Throughout the early 20th century, Terminal Island has been a host to various industrial uses such as powerplants and manufacturing.

Additionally, Terminal Island was home to a large Japanese American population in the early 1900's. In the late 1920's, the Island hosted the Allen Field Airport, before becoming a Naval Air Base in 1935. During World War II, the space served as a naval shipyard, and in 1940, as many as 88% of elementary school students were from Navy families. Over time, military use of the Terminal Island declined and gave way to shipping and industrial uses. Historical photos of Terminal Island are shown on the right.

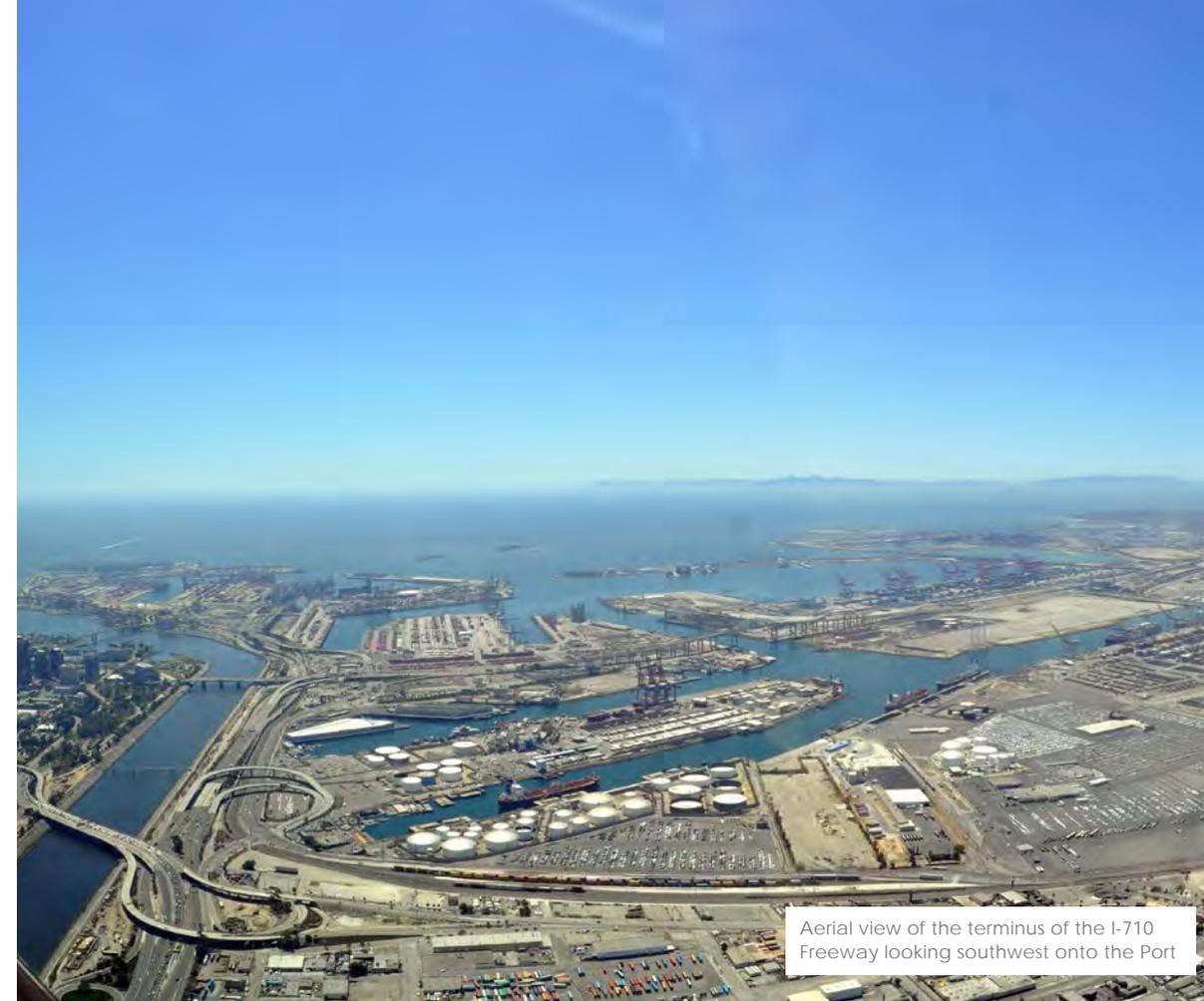
Currently, the Terminal Island Freeway connects to Terminal Island and the Port of Long Beach; terminating at Willow Street in the West Long Beach neighborhood.

## PROJECT AREA

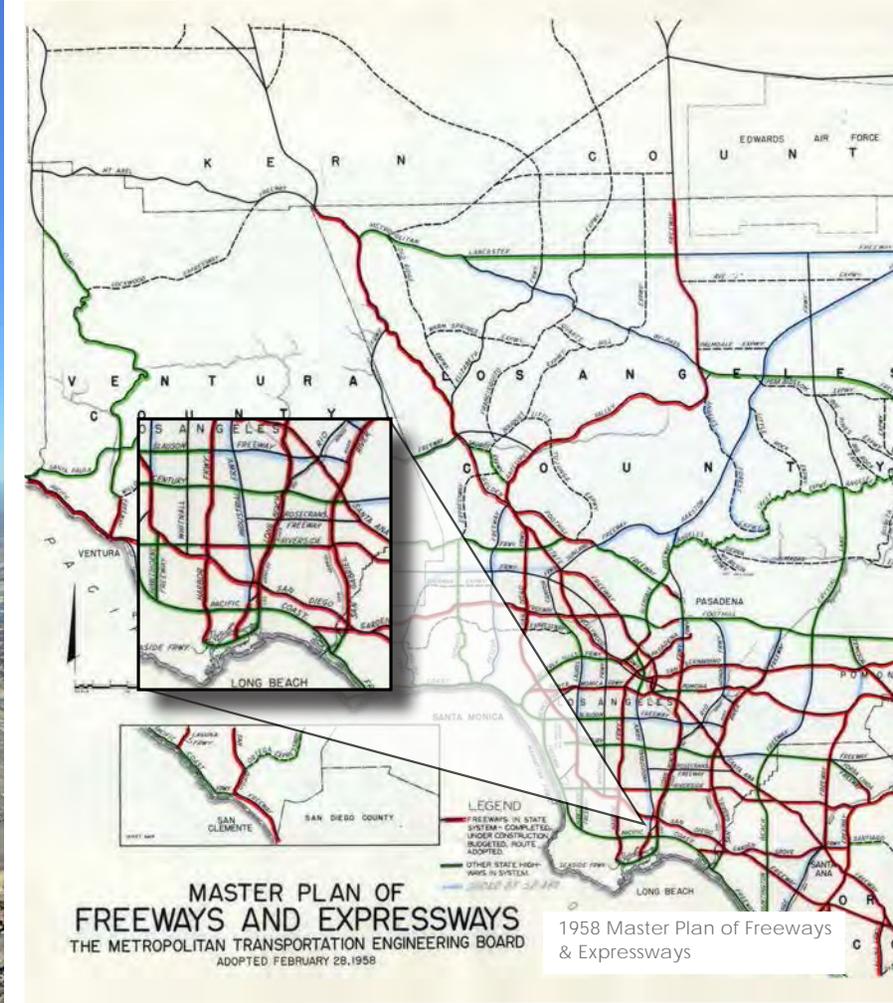
The project area of the Green TI Plan does not span the entire length of the TI Freeway. Rather, the project focuses on the City-controlled portion of the TI Freeway between Willow Street and 20th Street. Maps depicting the project site are shown on pages 5 and 6.



Terminal Island in the mid 1960's



Aerial view of the terminus of the I-710 Freeway looking southwest onto the Port



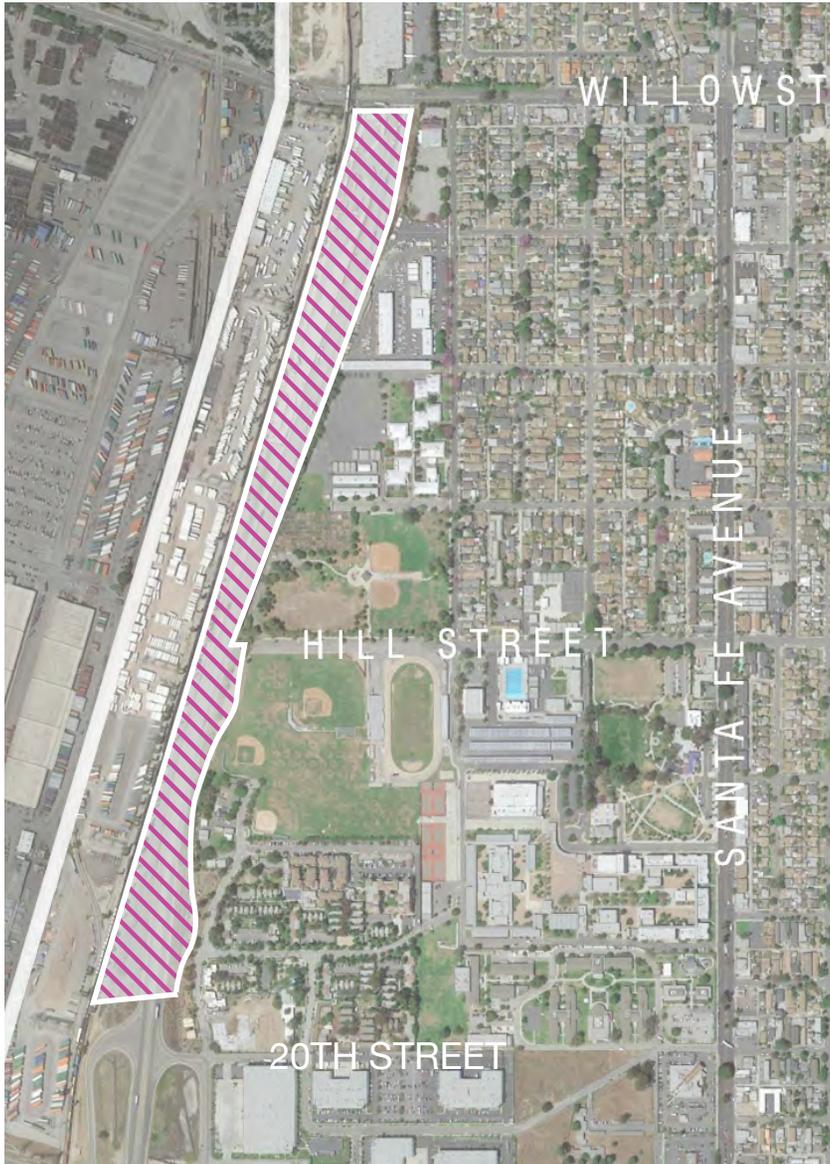
1958 Master Plan of Freeways & Expressways



Image of the Terminal Island

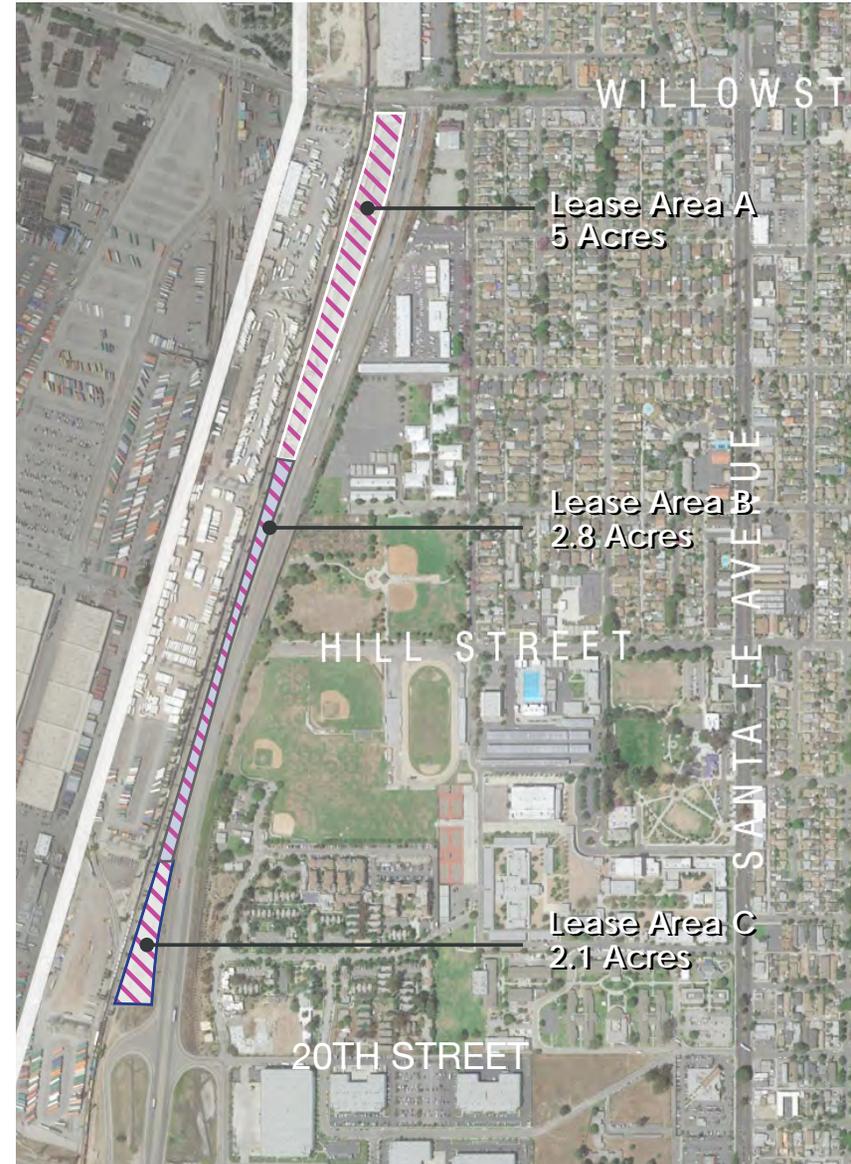
## GREEN TI PROJECT AREA

The Green TI project area covers the segment of the City-owned portion of the TI Freeway, which runs between 20th Street and Willow Street. The area is located on the western edge of the City of Long Beach and is situated within the West Long Beach neighborhood.



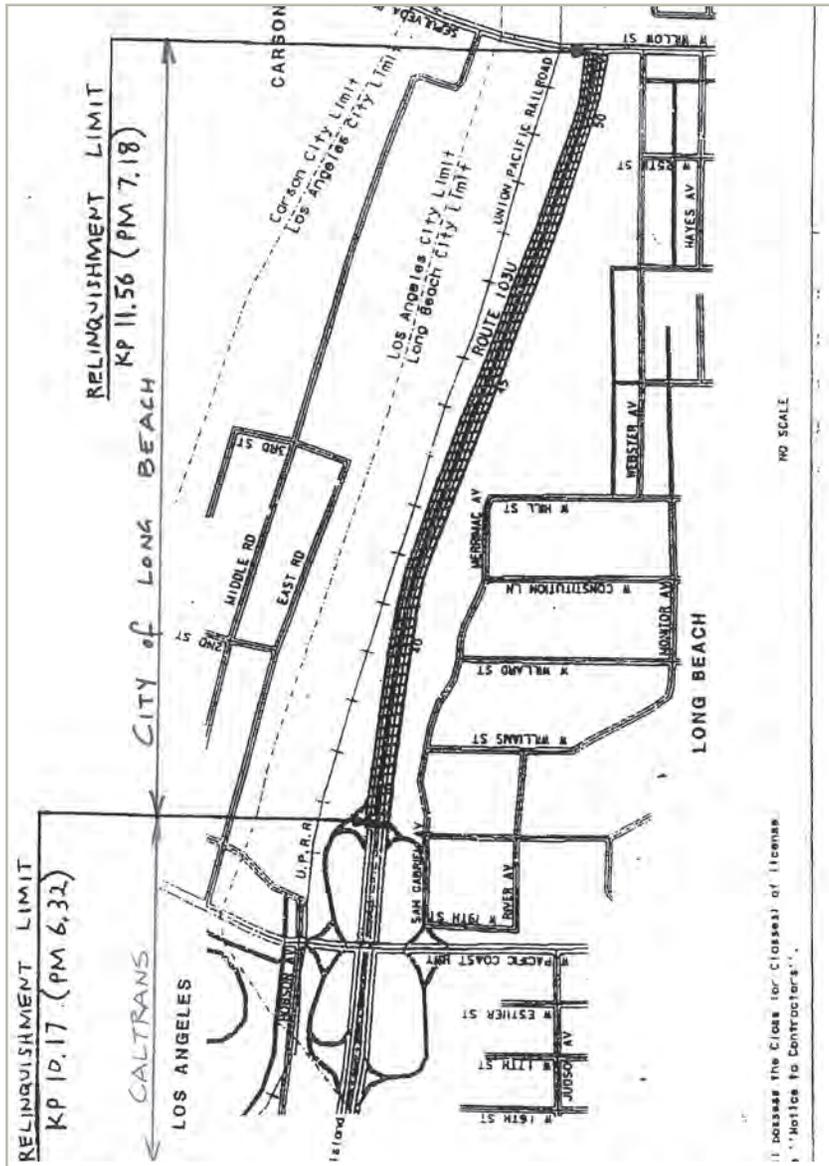
## TI PROJECT AREA LEASES

Three lease areas have been conveyed by the City of Long Beach to the west of the vehicular roadway and within the Freeway right-of-way. Each lease area shown on the map below ranges from 2-5 acres. Lease Area A is presently occupied by Bob Hill Crane.



## TI PROJECT AREA OWNERSHIP

The legal boundaries of the City-owned segment of the TI Freeway are shown below, in this exhibit associated with the relinquishment of the Terminal Island Freeway to the City of Long Beach. Currently, the City does not own the on- and off-ramp cloverleaves south of 20th Street. Future analysis will be required to determine the usage and form of these TI Freeway on- and off-ramps.



## TI PROJECT AREA ADJACENT USES

Uses that abut the project area include the Century Villages at Cabrillo Campus (CVC), Cabrillo High School, Hudson Park, Elizabeth Hudson Elementary, and the Southern California International Gateway (SCIG).

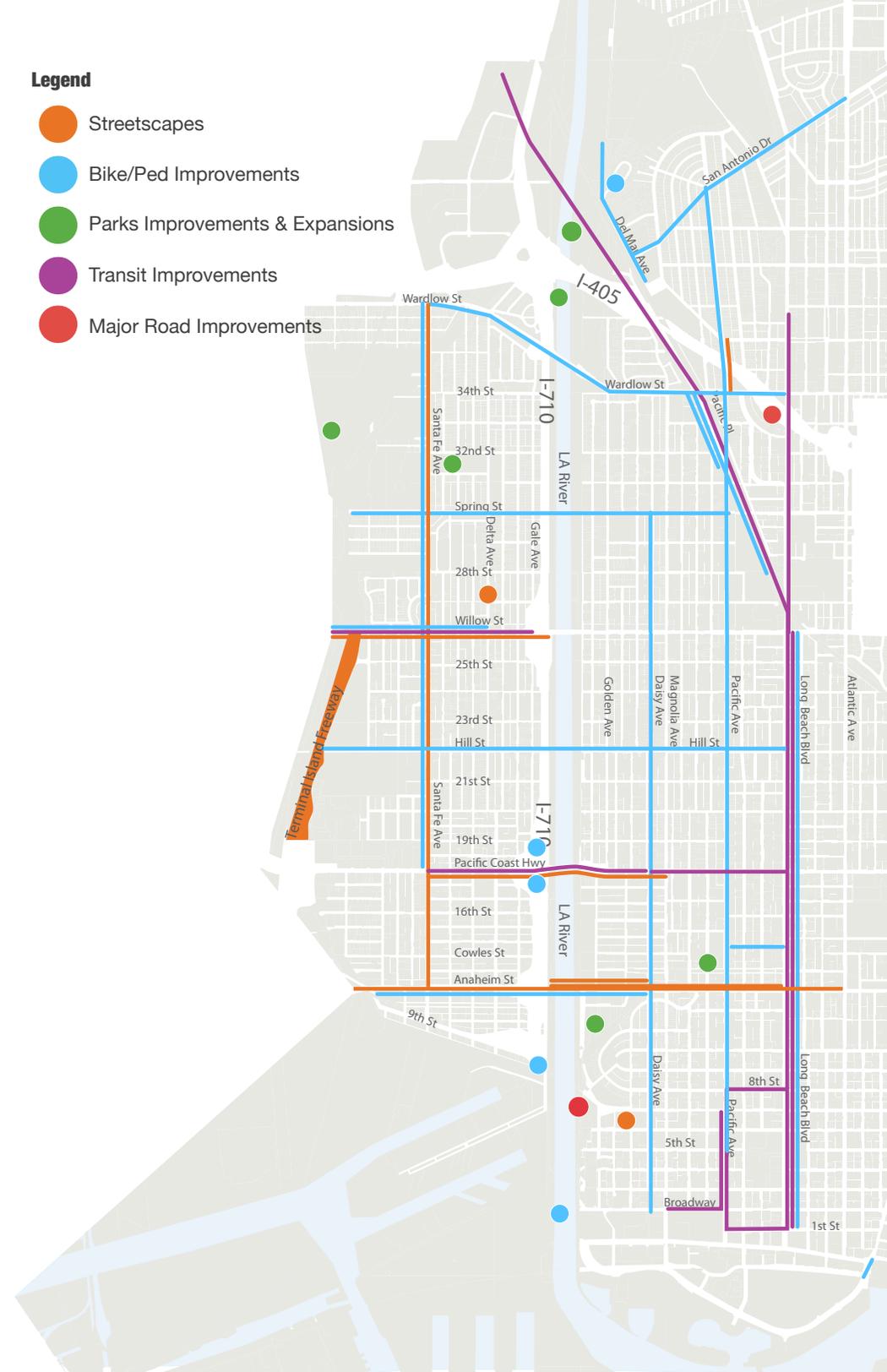


# LIVABLE WEST LONG BEACH PLAN

The Livable West Long Beach Plan “identifies, prioritizes, and strategizes the implementation of projects and initiatives that will provide a variety of community benefits including enhancements to the community’s physical environment, improved accessibility and connectivity, a cleaner environment, a vibrant economy, and improved community health” (Livable West Long Beach Plan pg. 1). Founded by the Port of Long Beach, and developed out of a need to document and compile a number of adopted City planning policies and programs that had not yet been implemented within the West Long Beach community, the Livable West Long Beach document identifies key projects that would help to improve the livability of the West side. The de-commissioning of the Terminal Island Freeway is mentioned in this document as a key project that would enhance and improve the West Long Beach community.

## Legend

- Streetscapes
- Bike/Ped Improvements
- Parks Improvements & Expansions
- Transit Improvements
- Major Road Improvements

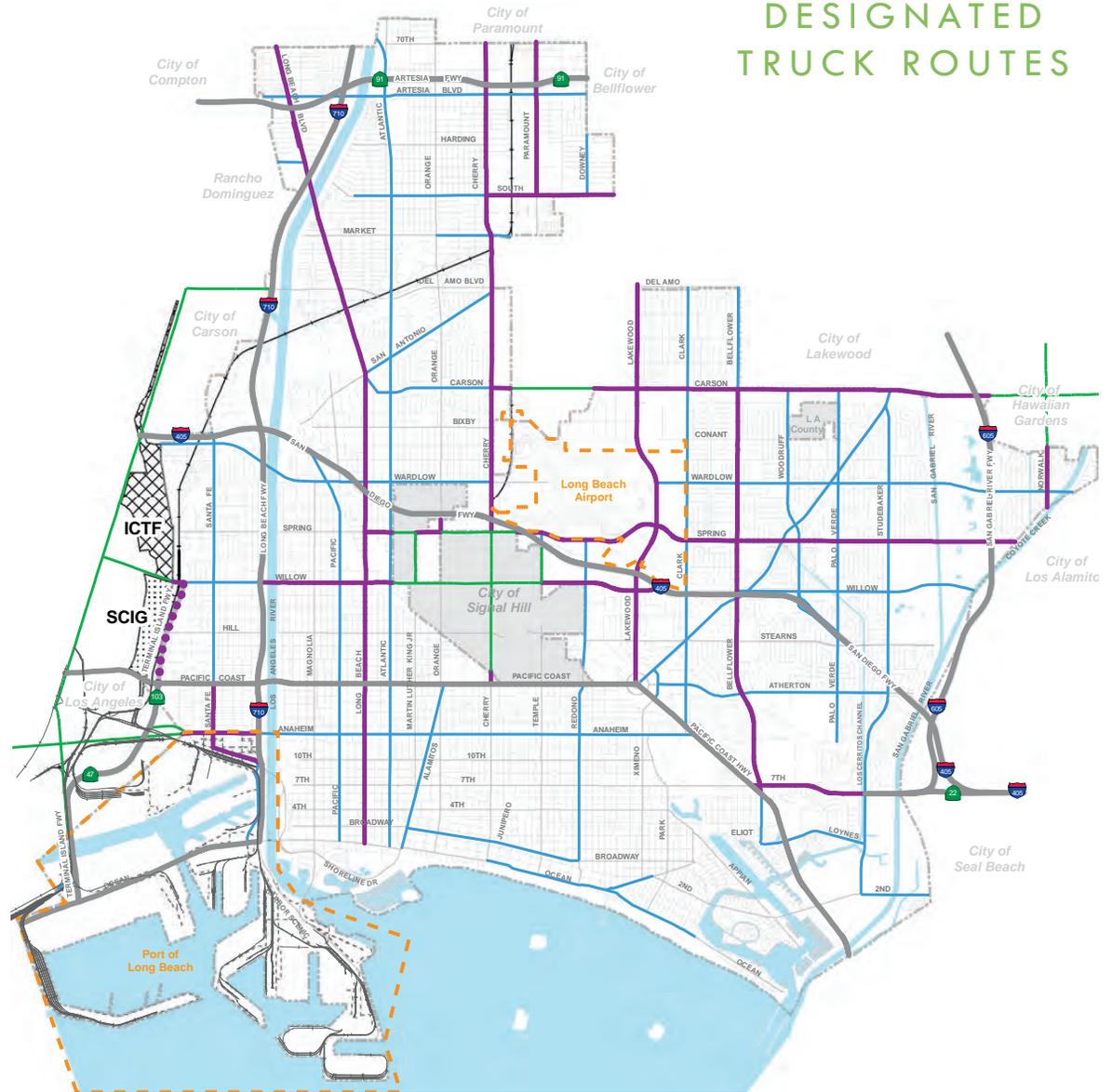


# LONG BEACH MOBILITY ELEMENT

The Long Beach Mobility Element Update was adopted in 2013 and establishes the vision, goals, policies, and implementation measures to enhance the City's local and regional transportation networks. The goals of the Mobility Element Update align with the goals of the Green TI project, and they work to balance the needs of all roadway users, develop context-sensitive street classifications, ensure multi-modal connectivity and accessibility, and encourage active transportation (bicycling and walking).

Additionally, in the map shown to the right, the Long Beach Mobility Element identifies the TI Freeway between 20th Street and Willow Street as "Recommended for Removal" from the designated truck routes of the city. This suggests the de-commissioning of the City-owned portion of the TI Freeway.

## DESIGNATED TRUCK ROUTES



### Legend

#### Truck Route

- Regional
- ⋯ Recommended for Removal

- State Facility
- Other Cities

#### Local Delivery

- Appropriate Path of Travel
- - - - Port-related Streets



## CASE STUDIES

Similar projects have been funded through a variety of funding sources and financing strategies. These include:

### Portland's Harbor, Portland

In the 1950's, Portland's Harbor was home to six lanes of route 99; a major thoroughfare for many years. However, with new roads and freeways built elsewhere, use of the 99 declined. In the 1960's, Portland's mayor proposed the de-commissioning of the freeway, which was ultimately closed completely by 1974. The open space now stretches along the waterfront, and has acted as a catalyst for several new parks that have come online over the years.

### Embarcadero Freeway De-commissioning, San Francisco

The de-commissioning of the Embarcadero Freeway, which has been debated for many years, was prompted by the extensive damage to freeway caused by the 1989 Loma Prieta Earthquake. The first section of the elevated freeway opened in 1959. Plans for extending the freeway were controversial from the very beginning. After the earthquake, the plan for demolition of the freeway was opposed by the business community until then Mayor Art Agnos and subsequent mayors negotiated with federal and state officials to win enough funding to make the demolition practical, and the opposition relented. Thirty-six different federal, state, and local funding sources were used to accomplish the nine projects that comprise the Waterfront Transportation Projects, including funding from the 1/2 cent sales tax in San Francisco for transportation. The site is now a wide, palm-lined waterfront boulevard with Muni Light Rail tracks in the median. The site includes parks and public plazas.

BEFORE

AFTER

### Doyle Drive / Presidio Parkway, San Francisco

Doyle Drive was constructed in 1936 and had reached the end of its useful life by 2012. The reconstruction of what is now called Presidio Parkway is being accomplished through a Design, Build, Finance, Operate, and Maintain (DBFOM) P3 structure. The first half of the project was constructed with conventional Caltrans federal and state funding. To complete the project, Caltrans offered an annual \$22 million. Availability payment is beyond certain milestone construction payments paid by Caltrans. The consortium to carry out the DBFOM project was selected and the project is under construction. The Presidio Parkway will create a spectacular regional gateway between the iconic Golden Gate Bridge and the City of San Francisco. The project is scheduled for completion in 2016.

## USING THIS DOCUMENT

The document findings from the preliminary analysis of this space and its opportunities and constraints, as well as the design vision, articulated by the community in the outreach process are broken up into six parts, described briefly below.

### **PART 01 Introduction**

Provides an overview of the project area and history, and describes the intentions of this document.

### **PART 02 Existing Conditions**

Details existing site information, existing roadway configurations, demographics, traffic conditions, and considerations for implementation of the Green TI project.

### **PART 03 Community Outreach**

Describes the community outreach and stakeholder engagement process and key takeaways.

### **PART 04 Design Concepts**

Outlines a preliminary draft design concept for the de-commissioning of the Terminal Island Freeway, and depicts possible strategies for pedestrian access, bicycle access, vehicular access, an open space buffer, ecology options, and stormwater management.

### **PART 05 Implementation Plan and Next Steps**

Provides critical information for the next steps and potential phasing of the Green TI project.





# 02

## EXISTING CONDITIONS

This chapter provides an overview of the demographic characteristics of the Green TI surrounding neighborhoods, site conditions, existing and planned projects, and opportunities and constraints of the site. These site and community characteristics provide valuable context that helps determine the goals and design concepts for the Green TI project.

The chapter is divided into seven sections discussing the demographics, built environment assessment, movement of people and goods, traffic characteristics and data, opportunities and constraints, major upcoming projects, and regulatory and financial considerations.

# DEMOGRAPHICS

## GREEN TI STUDY AREA VS. TI PROJECT AREA

The demographic analysis that follows outlines a compilation of data gathered from the US Census Bureau, CalEnviroScreen 2014 data, and the Statewide Integrated Traffic Records System (SWITRS). The TI Study area is shown in the map below, which takes into account census tracts (and therefore residential neighborhoods) that are adjacent to and directly effected by the TI Freeway.

### TI Study and Project Areas



Source: Census 2009-2013. Los Angeles County, California. TIGER/Line Shapefiles with selected demographic and Economic Data. 2013 American Community Survey 5-year estimates. Retrieved from <http://www.census.gov/geo/maps-data/data/tiger-data.html> ArcGIS Cartographic Roadway and Streets Files

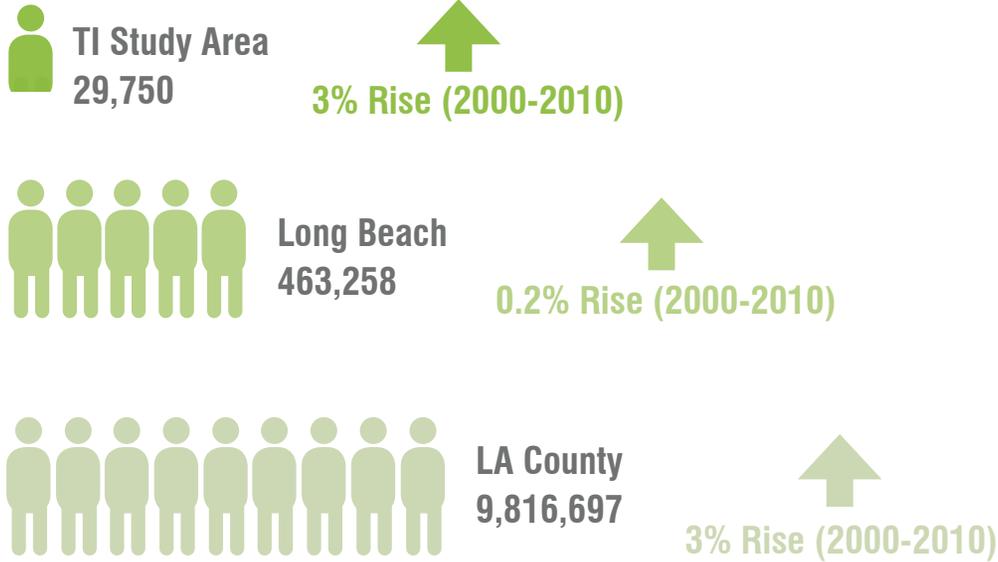


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## POPULATION

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### POPULATION COMPARISON



Source: Census 2000 Summary File 1 (SF1) 100-Percent Data and 2013 ACS Total Population

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### AGE



Source: Census 2010. P12 Sex by Age. Total Population. 2010 Census Summary File 1 (SF1)

The population of the TI Study area comprises approximately 6.4% of the population of the City of Long Beach. The rate of population growth in the TI Study area is higher than that of the City as a whole.

The TI study area has nearly nine times the amount of particulate matter and double the asthma rate of LA County. TI study area residents also have on average, fewer acres of park space than residents of the City of Long Beach.

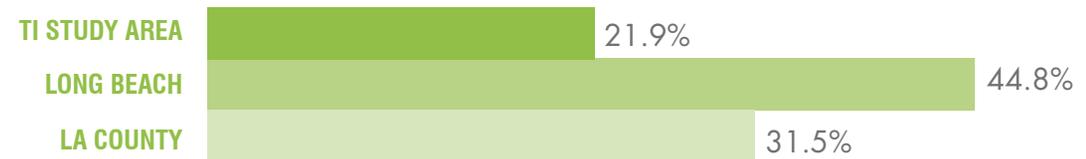
## COMMUNITY HEALTH

PARTICULATE MATTER AND FINE PARTICLE PER SQUARE MILE (MEAN FROM 2009-2011)



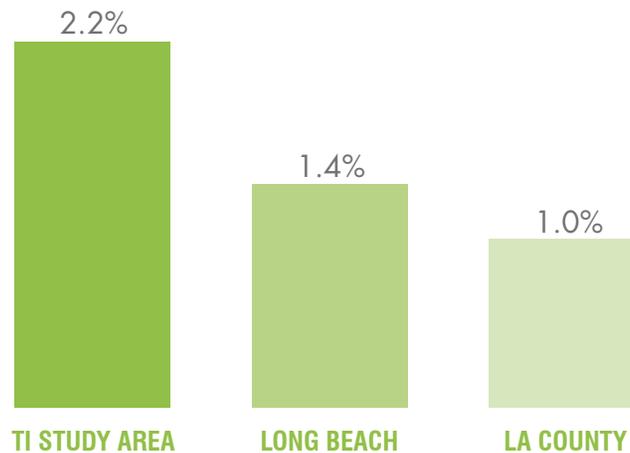
Source: The Office of Environmental Health Hazard Assessment. 2014 California Communities Environmental Health Screening Tool CalEnviroScreen Version 2.0

PROPORTION OF POPULATION WITHIN 1/4 MILES OF OPEN SPACE (NEIGHBORHOOD OR REGIONAL PARK, OPEN SPACE, OR PUBLICLY ACCESSIBLE SHORELINE)



Source: LA County, Regional Planning, CIO, CPAD: EGIS\_LAND\_TYPES\_201501

ASTHMA RATE (AGE-ADJUSTED RATE OF EMERGENCY DEPARTMENT VISITS FOR ASTHMA)

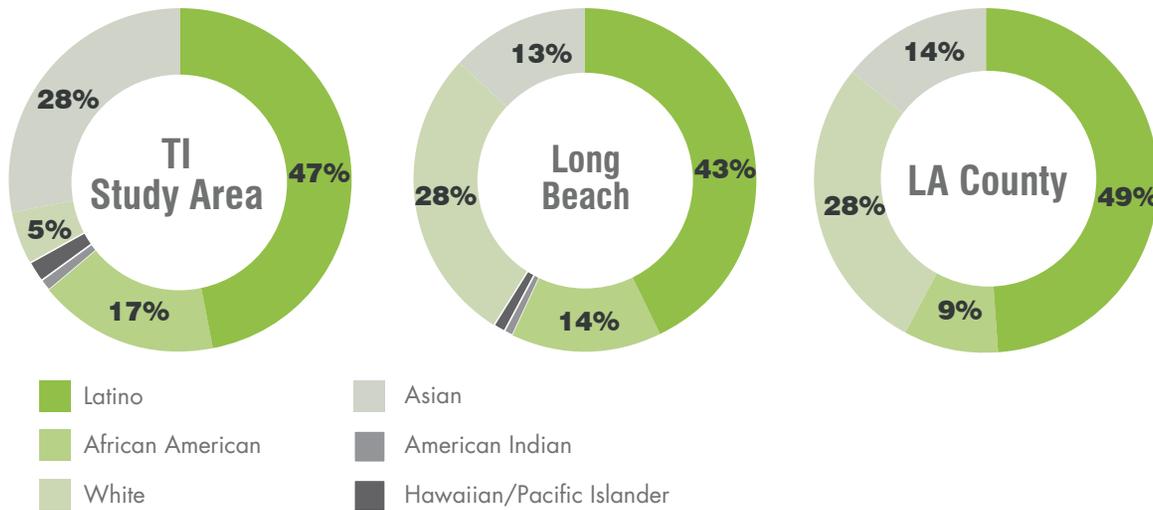


The Office of Environmental Health Hazard Assessment. 2014 California Communities Environmental Health Screening Tool: CalEnviroScreen Version 2.0 (CalEnviroScreen 2.0).

Source: The Office of Environmental Health Hazard Assessment. 2014 California Communities Environmental Health Screening Tool CalEnviroScreen Version 2.0

## DIVERSITY

### ETHNICITY



Source: U.S. Census Bureau 2010. QT-P6 Race Alone in Combination and Hispanic or Latino. 2010 Census Summary File 1

### FOREIGN BORN



Source: U.S. Census Bureau 2010. Imputation of Citizenship Status. 2009-2013 American Community Survey 5-Year Estimates

### LIMITED ENGLISH PROFICIENCY



Source: US Census Bureau 2010. Household Language by Household. Limited English Speaking Status. 2009-2013 American Community Survey 5-Year Estimates

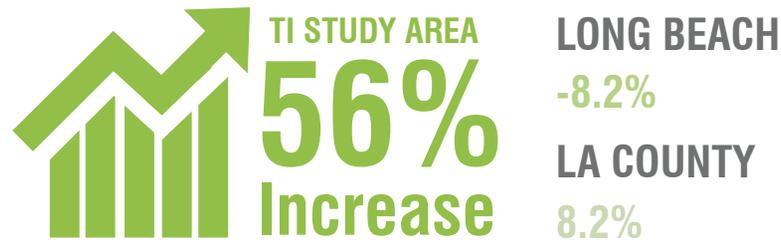
The TI study area represents a very ethnically diverse neighborhood in Long Beach. Over one third of the population has limited English proficiency.

Employment in the TI study area has grown rapidly from 2002-2011, especially when compared to the rates of employment occurring at a regional scale.

It is important to note that over half of the residents of the TI study area are homeowners.

## EMPLOYMENT AND INCOME

### EMPLOYMENT GROWTH (2002-2011)



Source: US Census Bureau 2013. OnTheMap Application. Longitudinal-Employer Household Dynamics Program.

### TOTAL EMPLOYMENT

TI STUDY AREA	LONG BEACH	LA COUNTY
3,234	40,030	4,176,034

Source: US Census Bureau 2013. OnTheMap Application. Longitudinal-Employer Household Dynamics Program.

### MEDIAN HOUSEHOLD INCOME

TI	\$19,726
LB	\$27,010
LA	\$28,250

### POVERTY RATE

TI	20.8%
LB	20.3%
LA	17.6%

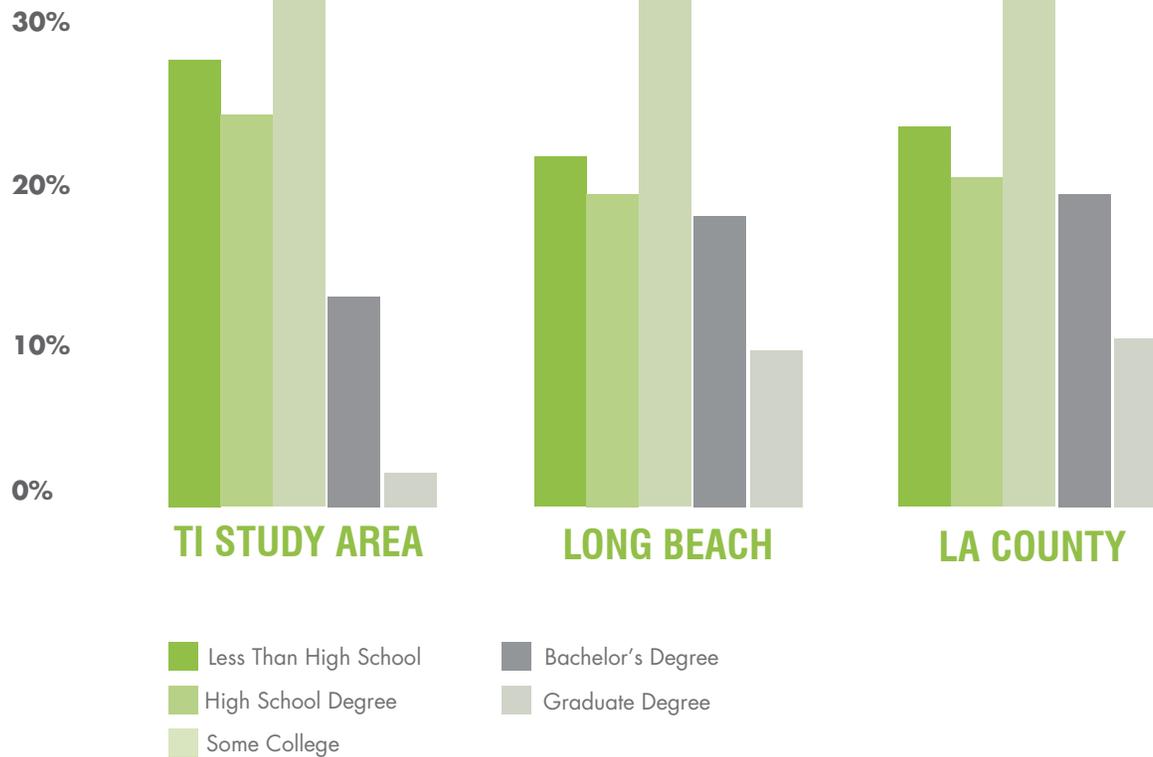
### OWNER-OCCUPIED HOUSING

TI	54.3%
LB	43.4%
LA	56.3%

Source: US Census Bureau. Median Household Income in the Past 12 Months (in 2013 inflated-adjusted dollars) 2009-2013 American Community Survey 5-Year Estimates and US Census Bureau 2010. Tenure, Household Size, and Age of Household 2010 Census Summary File 1.

## EDUCATION

### EDUCATIONAL ATTAINMENT



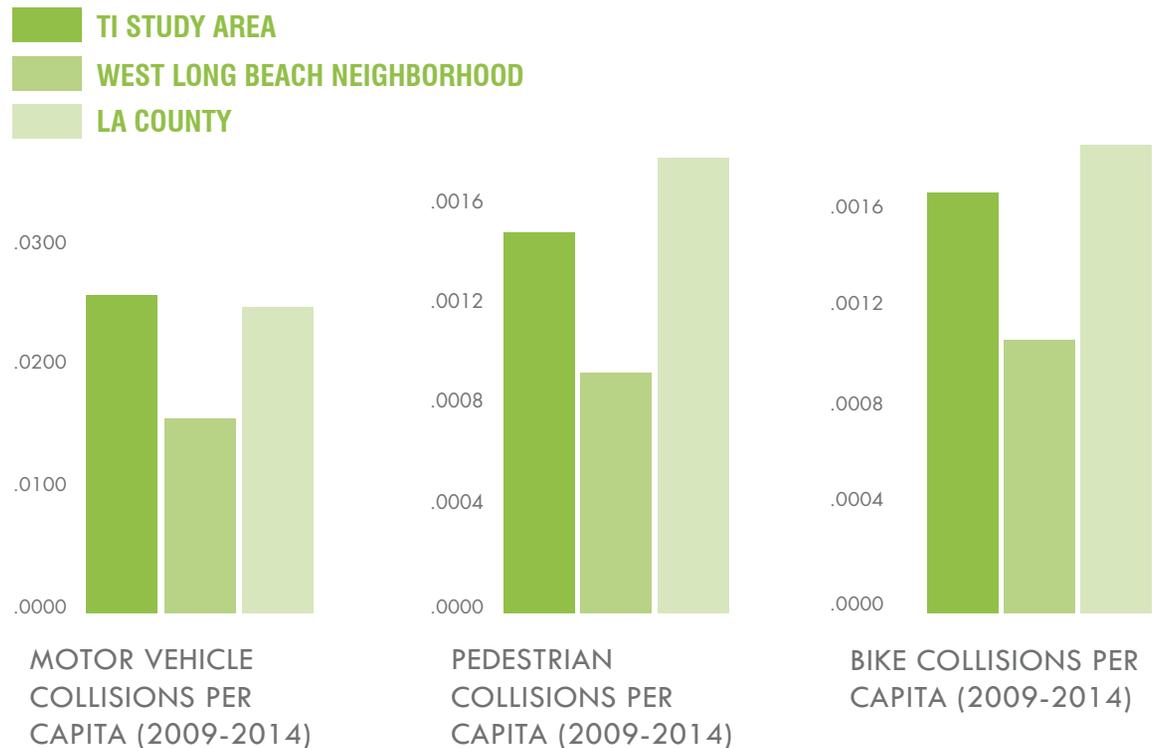
Source: US Census Bureau. Educational Attainment for the Population 25 Years and Over, 2009-2013 American Community Survey 5-Year Estimates.

The people living in the TI study area have High School and 'Some College' attainment rates that are similar to those in the rest of the City and County. However, those in the TI study area are less likely to have Bachelor's and Graduate degrees. Additionally, the TI study area has a greater percentage of less than high school graduates than Long Beach and Los Angeles County.

## ROAD SAFETY CHARACTERISTICS

When compared to the West Long Beach neighborhood, the TI study area experiences more motor vehicle, pedestrian, and bicycle collisions per capita. Generally, the TI study area experiences similar collision rates as LA County. This presents an opportunity to improve safety and decrease accidents by creating safe pedestrian and bicycle paths of travel.

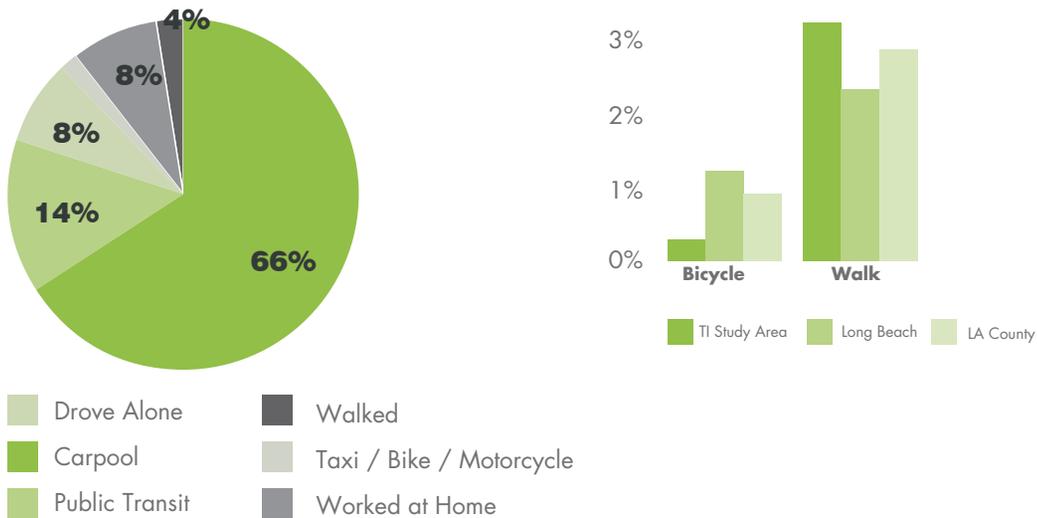
### COLLISIONS



Source: California Highway Patrol. The Statewide Integrated Traffic Records System (SWITRS) West Long Beach. Reporting period 1/2009-1/2014. Include Collision on: Private Property, Highway.

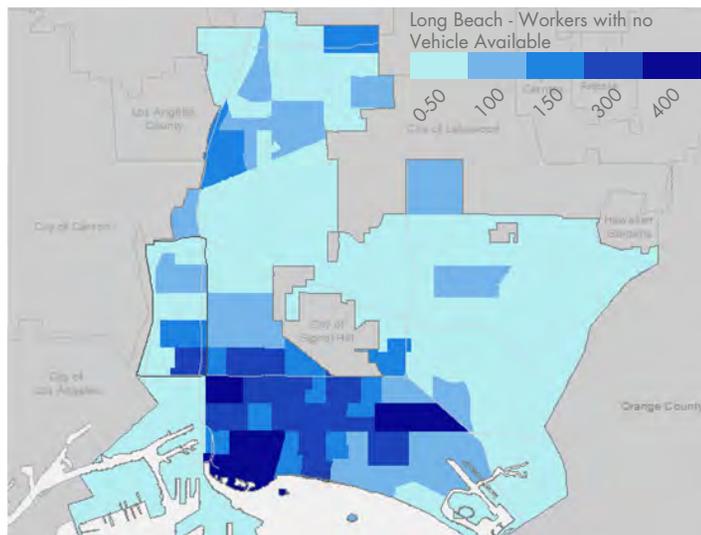
# TRANSPORTATION

## MODE OF TRANSPORTATION TO WORK



Source: US Census Bureau. Means of Transportation to Work. 2009-2013 American Community Survey 5-Year Estimates

## VEHICLE OWNERSHIP



Source: US Census Bureau (2009-2013). Los Angeles County, California. TIGER/Line Shapefiles with Selected Demographic and Economic Data. 2013 American Community Survey 5-Year Estimates. Retrieved from [www.census.gov/geo/maps-data/data/tiger-data.html](http://www.census.gov/geo/maps-data/data/tiger-data.html). ArcGIS Cartographic Roadway and Streets Files.

Within the TI study area, two-thirds of residents drive to work. While percentages of cyclists and pedestrians are low, more residents walk than bicycle to work.

# BUILT ENVIRONMENT ASSESSMENT

The existing conditions of the TI Freeway include a four lane facility with two northbound lanes and two southbound lanes separated by an at-grade unpaved median area. There is a portion of raised median near the intersection with Sepulveda Boulevard/Willow Street. As an existing freeway, the road is designed to California Department of Transportation design standards, includes 12' lanes and the road surface is designed for water to run off towards the shoulders; therefore it has a slight cross slope, typically 2%. On the east and west side of the freeway, along the right of way, there are drainage areas that collect and transmit run-off towards the south. There is a large water retention area on the northeast quadrant of the interchange of the TI freeway with Pacific Coast Highway. The edges of the paved roadway include a rolled curb along most of the roadway which helps to convey the drainage.

Generally, the trucks are using the freeway section as an alternative route instead of I-710 and Alameda, while many of the northbound trucks turn west at the Sepulveda Boulevard intersection. Southbound trucks travel to Pacific Coast Highway and toward Terminal Island.

## Typical Cross Section



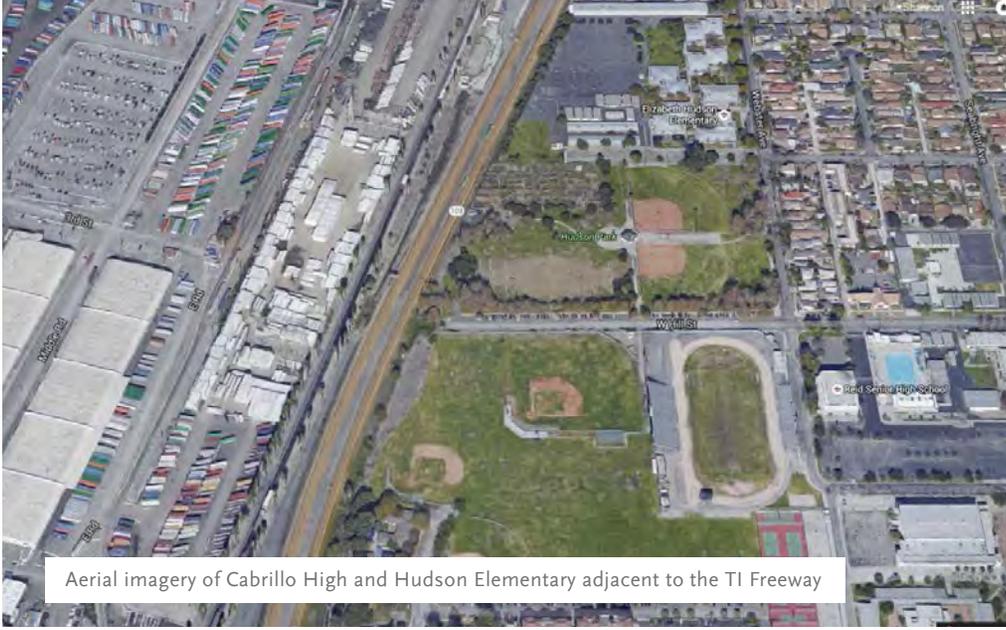
While the roadway configuration fluctuates throughout the project area, the road consists of two lanes in each direction, separated by a wide, center median.



Looking north on the TI Freeway



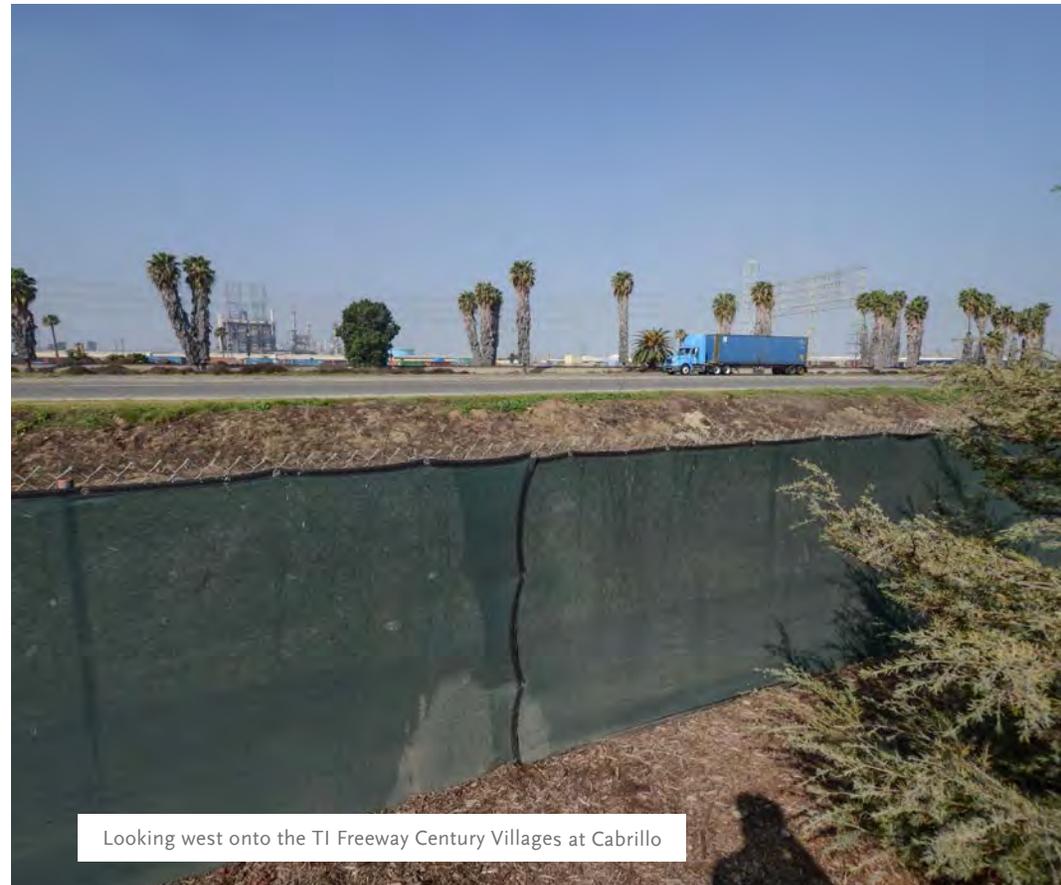
Looking west toward the TI Freeway from Hudson Park



Aerial imagery of Cabrillo High and Hudson Elementary adjacent to the TI Freeway



Looking north to oncoming truck traffic on the TI Freeway



Looking west onto the TI Freeway Century Villages at Cabrillo

## TRAFFIC CHARACTERISTICS AND DATA

### CURRENT ANNUAL DAILY TRAFFIC

On the section of the TI Freeway north of Pacific Coast Highway, there are about 7,000 daily vehicles northbound and about 5,000 daily vehicles southbound.

### PERCENTAGE OF TRUCKS AND PORT TRUCKS

Approximately 50% of the daily vehicles are trucks (approximately 6,000).

### STUDY AREA TRAFFIC VOLUMES

In comparison to the TI Freeway, PCH carries about 40,000 vehicles per day and Sepulveda/Willow carries about 20,000 vehicles per day. Key routes connecting to the TI Freeway are the east-west roads of Ocean Boulevard, Anaheim Street, Pacific Coast Highway, and Sepulveda Boulevard/Willow Street. Key parallel routes are Alameda Street to the west and Santa Fe Ave and I-710 to the east.

### EXISTING TRIP ORIGINS AND DESTINATIONS

The majority of trips using the TI Freeway north of the Pacific Coast Highway are traveling to the port area and traversing the entire length of the freeway to its southern terminus at Seaside/Ocean Boulevard. The trips to/from west of the TI Freeway terminus access the industrial areas along Sepulveda Boulevard including the Intermodal Container Transfer Facility (ICTF). The trips to/from east of the TI freeway terminus access I-710 via Willow Street.

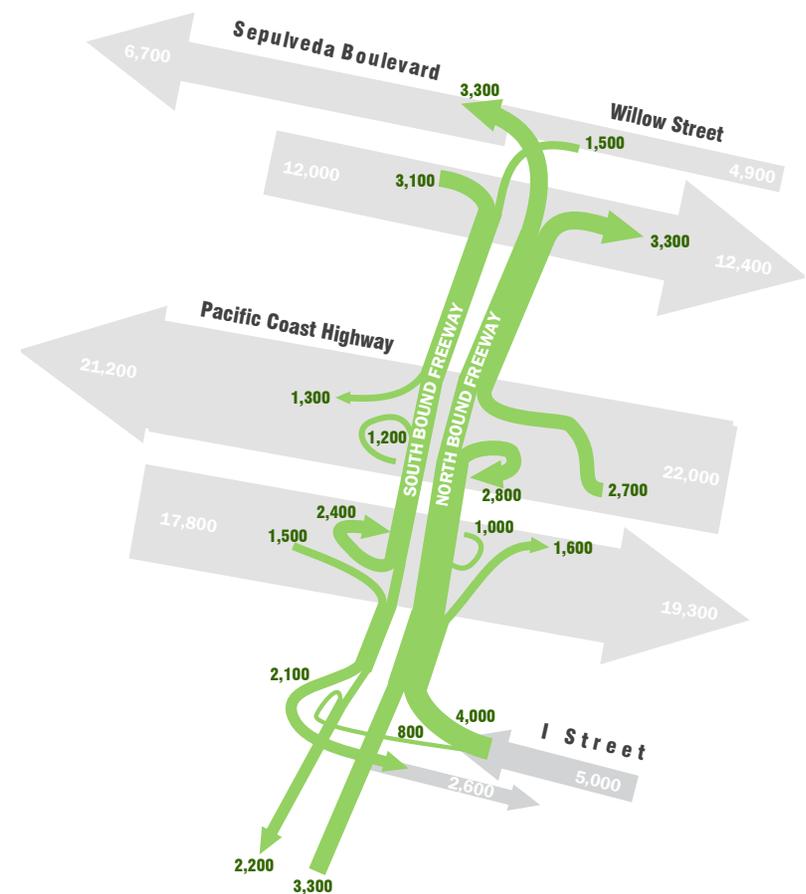
### LIKELY REDISTRIBUTION ROUTES

Vacating the portion of the TI Freeway north of PCH would not result in a 100% diversion of trips on that segment to PCH. Based on analysis using the Port of LA/LB subarea Travel Demand Model (PortTAM), the majority of trips on the segment north of PCH are using the TI Freeway to access I-710 as an alternative to Ocean Blvd, Anaheim Street and Pacific Coast Highway. PCH diversion is only 1 mile to Alameda. Santa Fe would see a jump in automobile traffic (no trucks would be expected on this Street) between PCH and Willow (which would be expected as the next parallel route), and there would be a rise on Sepulveda and Alameda, likely as trips from I-710 would go past the vacated TI section and continue on Sepulveda to Alameda Street and other point west.

PCH would likely not see more than 2,000 to 3,000 (about 25%) of the 11,200 ADT on the TI Freeway. That is because almost all of that traffic originates on Terminal Island and is intended for I-710 (and vice versa), so the other I-710 ramps on Anaheim Street and the direct connection from Ocean Boulevard would attract the majority of those trips. Therefore the redistribution is less of a detour of current trips and more of a change that forces trips to utilize I-710 for a greater portion of their trip. The modeling does reflect what happens along the TI freeway, in that travelers shift over from I-710, to cut down to Terminal Island 'the back way'.

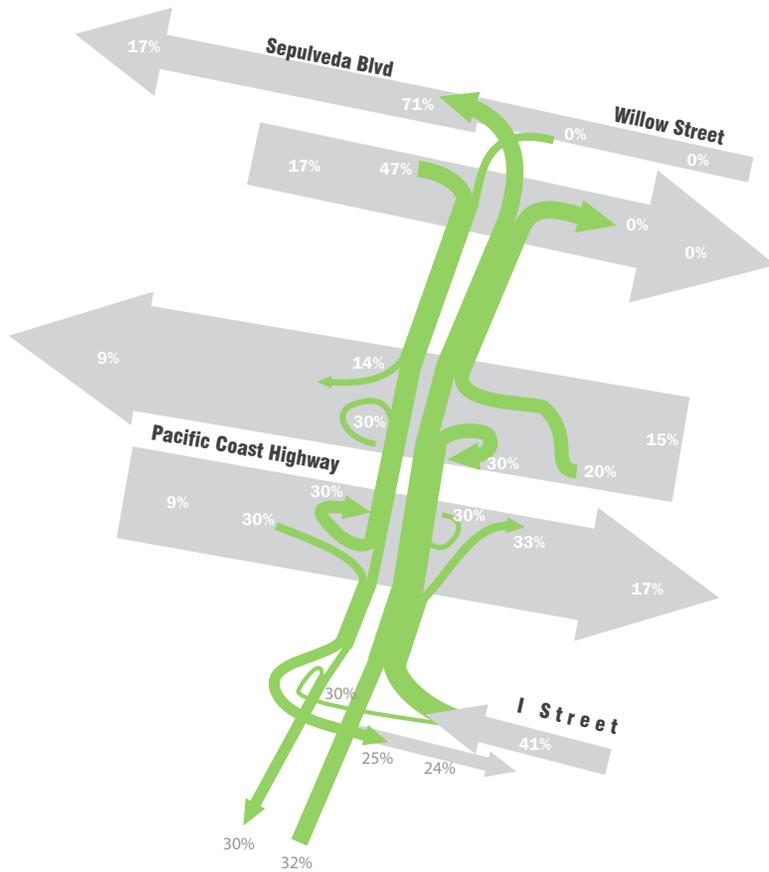
## EXISTING TRAVEL VOLUMES

The existing traffic volumes show an average of 11,200 ADT, with a heavier concentration of northbound traffic. Line widths in the figure below are proportional to daily volume of traffic. Numbers indicate average daily traffic.



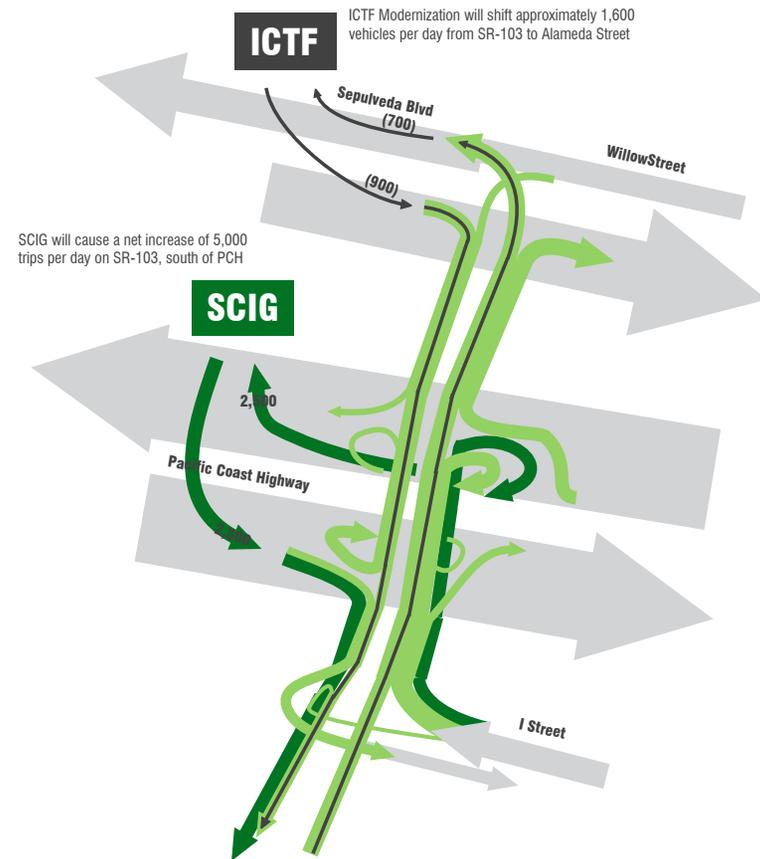
## TRUCK PERCENTAGES

The TI Freeway carries heavier northbound truck movements.



## EFFECTS OF SCIG AND ICTF ON DAILY VOLUMES

If approved, the ICTF Modernization may be anticipated to shift approximately 1,600 vehicles per day from the TI Freeway to Alameda Street. SCIG will cause a net increase of 5,000 trips per day on the TI Freeway, south of PCH, outside of the project area.



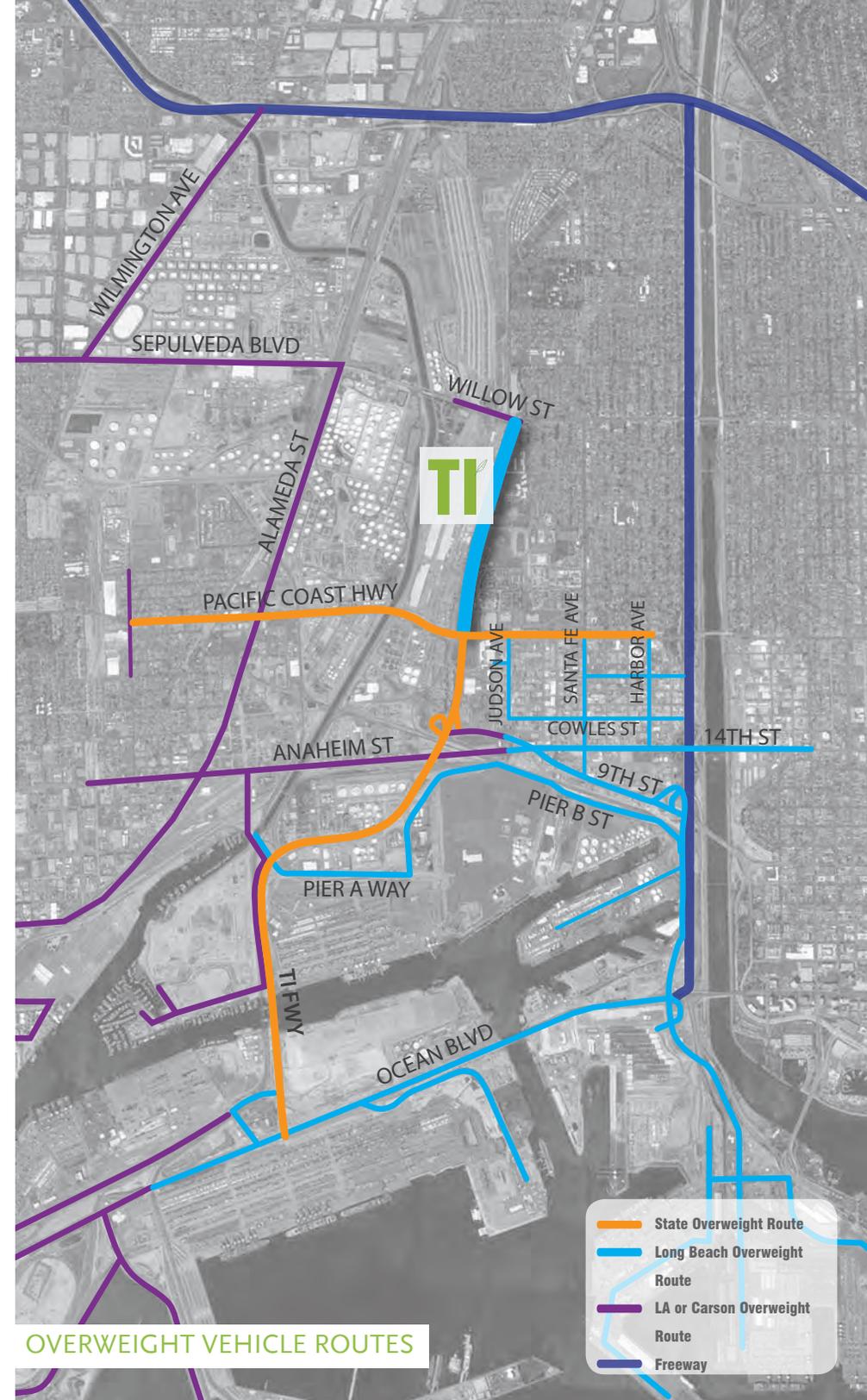
## OVERWEIGHT VEHICLE ROUTES

The map to the right illustrates the local overweight vehicle routes in West Long Beach, Los Angeles, and Carson. Within the City of Long Beach, Judson Avenue, Santa Fe Avenue and Harbor Avenue are identified as overweight routes south of Pacific Coast Highway. Adjacent overweight routes such as Alameda Street, fall within the boundaries of the City of Los Angeles or Carson.

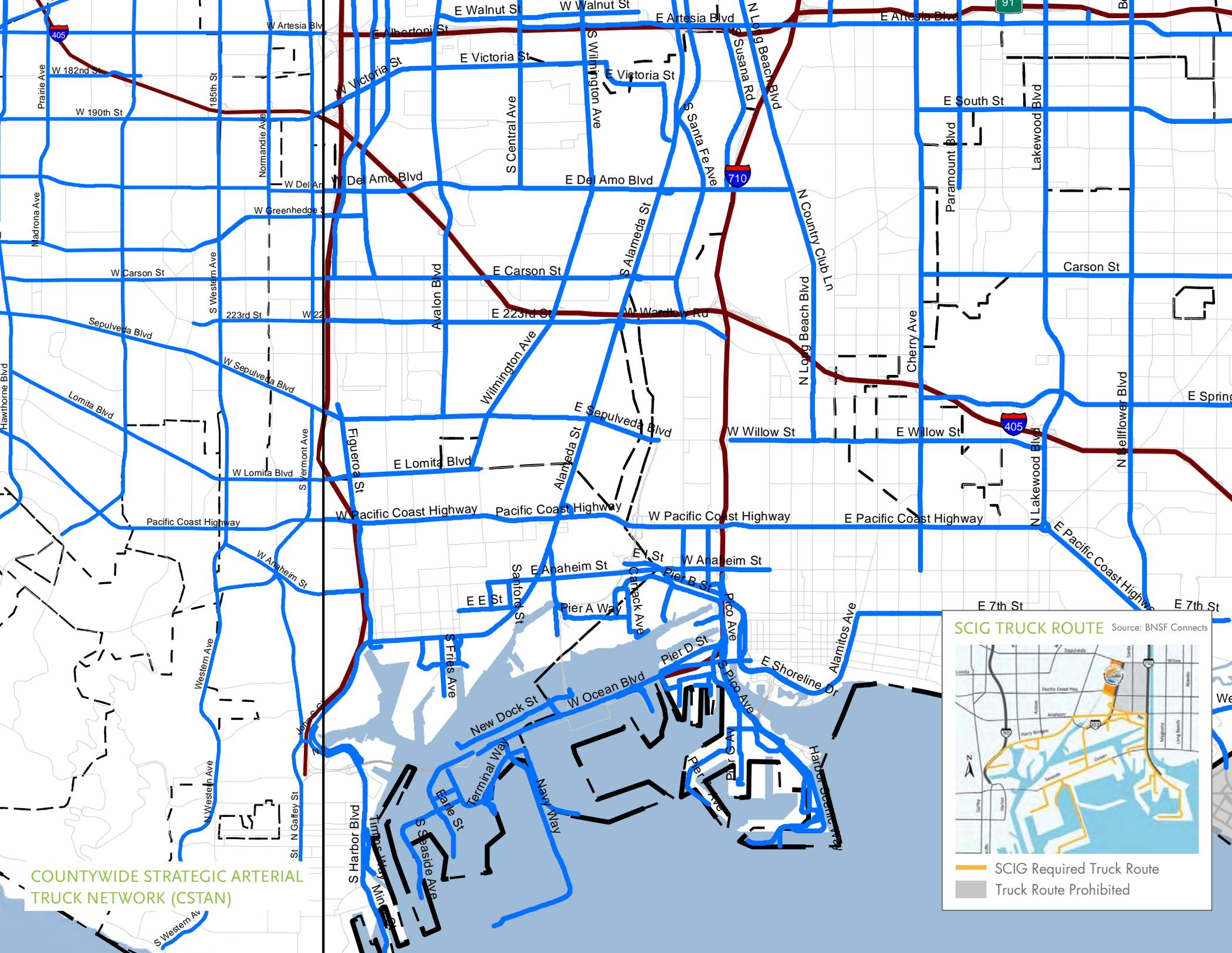
## LOCAL COUNTYWIDE STRATEGIC ARTERIAL TRUCK NETWORK (CSTAN)

The Local Countywide Strategic Arterial Truck Network (CSTAN) has been drafted to identify an arterial truck system throughout Los Angeles County. Identifying and prioritizing routes within the county designates particular routes for trucks, minimizing conflicts and collisions between trucks and pedestrian or bicyclists.

The network map on the next page illustrates the arterial truck routes that are adjacent to the TI Freeway. Alameda Street and Pacific Coast Highway are local connections that would continue to be used following the decommission. Additional analysis is needed to define an alternative overweight route for businesses located near the TI Freeway.



OVERWEIGHT VEHICLE ROUTES



COUNTYWIDE STRATEGIC ARTERIAL TRUCK NETWORK (CSTAN)

SCIG TRUCK ROUTE Source: BNSF Connects



- SCIG Required Truck Route
- Truck Route Prohibited

# OPPORTUNITIES AND CONSTRAINTS

## ACTIVE TRANSPORTATION

### Connector to future Bike Boulevard on Hill Street

The City of Long Beach's Mobility Element includes a future bike boulevard on Hill Street and Class II bike lanes on Willow Street. Currently, Pacific Coast Highway has a Class III bike facility. Any new bike facility on the reconfigured TI should include provisions for connections to Hill Street for future bike connectivity in the city.

### Class I Bike Facility / Shared Use Path

A Class I bike facility/shared use path is a separated paved pathway that is dedicated to non-motorized uses. The pathway could be on the east or west side of the reconfigured TI Freeway. It may be connected to other bicycle or walking paths at Sepulveda Boulevard/Willow Street or 20th Street.

## ROADWAY OPPORTUNITIES & CONSIDERATIONS

### Transportation Facility Scaled for Neighborhood and Future Demand

Re-design of the freeway would provide an opportunity to scale the roadway to the appropriate classification to handle existing and future traffic demand. The City of Long Beach's Mobility Plan includes Street Typology design criteria that can guide the design of the facility. Based on existing and future traffic demand on the TI Freeway segment, a local 2-lane roadway is sufficient. Regional traffic would not be affected and the reconfigured roadway would mainly be an access point to the adjacent local community.

### Traffic Calming

With a reconfigured roadway, there will be an opportunity to provide traffic calming along the entire corridor to manage traffic speeds. Access points to the neighborhood provide opportunities for intersection controls like stop signs or roundabouts. Roundabouts can be designed for desired design speeds. Other traffic calming features may include chokers and narrowed lanes.

### Caltrans Relinquishment/Reconfiguration of the Pacific Coast Highway Interchange

The reconfiguration of the TI Freeway and new roadway connections are limited by the existing interchange configuration at Pacific Coast Highway. With a potential relinquishment of the interchange to the City from Caltrans, the connection to the new transportation facility can be more flexible and additional right-of-way can be utilized for open space or landscaped area.

### Project Study Report (PSR) & Other Technical Reports Analyzing Reconfiguration of PCH Interchange

If the interchange at the Pacific Coast Highway is to be reconfigured, there are a number of technical analyses that would need to be prepared to evaluate the alternatives and determine which reconfiguration is recommended. Caltrans has the framework for the analysis and reports, including a Project Study Report, that are needed to support the changes.

### New Local Road Connection to PCH & SR-103

Termination of a freeway onto local roads will need to be carefully designed. The reconfigured local roadway will need to be connected to both Pacific Coast Highway at the interchange, and also would need to transition back in to the freeway lanes on the SR-103.

### Existing Freeway to a Reconfigured Roadway

The existing TI Freeway was designed under Caltrans design standards for freeways under heavy truck loads and higher speeds. Drainage, shoulder widths, lane widths, cross slope, signage, etc. were designed for a freeway and may not include the necessary design criteria for a local roadway. For example, the cross slope on the roadway is generally 2% toward the outer shoulder area, whereas if the new roadway utilized either the existing northbound or southbound freeway, it would typically require the roadway to drain water to either side of the roadway.

### Elevation Considerations

The elevation of the existing TI Freeway is higher than potential roadway connections at Hill Street and other local roads on the east side. In order to make a connection, either the existing local roadway may be ramped up to meet the existing freeway grade, or the reconfigured roadway would be lowered.

### Drainage Areas

Currently there are large areas of drainage swales and retention areas that will need to be reconfigured depending on the proposed use of the right-of-way. Currently the drainage is conveyed from north to south along both the east and west side of the freeway.

## LANDSCAPING AND OPEN SPACE

### Open Space

With the partial or full removal of the TI Freeway, an opportunity exists to utilize the existing roadway corridor right-of-way as an open space or landscaped area. Configurations of the new space could include open space on either the west side of the right-of-way, or the east side of the right-of-way, or the entire right-of-way could be reconfigured to open space.

### Connections to Existing Park Space

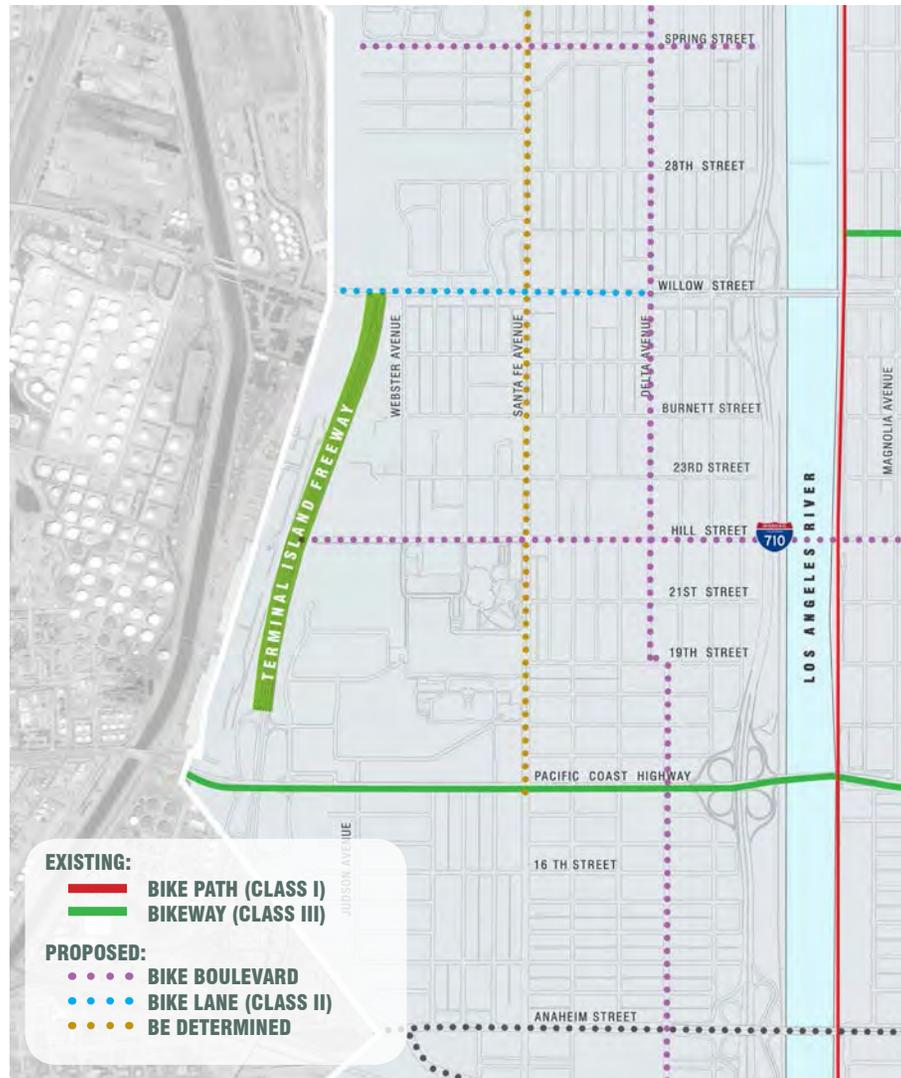
With an eastern adjacency to Hudson Park, design of the TI project should consider a physical connection to this existing facility. Additionally, connections to existing school-owned fields and open spaces could provide additional areas that may be used for outdoor education purposes. Pedestrian, bicycle, and open space connections to all schools, parks, and campuses adjacent to the freeway should be prioritized in the design concept phase.



# MOVEMENT OF PEOPLE AND GOODS

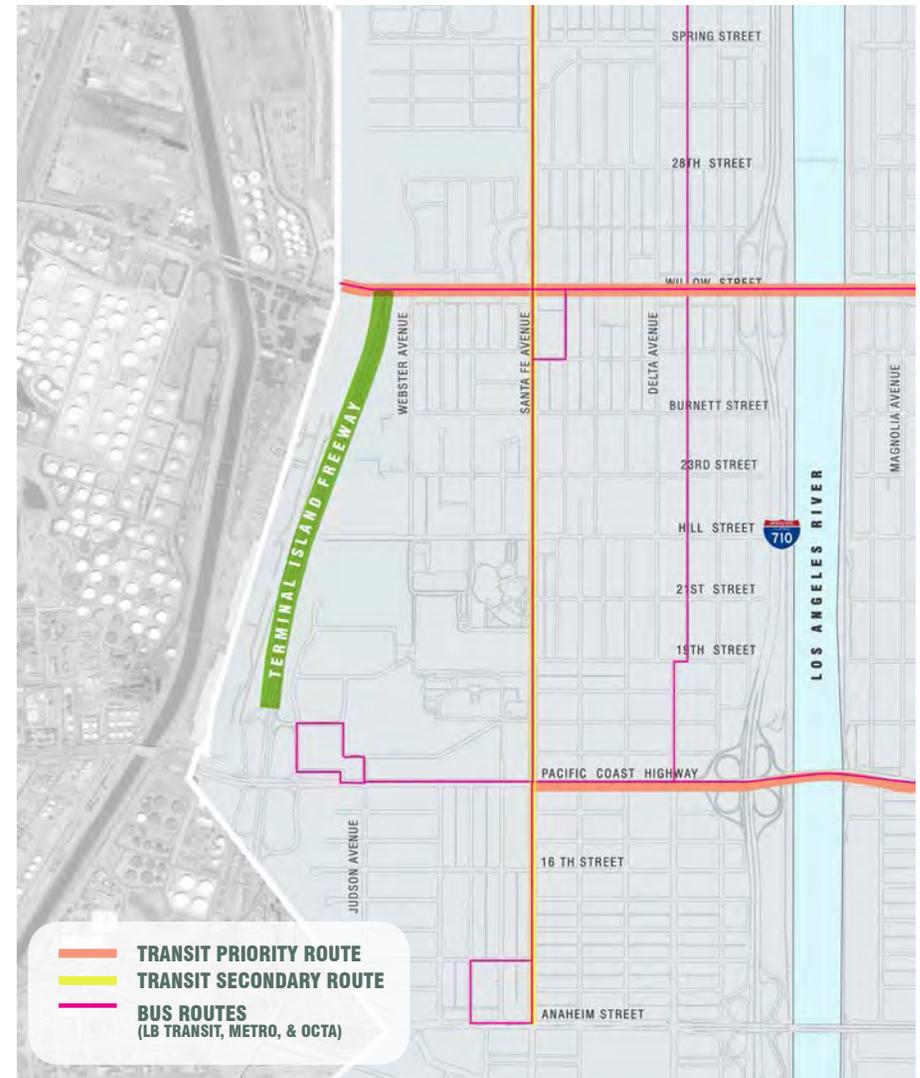
## BIKE PLAN

The Long Beach Mobility Element identifies two parallel north/south streets as bicycle routes for the community — Santa Fe Avenue and Delta Avenue. Hill Street, a potential connector to the TI Freeway, is identified as a future Bicycle Boulevard. Willow Street and Pacific Coast Highway are also identified as a key east west bicycle connectors to the decommissioned freeway.



## TRANSIT ROUTES

The Mobility Element identifies Willow Street and Pacific Coast Highway (east of Santa Fe Avenue) as Transit Priority Routes. Current bus lines service the Century Villages at Cabrillo, just north of Pacific Coast Highway.



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GREEN TL

GREEN TL. CONCEPT

GREEN TL. COMMUNITY VISION

MOVEMENT+AGE+ACCESSIBILITY

WHAT WE'LL BRING FROM THE COMMUNITY:

- 98% Increased Environmental Benefits for Our Community
- 98% Increased Quality of Life for Neighborhood

Local Amenities: Parks, Trails, Community Center, etc.

GREEN TL. DRAFT PLAN AND RENDERINGS

GREEN TL. COMMUNITY DRIVEN AMENITIES



# 03

## COMMUNITY OUTREACH

A robust community outreach strategy was carried out in the preparation of Green TI Plan. As part of the outreach, the City has hosted four public workshops, a number of stakeholder meetings with local organizations, Technical Advisory Committee meetings, and committee meetings with the City of Long Beach Planning Commission, Board of Harbor Commissioners, City Council, and several other local organizations.

The following chapter summarizes the findings from the Green TI project outreach events. Community participation has informed the goals, programming elements, and conceptual design of the Green TI Plan. The City advertised these public workshops by building a project brand, marketing online, building a project website, flying with multilingual translations, and announcing them at other meetings and events. A detailed summary of each workshop can be found in the Appendix of this document.

## WORKSHOP #1

The first community workshop for the Green TI Plan was held on Saturday, December 6th, 2014 at Silverado Park. The workshop began with an overview of the current conditions of the Terminal Island Freeway and offered relevant case studies of similar freeway decommissioning projects from around the country. The presentation ended with several conceptual graphics of how the freeway could be converted in order to inspire and inform the 92 workshop participants.

Following the presentation, attendees of the workshop were organized into small groups for an interactive activity. Participants were asked how they would like to “green” the Terminal Island Freeway.



# TOP SIX COMMUNITY-DEFINED GOALS FOR GREEN TI

- 1 Provide environmental benefits to our community
- 2 Prevent overflow freeway traffic into the neighborhood
- 3 Quiet noise and reduce freeway intrusion
- 4 Link the residential neighborhoods and schools
- 5 Introduce pedestrian and bike paths
- 6 Calm traffic



## OTHER COMMUNITY-DEFINED GOALS

*NOTE: NUMBERS 1-6 ARE LISTED ON THE LEFT*

7. Provide a place for recreation or exercise
8. Provide a place for people to sit and stroll
9. Be a showcase for environmental best practices
10. Attract investment to West Long Beach
11. Protect goods movement, jobs, and income
12. Provide space for events, entertainment, and cultural activities
13. Brand the City
14. Be a regional destination for people from outside the area
15. Act as a visual gateway to West Long Beach

## WORKSHOP #2

The second community workshop for the Green TI Plan was held on Saturday, March 14th, 2015 at Silverado Park. The workshop began with a brief presentation of the project along with findings from Workshop #1 and findings from the existing conditions analysis. In total, 61 participants signed in to the event.

Three workshop activities were held. The first activity helped inform which streets would be ideal connectors to the future green space. The second activity centered around the future roadway configuration of the street (if any). The final activity involved initial design concepts based on the goals determined by the community in Workshop #1. Participants voted on their top 12 programming elements, which are shown to the right.



### 1 URBAN FORESTRY



### 2 BIKE PATHS



### 3 POLLUTION-EATING PLANTS



# TOP 12 COMMUNITY-DEFINED PROGRAMMING ELEMENTS FOR GREEN TI

4 COMMUNITY GARDENS



7 WATER COLLECTION DEVICES



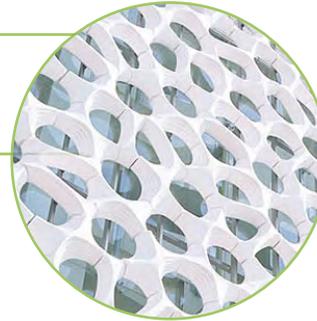
10 FITNESS ZONE



5 NATIVE + EDUCATION GARDENS



8 SMOG EATING SURFACES



11 LIGHTING



6 PLAY AREA



9 GAME AREA / SKATE AREA



12 SHADE STRUCTURES





## WORKSHOP #3

The third community workshop for the Green TI Plan was held on Saturday, July 18th, 2015 at Silverado Park. 42 participants signed in to the event. The project team showcased the revised and updated existing conditions of the Terminal Island Freeway, and described a variety of design alternatives for the project. These alternatives demonstrated options for the road location, level of road accessibility, division of planted buffer zone versus people space, spatial organization, and the site story. The presentation concluded with two conceptual designs showing how the freeway might be converted in order to cultivate discussions with workshop participants.

After the presentation, participants were divided into small groups to discuss and comment on design alternatives for one of the two site stories. After learning about the two design alternatives, participants were asked to fill out a scorecard to direct how the project should move forward.



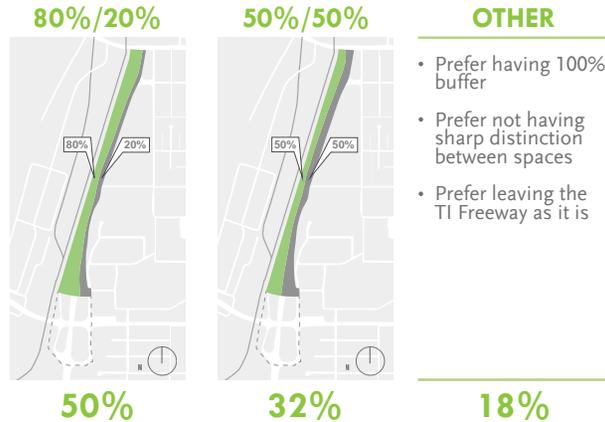
# CONCEPTUAL DESIGN DIRECTION

THEMES THAT DIRECT THE DESIGN PROCESS

URBAN EDGE	MOUNTAINS TO SEA	OTHER
<p>Located at the westernmost edge of the city, Green TI provides an opportunity to bring nature back into the urban environment.</p>	<p>Users flow through the site and collect in gathering spaces, just as water from the LA river once flowed through the city</p>	<ul style="list-style-type: none"> <li>Prefer neither</li> </ul>
<b>50%</b>	<b>41%</b>	<b>9%</b>

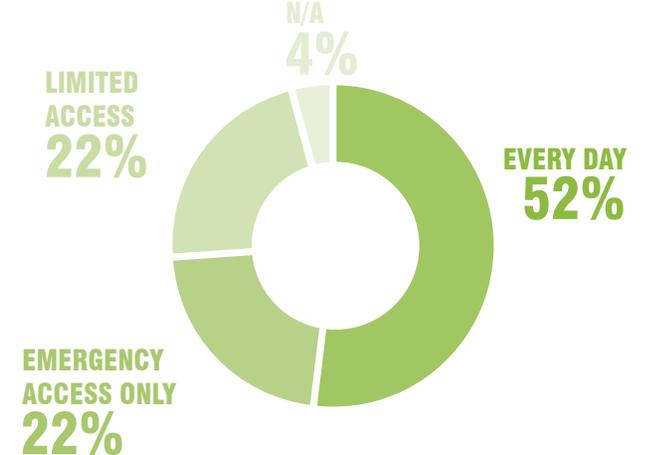
# DISTRIBUTION OF BUFFER SPACE

PERCENTAGE OF SEMI-ACCESSIBLE BUFFER SPACE TO FULLY-ACCESSIBLE COMMUNITY SPACE



# ROAD LOCATION + ACCESSIBILITY

LEVEL OF ROAD ACCESSIBILITY



# DISTRIBUTION OF PROGRAMMING

PROGRAMMING ELEMENTS SHOULD EITHER BE CLUSTERED OR SEPARATED INTO DISTRICTS

CLUSTER	LINEAR	OTHER
		<ul style="list-style-type: none"> <li>Prefer leaving the TI Freeway as it is</li> </ul>
<b>80%</b>	<b>15%</b>	<b>5%</b>

# PROGRAMMING THE BUFFER

THREE TYPES OF BUFFER SPACE

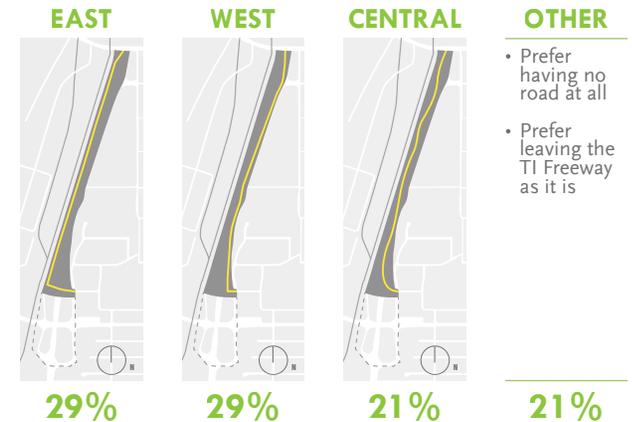
GENERAL COMMENTS:

- Incorporate sustainable design and consider water usage and plant types
- Allow people to access the space
- Maintain high level of safety
- Mitigate noise issues

- 1 URBAN FOREST**
- 2 WETLAND**
- 3 CITY NURSERY**

# ROAD LOCATION

LOCATION OF THE ROAD



Designing a road that strategically meanders through the space in several directions can help to address the mix of responses from the community.



## WORKSHOP #4

The fourth community workshop for the Green TI Plan was held on Saturday, October 24th, 2015 on Hill Street next to Hudson Park. The workshop was an open-street event celebrating the progress made on the Green TI project. This public event consisted of music, food, games and tents showcasing supporting organizations and City departments.

Participants were also led through a series of large-scale banners that described existing conditions of the Terminal Island Freeway, results from previous community workshops, and conceptual design alternatives. These alternatives responded to the existing conditions analysis and the input received from the community workshops.

86 participants shared what programming features they most supported in the conceptual design by filling out a scorecard. All of the participants who responded to the survey support the Green TI Plan.



# TOP FIVE DESIGN ELEMENTS IDENTIFIED FOR GREEN TI BY THE COMMUNITY

(NUMBER REFERS TO NUMBER OF VOTES RECEIVED)

## WHAT THE DESIGN ELEMENTS CAN LOOK LIKE



PEDESTRIAN & BICYCLE FACILITIES



PLANTED BUFFER/URBAN FOREST



NATURE PLAY



WETLAND/WATER CLEANSING AREA



NATIVE/EDUCATION GARDEN



PLAZA



PARK ROAD



ECO LAB



SKATE AREA



OUTDOOR CLASSROOM

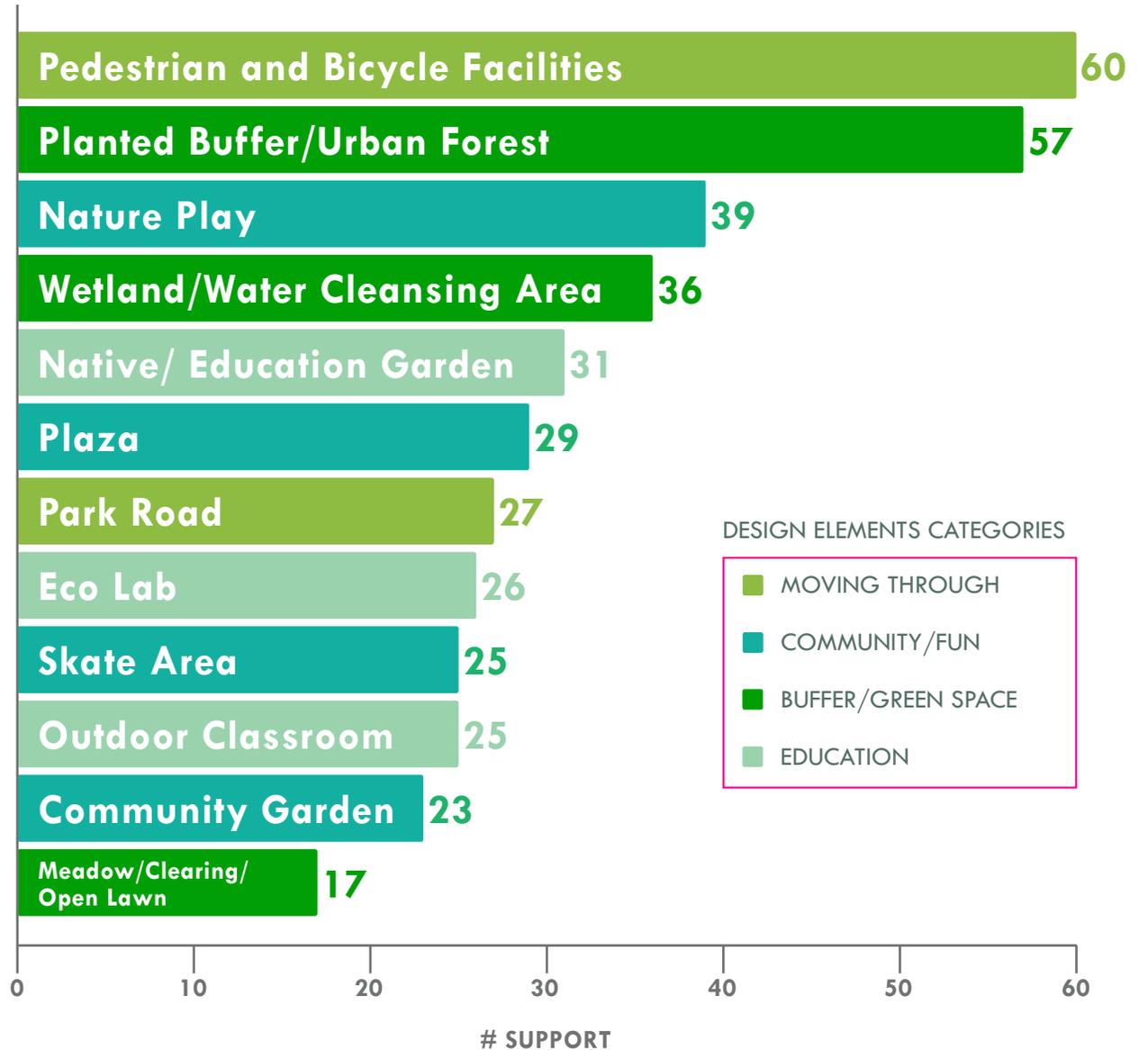


COMMUNITY GARDEN



MEADOW/CLEARING/OPEN LAWN

PROGRAMMING ELEMENTS



## STAKEHOLDER MEETINGS

A series of stakeholder meetings were also held with existing West Long Beach organizations, community groups, local business and port groups, and other interested parties. The matrix shown to the right lists the stakeholder meetings that were held throughout the project process.

At many stakeholder meetings, the project team gave a brief presentation and overview of the Green TI project, described where the project was in the planning process, and offered opportunities for interested parties to discuss details of the plan and key considerations for future development. Attendees were also encouraged to disseminate information to listservs, and to join the workshops that were held between December 2014 and October 2015. Stakeholder meetings offered community residents the opportunity to voice concerns about the preliminary design concepts, integration of the roadway, and other programming elements.



# COMMISSIONS & COUNCIL PRESENTATIONS

**NOV  
19** **Planning  
Commission**

**DEC  
1** **City Council**

<b>Business Stakeholders</b>	
Magnolia Industrial Group	June 17 and October 21 2015
Tesoro, Cal Cartage, LA Grain, CVC	June 30, 2015
Watson Land Co., Future Ports, Nova, Fast Lane, Three Rivers	August 19, 2015
CSULB Foundation/Tech Park	September 18, 2015
Future Ports of America	August 10, 2015
International Warehouse Logistics Association	August 10 and Sept 17 2015
<b>Community Stakeholders</b>	
Wrigley Association	June 1 and October 5, 2015
Wrigley Area Neighborhood Alliance	June 15 and October 19 2015
Willmore City Heritage Association	October 20, 2015
West Long Beach Association	September 24, 2015
Westside Area Project Council	July 8, 2015
WLBA	July 8, 2015
Semillas De Esperanza	June 17 and October 21 2015
Century Villages at Cabrillo	October 8, 2015
<b>Health Organization Groups</b>	
Long Beach Alliance for Children with Asthma	July 14, 2015
Long Beach Alliance for Food and Fitness	May 27, 2015
<b>Environmental Justice Stakeholder Groups</b>	
Port of Long Beach Environmental Justice Group	May 29, 2015
<b>Transportation and Government Groups</b>	
Gateway GOC, Caltrans, Metro, SCAG, SCE, Carson, AQMD, Long Beach Transit	July 15, 2015
LBUSD, Cabrillo HS	July 15, 2015
Hudson Elementary	September 24, 2015
<b>Terminal Operators Groups</b>	
West Coast Marine Terminal Operators Agreement (WCMTOA)	June 19, 2015





# 04

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## DESIGN CONCEPTS

The Green TI Plan documents a look at the environmental and community opportunities that can be captured by de-commissioning and repurposing the Terminal Island Freeway. A central goal of the conceptual design is creating a healthy green space for the West Long Beach community. The design also takes community input, the unique history of the site, and the local surrounding context (see Chapters 2 & 3) into consideration. Historically, the Los Angeles River once flowed freely through the Los Angeles Basin, carving out unique parts of land along the way. Prior to the River's channelization, the TI Freeway site was a marshy terminus for the river. Inspiration for the proposed design draws from the natural history and ecology of the site.

## ACCESS AND CIRCULATION CONCEPTS

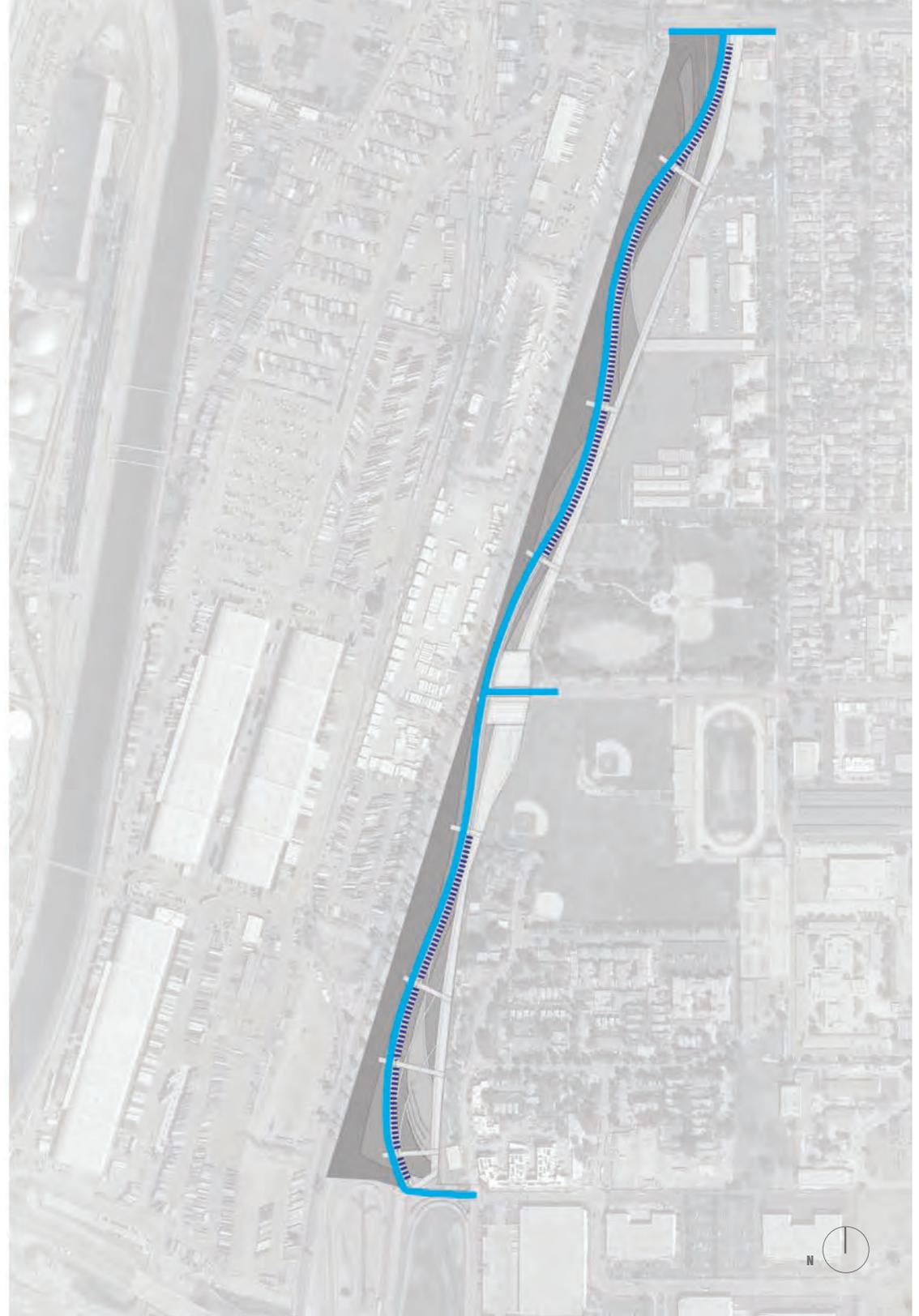
### VEHICULAR

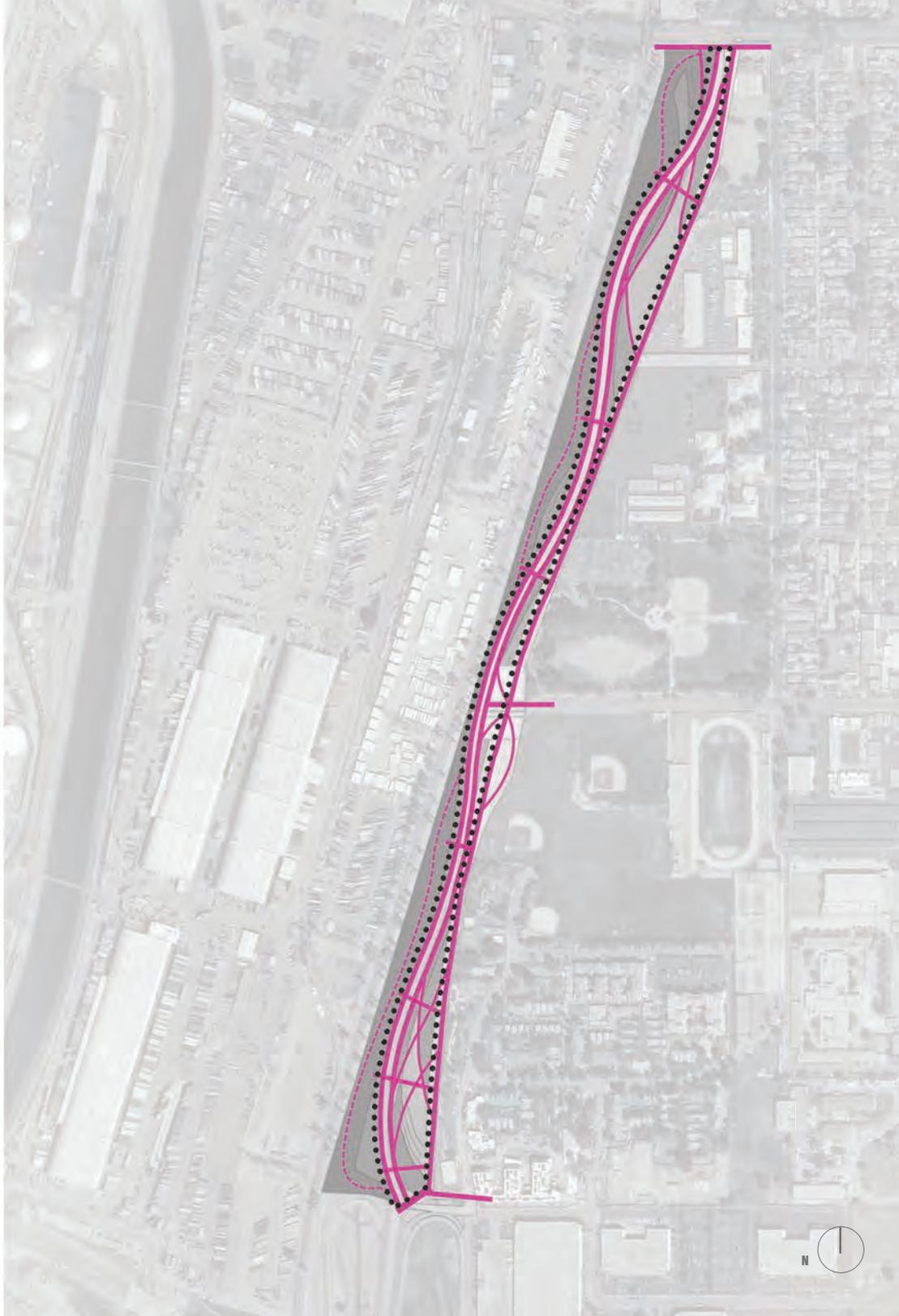
In this design concept, vehicles can travel through the green space on a meandering north-south road that connects Willow Street to 20th Street. Vehicles can also enter on Hill Street to provide the West Long Beach neighborhood with direct access to the site. This park road is designed to be separate from the southern portion of the TI Freeway (south of Pacific Coast Highway), which will remain active. This separation will cause the Terminal Island Freeway to end at Pacific Coast Highway. This conversion will be critical, as it will reduce automobile traffic along the park road, making it a safer place for pedestrians and cyclists.

The curvilinear road helps to define the larger geometry of the space and also serves as a traffic calming device. The road is wide enough for emergency vehicles to travel and can be open 24 hours a day, partially closed, or fully closed for special functions. Additionally, a curvilinear road that spans the entire length of the space provides regular surveillance against crime and other undesired activities. Parallel parking has been included along the entirety of the mile-long stretch, except near the central plaza where the site is its narrowest. The disbursement of parking allows different parts of the neighborhood to access the space and helps to alleviate parking demand.

The TI Freeway terminus design would need to slow northbound TI Freeway traffic, and should start downgrading the speed on the roadway past the Henry Fort Avenue off-ramp. The current terminus of the Terminal Island Freeway is an example of a signalized 'T' intersection. As a freeway terminus which does not seem to have significant safety issue however, the interchange at PCH does not have the same amount of approach sight distance and is not at grade with the mainline of Pacific Coast Highway. Either the connection to Pacific Coast Highway will need to rise on ramps to meet PCH as it does today or the TI Freeway will need to be raised south of PCH to meet PCH at an intersection.

 ROAD  
 PARKING





## PEDESTRIAN + BIKE

In addition to the park road, there are pathways for pedestrians and cyclists which provide healthier experiences for all types of users. A wide pedestrian paseo and bikeway along the eastern edge of the site allows for convenient connections to the adjacent properties. The paseo offers children in the neighborhood a safe route to get to schools abutting the TI Freeway. The multi-modal paths that run north-south on either side of the road create a 2-mile loop for walking, running, or biking. This experience can be enhanced by having trees that provide shade, seating that create places to rest, and sufficient lighting for safety. Connections can be made in the new space from adjacent communities and schools (Cabrillo High School and Hudson Elementary) as appropriate and desirable.

- PEDESTRIAN PATH
- • • • BICYCLE PATH

## ECOLOGY AND PLANTING

The green space is broken into four different ecologies: urban forest, tidal wetland/bioswales, meadows, and native gardens. The urban forest runs along the westernmost edge of the site, creating a large green buffer from adjacent industrial activities. The earth along this edge abuts a 12-foot wall that functions as a sound barrier and enclosure for the eastern, more-exposed portion of the space. The urban forest is heavily treed with a dense layer of understory planting. There is very little human habitation planned in this space, as the buffers may also serve as wildlife habitation for species of birds, insects, etc.

- URBAN FOREST
- TIDAL WETLAND
- MEADOWS
- NATIVE GARDENS





## STORMWATER AND DRAINAGE

The water table in this area is very high and certain areas of the site are prone to occasional flooding. Water will be directed to a bioswale stream that runs north-south through the center of the site. At various points, the stream opens into larger water collection areas that hold more water during seasonal flooding. The stream terminates at the southern portion of the site into a large planted tidal marsh. Only native and drought tolerant plantings will be used within the proposed green space. Special native gardens along the northern and southern pathways will showcase the beauty of our natural vegetation. In addition to the native gardens, meadow areas will be accessible to allow for areas of play and gathering.

 STORMWATER STREAM

## PROGRAMMING AND USAGE

The proposed greenspace serves as a buffer from adjacent industrial activities and allows for exciting new uses. The program types are broken into three categories: community gathering, play/fitness, and education/eco-learning. Each type is located in close proximity to the three entrances allowing visitors quick access to activities no matter where they arrive.

The event lawn to the north is a flexible space that can accommodate a variety of uses such as festivals, pick-up games, and picnics. The central plaza is the main hub of the community gathering space because of its centrality and adjacency to Hudson Park and Cabrillo High School. The road running through the plaza can be closed for larger events without disrupting the vehicular flow of the main park road. The plaza is also a flexible space and can be programmed with community events such as farmers markets, health fairs, and seasonal celebrations. The seating steps in the southern meadow area can be a place for smaller, informal gatherings like poetry readings, lectures, and children's story time. The Villages at Cabrillo neighborhood borders this space to the east so a quieter, passive zone is respectful to nearby residents.

The green space will also have play and fitness zones that will complement the already existing sports fields at the nearby Hudson and Admiral Kidd Parks. A nature play area will allow children to engage and explore the natural environment. The goal of this design is to create an experience of wonder and creativity that is not matched by standard play equipment or spaces. Elements of this type of exploratory play and learning are spread throughout the site. The skate park located near Cabrillo High School provides a place for students and skaters of all ages to play and socialize. Skating and seating elements are thoughtfully designed as part of the larger landscape language of this area. Native gardens will have meandering paths that lead to small clearings opening up to reveal fitness zones.

The new green space provides a major opportunity to educate visitors about the environmental benefits that the site will provide. It can also become a testing ground for new and innovative "sustainable and green energy" strategies. Eco-education gathering zones within the space provide places for lectures, classes, and experiments. Native botanical gardens will teach visitors about the characteristics and benefits of such plants. The perches above the tidal wetland allow for viewing and studying native flora and fauna. The incorporation of educational signage throughout the space will enhance the visitors educational experience.



PARK ROAD



WETLAND  
AREA



MEADOW/  
CLEARING



COMMUNITY GARDENS



EDUCATION GARDEN



SKATE AREA



PLAZA



NATURE PLAY



OUTDOOR CLASSROOM



OPEN LAWN



PLANTED BUFFER





## VIEW 1

Looking northwest, we see (from left to right) the urban forest ecology, tidal wetland/bioswales ecology center, curvilinear park road with parallel parking, pedestrian and bicycle pathway, perches that are built over the tidal wetland, and seating steps in the distance.



 Viewshed of Rendering





## VIEW 2

Looking northeast, we see (from left to right) the urban forest ecology with planted understory, highly-programmable plaza space, active pedestrian pathways, and the skate park. Hudson Park can be seen adjoining the site at Hill Street, which intersects with the park road.



 Viewshed of Rendering





### VIEW 3

Looking south, we see (from left to right) the pedestrian and bicycle path, the highly-programmable event lawn with seating steps, and the park road. Overall, this area has more passive uses and feels more like a neighborhood park.



 Viewshed of Rendering





# 05

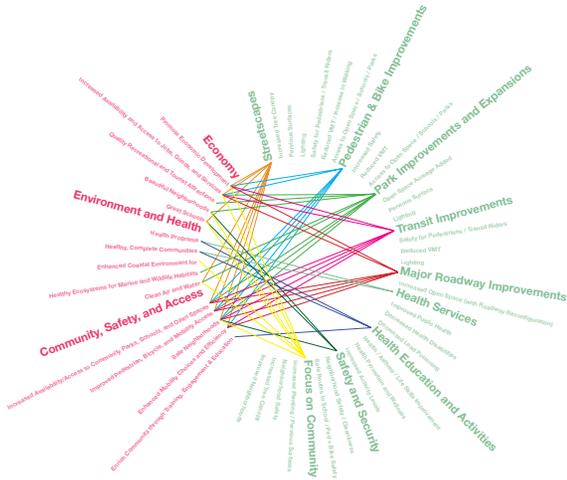
## IMPLEMENTATION PLAN AND NEXT STEPS

This plan was prepared through an environmental justice grant as a feasibility study for re-purposing the TI Freeway. The following chapter describes options for next steps toward project implementation of the Green TI Project.

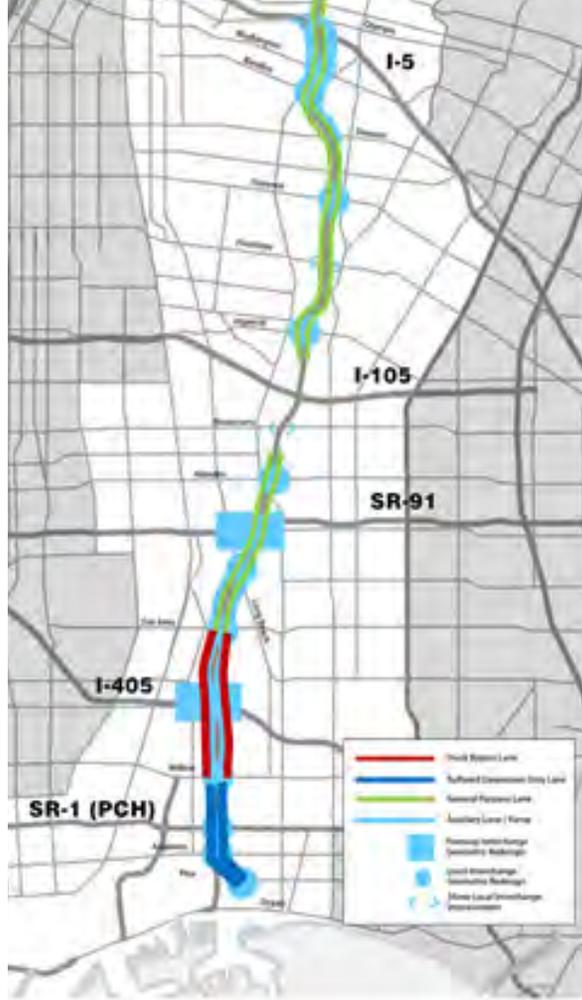
- Immediately: Present concept design to Long Beach City Council for recommendation to receive and file.
- If the City Council takes an action to implement the Green TI Plan, the following is a list of next steps to transform the TI Freeway into a green buffer.
  - Year 1 (approx. \$1.5 mil): Work with the cities of Los Angeles and Carson, and the Ports of Long Beach and Los Angeles to develop a plan for goods movement without this segment of the TI Freeway and fill in any necessary gaps. More outreach with stakeholders and detailed design development should be undertaken, during which work to increase the detail of design to a 5% level should also occur. A deeper review of the range of governance, planning, design, and operational issues should be performed (which should also include planning-level capital and operating cost estimates, and, ideally, potential sources of capital and operating funding should begin to be identified);
  - Year 2 – 5 (approx. \$2 mil.): Environmental process. Issue NOI/NOP to initiate environmental process, which includes the evaluation of previously outlined environmental issues and any proposed mitigations, as mandated by federal and state law. Determine lead agency for NEPA (likely Caltrans). Complete environmental documentation and permitting work;
  - Year 3-5 (approx. \$100-250,000): Funding phase (ideally completed no later than during environmental assessment), in which the funds needed to compete design and construction as well as operate and maintain the project are sought and obtained;
  - Year 4 (approx. \$100,000): Pre-implementation phase, which, includes decisions regarding procurement, project delivery, governance and operations, followed by the procurement of the designer, contractor and operator (if needed); and
  - Year 5-7 (dependent on capital cost estimate): Implementation phase, which would commence construction, operation, and maintenance of the newly opened facility, including oversight of the selected firm(s) that would perform operations and maintenance (if use of private contractors is the option decided by the City).

## ISSUES AND OPPORTUNITIES RELATED TO OTHER PROJECTS

There are a series of projects in and adjacent to Long Beach that will have a direct impact on the Green TI Project. This section identifies eight of the projects with the most significant potential opportunities related to the Project.



**1 West Long Beach Livability Plan:** This Plan prioritizes previously adopted City of Long Beach policies and projects, and unifies them under a triage of Livable Neighborhood Connections or LiNC strategies; **the integration of the various projects included in the LiNC program will enhance the Green TI project.** Additionally, integration of certain projects near the Green TI study area will increase the competitiveness of a number of potential grant programs. Those projects include, but are not limited to, the Willow Street Class II Bikeway, the Willow Primary Transit Corridor, the Willow Streetscape, the Willow Street Bridge Sidewalk Widening, the Hill Street Ped/Bike Bridge, the Hill Street Bike Boulevard, the Santa Fe Avenue Bikeway, the Santa Fe Avenue/25th Street Traffic and Pedestrian Signals, and the Pacific Coast Highway Streetscape.



**2 I-710 Corridor:** In 2016, Metro is expected to release the EIS/EIR on the widening of the Long Beach Freeway (I-710), which will include widening through Long Beach from 8 lanes to 14 lanes. The draft documents to date do not identify any negative impacts to the area west of the TI freeway, but do for the West Long Beach community east of the TI freeway. **The widened 710 Freeway will be designed to accommodate truck traffic in separate lanes, thereby relieving congestion, which will benefit the residents of West Long Beach.** The added capacity has the potential to reduce demand for TI freeway traffic. It is unknown whether any mitigation funds from the 710 project could benefit the proposed Green TI Project.



**3 Southern California International Gateway (SCIG):** The SCIG is at the western boundary of the Project site along Green TI's entire length from Pacific Coast Highway to Sepulveda Boulevard/Willow Street. Existing tenants will be relocated to accommodate the Burlington Northern Santa Fe (BNSF) Railway Company's new state-of-the art, near-dock intermodal railyard. The SCIG gate would be located along PCH west of the TI Freeway. The trucks serving the site are routed on specific routes from the port terminals to the TI Freeway/PCH interchange.





**7 Harbor Subdivision Transit Corridor:** Metro has prepared an Alternatives Analysis (AA) for the Harbor Subdivision Transit Corridor. The current end of the Metro-owned right-of-way is at Wilmington Avenue in Carson. Four alternative routes are included in the AA to extend service into Long Beach. One takes the route along Sepulveda Boulevard/Willow Street, connecting to the Blue Line. Another takes an alignment along Pacific Coast Highway, again terminating at the Blue Line. **The routes bracket the TI Freeway Project.** Both routes, the AA concludes, would be suitable only for an LRT-compatible mode. The Southern Routing/Terminus options, as these are referred to in the AA, would be the last segments of a project that would begin with an extension of the Green Line through the South Bay, which is included in the Measure R funding. Either of the two alignments mentioned here would have a positive impact on the Green TI Project and West Long Beach. The lines would provide direct access to employment centers to the west, Los Angeles International Airport and connecting Metro routes.

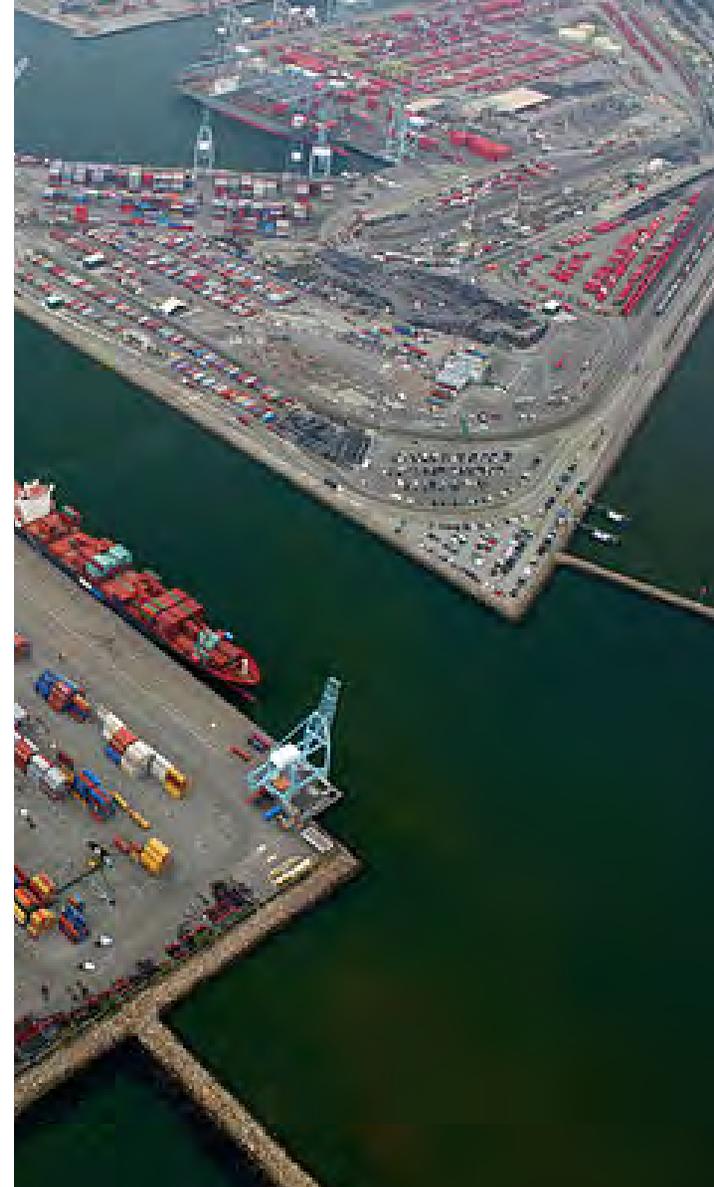


**8 Port of Long Beach Land Use Study:** Development of the Port's new Land Use Study currently underway will inform the Port's long-term vision, by recommending a series of phased incremental improvements within the Port's boundaries. This effort includes comprehensive outreach to key stakeholders from the Port and its tenants, customers, regulatory bodies, and community, many of whom also have a stake in the success of the Green TI Project.

The Land Use Study process is to be focused enough to respond to near-term trends, flexible enough to accommodate long-term trends, and robust enough to face future trends. To both achieve and sustain balance, the study must be founded on rigorous measurement of the costs and benefits of responding to these trends:

- Fundamental changes in the trucking community
- Evolving train deployments
- Rapidly changing inland logistics
- Progress in water quality standards
- Increasing presence in the community
- Advances in environmental protection
- Shifting financial universe

The Land Use Plan will be a living document, empowering the Port to respond to regional and local stakeholders, changes in traffic, and development opportunities—much in the same way the Green TI Project must address these issues. **These issues may influence subsequent implementation phases of the Green TI project.**



## IMPLEMENTATION ISSUES RELATED TO ENVIRONMENTAL ASSESSMENT

The later study phases of the Green TI Project will have to examine environmental and regulatory environmental issues, risks, and potential mitigations in much more detail than has been addressed thus far. Because of the urgency and significance of these issues, it is recommended that an environmental study be conducted as soon as possible to help determine the project's feasibility. Ideally, this should commence as soon as the project is defined to a sufficient level of detail so that capital and operating cost estimates as well as a Purpose and Need Statement can be provided. Alternatively, the environmental scoping phase could commence in parallel with the next phases of study implementation to allow time for additional project detail and cost estimates to be developed.

It is anticipated that given the new wetland and riparian areas being created and potential impacts of tearing down a major freeway, particularly one used by trucks, and the potential to receive federal funding, the environmental process would likely require a complete Environmental Impact Report for CEQA and a complete Environmental Impact Statement for NEPA. Because the project, as currently conceived, could incorporate new bioswales and traverse near a rail right-of-way, there are numerous additional stakeholders who must be consulted, including but not limited to the City's Harbor Department, the Federal Railroad Administration, the California Public Utilities Commission, the California Coastal Commission and the U.S. Army Corps of Engineers.

Other environmental regulations that could potentially affect the implementation of the Green TI Project will have to be assessed. These include any impacts on designated historic districts and designated historic landmarks, changes in noise

levels (which are likely to be more than minor but beneficial to the community), and effects on air quality and greenhouse gas emissions (GHGs). The Green TI Project's use of green space and bioswale treatments, as well as the intended reduction of vehicular traffic, would improve the chances of meeting the GHG emissions targets as mandated by SB 375.

Additional issues that must be studied further in the environmental review include the effects on GHGs and other emissions due to trucks idling longer on congested corridors as a result of the TI freeway's decommissioning, and the mitigations proposed in this study that could mitigate those overall impacts. In addition, the need for new truck access points and the traffic and environmental impacts on the overweight truck route, the gap in the road and highway infrastructure, and potential remedies for these traffic impacts must also be part of the environmental review process.

Additional state and local laws and industry standards to be considered include, but are not limited to, the following:

- **California Public Utilities Commission: (CPUC):** Although the CPUC technically does not have regulatory authority over a decommissioned highway, the CPUC could claim some jurisdiction due to the adjacent rail corridor, which includes any planned street crossings and/or operations within streets, including grade separated segments.
- **State and Federal Environmental Laws:** Should the project seek federal funding, both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) reviews would be required. Since significant changes are being proposed by the project, a full environmental impact statement (EIS) for NEPA as well as an environmental impact report (EIR) pursuant to CEQA would likely be needed. Elements of such reviews must include the following:
  - Additional community outreach: to address business and community benefits and impacts of the project's design and operation;

- Further design development: most likely to a 5% engineering plan and profile level, in order to define in more detail any additional right-of-way that may be necessary (such as on affected adjacent streets including the Pacific Coast Highway, I-710 or arterials) to address traffic flow changes;
- Planning-level capital and operating cost estimates, in year of expenditure dollars, based on the 5% engineering plan and profile design level mentioned above;
- The full range of environment impact assessments: primarily addressing noise, air, water, runoff potential to the Los Angeles River, and visual impacts;
- Traffic analysis: significant further study is needed to fully understand all of the traffic implications, which are discussed in more detail below;
- Business and employment impacts, including on local businesses such as goods movement companies but also regional and national macroeconomic effects; and
- Neighborhood impacts, particularly on residents in disadvantaged communities such as those in West Long Beach, Wilmington and Carson

## TRAFFIC ANALYSIS

A significant issue for further implementation of the Green TI Project involves the impact that reduced lanes and speed may have on traffic in the subregion and in affected adjacent neighborhoods and major facilities, some of which are of national and international importance. The impacts that must be studied in more detail include, but are not limited to:

- Traffic volume projections on designated overweight corridors and related gap closure recommendations
- Alternative Routes
- Truck movement data
- Impacts of vehicular movements on local streets and arterials in adjacent neighborhoods, such as on Pacific

Coast Highway at the terminus of the TI Freeway and the disposition of the Caltrans cloverleaf ramps

- Changes in traffic volumes on state and federally funded highways
- Effects on goods movement in and out of the Ports of Long Beach and Los Angeles

In addition, environmental impacts on several sensitive receptors must be evaluated for their levels of environmental exposures and neighborhood-related impacts. Those immediately adjacent to the roadway include, but are not limited to, the Century Villages at Cabrillo, Hudson Elementary School, Reid Continuation School, Cabrillo High School, and Hudson Park.

While changing rules for CEQA allow for use of measures that may not require mitigation for LOS impacts of changes, and instead consider VMT, it remains unclear exactly how these changes could affect the Green TI Project. Under the new rules, the Green TI Project could have an overall reduction in VMT, and traffic mitigations for CEQA would thus not be required. It is important to note, however, that federal rules for NEPA will likely continue to rely on local practices to determine impacts. Since state guidance has yet to be developed at the time of this report, it is noted here that the City could consider alternative measures to LOS analysis. The City would likely still want to consider traffic impacts that affect the ability to move traffic based on targeted impacts.

Because of the level of detail needed for the environmental assessment, such a step would likely require at least two years for completion of draft EIR and EIS documents, followed by six months of public comment and review. An additional year at minimum would be needed to complete the final environmental documents, submit them to the appropriate state and federal agencies for review and receive their approvals. It is also important that any City decision as to whether it plans to seek federal funding be made as early as possible, because of the additional time and budget that

would be needed for NEPA review.

Finally, it is important to note that additional previously evaluated project alternatives may also be considered under the environmental process. These include moving and consolidating the freeway’s roadway and the related on- and off-ramps within the existing right-of-way, thereby creating a green buffer space as well as depressing and over-decking the roadway and truck route, which would also create additional green space.

## IMPLEMENTATION GOVERNANCE STRATEGIES

With any major transportation infrastructure project, the issues of governance—not simply what entity will own the completed works, but who will be responsible for operating, maintaining, funding and overseeing it to keep the new parkway as a going concern—are critical to success. Table 1 below shows some examples of how other cities are governing similar projects involving a combination of roadway, pedestrian amenities, bicycle accommodations and/or green space.

Our initial assumption is that the City of Long Beach would be the owner and sponsor of the project. Although other private-sector organizations and public agencies should provide critical leadership and funding, the City is best suited for the role. However, because the project includes formerly state-owned right-of-way, the City or other lead agency must work with federal agencies, Caltrans, the Port of Los Angeles, other County and state officials, and neighboring city authorities to ensure the project can advance in a timely and cost-effective way.

### Project Delivery Options

There are several types of project delivery methods feasible for implementing the project. An important decision in the case of any large complicated multimodal transportation project is to select an appropriate process that will best secure the project and minimize the initial investment and future operation and maintenance cost. The possible delivery methods include:

- Design/Bid/Build – The traditional Design/Bid/Build method, where the design and the construction phases

PROJECT	OPENING YEAR	PROJECT DESCRIPTION	SPONSOR/ OPERATOR	OBSERVATIONS
BeltLine and Streetcar Atlanta, Georgia	2014	22-mile Network of public parks, multi-use trails and streetcar by re-using historic railroad corridors	City of Atlanta/ City of Atlanta with streetcar oversight by the local transit authority	Inexperienced project sponsor (nonprofit with board comprising city leaders) did not follow the regional transit agency’s advice in advancing the project; led to tensions with funding agencies.
Orange Line BRT Los Angeles, California	2005	18 mi. project, a combined bus rapid transit and bikeway project. \$30 mil. investment in landscaping. Extended by 4 mi. in 2012.	Los Angeles County Metropolitan Transportation Authority (Metro)/ Los Angeles County Metro	Experienced sponsor (Metro) owns and operates the project, which is a combined bus rapid transit and bikeway project. Success led to project extended by 4 mi. in 2012.
Riverside Dr./ Gathering Place, Tulsa, Oklahoma	2017 (est.)	\$38.6 mil. package of pedestrian and bikeway and green space along regional roadway supporting \$250 million privately funded riverfront park	City of Tulsa/ City of Tulsa	Strong city leadership with additional public sector partners and \$10 mil of private sector funding (George Kaiser Family Foundation)
M-1 Rail Detroit, Michigan	2016 (est.)	3.3 mile modern streetcar with additional pedestrian amenities	City of Detroit/M-1 Rail, Inc.	Nonprofit M-1 Rail has a board consisting of its private and public-sector financial contributors. Lean staff supplemented by owner’s consultant representative. State DOT is a strong partner.
Presidio Parkway San Francisco, California	2015	\$1.1 billion, 15-year project involving replacement of regional thoroughfare with new roadway and bike, ped and green space investments,	San Francisco County Transport. Auth. (FCTA)/ SFCTA	Strong public agency ownership with strong owner’s representative team and P3 project delivery

TABLE 1

are separately and sequentially bid. Risk and control lies with the project sponsor.

- Design/Build – the City could also implement the project through a Design/Build method whereby a consultant team would have one contract to design and build the project. Greater risk and control are assigned to the design-build team than in design-bid-build
- Construction Manager/General Contractor (CMGC) – A hybrid delivery model is to separately compete for the designer and construction manager and contractor, but have them work together in the detailed design and construction phases (less risk and control is assigned to the contractor than design build, but more than with design-bid-build). A variant of this option is called Construction Manager at Risk (CMAR).
- Design/Build/Finance – A variation of design-build is to add some financing (and related risk) responsibility, which would allow the contractor to front the funding for the project in exchange for later milestone-based payment schedule by the project owner. Under this method, the contractor would add a profit margin to the financing, which might make it more expensive than the financing that the City and its funding partners could do themselves.
- Design/Build/Operate/Maintain (DBOM) – Finally, a Design/Build contract could include both operations and maintenance needs. Alternatively, the City could separately contract out the operations and maintenance of the parkway in a later contract arrangement. However, this option must involve some sort of milestone based payments from a previously identified funding source. This method assigns the greatest amount of risk and control to the DBOM team of all these methods.

### Operating Options

At the completion of the project there would be several ways the project could be turned over for operations and maintenance, including:

- Public Sector Operation –The parkway could be 100% implemented by the City and either operated by Long Beach Department of Parks, Recreation, and Marine, or another public entity through a memorandum of understanding (MOU). The designated agency would collect any park fees associated with its use and be responsible for any further funding needs and project delivery risks.
- Public /Private – The new parkway could be completed, turned over to the City, and then be operated under contract by a private vendor for a designated period of time. Under this scenario, the City would still collect any park fees and be responsible for paying the service contractors for services such as refuse collection, lighting and road maintenance, security services, etc. Some operations risks are assigned to the contractor with the remaining operations and ownership risks retained by the City.
- Private Owner/Operator – The entire project could be franchised out for both construction and then for operations to a private entity. The private entity could collect the fee revenues if any and thereby hold all of the operational risk. Alternatively, the City could collect any fees, supplemented by capital and operating funds needed to complete the design, construction and operate and maintain the parkway, thereby assuming the ownership risk, but pay the private entity a schedule of milestone-based “availability payments.” This is a type of performance-based payment method and is paid to the private entity based on the performance (i.e., availability) of the system in operation. This method assigns most of the operations risk to the private-sector concessionaire but the public sector retains the ownership risk.
- Just as with the design and delivery phases, options regarding operations should be explored further in the project’s subsequent phases of study.

## FUNDING OPTIONS

Implementation of the development program for the acreage

made available by the Green TI Project is dependent on understanding the project components, the cost for each component, the phasing proposed, and the funding programs available for the project. This report assumes that the actual closing of the freeway and demolition of the roadway may be years away, and it would be advisable to seek funding that can provide planning dollars that will lead to construction dollars. The funding program grant cycles, eligible activities, and typical award amounts become part of a sources and uses analysis for the project. The result is a roadmap for implementation, beginning with the preconstruction activities, moving through construction, and establishing the operations and maintenance program.

The costs for the project fall into three categories: preconstruction, construction, and operations and maintenance.

**Preconstruction:** The predevelopment activities and costs will be necessary to develop the base line information that will be required for federal or state applications. Those activities include:

- Engineering at a level necessary to accurately determine the costs. The level of engineering will be necessary to verify to the funding agencies that the City has a full understanding of the project. That is particularly important if a sophisticated water recycling or similar element is incorporated into the plan.
- Complete any required traffic engineering studies, including off-site elements necessary for the project to proceed.
- Environmental evaluation and appropriate clearance levels achieved under NEPA (if federal funding is sought) and CEQA. For some programs, a clearly defined schedule when the environmental clearances will be completed may be sufficient as long as the process is underway.
- Determine utility relocation requirements, define costs through the engineering process, and determine the

coordination and approvals necessary.

- Secure permits approving the project if any regulatory agencies will have jurisdiction. Permits for the construction will also be required, but may be delayed until the construction phase.
- Although the City owns the right-of-way needed for the project, the long-term lease agreement with Bob Hill Cranes on a small portion of it must be renegotiated within the grant timeline guidelines to allow the project to go forward.
- Establish the project matrix describing the project and what it changes in order to establish the data required to complete a benefit-cost analysis (BCA) in a manner that allows projections for 20 years.

**Construction:** The construction program must be divided into phases unless the entire project will be done at the same time. The phasing of this project can be incorporated into the funding request.

- Within each phase, detailed itemization of the work is necessary, as the potential funding programs may have eligibility requirements that may include some but not all of the components.
- Start and end dates for the construction must be estimated.

**Operations and Maintenance:** The funding agencies will require in the funding plan how the project will be maintained long-term.

- The agency that will be responsible for operations and maintenance (O&M) and their authority to carry out the obligations
- The revenue source(s) to fund O&M, including the “backstop” should be the primary source for the O&M

A series of programs can be utilized to fund both the planning

and construction of the proposed project; each is summarized in this report. The summaries include the projects funded in the most recent grant cycle for the programs. That is important, as the components of the project are identified and the costs established for the components. The sources and uses analysis will match project components with funding programs that can cover those components.

The City’s Capital Improvement Plan (CIP), General Fund, and Community Development Block Grant (CDBG) fund can be used for a wide variety of public works, parks, and other programs to support the Green TI Project.

It is important to note that the following funding programs would be most competitive if elements of the West Long Beach projects were integrated into the Green TI Project, such as integrating the bicycle trail and safe routes to school elements. Where complete street activities end at the edge of the TI Freeway area, making the connections would again enhance the competitiveness of the grant applications.

**Active Transportation Program (ATP):** The program most clearly applicable to the type of development contemplated at the site is the Active Transportation Program. The current ATP Cycle 2 program application period has closed. The planning for the next cycle is being done by the State. The official statement by the California Transportation Commission is: “We have only a very general schedule for the 2017 cycle. We start the guidelines process early next year, and the applications will be due around June 1 of 2016 and we have to adopt by March 2017. The 2017 ATP will cover FY 17/18, 18/19, 19/20 and 20/21 with the new funding in the last two years.” The long-term nature of the TI Freeway’s de-commissioning allows the City of Long Beach apply for the early planning funds with construction in FY 19/20 and 20/21. The ATP program accepts applications that include the predevelopment costs as well as the construction costs. As noted above, the funding is over a series of years, so the predevelopment activities can be funded in the early years,

with the construction in the last two years of the funding program.

The ATP program was created to encourage increased use of active modes of transportation, such as biking and walking. The ATP consolidates various transportation programs including the federal Transportation Alternatives Program, state Bicycle Transportation Account, and federal and state Safe Routes to School programs into a single program to:

- Increase the proportion of biking and walking trips,
- Increase safety for non-motorized users,
- Increase mobility for non-motorized users,
- Advance the efforts of regional agencies to achieve greenhouse gas reduction goals,
- Enhance public health, including the reduction of childhood obesity through the use of projects eligible for Safe Routes to Schools Program funding,
- Ensure disadvantaged communities fully share in program benefits (25% of program), and
- Provide a broad spectrum of projects to benefit many types of active transportation users.

The current-year program funding has \$129 million of the overall \$360 million in Cycle 2, with announcement of the winners by the end of the year. Under the current program guidelines, Long Beach would be required to apply under the statewide competitive program, which is allocated 50% of the total funds. Table 2 provides a summary of project funded in the latest round including those in the Los Angeles Basin and other large projects in the state.

ATP grants can be proposed for programming if accompanied by a Project Study Report (PSR) or equivalent, which details the cost for each of the components along with the approvals necessary for construction. The development of that information would be part of the planning request under the ATP program.

**Los Angeles Metropolitan Transportation Commission (Metro) Call for Projects:** The Metro Call for Projects for the current year included Regional Surface Transportation Improvements. The

## ACTIVE TRANSPORTATION FUNDING EXAMPLES 2014 FUNDING

AGENCY	PROJECT	TOTAL FUNDING (in \$1000)	ATP FUNDING
Local Projects			
Los Angeles County	San Fernando Road Bike Path - Phase 3	\$25,430	\$21,195
Los Angeles County	Willowbrook Area Pedestrian Access to MLK	\$5,555	\$3,865
Palmdale	Avenue R Complete Streets and Safe Routes	\$6,669	\$5,332
Santa Clarita	Sierra Highway Pedestrian & Bike Bridge	\$3,229	\$1,402
Other Large Projects			
MTC	Bay Area Bike Share Expansion	\$19,831	\$7,713
CVAG	CV/Link	\$99,352	\$10,900

TABLE 2

funding allocated for this year's program is \$199.4 million. The application deadline was January 30, 2015.

Metro is responsible for allocating discretionary federal, state and local transportation funds to improve all modes of surface transportation. Metro also prepares the Los Angeles County Transportation Improvement Program (TIP). A key component of TIP is the Call for Projects program, a competitive process that distributes discretionary capital transportation funds to regionally significant projects.

The Metro Board will initiate the next round during 2016 with applications due in 2017. The funding for the projects in that round will be for FY 17/18, 18/19, 19/20 and 20/21 with funds available in the last two fiscal years. Metro staff ranks eligible projects and presents preliminary scores to Metro's Technical Advisory Committee (TAC) and the Metro Board of Directors for review. Upon approval, the TIP is developed and formally transmitted to the regional and state transportation planning agencies. The TIP then becomes part of the five-year program of projects scheduled for implementation in Los Angeles

County. Long Beach is very familiar with the program with funding going to the City, the Port and Long Beach Transit from the 2013 round. Table 3 provides a summary of the most recent funding in Long Beach.

**TIGER Grants:** The scheduled 2016 TIGER discretionary grants are expected to fund capital investments in surface transportation infrastructure and will be awarded on a competitive basis to projects that will have a significant impact on the nation, a region, or metropolitan area.

The TIGER grant program objective is to continue to make transformative surface transportation investments by providing significant and measurable improvements over existing conditions. The grant program will focus on capital

projects that generate economic development and improve access to reliable, safe and affordable transportation for those disconnected while emphasizing improved connection to employment, education, services and other opportunities, workforce development, or community revitalization.

Eligible projects for TIGER Discretionary Grants are capital projects that include a wide variety of transit and port elements. The applicable category for the TI Freeway would be highway projects eligible under title 23, United States Code, which includes bicycle and pedestrian related projects.

Under the FY 2015 Appropriations Act, the TIGER funding for the current round that is closed, is \$500 million. Across six rounds of capital projects, TIGER Discretionary Grant awards ranged from \$1 million to \$105 million. Although the average award size has been \$14.5 million, the Secretary may make considerably larger awards to appropriate projects. If an applicant submits an application with a substantial TIGER funding request, DOT strongly encourages the applicant to identify in their application discrete project components that have independent utility and separately detail the costs and requested TIGER funding for those components, as well as the overall TIGER funding.

A TIGER application may include surface transportation and non- surface transportation components as long as the components demonstrate a strong relationship or connection between them. DOT strongly encourages the applicant to identify the project components that have independent utility and separately detail the costs and request the TIGER grant to pay for the surface transportation components of a broader project that has non-surface transportation components. The TIGER program includes "Ladders of Opportunity" projects. Projects meeting this eligibility are those that may increase connectivity to employment, education, services and other opportunities, as well as support workforce development, or contribute to community revitalization, particularly for disadvantaged groups including low-income groups, persons

## METRO CALL FOR PROJECTS 2013 FUNDING

2013 FUNDING	PROJECT	TOTAL FUNDING	METRO FUNDING
City of Long Beach	Redondo & Anaheim Intersection	\$1,236,000	\$741,600
Port of Long Beach	Pier B Street Freight Corridor Reconstruction	\$105,790,445	\$10,954,601
City of Long Beach	Artesia Corridor ATCS Enhancements	\$3,045,062	\$1,827,037
City of Long Beach	Santa Fe Avenue Synchronization	\$3,200,328	\$1,920,197
City of Long Beach	Metro Blue Line Signal Prioritization	\$1,568,250	\$992,893
City of Long Beach	Delta Avenue Bicycle Boulevard	\$1,451,307	\$1,015,917
City of Long Beach	Market Street Pedestrian and Streetscape	\$6,619,767	\$3,233,837
City of Long Beach	LBT Clean Fuel Bus Replacement	\$2,628,006	\$2,102,405
Totals		\$123,539,165	\$22,788,487

TABLE 3

## TIGER FUNDING EXAMPLES

### 2014 FUNDING

AGENCY	PROJECT	TOTAL FUNDING (in \$1000)	TIGER FUNDING
Local Projects			
LA Metro	Streetscape, ped and bike imp. Little Tokyo	\$17,050	\$10,954,601
LA Metro	Willowbrook/Rosa Parks Station	\$53,700	\$1,827,037
Other Large Projects			
Asheville, NV	Connecting ped, road-way and bike network	\$29,200	\$14,600
Champaign-Urbana MTD	Complete streets corridor	\$34,883	\$15,705
Maryland Highways	Expand roadway at Fort Meads	\$42,093	\$10,000

TABLE 4

with visible and hidden disabilities, elderly individuals and minority persons and populations.

Beginning with the 2015 TIGER round, DOT implemented a Pre-Application process. The Pre-Application helps DOT allocate staff resources for the evaluation process, allows applicants to provide identifying information about their project, and assists DOT in clarifying and addressing eligibility questions before the Final Application is submitted. Based on the 2015 round, the TIGER Notice of Funding Availability (NOFA) will be issued in early April 2016 with Pre-Applications due in early May 2016 and Final Applications due in early June 2016. Table 4 provides a summary of projects funded in the most recent TIGER round, including those in the Los Angeles Basin and others across the country.

**Land and Water Conservation Fund (L&WCF):** The L&WCF would be an ideal source of funding. The City of Long Beach received \$450,000 in L&WCF funding for the Pacific Electric Right-of-Way Greenbelt. Completion of that project in the next few years would demonstrate to the program administrators that the City can effectively manage the program. Additionally, the L&WCF overall program has limited funding. In the current year funding cycle is closed. Ten projects were allocated

## LAND & WATER CONSERVATION FUND

### 2015 FUNDING

AGENCY	PROJECT	FUNDING
Local Projects		
Long Beach	Pacific Electric Right-of-Way Greenbelt	\$450,000
City of Los Angeles	Runyan Canyon Acquisition	\$1,500,000
City of Baldwin Park	Walnut Creek Nature Park Improvements	\$480,000
Other Large Projects		
City of Alameda	Jean Sweenedy Open Space Park	\$2,000,000
City of Imperial	Imperial Regional Park and Equestrian Center	\$750,000

TABLE 5

\$6.14 million. The deadline for the 2016 round is February 3, 2016. The project information needed for an L&WC grant will likely not be available. That includes detailed information on the project including the NEPA Proposal Development/Environmental Screening Form, so targeting the 2017 funding round should be the objective. Table 5 provides a summary of the projects funded in the current round.

**Urban and Community Forestry:** The State Department of Fire and Forestry provides annual funding for urban forestry projects. This year the Department funded \$15.7 million in projects. The Governor's mid-year budget includes \$37.8 million in funding, which is a doubling of the funding. The details on funding availability will be available later this year with applications due in September 2016. The program receives annual funding, therefore an application can be made when the need for funding can be determined. Table 6 provides a summary of the projects funded in the current year. Depending on the progress made, an application can be submitted for that round, or for the 2017 round.

**Tidelands Funding:** The funding of the ultimate program for

## URBAN FORESTRY FUNDING EXAMPLES

### 2015 FUNDING

AGENCY	PROJECT	FUNDING
Local Projects		
LA Conservation Corps	San Pedro	\$1,481,999
LA Beautification Team	Pacoima, Sylmar, Sun Valley and others	\$750,000
City of Baldwin Park	South Los Angeles	\$750,000
Other Large Projects		
City of Alameda	Sacramento County	\$1,000,000
City of Imperial	Napa	\$2,825,000

TABLE 6

the Green TI Project could be eligible for Tidelands Funding. The uses and the extent to which Tidelands Funds could be used are yet to be determined. The Port of Long Beach is undertaking a nexus study which will inform the feasibility of using this funding source for the Green TI project.

The Long Beach's Harbor Commission recently approved a fiscal 2016 budget of \$829 million, more than half of that spent in capital projects. A transfer of \$17.74 million to the city's Tidelands Fund also is part of the budget, which was approved on May 27. This budget anticipates a 6.1% increase in revenues over fiscal 2015. The port generates revenue through land leases and other charges for goods movement, and does not use any tax revenue from Long Beach residents. Replacement of the Gerald Desmond Bridge and construction of the Middle Harbor terminal represents the bulk of the \$555 million set aside in this budget for capital projects. The issue for the Green TI Project is whether capital funds can be included in the next fiscal year's budget.

Tidelands funding can provide the non-Federal match for

programs such as the TIGER fund, which require non-Federal matching funds.

**Stormwater Funding Sources:** The 2014 Water Bond (Proposition 1) approved \$7.545 billion in general obligation bonds for a series of water projects across the state. Of that amount, \$200 million is allocated to the State Water Grants and Storm Water Resources Plans. Eligible projects include multibenefit storm water management projects, which may include, but shall not be limited to, green infrastructure, rainwater and storm water capture projects and storm water treatment facilities.

The guidelines for the new grant program are under revision based on the public comments on the draft and are scheduled to be released in early December. Tentatively, the grant cycle will begin in January 2016.

**Port of Long Beach:** The Port of Long Beach has a history of supporting projects in West Long Beach. Funding is typically made available as part of the mitigation for a new major project in the Port. As noted below, during the 2012-13 fiscal year, the Port provided a \$675,000 grant to the City for street planting and maintenance.

**Other Programs:** As outlined in the earlier Existing Conditions Report, other funding programs might have applicability depending on the ultimate components of the project. Those include: Congestion Mitigation and Air Quality Improvement Program (CMAQ) and potentially the Measure J2 program as the City negotiates which local programs will be included in the program when it is placed before the voters. Additionally, there will be mitigation funds as part of the I-710 widening, SCIG and ICTF that are yet to be defined.

**Funding In Relation to Governance and Maintenance Structures:** Each of the funding programs require the

applicant to identify the entity that will own and maintain the project. The City owns the site and therefore will be responsible for implementing the project and maintaining the project long term. There are programs to support some the operations and maintenance (O&M) elements. During the 2012-13 fiscal year, the City received a \$675,000 grant from the Port of Long Beach to plant and maintain 6,000 trees in the two zones closest to the Port. The TI Freeway site falls within the zones. Additionally, the City's Consolidated Annual Performance Evaluation Report (CAPER), which reports on its HUD funding, lists \$193,000 for the Urban Forestry Program, specifically allocated to maintaining trees in the CDBG eligible areas. Other specific funding sources will be identified for the other components of the project.

**Funding Strategy Recommendations:** Both the ATP and Metro Call for Projects can include both planning and construction funding. The ATP program will be accepting applications in mid-2016 and the Metro program will be accepting applications in mid-2017. It is recommended that the City apply under the ATP program next year, and failing approval, apply under the Metro Call for Projects program in 2017. Depending on the components to be funded, applications for the Land & Water Conservation fund and the Urban Forestry Program can be submitted during the appropriate grant cycles for those programs. Ongoing evaluation of the TIGER, Port and Tidelands funding will determine whether those funding sources should be pursued.

## CONCLUSION

The Green TI Project has tremendous potential to transform an underutilized highway into a valuable asset, buffer, and open space for Long Beach and Gateway Communities subregion. Although significant stakeholder acceptance has been obtained regarding the conceptual design developed to date, a significant amount of work remains to obtain sufficient funding for its further design and construction. Not least in these next implementation steps are those needed to ready the project for environmental review. Fortunately, many of these steps can be undertaken simultaneously to help speed the project to completion; these steps include advancing the design, beginning the early environmental scoping process, and searching for funding. During these steps, synergies should be sought with the eight projects mentioned above in order to avoid redundancies and to leverage already-secured funding for these projects to help fund or “buy down” the costs of the Green TI concepts discussed here.





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