CIRCULATION ELEMENT

CITY OF HAWTHORNE GENERAL PLAN

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Revision Table

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SECTION I - INTRODUCTION TO THE CIRCULATION ELEMENT

Circulation and transportation systems are one of the most important of all urban systems in determining the overall structure and form of the areas they service. The basic purpose of a transportation network within the City of Hawthorne is the provision of an efficient, safe, and serviceable framework which enables people to move among various sections of the city in order to work, shop, or spend leisure hours. The transportation network also allows for the movement of goods for both the public and private sectors.

Purpose

The basic purpose of the Circulation Element is to identify, describe, and locate the basic transportation system networks which provide for the cities' transportation needs and land uses. The element sets forth goals and policies that are to be implemented and promotes the effective use of transportation facilities to efficiently and safely move people and goods while striving to preserve and protect the economic, environmental, and natural resources.

The Circulation Element also functions as a guideline for local and regional transportation planning. Once implemented, the local and regional transportation network may be improved as necessary to accommodate increased economic activities such as housing density or commercial and industrial intensification.

Related Plans and Programs

The Circulation Element must be closely coordinated, compatible, and internally consistent with each individual element of the General Plan. However, the land Use, Housing, and Noise Elements are most closely associated with the Circulation Element because circulation and transportation planning efforts have a direct impact upon each of them. The land Use Element designates the general distribution and location patterns of such uses as housing, business, industry, and open space.

These land use patterns must accommodate both local and regional transportation networks. As such, the Circulation Element must accommodate the type and density of development designated in the land Use Element. The Housing Element identifies adequate sites for the preservation, improvement, and development of housing. Thus, the Circulation Element must accommodate the density and location of residential development in the City. Lastly, the Noise Element identifies and appraises noise exposure and problems within the community. In turn, the Circulation Element identifies noise exposure information that results from transportation related systems.

SECTION II - EXISTING CONDITIONS

The mode of travel and the means through which that mode must move are the two basic determinants of the movement of people and goods within an urban environment. In the City of Hawthorne, the circulation system is primarily a rectangular grid represented by a hierarchy of streets and pathways ranging from large freeways to pedestrian walkways over which people and goods move between communities and within the community.

Freeways

This section provides an overview of Hawthorne's circulation system. It classifies the streets, identifies the extent of other motorized means of moving goods and people such as trains, buses, and airplanes, and discusses pedestrian and bicycle circulation. Truck routes, parking, traffic generating attractions of activities, and air quality are additional topics which are addressed in this section. Figure 1 classifies the various street systems within the City.

The principal circulation network within Southern California is the freeway system. The freeway circulation system offers high-speed thoroughfares for motor vehicles and has become the basic travel network for movement between cities as well as short trips within the city, although this system was not designed for the latter. The freeway system was designed to serve the travel needs of an ever-growing number of private automobiles and buses. It also serves the regional transportation demands for distribution of goods and services, with trucks carrying the majority of goods consumed within the community. This freeway system has provided a mechanism for growth throughout Los Angeles County, introducing and improving access to areas with high growth potential. Much of Hawthorne was developed as a result of this phenomenon.

A freeway is defined as a road serving high-speed traffic with no crossings interrupting the flow of traffic (i.e., no crossings at grade). Located near the western edge of the City of Hawthorne is the San Diego Freeway (1-405) and to the north, the Century Freeway (1-105) scheduled for completion in 1993.

San Diego Freeway (1-405). The 1-405 is the major north-south transportation corridor within the South Bay area and passes throu9h the west end of Hawthorne. Traffic counts performed by CALTRANS along its route have indicated that travel demand is well over design capacity at various points, including Hawthorne, during peak flow. Within Hawthorne, the 1-405 is presently over capacity which has created congestion problems along this corridor especially during peak traffic flows. Interchanges exist at Imperial Highway, El Segundo Boulevard, and Rosecrans Avenue.

As further development in Hawthorne and the South Bay region occurs, changes in traffic flows along this major corridor will result, which may affect surrounding communities. However, through the mechanisms of alternative modes of travel, city and regional transportation impacts can be significantly reduced.

Century Freeway (1-105). The other major element in the regional transportation network is the I-IDS which runs east-west along the northern boundary of Hawthorne. The I-IDS is currently under construction and is expected to be completed in 1993. It is anticipated that once completed, the 1-105 will significantly reduce east-west surface street congestion along arterial streets. Interchanges along the freeway will exist at Hawthorne Boulevard, Prairie Avenue, and Crenshaw Boulevard. In addition, the intersection of the 1-405 and the I-IDS will be a five-level interchange network which will, once completed, become one of the largest freeway interchange systems in modern transportation history.

Local Vehicular Circulation and Street Classification

In a regional context, freeway circulation systems move traffic between cities as well as interfacing with the local circulation system functions by moving traffic within and between various parts of the city and adjacent communities. Figure 2 indicates the level of use of the local circulation system, and illustrates the strong rectangular grid pattern of roadway use and development. The local circulation system is divided into several types of streets and are established upon their functions within the local street network. The classification for types of streets are as follows: arterial, collector and local streets. Typical roadway cross sections are shown in Figure 3. These roadway classifications are further described below:

Arterial Streets. An arterial street is defined as a major street carrying the traffic of local and collector streets to and from freeways and other major streets, with controlled intersections and generally providing direct access to properties. Major north-south arterials serving Hawthorne are Aviation Boulevard; Inglewood Avenue; Hawthorne Boulevard; Prairie Avenue; Crenshaw Boulevard; and Van Ness Avenue. Major east-west arterials found in the City include Imperial Highway; El Segundo Boulevard; Rosecrans Avenue; and Compton Boulevard. Generally, both north-south and east-west arterial streets are spaced apart at even one-mile distances. Minimum arterial street right-of-way width in Hawthorne is one hundred feet and is designed to provide an eighty-four foot width curb to curb.

Collector Streets. A collector street is a street for traffic moving between arterial and local streets, generally providing direct access to properties. Typical collector streets found in the City of Hawthorne include 120th Street, 135th Street, Broadway Avenue, and Ramona

Avenue. Minimum collector street right-of-way width in Hawthorne is eighty feet and is designed to provide a sixty-four foot width curb to curb.

Local Streets. A local street is a street that provides direct access to properties and designed to discourage through-traffic. Generally, these types of streets serve the residential needs of the community by carrying low volumes of traffic. They also serve neighborhood commercial and industrial land uses. Minimum local street right-of-way width in Hawthorne is sixty-feet and is designed to provide a forty-foot width curb to curb.

Transit Systems

The smaller urbanized areas of a region have always had the least amount of public transportation service. However, the changing lifestyles, economic pressures and greater social and environmental concerns have increased the need for alternatives to automobile travel or in many cases, not traveling at all.

Compared to the convenience, flexibility and privacy of travel by car, transit travel is less appealing, especially for recreational purposes. The often poor quality of transit service also contributes to declining patronage. However, by providing adequate services, reducing transit inconveniences and costs, and the future 1-105 light rail system, public transportation can be one of the alternative modes implemented to alter the balance of the present auto-oriented transportation system.

Transit services are physical systems and services which support development and people. Examples of transit services utilized within the City of Hawthorne are the urban and suburban rail systems, bus systems, and an airport network. These systems are described below:

Southern Pacific and Santa Fe Railroads. The railway system presently operating within the City of Hawthorne is centered around the Southern Pacific. The Southern Pacific line currently operates a daily schedule in each direction over a line which extends the full length of the City. The Santa Fe Railroad serves a small area in the southwest corner of the City.

Century-El Segundo light-Rail Transit System. The Los Angeles County Transportation Commission has approved the construction of a 20-mile light-rail transit project with anticipated opening in mid-1993. The line will run down the middle of the I-105, now under construction, from Norwalk on the east to Aviation Boulevard on the west; then the line will turn southward off the freeway and travel through the southwestern border of Hawthorne. Three stations in Hawthorne will be located with park-and-ride facilities.

The Century-El Segundo light Rail Transit System will alter existing travel patterns in and out of Hawthorne. This will be achieved by the light rail's positive impact of increasing the provision of adequate transit services with the Los Angeles County region and accommodating transit uses by providing an alternative mode of transportation other than what presently is available. As such, this rail rapid transit system will provide an important means to mitigate traffic congestion so that comprehensive land use considerations can be optimized. In addition, the proposed sites of park-and-ride facilities at high-employment based locations will reduce commuter inconvenience and encourage transit ridership.

Bus Service. Hawthorne is located within the Southern California Rapid Transit District (SCRTD), which provides bus service to Hawthorne for commuters and shoppers. In general, the buses operate on routes confined to the City's major arterial streets. SCRTD is primarily responsible for the review and designation of services, and frequently revises schedules and routes according to expressed need and economic activity.

Hawthorne Municipal Airport. Hawthorne Municipal Airport is owned and operated by the City of Hawthorne and is located in the western portion of the Los Angeles basin, five miles east of Santa Monica Bay and the Pacific Ocean. Airport property is directly bounded by Crenshaw Boulevard, 120th Street, Prairie Avenue, and a Northrop Aircraft facility. In 1986, Hawthorne Municipal airport accommodated approximately 277 single-engine based aircraft, 30 multi-engine based aircraft, and three fixed base operations offering rentals, charter service, flight instruction, and engine and airplane repair. In addition, 1986 figures indicate that 130,714 annual operations were conducted. The existing design capacity of the single runway airport is 230,000 operations per year. However, the Airport does not function as a major transportation mode for residents at this time.

Of interest to Hawthorne are noise, safety, and land use considerations. These considerations may not remain stable in the future given the current underutilization of airport operations. Due to changing physical, economic, and environmental conditions, the possibility of the airport transforming from a general aviation airport into a private, corporate airport setting is becoming more of a reality. Factors which may contribute to this transformation include increases in manufacturer's product liability insurance, changes in production and distribution patterns for aviation fuel, changes in ownership and marketing strategies of the larger general aviation manufacturers, and public perception of aviation due to media coverage of safety and noise issues.

To study problems associated with the airport, an Airport Advisory Committee was formed in a joint effort by the City of Hawthorne and the Northrop Corporation. This committee will formulate recommendations for existing and future land use, noise, and safety considerations and needs.

In addition, the committee is also responsible in formulating an Airport Master Plan to study existing facilities and activity trends in order to adequately assess future needs. The Plan shall include an inventory of existing navigation aids and aerospace factors, historical aviation activity, identification and location of area airports and service areas, and socioeconomic characteristics.

Para-Transit Systems

Para-transit services include such transportation services as jitneys, carpooling, van pooling, taxi service, and dia1-a-ride arrangements. These services usually serve elderly and disabled persons, although some services are available without restrictions. Six fixed bus routes and five taxi companies currently serve the South Bay area. In addition, three dia1-a-1ift services are available for senior citizens or disabled residents in Hawthorne. Lastly, private sector companies, like the Northrop Corporation, are currently providing car pooling or pooling para-transit systems.

Transportation System Management

Transportation System Management (TSM) is a cooperative process involving all transportation agencies in an urban area attempting to increase the efficiency of a transportation system through low-cost and relatively short-term actions. TSM analysis can incorporate a number of techniques that could be implemented to benefit a localized citywide or corridor problem. This is accomplished by establishing a better balance between the auto, pedestrian, bicycle, and transit of the urban transportation system.

Contemporary objectives to satisfy the goal are to minimize person delay rather than only vehicle delay to maximize mobility, yet minimize environmental and energy impacts of travel; place increased reliance on public transportation and other means of group riding; improve transit speeds and operating efficiency; reduce travel demands and ensure that improvements are compatible with each other and consistent with broader urban objectives.

Projected vehicular traffic for Year 2000 cannot be totally accommodated on the Master Plan of Streets and Highways solely through capital improvements such as street widening. Other strategies to reduce vehicular demand must be utilized to accomplish the goal of this Element. Ideally, the TSM process involves a comprehensive and coordinated analysis of alternative strategies that

take into account the complexities and trade-offs in the transportation system.

TSM Strategies

One of the major TSM strategies presently working in Hawthorne is vanpooling. The vanpool concept is presently being-instituted by the Northrop Corporation which provides vans to their employees under varying arrangements.

The City of Hawthorne may also consider the use of "Commuter Computer." The non-profit organization "Commuter Computer" has been actively promoting both carpools and vanpools within the El Segundo and Los Angeles area. This organization provides matching services for interested participants and aids in the pooling format in other ways. The vanpool concept has the most promising application for two types of trips; long commute trips and commute trips to concentrated employment nodes.

Other active TSM programs which the city might consider would include work hour rescheduling where a staggered work program would help in spreading the peak period traffic over a longer time period, rather than exhibit high volume/short duration surges of traffic volume on the street system.

Additional programs in Hawthorne depend on the active participation of employers in the private sector. A major issue acting as a barrier to their cooperation is that the employer stands to benefit far less than the community and may even suffer from initial implementation problems. of reduced productivity and the need to invest in project-related equipment.

TSM in Hawthorne includes traffic-controls, improved public transportation, and improvements of the management of the existing transportation system.

Non-Motorized Circulation

Non-motorized circulation in Hawthorne includes pedestrians and bicyclists. Since increasing energy costs and air quality are becoming more of a critical concern, the provision of non-motorized circulation needs are becoming more important. The value of these non-motorized systems will escalate as city and regional transportation policies are implemented. Various types of non-motorized circulation include:

Pedestrian Circulation. The streets of Hawthorne were designed for automobile circulation. As such, pedestrians must compete with automobiles in many areas of the city. Traffic volumes on major arterial streets during peak traffic hours create intense conflicts between pedestrian and automobile movement. In addition, some

residential areas in the city have no sidewalks to separate pedestrians from motor vehicle movement; however, programs have and will continue to be implemented to correct this problem.

Bicycle Circulation. Hawthorne has just approved the extension of an existing bikeway within the city. It will run along the Dominguez Flood Channel from I20th Street to El Segundo Boulevard. The Hawthorne City Council has adopted bikeway plans that will generally follow power lines and drainage channel rights-of-way. The construction of new bike lanes on existing arterial or collector streets has not been implemented because a bicyclist's space takes away sorely needed space for moving higher person occupancy vehicles.

Other Circulation Related Topics

Additional topics related to circulation and the movement of people and goods through the city that require discussion and consideration include major traffic generators and attractors, truck routes, parking, and air pollution. These issues are briefly discussed below.

Traffic Generators and Attractors. Hawthorne exhibits four inner city locations that can be considered traffic generators or attractors. They are: 1) Northrop Corporation facilities located north of Broadway Avenue between Prairie Avenue and Crenshaw Boulevard; 2) Mattel Incorporated located on Rosecrans Avenue near the 1-405; 3) Hawthorne Boulevard retail and service strip commercial developments; and 4) the Hawthorne Municipal Airport. In addition to the four inner city traffic generators, several locations outside the city have a direct effect on traffic flow within the city. Among these locations are most notably the Los Angeles International Airport located to the northwest, the Pacific Ocean and surrounding recreation areas, the Forum and Hollywood Race Track located only a mile north of the city on Prairie Avenue.

Truck Routes. The City of Hawthorne presently has a designated truck route system which utilizes many of its major traffic-ways. These routes provide the city with a system which offers truck access to commercial and industrial areas while confining trucks to major streets. As such, existing truck routes reduce excessive noise, dust, and traffic hazards associates with truck movement from encroaching upon residential areas. Figure 4 indicates the designated truck routes within the city.

Parking. The city presently has adequate parking facilities for most commercial, industrial, and public areas. However, residential parking, particularly parking associated with high density residential developments is a problem. The problem is created by the lack of adequate parking for older apartment complexes, existence of narrow local streets, and apartment tenants using street curb-side parking in

lieu of their assigned parking space. Future zoning ordinance considerations will be necessary with respect to parking design and ratios. The present commercial off-street standards for the City of Hawthorne are one of the most restrictive in the Los Angeles region. Current standards require one space for every 250 square feet of gross leasable floor area for 75% of the development, and one space for every 100 square feet of gross leasable floor area for the remaining 25% of the development. As such, existing inadequacies or future parking needs which will result from implementation of the Land Use Element will be minimized.

Air Pollution. Air pollution is associated with the impacts of automobile, bus, truck traffic, and to a lesser extent, manufacturing industries. Since Hawthorne will be serviced by two major freeways as well as its existing street system, local air quality will most likely be modified during peak traffic flow periods in areas adjacent to travel corridors. However, the City of Hawthorne has little direct control over mitigating these impacts associated with motor vehicular traffic.

School Circulation There is a growing need for the construction of school facilities. Due to the scarcity of sites that are adequate to accommodate the required school acreage, school districts are having to consolidate residential lots and acquire lots across and adjacent to local streets. This presents a safety concern for school children and youth who are required to cross local streets to access school facilities.

SECTION III - ISSUES AND OPPORTUNITIES

The Circulation Element is based upon policy response to circulation issues and opportunities. Issues are local concerns relating to existing or expected circulation topics which need resolution. Opportunities are potential benefits which might be achieved as a result of the revision of old situations, or the addition of new ones.

The following factors discussed in this section were identified as the major issues and opportunities to be addressed in the Circulation Element and were identified through the examination of existing circulation systems, reviewing transportation studies, seeking citizen evaluation through public participation workshops, and conducting ad hoc committee meetings composed of members of the Hawthorne City Council, Planning Commission and other City officials.

Traffic Circulation

Current traffic circulation along arterial streets within the City include opportunities for traffic signal modernization, timing, and coordination. The General Plan identifies such signals and establishes policies to improve traffic circulation and safety.

Alternative Transportation Modes

The City's location provides an opportunity for increased use in public transportation through expansion of local and regional bus systems and encouragement of carpooling, vanpooling, jitneys, or staggered work hours for local business. In addition, the City should consider ways to exploit the opportunity that exists due to the location of the Century-El Segundo Light Rail Transit System. The General Plan includes policies to stimulate such activities.

Parking

The circulation system must accommodate existing and future developments in the City. As such, neighborhood and commercial parking problems need to be mitigated. The General Plan identifies parking needs and establishes policies to initiate the improvement of parking conditions and facilities within the City.

School Safety

School Districts are met with many challenges in meeting classroom enrollment, reduction in classroom size, and selection of new school sites. Local streets may present a difficulty in meeting school safety concerns when school sites which are divided by, or adjacent to, local streets require children and youth to cross a local street to access ancillary uses such as playgrounds and other recreational areas. The General Plan should facilitate the possible vacation of local streets once a traffic study has been completed and the Department of Public Works has determined that traffic circulation will not be substantially impeded.

SECTION IV – CIRCULATION ELEMENT GOALS AND POLICIES

Convenient and safe movement between home, work and shopping is an important component of the perceived quality of life for the community. As the City reaches its development capacity, traffic volumes result in increased congestion as expansion of existing roadways becomes more difficult.

The Circulation Element provides a roadway plan that meets the requirements for safe and efficient movement at the development intensity anticipated in the Land Use Element.

GOAL 1.0: PROVIDE FOR THE SAFE AND EFFICIENT MOVEMENT OF PEOPLE, GOODS AND SERVICES THROUGHOUT THE CITY.

POLICY 1.1: The City shall maintain a coherent local circulation system based on a hierarchy of streets which serve the needs of all residents.

POLICY 1.2: The City shall review and improve traffic control signalization and signage.

POLICY 1.3: The City shall maintain and develop new traffic and parking restrictions along narrow streets in neighborhood areas which impede through traffic.

POLICY 1.4: The City shall continue to require land dedication from existing alleys in order to create minimum 20 foot alleyways.

POLICY 1.5: The City shall review and improve existing parking conditions and requirements for all land uses within the City.

POLICY 1.6: The City shall review and authorize design, engineering and roadway improvement projects.

POLICY 1.7: The City shall encourage that adequate mitigation measures be pursued with regard to the potential noise and safety impacts associated with traffic near Hawthorne Municipal Airport.

POLICY 1.8: The City shall encourage the maintenance and improvement, where appropriate, of the safe and convenient bicycle and pedestrian movement through the City.

POLICY 1.9: The City shall discourage driveway approach entrances/exits for all corner lots and all reverse corner lots in all zone classifications from being located closer than twenty feet from the point formed by the intersection of the front lot line and the side lot line separating the lot from the street.

POLICY 1.10: The City shall discourage driveway approaches to be taken in all zone classifications that would exceed 50% of the street frontage on any lot.

POLICY 1.11: The City shall review and consider the re-design of the center median along Hawthorne Boulevard between Imperial Highway and Rosecrans Avenue.

POLICY 1.12: The City shall examine the feasibility of designating streets for one-way traffic flow.

POLICY 1.13: The City shall review and consider the designation of additional bike-lanes where appropriate.

POLICY 1.14: The City shall continue to improve 139th Street between Prairie Avenue and Crenshaw Boulevard with respect to pavement, curb, gutter and sidewalk improvements.

POLICY 1.15: The City shall encourage the reconstruction and upgrading of railroad crossings to improve circulation and safety.

POLICY 1.16: The City shall review and encourage the use of public transportation through the expansion of local and regional bus systems; encouragement of vanpooling, carpooling, jitneys, and the new light-rail transit system; and consideration of staggered work hours for local businesses.

POLICY 1.17: Properties abutting an alley shall be discouraged from using the street for ingress and egress.

POLICY 1.18: The City shall discourage the use of local city streets as carriers of inter-city traffic.

POLICY 1.19: The City shall review and consider the redesign of local and collector streets for the area bounded by the San Diego Freeway (I-405), Rosecrans Avenue, Aviation Boulevard, and Wiseburn Street.

POLICY 1.20: The City shall consider the vacation of the street between 129th Street from Washington Avenue to the first alley east of Hawthorne Boulevard (Williams Way) and Washington Avenue from El Segundo Boulevard to 129th Street.

POLICY 1.21: The City shall recommend to the county that the following traffic signals along five uniform traffic control county corridor routes be upgraded with respect to signal timing and coordination:

1) Crenshaw Boulevard, 120th Street to Rosecrans Avenue.

2) El Segundo Boulevard, Inglewood Avenue to Van Ness Avenue.

3) Hawthorne Boulevard, Imperial Highway to Rosecrans Avenue.

4) Imperial Highway, Inglewood Avenue to Wilton Place.

5) Rosecrans Avenue, Aviation Boulevard to Crenshaw Boulevard.

POLICY 1.22: The City shall encourage the improvement of traffic signals along major corridors in the City as follows:

1) Installation of left-turn signals at the intersection of Prairie Avenue and El Segundo Boulevard for all directions.

2) Upgrade and modernize traffic signals at the intersection of Prairie Avenue and Compton Boulevard.

3) Improve timing and coordination of traffic signals at Imperial Highway and Hawthorne Boulevard.

4) Installation of left-turn signals for Imperial Highway only at Hawthorne Boulevard.

5) Inglewood Avenue at Imperial Highway.

6) Inglewood Avenue at 118th Street

7) Inglewood Avenue at 120th Street

8) Inglewood Avenue at Broadway

9) Inglewood Avenue at El Segundo Boulevard

10) Inglewood Avenue at 130th Street

11) Inglewood Avenue at 132nd Street

12) Inglewood Avenue at 135th Street

13) Inglewood Avenue at 138th Street

14) Inglewood Avenue at Rosecrans Avenue

15) Ing1ewood Avenue at 147th Street

POLICY 1.23: The City shall encourage the re-channelization of Inglewood Avenue between Imperial Highway and Rosecrans Avenue to provide additional left-turn pockets at the following intersections:

1) Imperial Highway (signalized)

2) 116th Street

3) 118th Street (signalized)

4) 119th Street

5) 120th Street (signalized)

6) 121st Street

7) Broadway (signalized)

8) 130th Street (signalized)

9) 132nd Street (signalized)

10) 134th Street (west leg)

11) 134th Street (east leg)

12) 135th Street (signalized)

13) 137th Street

14) 138th Street (signalized)

15) 141st Street

POLICY 1.24: The City shall facilitate the efficient movement of vehicular traffic within the City of Hawthorne. It is recommended that the following street right-of-ways in the Moneta Gardens area be widened to 50 feet whenever the existing right-of-way is found to be less than 50 feet.

1) Cordary Avenue - between El Segundo Boulevard and Rosecrans Avenue

2) Doty Avenue - between El Segundo Boulevard and Rosecrans Avenue

3) Kornblum Avenue - between El Segundo Boulevard and Rosecrans Avenue

4) Cerise Avenue - between 135th Street and Rosecrans Avenue

5) Lemoli Avenue - between 135th Street and Rosecrans Avenue

6) Chadron Avenue - between 135th Street and Rosecrans Avenue

7) 139th Street - from Prairie Avenue to Crenshaw Boulevard.

Policy 1.25: The City shall discourage through traffic in residential areas by placing cul-de-sacs on local streets to eliminate their intersecting with arterial streets and by the use of other traffic calming techniques. The street segments that may be closed pursuant to this Policy include:

1) Eucalyptus Avenue, south of Imperial Highway

2) Gale Avenue, south of Imperial Highway

3) Acacia Avenue, south of Imperial Highway

4) 115th Street between Hawthorne Boulevard and Grevillea Avenue

POLICY 1.26: The City is encouraged to design arterial streets as complete streets, balancing the needs, safety, and use of public right-of-way for all users of all abilities.

POLICY 1.27: The City shall identify bicycle corridors within City limits and adjacent municipalities in order to integrate into the regional bicycle plan and connect resident to activity centers.

POLICY 1.28: The City shall build local and regional consensus and support for the advancement of the Dominguez Channel Greenway as a new active transportation corridor and connector from Hawthorne to the Port of Los Angeles.

POLICY 1.29: The City shall support the retrofitting of existing arterials to be safe, accessible, and comfortable transportation corridors to meet the needs of all modes of transportation, prioritizing resurfaced and rebuilt streets for the first retrofits.

Level of Service Analysis

The traffic impact methodology selected is the 1985 Highway Capacity Manual Planning Method (HCM). The HCM method calculates the level of Service at a particular intersection. level of Service denotes any infinite number of traffic-operating conditions which may exist on a given lane or roadway when it is subjected to various traffic volumes

There are six levels of Service ("A" through "F") which relate to driving conditions from best to worst respectively. The characteristics of traffic operation for each level of service are listed in Table I. In general,

LOS "A" indicates free-flow conditions with no congestion, while LOS "F" represents total system breakdown with stop-and-go conditions and long delays.

The implementation of the land use policy contained in the Land Use Element would alter the distribution of circulation related development in two areas of the City. The first area is located adjacent to the Century Freeway (1-105) and is identified as freeway related commercial uses. The second area is located in the southwestern portion of the City, specifically bounded by Isis Avenue, Rosecrans Avenue, Ocean Gate Avenue and Compton Boulevard. This area is also designated freeway commercial due to its proximity to the San Diego Freeway (1-405). Figure 5 shows existing and future ICU and Level of Service for these two areas.

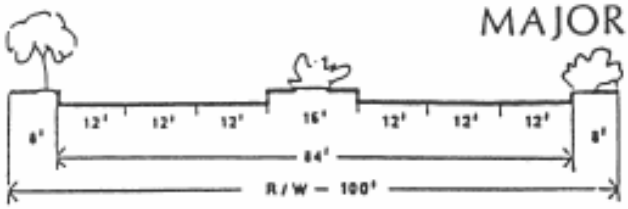
The network of surface streets, highways and freeways serving the two freeway commercial areas will experience an increase in daily vehicle trips. However, by the year 2000, the above mentioned circulation systems would be extremely congested whether or not commercial use intensification resulted due to projected urban growth rates in all surrounding jurisdictions.

In addition, the location of the light rail project, reduction of freeway commercial floor area ratios from 4:1 to 3.5:1 (as proposed by the Land Use Element), and current City of Hawthorne parking standards will mitigate the possibility of adverse traffic related elements.

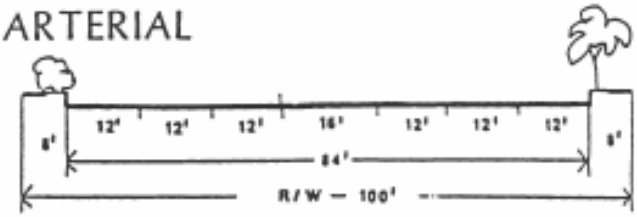
San Diego Freeway
Century Freeway
Major Arterials
Collector Streets
Figure 1
Street Classification
HAWTHORNE
GENERAL
PLAN·1989
North

00,000 Daily Traffic Volumes
Figure 2
Daily Traffic Volumes
HAWTHORNE
GENERAL
PLAN·1989
SOURCE: 1987 Los Angeles County Traffic Volumes; City of Hawthorne Engineering Dept.
North
0
1000
2000
Scale in Feet

MAJOR ARTERIAL

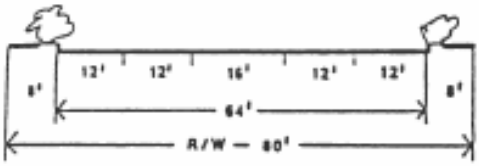


SIX-LANE DIVIDED WITHOUT PARKING
(OPTIONAL OFF-PEAK CURB PARKING)

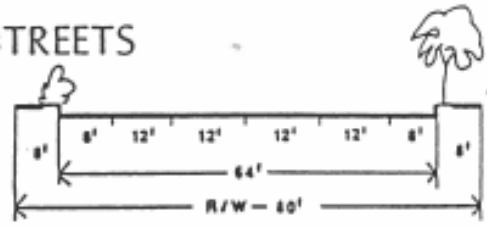


SIX-LANE WITH MIDBLOCK
LEFT TURN CHANNELIZATION
(OPTIONAL OFF-PEAK CURB PARKING)

COLLECTOR STREETS

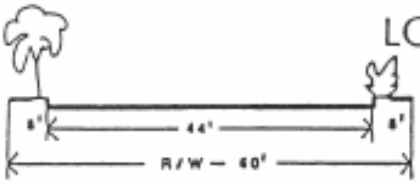


FOUR-LANE WITH MIDBLOCK
LEFT TURN CHANNELIZATION

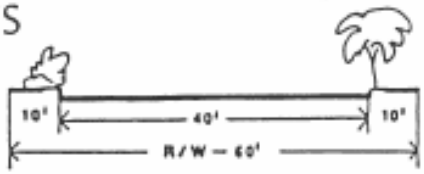


FOUR-LANE WITH PARKING

LOCAL STREETS



TWO-LANE WITH PARKING FOR
INDUSTRIAL AND COMMERCIAL AREAS



TWO-LANE WITH PARKING
FOR RESIDENTIAL AREAS

HAWTHORNE
GENERAL
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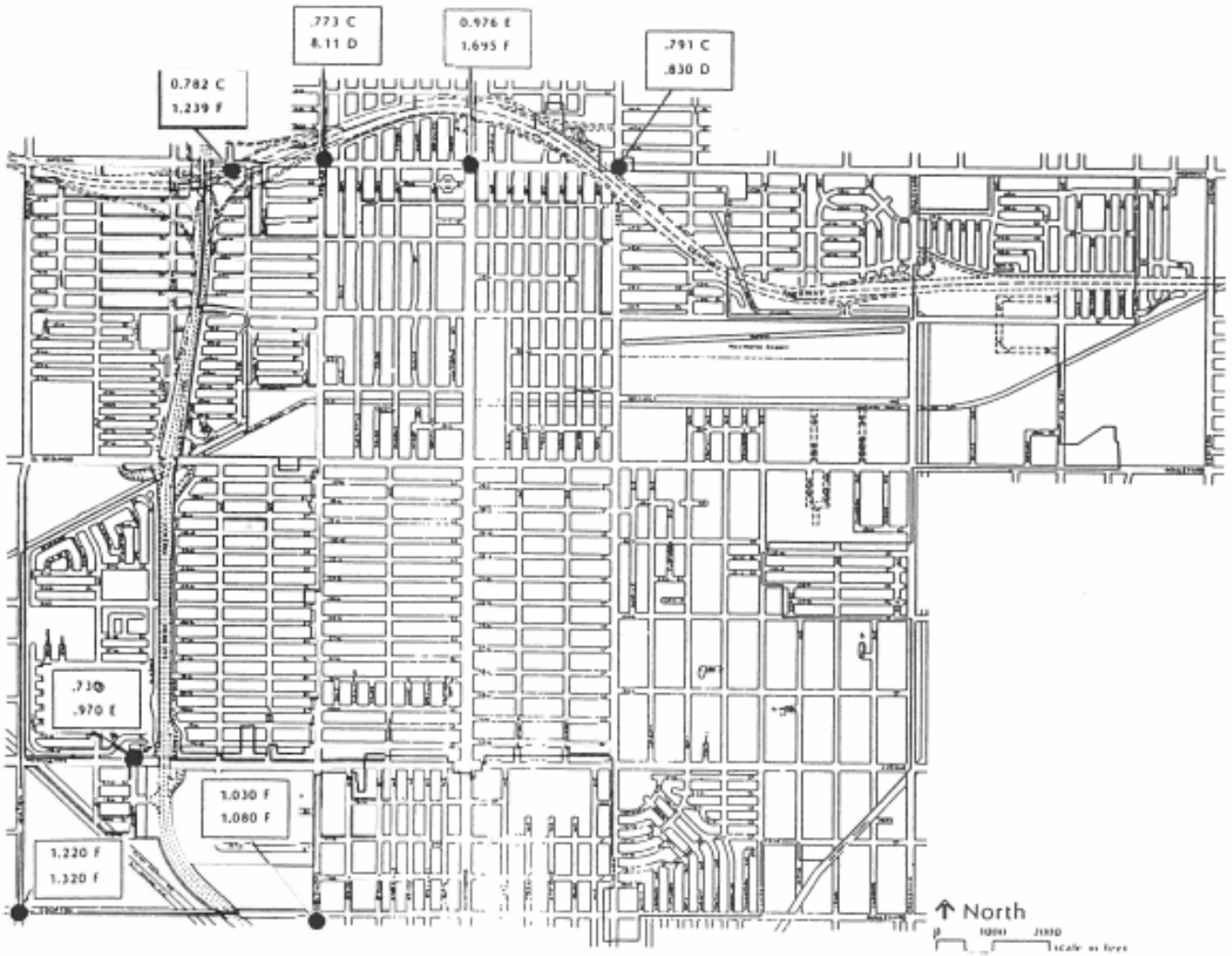
Figure 3
Roadway Standards

Truck Routes
Figure 4
Truck Routes
HAWTHORNE
GENERAL
PLAN 1989
North



SOURCE: Justin Farmer and Associates, Traffic Engineer.

ICU LOS Traffic Conditions

0.000 X Existing Traffic

0.000 X Year 2000

Figure 5
Future (2000)
ICU and LOS

HAWTHORNE
GENERAL
PLAN·1989

TABLE 1
DEFINITIONS OF LEVEL-OF-SERVICE

LEVEL OF SERVICE	OPERATING CONDITION (PAGE 81 HIGHWAY CAP, MANUAL)(SEE FOOTNOTE)	VOLUME TO CAP RATIO (PAGE 323 HWY.CAP. MAN.)
A	Free flow, low volumes, high speeds, little or no driver restrictions.	0.00 – 0.60
B	Stable flow, drivers have reasonable freedom of speed and lane choice.	0.61 – 0.70
C	Stable flow but maneuverability limited by high volumes, speed still satisfactory.	0.71 – 0.80
D	Approaching unstable flow, tolerable 0.81 speeds, but affected by fluctuating high traffic volume. Driver has little freedom of maneuverability.	0.81 – 0.90
E	Volumes at or near capacity, queues of vehicles wait at signal. Unstable flow and possible blockages of momentary duration.	0.91 – 1.00
F	Blockage due to down stream restriction backing into subject intersection. Stoppages may be for long periods.	OVER 1.00

Source: Justin F. Farmer, Transportation Engineer, Inc.

NOTE: Highway Capacity Manual, 1965, Special Report 87, Highway Research Board, National Academy of Sciences, National Research Council Publication 1328.

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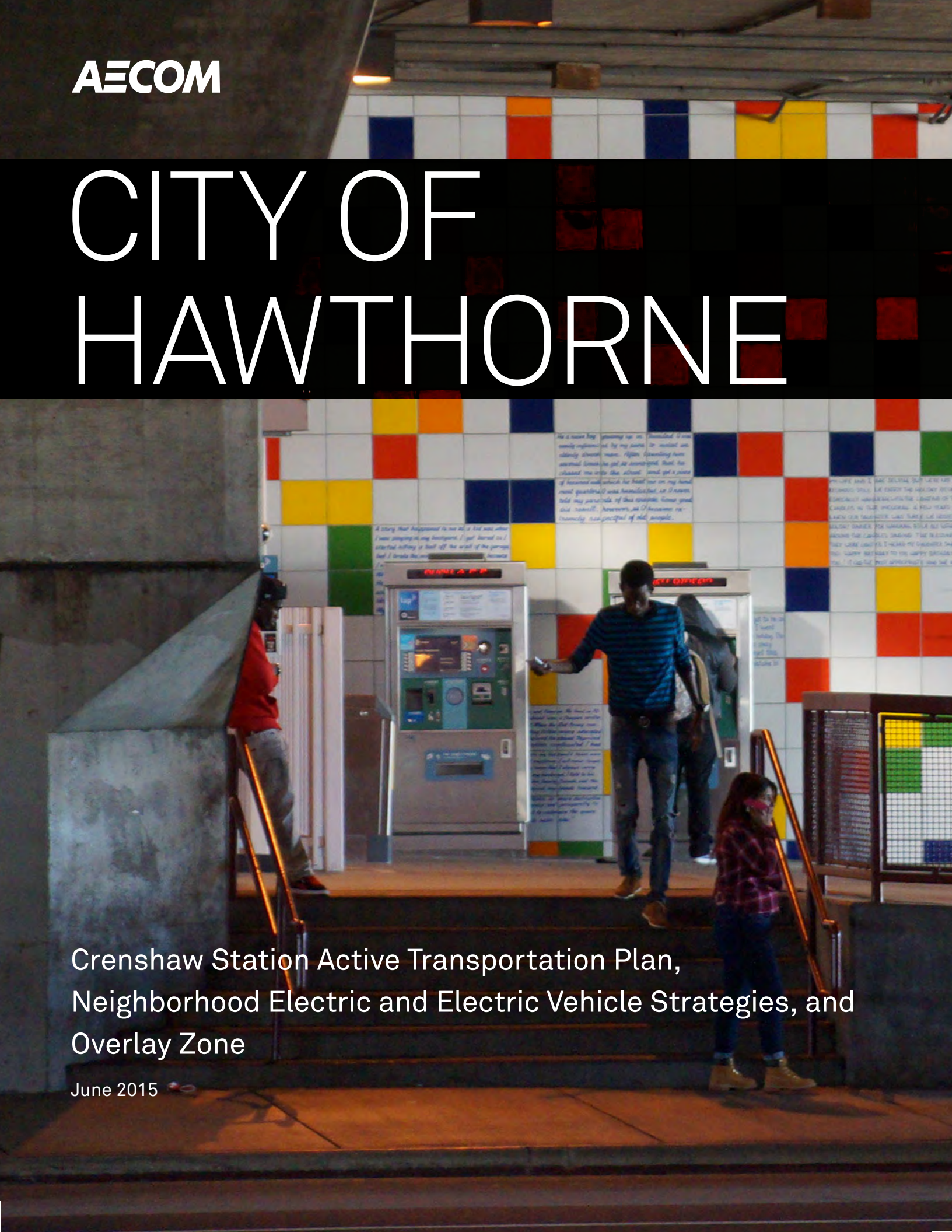

Crenshaw Station Active Transportation Plan, Neighborhood Electric and Electric Vehicle Strategies, and Overlay Zone

June 2015

This is a project of the City of Hawthorne with funding provided by the Southern California Association of Governments' (SCAG) Sustainability Grant program. This report was prepared by AECOM (formerly URS Corporation), in collaboration with Berkebile Nelson Immenschu and McDowell Inc. (BNIM), Metropolitan Research and Economics (MR+E), and Civic Projects.

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INTRODUCTION


Metro
Crenshaw

INTRODUCTION

PURPOSE AND POLICY BACKGROUND

The Crenshaw Station Area Active Transportation Plan, Local and Electric Use Vehicle Strategies, and Overlay Zone (ATP) aims to facilitate and enhance non-carbon emitting modes of travel in an area that currently lacks the appropriate infrastructure. This project will serve as a regional model for implementation of goals outlined in the Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Specifically, it serves to increase accommodation and planning for bicyclists and pedestrians; and increase transportation options for trips less than three miles, particularly linkages between bicycling and walking with transit.

The purpose of the ATP is to provide a range of transportation alternatives other than personal automobile for travelling in the City of Hawthorne Crenshaw Station area. The ATP is an outcome of regional and local policy aimed at reducing greenhouse gas emissions and increasing connectivity to transit. The California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB32), mandates all metropolitan regions to decrease their Greenhouse Gas (GHG) emissions to 1990 levels by 2020, a reduction of approximately 15 percent below emissions under a "business as usual" scenario (CA.gov, Assembly Bill 32 Overview). The Sustainable Communities and Climate Protection Act of 2008, Senate Bill 375 (SB375), supports AB32 by setting regional targets for GHG emissions and reductions from passenger vehicle use. SB375 also mandates that all metropolitan planning organizations, like SCAG, must prepare an SCS as part of their long range RTP. SCAG's 2012-2035 RTP/SCS is the policy which operationalizes the mandates of AB32 and SB375. In addition to the guidance provided in the RTP/SCS, Los Angeles County Metropolitan Transportation Authority (Metro) provides the framework for enhancing connectivity to Metro stations in the First-Last Mile Strategic Plan. The goals of that plan include expanding the reach of transit through infrastructure improvements, maximizing multi-modal benefits and efficiencies, and building on the RTP/SCS. The First Last Mile Strategic plan includes guidelines and strategies for mobility solutions in station areas, which the ATP implements for the Crenshaw Station area.

This ATP serves as the preliminary step in a process that can lead to physical improvements at the station area and policy modifications that can enhance active transportation and neighborhood connectivity to transit. The Crenshaw Station ATP will be used by the City of Hawthorne as a guide for moving forward with active transportation design and policy to enhance transit accessibility and connectivity within the walkshed and bikeshed of the Crenshaw Station. The plan can also be used as a tool for agencies and decision makers to seek funding, prioritize and select projects to implement, or support other related initiatives, projects, or programs in the area.

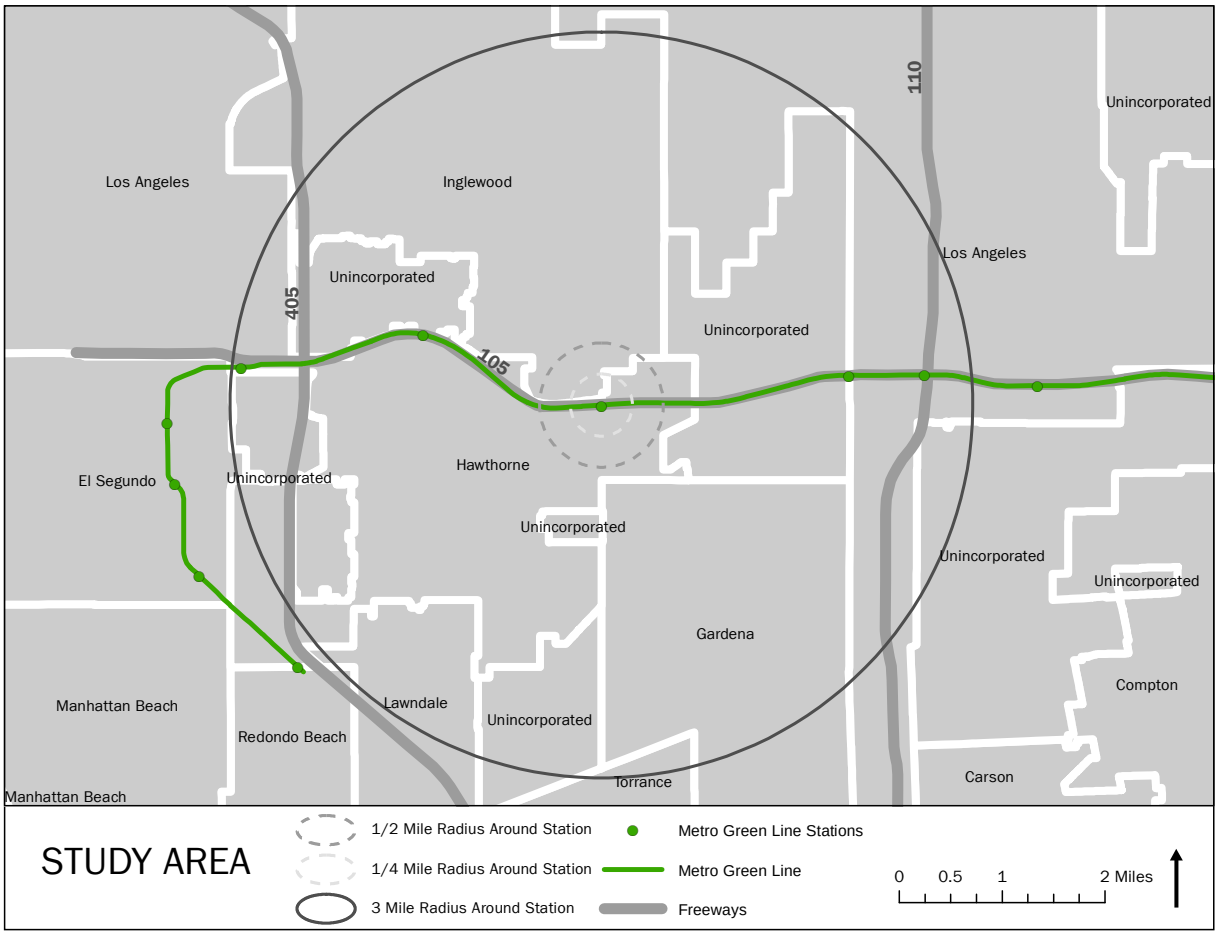
It is anticipated that the City of Hawthorne will use this ATP for advanced decision making to implement infrastructure improvements and policy modifications to meet the following desired outcomes:

1. To increase safety, accessibility, and accommodation for pedestrians, bicycles, and other forms of active transportation within the immediate vicinity of the Crenshaw Station.

2. To increase alternative transportation options for trips less than three miles from Crenshaw Station, particularly linkages between bicycling and walking with transit.

3. To enhance non-carbon emitting modes of travel in the study area which currently lack the appropriate infrastructure.

The plan area encompasses a 3 mile radius extending from the Crenshaw Light Rail Transit (LRT) Station on Metro's Green Line, located at 11901 S Crenshaw Boulevard in Hawthorne California. The area is approximately 28 square miles in the Southern Los Angeles region, including neighborhoods of Los Angeles, Hawthorne, Inglewood, Lawndale, Gardena, and unincorporated Los Angeles County.



Study Area Map, Figure 1

The Study Area map (Figure 1) illustrates the ¼, ½, and 3 mile radii around the Crenshaw Station, located at the intersection of Crenshaw Boulevard and CA Interstate 105. The ½ and 3 mile radii represent the distances in which pedestrians could be expected to walk and bike, respectively, while utilizing the Crenshaw Station as an access point to the Metro rail system. The ¼ and ½ mile radii include only the cities of Hawthorne and Inglewood, while the 3 mile radius includes Hawthorne, Inglewood, Unincorporated areas, City of Los Angeles, Gardena, Lawndale, and the edges of Torrance, Redondo Beach, and El Segundo.

RELATIONSHIP OF ATP TO GENERAL PLAN, ZONING CODE, SPECIFIC ZONES AND OVERLAY ZONE

The ATP is an action and implementation-oriented plan that focuses on identifying infrastructure improvements to support walking, biking, and Neighborhood Electric and Electric Vehicle (NEV/EV) use in the Crenshaw area. As part of this effort, the plan identifies necessary zoning and plan amendments to achieve the project's goals. Specifically, while the ATP is not a regulatory document, it identifies necessary changes to the City of Hawthorne's existing policy and regulatory framework that would increase accessibility to the Crenshaw Green Line Station, expand the walkability and bikeability of the surrounding neighborhoods, encourage NEV/EV use, and increase opportunities for future transit users within the stations' commuter shed.

OVERVIEW OF THE ATP ORGANIZATION AND CONTENT

The Active Transportation plan is organized as follows:

Introduction, provides an introduction with purpose and need, governing policy, and desired outcomes of the Active Transportation Plan, Local Use and Electric Vehicle Strategy, and Overlay Zone.

PART A: ACTIVE TRANSPORTATION PLAN

Section 1, Analysis and Process, presents the methodology used in preparing the active transportation plan, provides an overview of the project study area, inventory of origins and destinations, analysis of existing and potential pathways

that connect the major points of interest, and an inventory of pedestrian and bike impediments within the study area.

Section 2, Pathway Improvements, presents recommended infrastructure improvements to enhance safety, accessibility, and connectivity of the station area and interconnected pathways into the surrounding neighborhoods.

PART B: LOCAL AND ELECTRIC USE VEHICLE STRATEGIES

Using the findings and recommendations from the SCAG/ South Bay Cities Council of Governments (SBCCOG) Plug-in Electric Vehicle (PEV) Readiness Plan, the Local Use and Electric Vehicle Strategies propose a strategy for electric vehicle infrastructure, and for fostering and supporting the entire electric vehicle ecosystem in the project area.

The strategy addresses the physical and regulatory needs to enable electric vehicle use and identifies priority locations that are best suited for EV uses.

The NEV Strategy is based on SBCCOG's Local Use Vehicle Demonstration Project. It identifies specific implementation strategies for Hawthorne through physical infrastructure improvements and a demonstration project. The strategy addresses the physical and regulatory changes needed to support NEV use.

PART C: OVERLAY ZONE

In order to implement the active transportation and NEV/EV plan and strategies, Part C identifies regulatory changes to permit and incentivize the identified projects and strategies. The draft Overlay Zone is based on the format of the existing municipal code. It implements the goals developed in the ATP, NEV and EV plans. The overlay zone text includes:

- Language that explains the implementation of the overlay zone in relation to the underlying zones;
- An explanation of how to resolve potentially conflicting development standards;
- A list of uses permitted in the overlay zone that is not otherwise permitted in the underlying zones;
- Design and development standards for ATP, NEV and EV infrastructure on private property, and;
- An incentives structure for the inclusion of ATP, NEV and EV infrastructure in private developments.

PART D: IMPLEMENTATION PLAN

The Implementation Plan outlines the next steps to take by responsible agencies to advance the recommended bicycle, pedestrian, and NEV/EV infrastructure improvements

forward into real projects.

REFERENCES

Contains a list of documents referenced in the creation of

this ATP.

APPENDICES

The following are included as appendices to this document:

- Appendix I: Existing Conditions Photo-Log
- Appendix II: Existing Conditions Report
- Appendix III: Community and Stakeholder Outreach Summaries
- Appendix IV: Cost Estimate
- Appendix V: Example EV Permit and Zoning Code

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A

ACTIVE TRANSPORTATION PLAN


GO DIRECT...
WITH DIRECT AIR SERVICE INC.

1

ANALYSIS AND PROCESS

METHODOLOGY

The ATP was developed through a combination of field work, technical analysis, and community and stakeholder outreach.

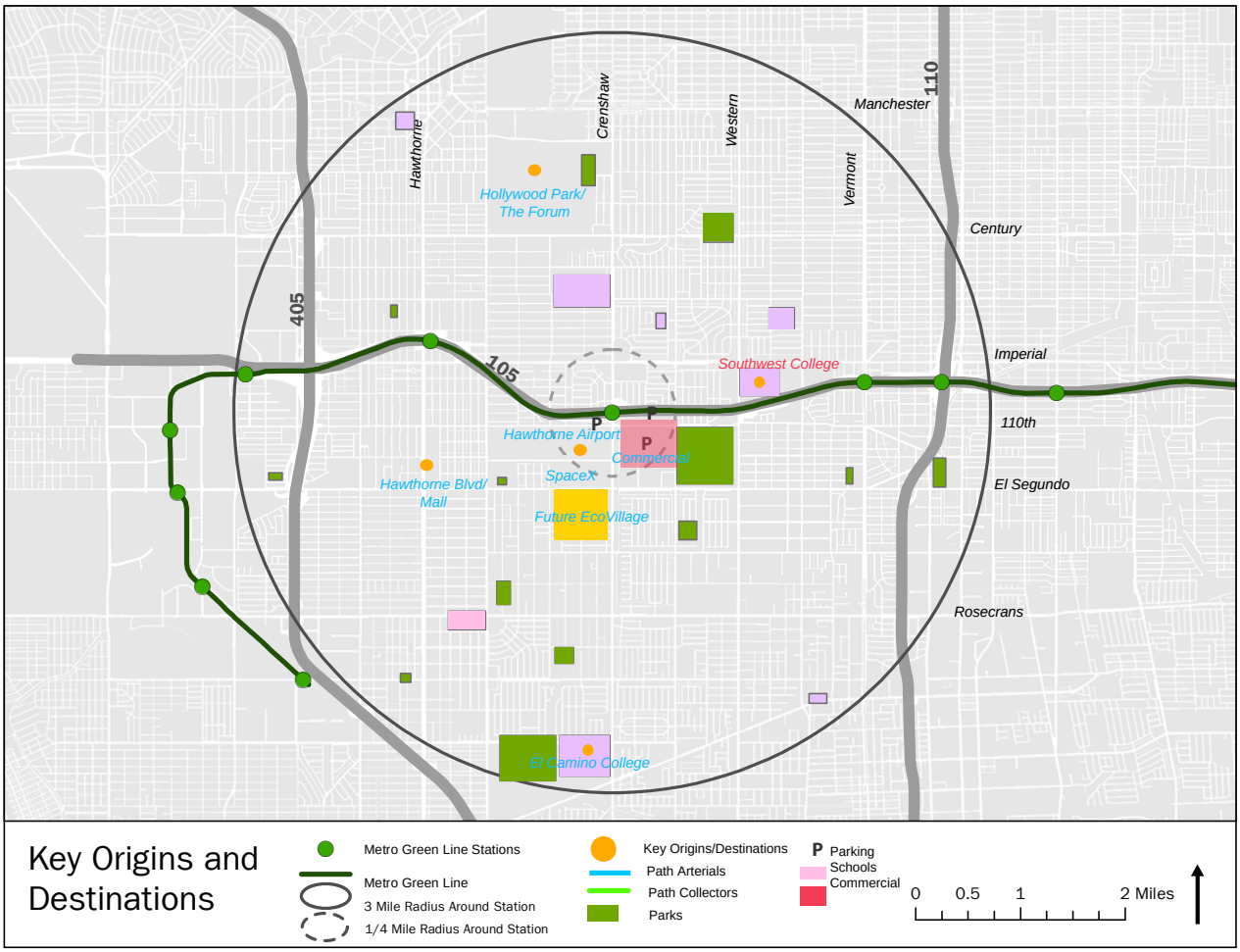
Field Work: The project launched with a study area tour to document existing conditions. Conducted on-foot, the study area tour aimed to identify existing impediments to walking and biking in the immediate Crenshaw Station area. The specific locations and items observed included the Crenshaw/120th intersection, 105 Freeway ramps, the Crenshaw Station (platform and bus stations below), pedestrian infrastructure, bicycle infrastructure, and private commercial development in the station area. The findings from the field work were documented in a photo and observation log, and informed the existing conditions analysis (Appendix I).

Literature Review: The team reviewed relevant policy and guidance documents for the development of first/last mile connectivity as well as local use/electric vehicle strategies. The documents reviewed included but were not limited to the Metro First Last Mile Strategic Plan/Path Planning Guidelines, NACTO Urban Street Design Guide, South Bay Cities Council of Governments Neighborhood Electric Vehicles in Mature Suburbs, South Bay Cities Council of Governments Neighborhood Electric Vehicles Demonstration Project, UCLA/SCAG South Bay Cities Plug-in Electric Vehicle Deployment Plan, and UCLA/SCAG Southern California Plug-in Electric Vehicle Readiness Plan.

Existing Conditions Analysis: The analysis included an inventory of existing conditions and infrastructure deficiencies in order to identify barriers to station access and opportunities for improvement. Posted speed limits and roadway characteristics were reviewed to determine bicycle and NEV Level of Traffic Stress for study area roadway network. The team also determined the extent and location of NEV islands (areas within which NEVs may operate, but out of which they may not travel due to posted limit restrictions). The City's General Plan, zoning codes, and other regulatory documents were reviewed to determine if amendments are necessary or desirable to achieve project goals. Finally, an economic development analysis was prepared in order to assess underutilized resources and develop options for their reuse that could contribute to the overall sustainability of the area. The results of these analyses were compiled into an existing conditions report (Appendix II).

Outreach and Coordination: Outreach and coordination included the private sector, public agency representatives, and key stakeholders. The Hawthorne Boulevard Specific Plan is simultaneously being developed in the City of Hawthorne. A coordination call was held on October 15, 2014 with the Hawthorne Boulevard Specific Plan consultant. Project timelines, scope, data collection, outreach methods, and goals were discussed as well as methods to link the two projects in a citywide network of walking and cycling routes. A stakeholder workshop was held on April 8, 2015 with property and business owners and public agencies in study area as well as governmental entities with facilities or infrastructure in the study area to seek input and to promote the project. A community workshop was held on April 29, 2015 in order to display and discuss the results of the existing conditions analysis and brainstorm for future improvements. A second community workshop was held on June 10, 2015 in order to present preliminary concepts for the ATP and receive feedback. In addition to the workshops, individual calls were held with key stakeholders, such as SpaceX during the project in order to obtain specific input. Finally, an interactive website was launched and ran for the duration of the project to obtain input online (https://mysidewalk.com/organizations/288904/crenshaw-station-active-transportation-plan). Each meeting and workshop, as well as the results of the interactive website were summarized and compiled in order to inform the ATP and ensure that it responds to community needs and concerns (Appendix III).

ATP Development: The findings from field work, literature review, existing conditions analysis, and outreach and coordination were used to develop the recommendations contained in this ATP. While the ATP is a document for the City of Hawthorne, the station access-shed was defined as a 3-mile area, which includes portions of other cities. The result of the field work and existing conditions analysis were



Key Origins and Destinations, Figure 2

combined to identify areas with the highest rates of pedestrian and bicycle collisions and the most impediments to use of local/electric vehicles. Next, key origins and destinations were mapped within the station area. Using geographic information systems (GIS), the team overlaid the mobility barriers with the major origins and destinations and mapped the potential pathways between the Crenshaw Station and the major origins and destinations in the study area in order to define the Path network. Once the Path network was defined, major barriers to mobility along the Path network were identified. Using the Path toolkit of improvements from Metro's First-Last Mile Strategic Plan, the team next identified specific improvements to apply in the Crenshaw Station area to improve connectivity. Finally, key improvements were further developed for the specific context using photo simulations, costs were estimated, and potential funding sources were identified to implement proposed improvements.

SITE INVENTORY OF DESTINATIONS

There are many destinations within the ½-mile pedestrian shed and 3-mile bicycle shed of Crenshaw Station (Figure 2). The station is immediately adjacent to the Hawthorne Municipal Airport and a cluster of high tech industries. This agglomeration of businesses is a significant employment center for residents throughout the region, including notable firms SpaceX, Triumph Aerostructures, and Lithographix. The Crenshaw Station is conveniently located to this business center, providing potential for a significant number of employees to use rail transit as the means for commuting to work if the pedestrian connection from the station to the places of employment is convenient, safe, and inviting. The ½-mile pedestrian shed also includes retail, services, and dining destinations such as Crenshaw Imperial Shopping Center, a home improvement center, banks, restaurants, a fitness center, and drug stores.

The extended study area within the 3-mile radius includes several major nodes for trip origin and destination, including multiple town centers, schools and colleges, and entertainment venues. The cities and neighborhoods of Hawthorne, Gardena, El Camino Village, Lawndale, West Athens, Westmont, Inglewood, and Lennox all lay within the study area. Each of these neighborhoods and town centers include places of

business as well as high to low density residential neighborhoods.

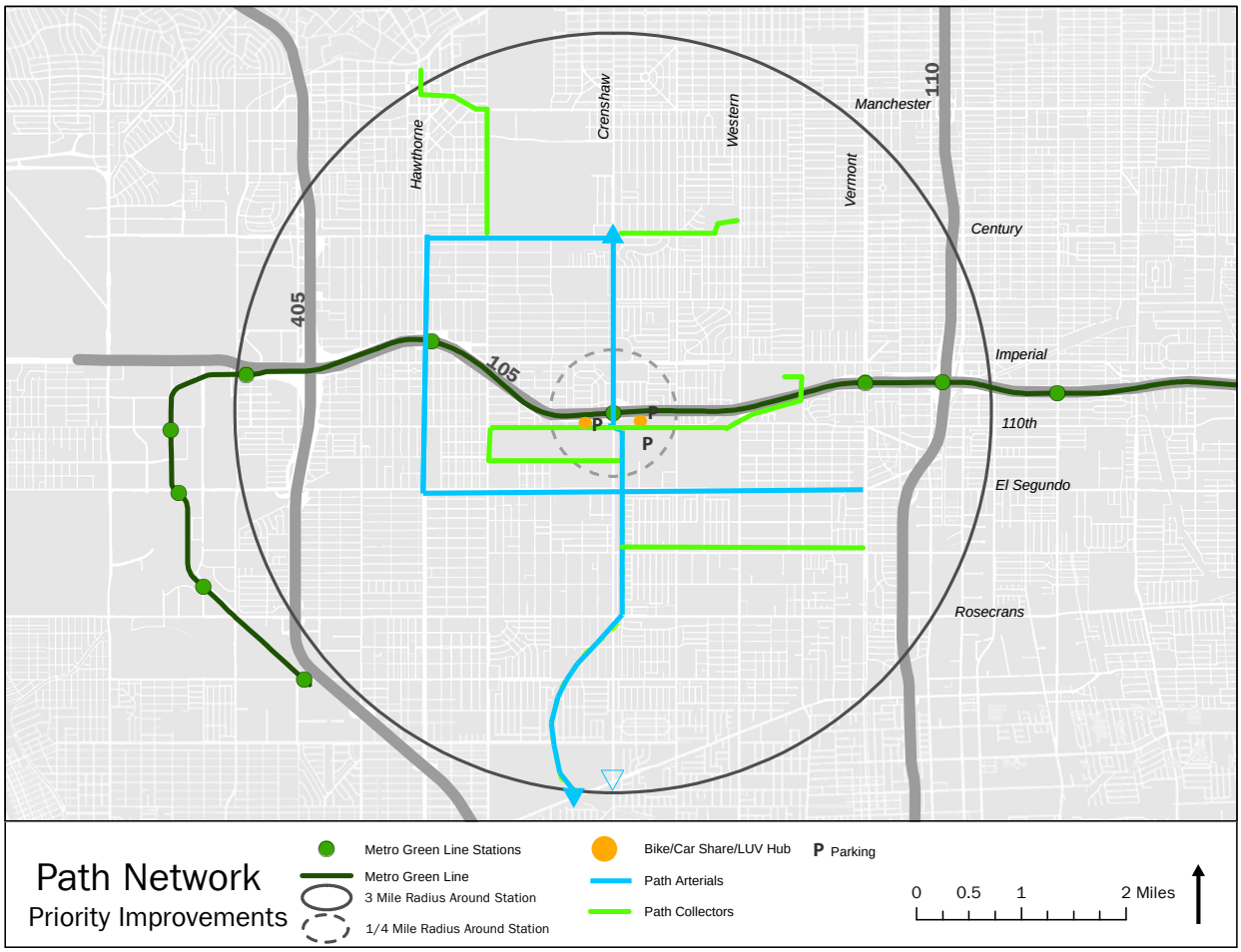
The 3-mile radius includes two community colleges (LA County Southwest College and El Camino College), three high schools (Morningside High School, Hawthorne High School, and Leuzinger High School), and multiple middle schools and elementary schools. The 3-mile radius also includes entertainment destinations, the Forum and Hollywood Park, which are home to many special events that bring large crowds which are largely auto-dependent. Additional entertainment destinations include over 18 local and regional parks and 2 golf courses.

PROPOSED PATH NETWORK

As defined by the Metro First/Last Mile Strategic Plan, the Path is "a series of active transportation improvements that extend to and from Metro Rail and [Bus Rapid Transit (BRT) stations. The Path is proposed along specific access routes selected to shorten trip length and seamlessly connect transit riders with intermodal facilities. Intermodal facilities may include bus stops, bike hubs, bike share, car share, parking lots, or regional bikeways, depending upon the location and context of the station." The Path Network includes Path Arterials, and Path Collectors, defined by Metro as follows:

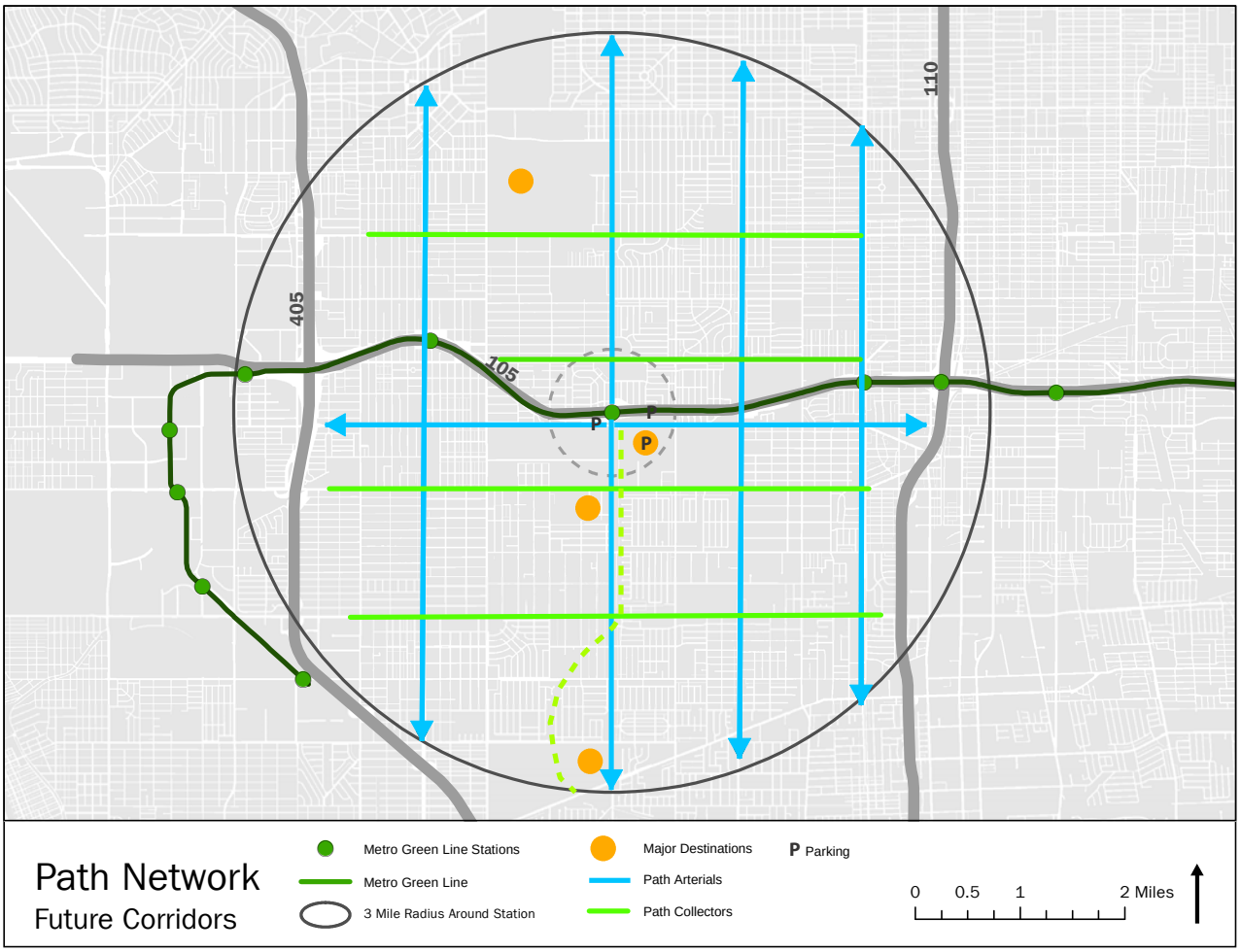
- Path Arterials – Path arterials are the main branch lines that extend from stations and support maximized throughput and efficiency for active transportation users. Path arterials accommodate the highest use active transportation corridors that lead to station portals, and are designed to accommodate a broad range of users. It is useful to organize Path users by their functional speed:
  - Slow (0-5 mph)- Slow moving, predominantly pedestrian based modes, including slower moving wheel-chair and cart/stroller push/pull users. Universal access is a critical concern, and accommodation of small wheeled access assist devices (i.e. wheeled push walkers) must be considered.
  - Medium (5-15 mph)- Broad range of users that move faster than pedestrians but still require physical separation from vehicles. Children on push-scooters, senior citizens using mobility scooters, skateboarders, casual bike riders and joggers all fall into this group.
  - Fast (15-35 mph)- Fast moving, aggressive bicyclists and drivers of neighborhood electric vehicles (NEVs) form this user group. Bikes and neighborhood electric vehicles (NEVs) can mix with vehicular traffic when supported by specific design elements and vehicular speed controls.
- Path Arterials aim to provide improved facilities for all three of these primary groups. Phased approached may be required to realize this goal due to constrained ROW. Separated active transportation lanes, signal and crossing improvements, wayfinding and plug-in component (i.e. bike share) integration are important considerations in the design of Path Arterials.
- Path Collectors – Path collectors include streets and routes within the station zone that both feed into arterials, and support crossing movements and general station area permeability. Collectors also consider the three primary active transportation groups noted above, but are more focused on supporting station area permeability on feeder routes, that will allow people access to the main arterials. Path Collectors work to reduce travel distances for non-motorized users by focusing on crossing movements and support Path Arterial function by providing efficient access to Arterial routes. Collectors frame the lesser traveled routes along the network, and help bridge gaps caused by high traveled and/or high speed vehicular roadways within station areas. Improved street crossing opportunities are essential to Collectors, including improved intersection function and the provision of mid-block crossings (Source: Metro First/Last Mile Strategic Plan).

In the Crenshaw Station Area the Path Network priority improvements are comprised of a combination of proposed arterials and collectors that connect to major origins and destinations and close gaps in the existing and proposed bicycle network. The Path Arterial along Crenshaw Boulevard connects to El Camino College in the South and the Forum in the north via Century Boulevard. A Path Collector is proposed to head north from Century Boulevard to connect to the future Metro Station at Florence and La Brea. The Path Arterial along Hawthorne Boulevard is intended to connect from the Forum south to the revitalized Hawthorne Mall. East-West Path Arterials are proposed along 110th street and El Segundo Boulevard to connect existing businesses and residents, as well as the future City of Hawthorne Eco Village to Vermont Avenue, where there is existing bicycle and bus transit, and where Bus Rapid Transit is currently being studied by Metro. Finally, additional east-west Path



Priority Improvement Map, Figure 3

Collectors are proposed to extend the network into existing residential and industrial areas to best serve and connect residents and employees to the Crenshaw Station. The goal of the Path Network priority improvements outlined here is to establish a connection to the Crenshaw Station from all four surrounding quadrants, connect to major origins and destinations, fill gaps in the existing bicycle network, and identify the highest priority arterials to define a realistic set of improvement projects. Figure 3 displays the priority improvement for the Path Network in the City of Hawthorne. Figure 4 depicts the additional major corridors in the Crenshaw Station area that could be considered for future improvements.



Additonal Corridors Map, Figure 4

INVENTORY OF MOBILITY IMPEDIMENTS

Several barriers exist to using the Path Network to access the Crenshaw Station using active transportation and NEV. The mobility impediments are documented here in order to better understand challenges currently faced by users and identify priority improvement projects. The focus for pedestrian impediments is the ¼ to ½ mile walkshed, whereas the focus for bicycle and local use vehicle impediments is the 3-mile access shed. General mobility impediments are discussed here, with more detailed, site-specific impediments detailed in Section 2.

Top Transit Access Barriers for Pedestrians

Connectivity – People prefer direct routes to their destination. Lacking connectivity to private development results in unsafe activity, such as crossing where there is no sidewalk or walking along slopes not designed for pedestrians.

Freeways – The station area contains multiple on/off ramps with no pedestrian signals, double turn lanes, and blind spots at pedestrian crossings.

Pedestrian Infrastructure – Push buttons are lacking or broken.

Safety/Legibility – Bus stations under the freeway are dark, lacking signage and wayfinding. There is no safe way to get from one side to the other.

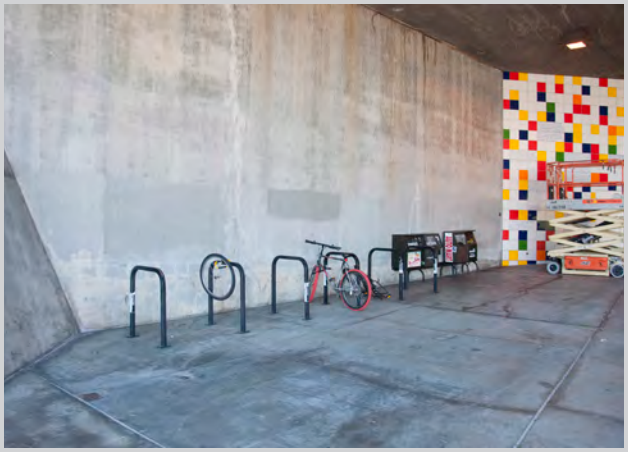
Crosswalks – Crosswalks are very long and contain double-right turn lanes that create blind spots at crossings.

Sidewalks – Sidewalks in the immediate station area are narrow, with physical barriers blocking the path.

Top Transit Access Barriers for Bicyclists

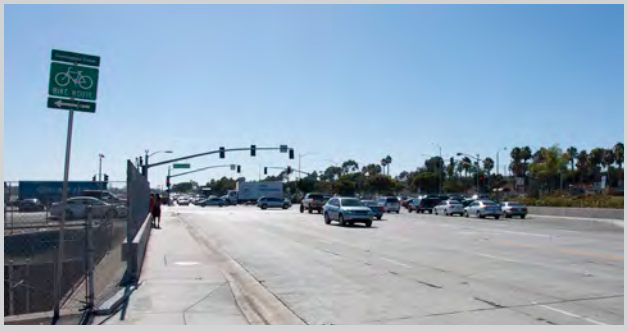
Connectivity – Lack of connections through existing parking lots to Dominguez Channel Trail restricts connections to adjacent businesses.

Safety/Security – Existing bicycle infrastructure lacks lighting for security.



Parking – Limited bicycle parking availability and security and bike theft concerns.

Right of Way Allocation – Despite ample street width, Crenshaw Blvd. lacks bike facilities, causing some cyclists to ride on sidewalks.



Fragmentation – The existing Laguna Dominguez Channel trail ends at 120th Street and does not connect to the Crenshaw Station. The bicycle network in the station area is fragmented within the 3-mile station radius.

2

PATHWAY IMPROVEMENTS

This section contains recommended bicycle, pedestrian, and NEV infrastructure improvements aimed at improving safety, accessibility, and walkability at Crenshaw Station and the area immediately adjacent to the station area and nearby intersections. The recommended projects were chosen using an analytical process involving inputs from observed and analyzed existing conditions, community meetings and workshops, and guidance on active transportation and safety improvement projects from the Metro First/Last Mile Strategic Plan.

The recommended projects prioritize addressing the existing safety hazards and accessibility deficiencies in the immediate transit station area to enhance walkability and bikeability. Following station area safety and walkability upgrades, it is suggested that a Path Network system be implemented to connect the transit station to nearby centers of business and points of interest, including the aerospace industrial district at Crenshaw and Northrop, retail centers at Crenshaw & 120th and Crenshaw & Imperial, aerospace and commercial business centers along Crenshaw to Northrop and El Segundo, and along 120th linking the transit station to the Hawthorne Airport. The presence of these large centers of business and employment create a significant opportunity to capitalize on transit ridership gains. Upgrading the pathways between the Crenshaw Station to these centers to be a safer and more comfortable environment for walking or biking could make transit ridership a more-attractive mode of commuting.

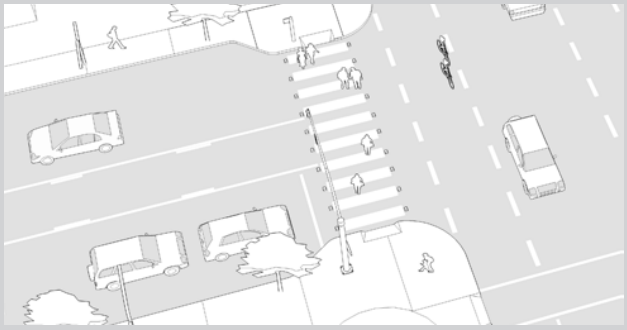
Once the immediate transit station area upgrades and connection improvements to nearby businesses are met, focus should be shifted to the greater bike-shed area of a 3 mile radius, where even more opportunities for connecting to transit exist. The study area is a prime setting for implementing a greenway path network, bikelane/NEV (or rolling lane) network, given the proximity to multiple central business districts, entertainment venues, commercial campuses, and community colleges.

INFRASTRUCTURE IMPROVEMENT RECOMMENDATIONS

GENERAL RECOMMENDATIONS

In order to address the active transportation access barriers to the Crenshaw Station, general improvements are recommended here within the ¼, ½, and 3-mile area around the station. Specific improvement projects for pedestrian and bicycle access follow the general recommendations.

General Infrastructure Improvement Recommendations

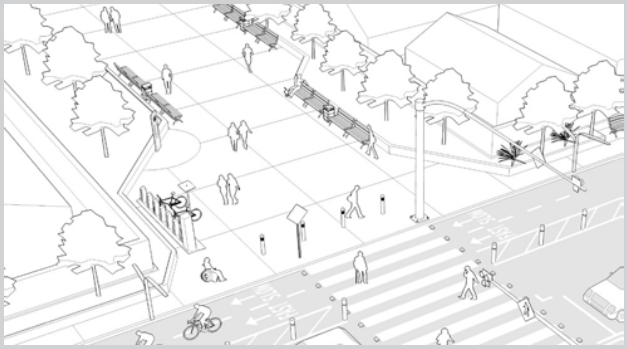


Enhance Existing Crosswalks

Elements/Location: Project elements include zebra striping, advanced stop bars, special paving, warning lights, improved lighting, and leading pedestrian intervals, when possible. These are being proposed at all crosswalks within a ½ mile radius of the station.

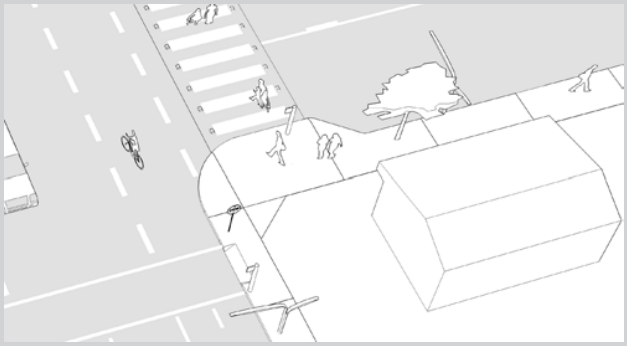
Mid-Block & Additional Intersection Crossings

Elements/Location: Project elements include adding new crossing with signals and vehicular controls, zebra striping, advanced stop bars, special paving, warning lights, and push buttons. This is being proposed at the Crenshaw Station to connect both sides under I-105.



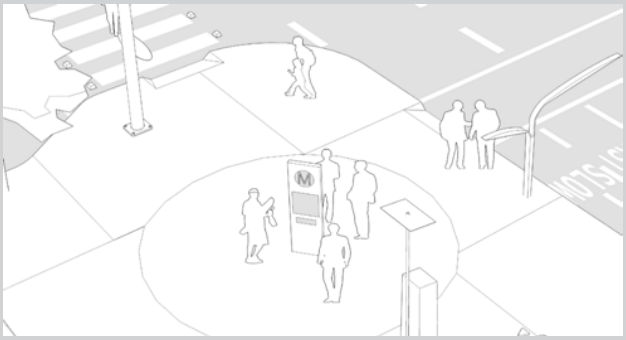
Cut-Throughs and Shortcuts

Elements/Location: Project elements include new short cuts with lighting, special paving, furnishings, shade, and bicycle accommodations. These are proposed at connections between places of business along Crenshaw crossing the Dominguez channel to retail establishments.



Curb Extensions at Intersections

Elements/Location: Project elements include shortening crosswalks by reclaiming oversized lanes at turns and freeway ramps. These are proposed at all crosswalks within a ½ mile radius.



Metro Signage and Maps

Elements/Location: Station area information signage is important to enhance awareness of proximity to the station, display paths, and promote safety. Signs can be at the station platform, corners, bus waiting, entrances, etc. Wayfinding signage and real-time signage also promotes a user-friendly and safe environment. This is proposed in the immediate station area.

Freeway Underpass & Overpass Enhancements

Elements/Location: Project elements include lighting upgrades, decorative features, landscaping, and site amenities. This is proposed at the street level of the station to enhance the user experience.

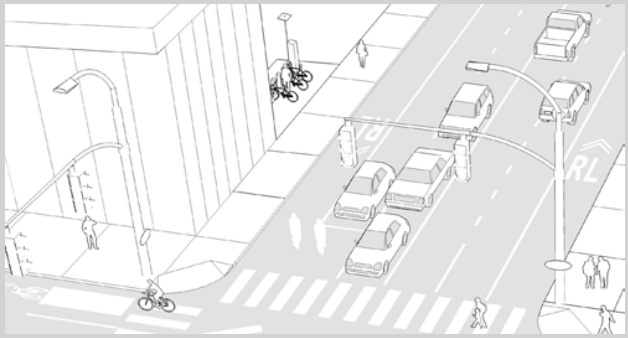
General Infrastructure Improvement Recommendations

Bus Waiting Areas

Elements/Location: Project elements include adding furnishings, shelter, lighting, public art, signage, and other amenities. This is being proposed at both sides of the station at street level.

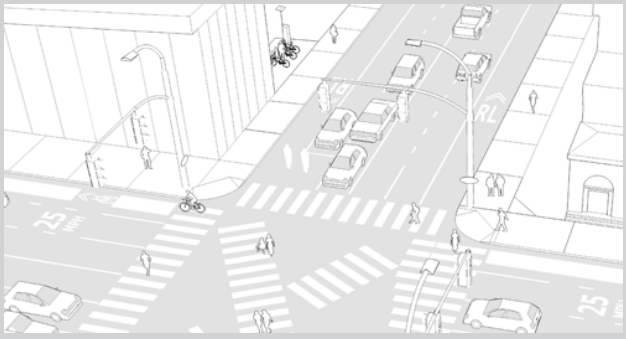
Enhanced Bike Facilities

The station area does not have any bike facilities that connect to the station. Separated bike lanes connecting directly to the station are being proposed. A network of Class 1, 2, and 3 lanes are being proposed in the 3-mile radius bikeshed.



Reduced Lane Width and Sidewalk Widening

Elements/Location: The current lanes near the freeway on and off ramps are wider than needed, which leads to faster speeds. The traffic calming method of reducing the lane width and widening sidewalk could reduce speeds, creating a safer environment for pedestrians. Sidewalk widening/reduced lane widths are being proposed between the station and the nearest intersection, especially for the lanes leading up to freeway on-ramps.



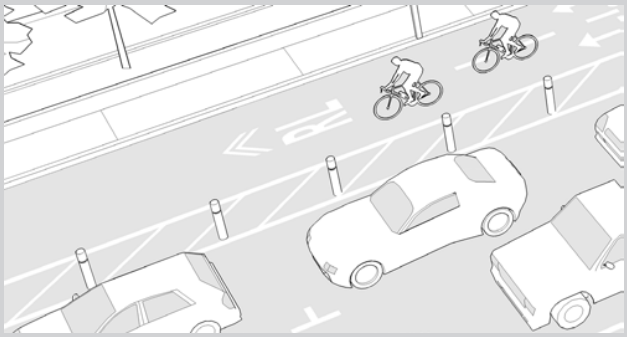
Signal Modifications

Elements/Location: Existing signals in the station area are focused at vehicle through-put. It is proposed that the signals timing be modified to enhance pedestrian accessibility. This plan also proposes switching out the existing basic walk/don't walk signals to timed signals with audio.

Bus Enhancements

Elements/Location: Crenshaw statin currently contains a bus lane at both sides of the station. Upgrading the lanes by using colored paint and barriers separated from vehicular lanes could enhance visibility and calm traffic under the freeway.

General Infrastructure Improvement Recommendations



Rolling Lane

Elements/Location: Rolling lanes are wider bike lanes capable of accommodating more than one person on a bicycle, skateboard, or other manually driven device side by side. Lanes are separated from vehicular lanes with a buffer zone and barriers. These lanes are a potential for application for a shared bicycles / Neighborhood Electric Vehicle strategy.

High-Visibility Bicycle Parking

Elements/Location: The Crenshaw Station has only 12 bicycle racks and 4 bike lockers. It is proposed that additional bike lockers be added at the station as well as upgraded bike racks in a highly visible area to detract from bicycle theft.

Photo/Graphic Source: Metro First/Last Mile Strategic Plan.

PEDESTRIAN, BICYCLE, AND NEV/EV INFRASTRUCTURE IMPROVEMENT RECOMMENDATIONS

The existing conditions assessment in this ATP found many deficiencies within the immediate transit station area as well as a severe lack of connection to the adjacent businesses and neighborhoods. Within a one mile radius, there are several large employers, including a high-tech agglomeration of businesses with thousands of individuals commuting every day. Also within the station area are several retail centers in the form of big box stores, fast food, fitness clubs, and others. This prime transit location creates large potential for this station to be a significant gateway for commuters accessing this area. However, the current area conditions are unsafe, uninviting, and hazardous which would detract almost any potential user with access to personal vehicles. The latent demand of transit usage at this station is untapped potential that could be realized following appropriate infrastructure investments and upgrades to create a safer, more convenient, and user-friendly environment.

The recommended infrastructure improvements within the station area consist of five projects. The plan to implement the proposed improvements is a phased project plan, with each successor project building on the last. The first project is meant to be the highest priority and the most attainable, while the latter projects are progressively greater in scope and cost. The projects are designed so that each project connects to the other projects and forms a network. The ultimate goal of the selected projects is to create a safe, convenient, and user-friendly connection from the Crenshaw Station to nearby places of employment, retail, and residential neighborhoods. The first two projects are focused primarily on safety, while the second two projects are focused primarily on convenience. The fifth project extends these benefits into the surrounding community.

The proposed projects are as follows:

1. Mid-Block Intersection and Transit Station Improvements
2. Station Access to the Nearest North and South Intersections
3. Laguna Dominguez Channel Improvements
4. Local Pathway Network Connecting Employment and Retail Centers- ½ Mile Radius
5. Bicycle/NEV Pathway Network- 3 Mile Radius

The first two recommended projects described within this section address deficiencies and offer solutions to help promote walking, bicycling, and other active transportation uses within the immediate transit station area. The first project, Mid-Block Intersection and Transit Station Improvements, addresses the most immediate station deficiencies, including adding a mid-block crossing under the freeway overpass, upgrading the station security, enhancing bus stations, adding bike amenities, and other miscellaneous upgrades. The second project, Station Access to the Nearest North and South Intersections, provides much needed safety improvements for accessing the station from the nearest intersection, including widened sidewalks, bike lanes, and pedestrian signals at freeway ramps. Several barriers exist for accessing the station on foot and bicycle, which deter transit use and create an unsafe and unwelcoming environment. Existing sidewalks are narrow, uneven, and blocked by physical barriers such as poles; pedestrian push buttons are broken or lacking; streets are

wide, with fast moving traffic; and lighting and security in the immediate station area is lacking. Additionally, a lack of an existing bicycle network connecting directly to the station and limited availability of bike parking discourages bicycle connections in the study area.

The third and fourth projects connect the immediate transit station area to the places of employment and retail with a ½ mile radius. This connection is important for attracting new riders who may currently drive to the area. If the connection from the station directly to the businesses were enhanced to be safe, convenient, and user-friendly, it could encourage users to switch commuting modes from auto to transit. The third project, Laguna Dominguez Channel Improvements, connects the 120th Street and Crenshaw Boulevard intersection with the high tech employment center by upgrading the existing Class 1 Bike path. The fourth project, Local Pathway Network Connecting Employment and Retail Centers, provides the missing link of connecting employees to retail, reducing the need for personal automobiles for short trips and making transit commuting more feasible. The fifth project, Bicycle/NEV Pathway Network, stretches beyond the immediate station area and connects to the major destinations and trip generators in the nearby community such as Downtown Hawthorne, the Inglewood Forum/Hollywood Park, Community Colleges, parks, and others. The three-mile radius extending from the Crenshaw Station is used for proposed improvements to make bicycling a more attractive mode of transportation to access the station.

The Overview Map depicts each of the project locations (Figure 5), followed by descriptions of each project. The recommended projects were developed and revised based on community stakeholder input from various workshops held in the study area. Each sequential project expands outward from the Crenshaw Station connecting to the previous project in order to extend the limits and increase the attractiveness of the active transportation network between the Crenshaw Station and nearby employment and commercial destinations.

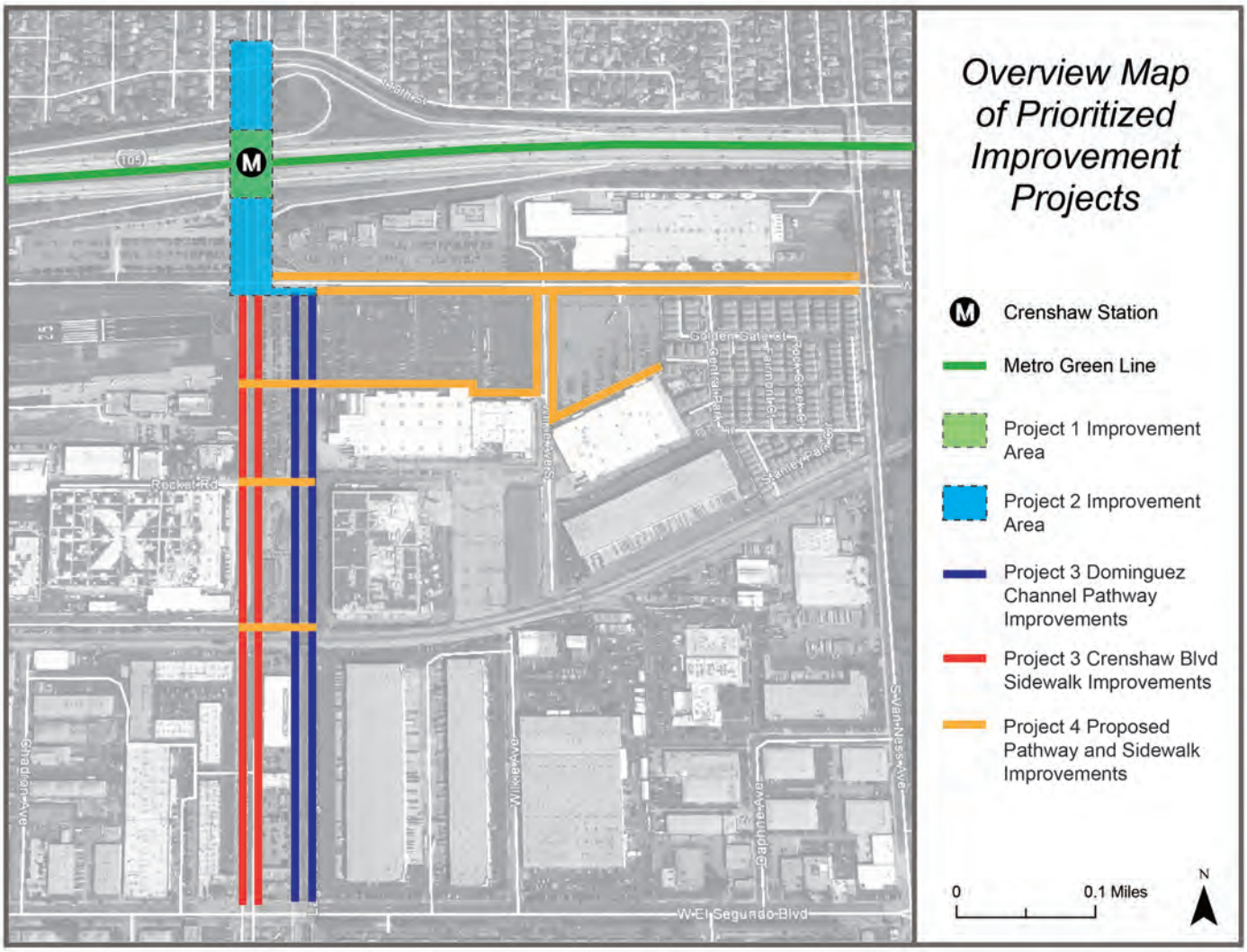
These projects have been developed in coordination with the NEV/EV Strategies, but are stand-alone projects that could be implemented with or without the recommendations set forth in the NEV/EV Strategies. All proposed bicycle paths will be constructed in compliance with state laws and regulations that allow NEVs to be operated on these pathways. The NEV Strategy discusses these requirements in further detail.

The Overview Map indicates the locations of the proposed active transportation improvement projects within approximately ½ mile radius from the station. Project 1 is focused on the immediate station area safety. Project 2 provides much needed improvements between the transit station and the nearest intersection as well as the Dominguez Channel pathway. Project 3 links the 120th Street and Crenshaw Boulevard intersection with the employment centers to the south by reconstructing the sidewalks along Crenshaw Blvd and a phased upgrade to the Dominquez channel. Finally, project 4 provides a local pathway network that connects the employment centers south of the station directly to the retail centers to the east of the station. Each project identifies deficiencies and recommended improvements, as well as a rough-order-of-magnitude cost estimate. For additional details on the scope of each project and related cost estimate, please see Appendix IV.

PROJECT #1. MID-BLOCK INTERSECTION AND TRANSIT STATION AREA IMPROVEMENTS

The most immediate safety hazard and concern in the Crenshaw Station area is the lack of a crosswalk connecting the two sides of the station at street level. The presence of a bus stop at both sides of the station creates a need for pedestrians to cross the street. Metro riders wishing to connect to a bus route could descend from the transit platform without the foresight as to which direction of traffic they would be facing. Once at the street level, pedestrians may learn that they need to access the bus route heading the opposite direction. Without a crosswalk present, pedestrians have two options: (1) to walk along a long, narrow sidewalk and cross three to four crosswalks including freeway on/off ramps and major intersections, or (2) to jaywalk a straight line across Crenshaw Boulevard under the low-visibility freeway overpass. Pedestrian collision data indicate that fatal incidents have occurred at Crenshaw Station at this location, highlighting the need for correction action.

The proposed corrective action is to add a mid-block pedestrian crossing consisting of new push button activated traffic signals in both directions, modified median with push buttons, zebra striping with embedded crosswalk flashing signals, advanced stop bars, and median upgrades at the half-way point. Additional recommended station improvements include security and lighting upgrades, bus



Overview Map, Figure 5

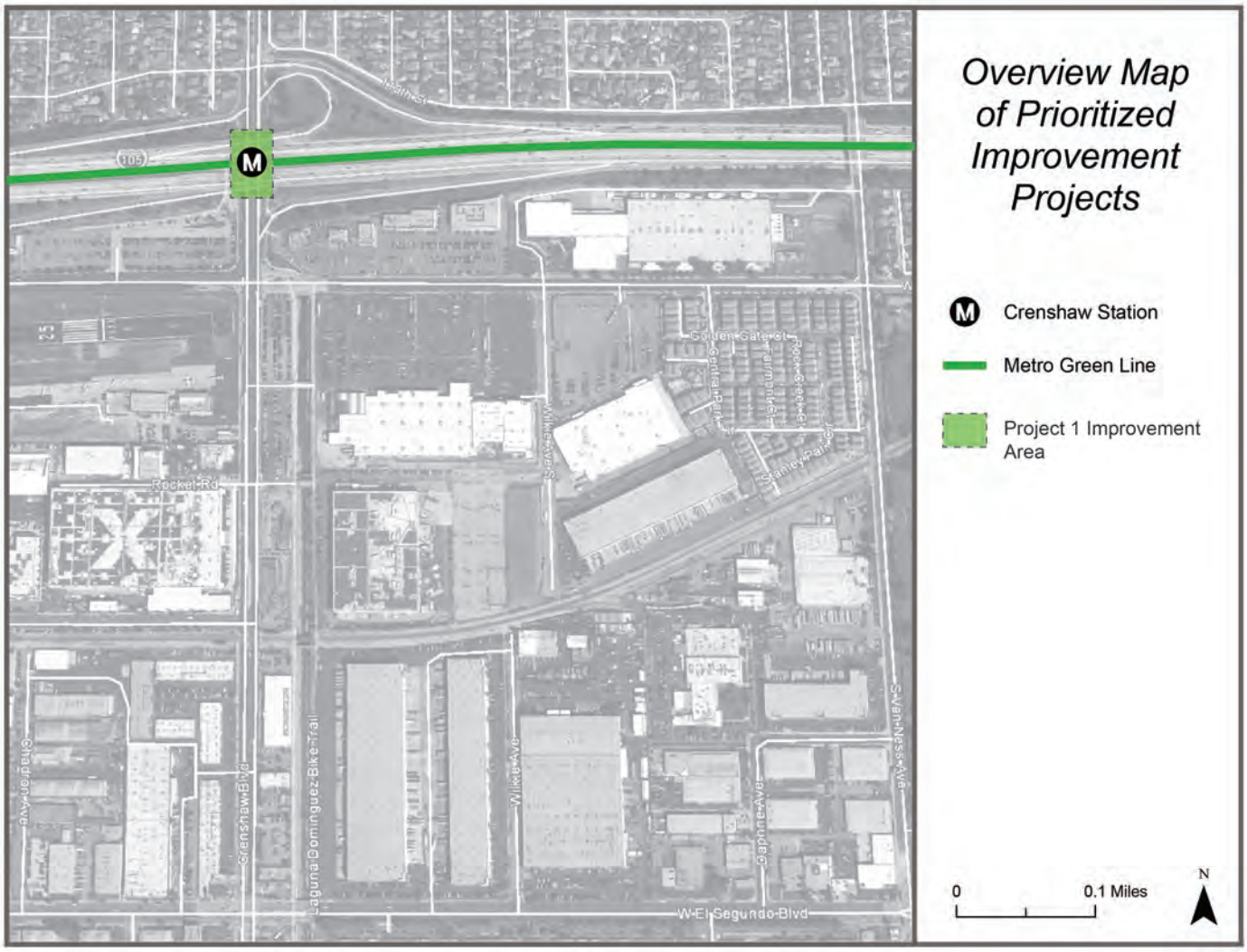
station enhancements with seating and shelters, way-finding and station area information signage, and bike parking upgrades (Figure 6).

According to at least one local employer, the station is perceived as unsafe and not recommended for use by their employers due to recorded incidents of crime. Due to this reason, it is recommended that security upgrades at this transit station take the highest priority. If the station currently has a reputation for crime and unsafe conditions, sweeping security upgrades must occur in order to change the local perception of crime. Even if all five projects recommended in this plan were implemented, increased ridership could not be possible without changing the community's perception so that employers would recommend that their employees use transit. Ideally, this would include permanent transit police or contracted security in the station area, greatly enhanced lighting, security kiosks, and closed circuit TV cameras.

The existing bus stations on both sides of Crenshaw offer no seating or amenities. Bus shelters were likely not implemented at this location due to the fact that the stops are sheltered from rain by the freeway overpass. However, adding bus shelters would provide a more comfortable waiting area for bus users, adding seating, shelter from wind/dust, and a sense of security. Enhanced signage, lighting, and artwork would also enhance the attractiveness of these waiting areas.

Additionally within the station area, bicycling as a commuting option is hindered by the limited availability and security of bicycle parking at the Crenshaw Station. There are 12 bike racks and 4 bike lockers at the station located in the dark and low-visibility conditions under the I-105 overpass. This unwelcoming environment has raised security and bike theft concerns among the local community, deterring Metro users from connecting by bicycle to the Crenshaw Station.

The proposed corrective action is to upgrade and add bicycle parking at the Crenshaw Station. High-visibility bicycle parking and lighting improvements would address security concerns, while the addition of bicycle lockers under the I-105 overpass and/or within the park and ride lot would address theft concern. Additional bike racks and bike corrals are also recommended adjacent to the station entrance and/



Overview Map- Project 1, Figure 6

or within the park and ride lot to increase the overall bicycle parking capacity.

Deficiency/Issue:

- Lack of crosswalk creates no option for transit users to access opposite side of station, creating potential for fatal accidents.
- Security issues at station, including crime, detract local employers from recommending the station to employees.
- Lack of signage and information.
- Bus station area lacks furniture/shelter.
- Limited bicycle parking availability at Crenshaw Station (12 bike racks and 4 bike lockers).
- Security and bike theft concerns deter commuting by bicycle to access Crenshaw Station.

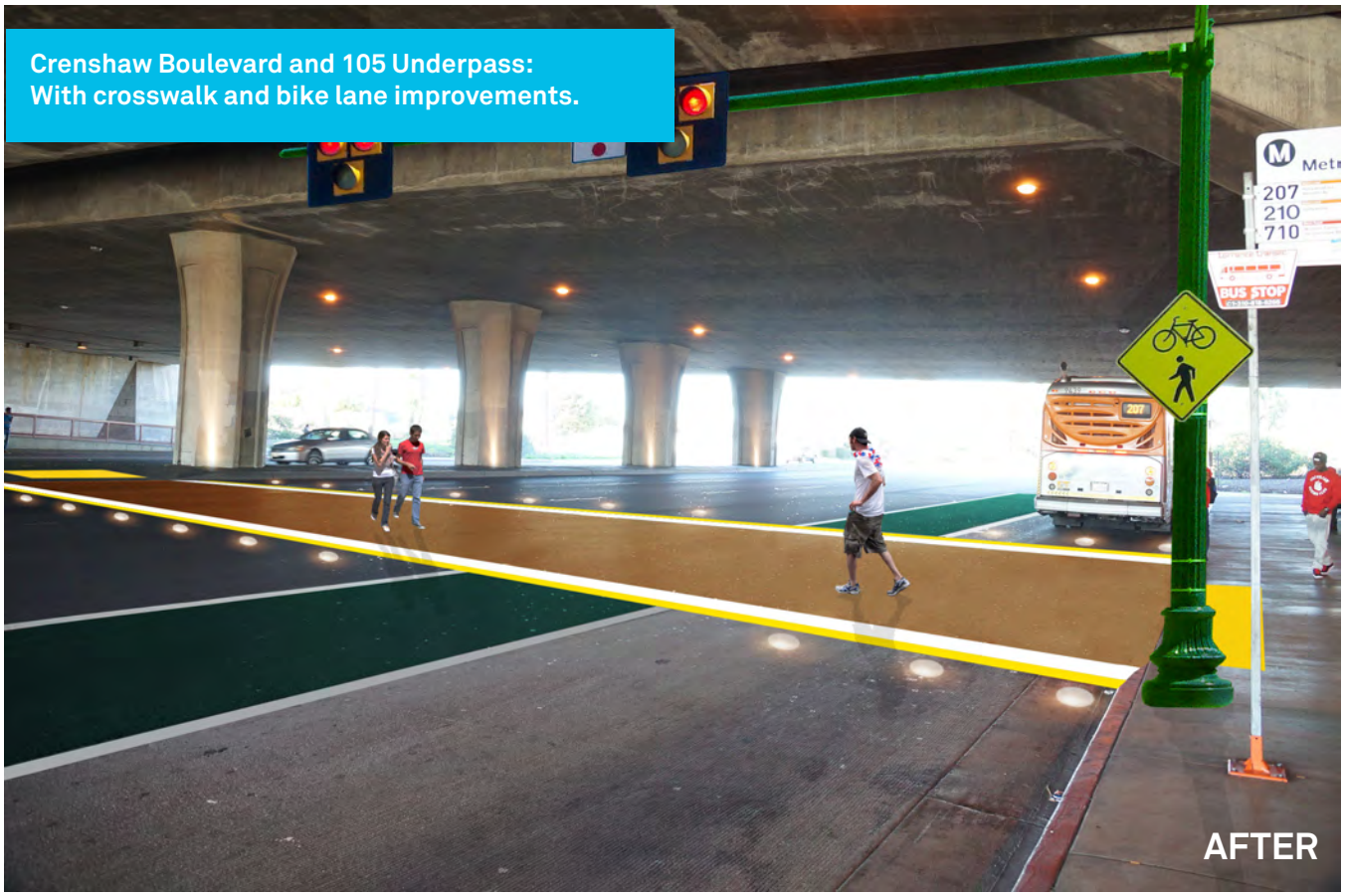
Recommendations:

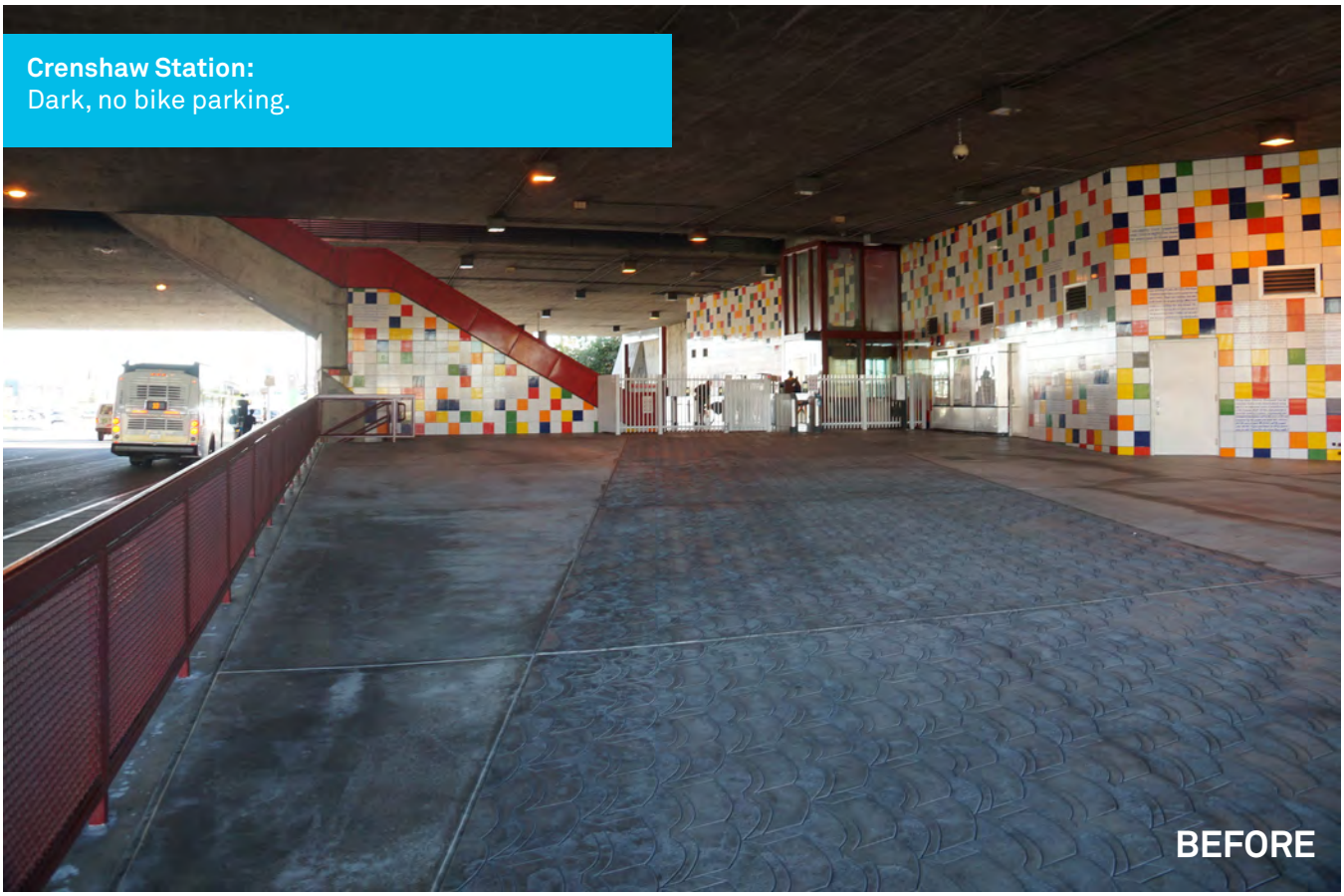
- Provide 2 new mid-block crossings with zebra striping (2 each), crosswalk flashers (2 each), pedestrian crossing signals with extended overhead hanging traffic lights (2 each), push button signals with countdown timers and audio (4 each), ADA ramps with truncated domes (4 each)
- Security
  - Permanent transit police or contracted security guards.
  - Add high visibility cameras at all waiting and egress areas.
  - Upgrade lighting at all waiting egress areas.
- Upgrade way-finding signage for immediate station area, provide information kiosk with points of interest, employment and retail centers, and connection to other modes of transportation.
- Add seating, shelter, and landscaping to bus waiting areas (2 each).
- High-visibility bicycle parking with lighting improvements at Crenshaw Station.

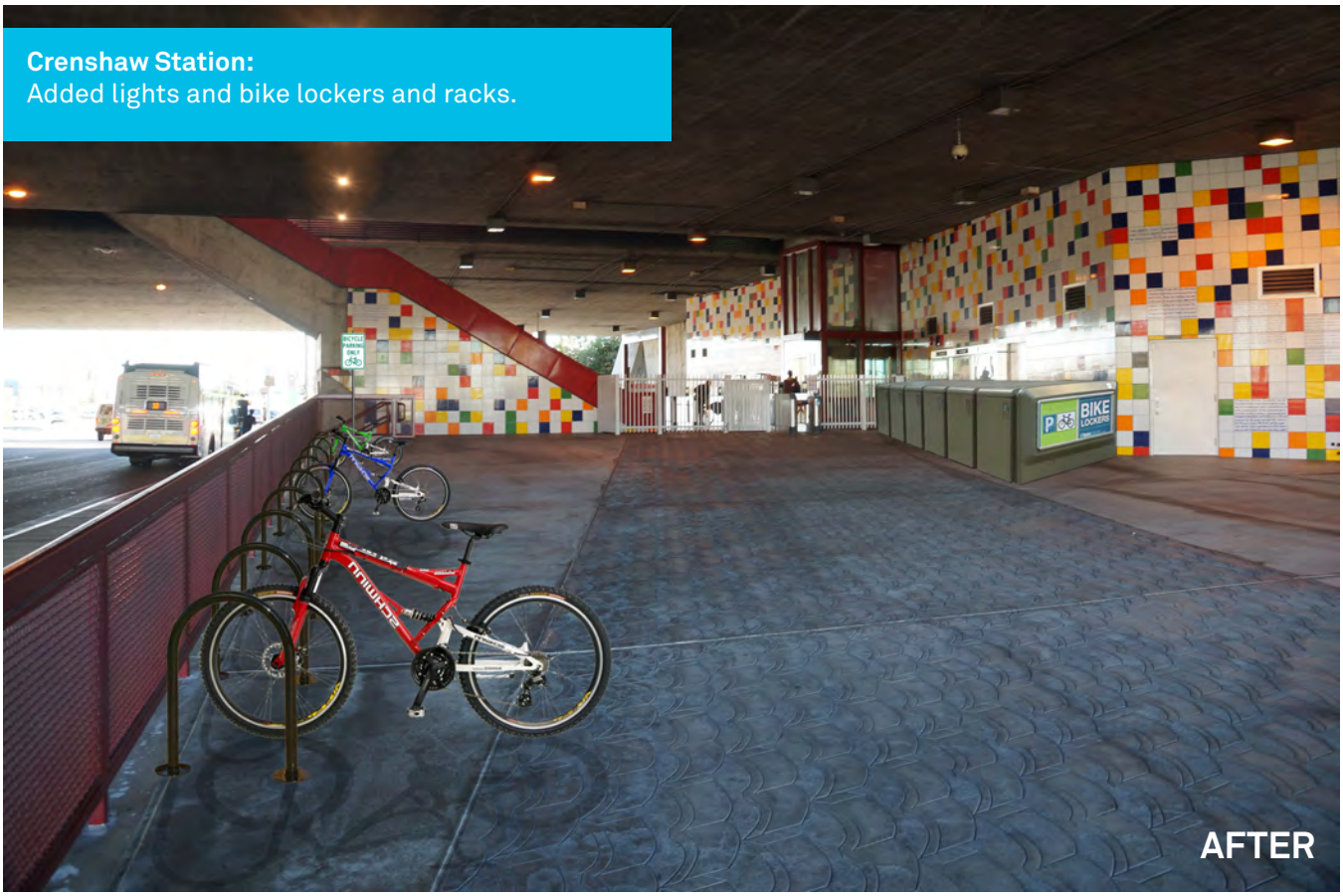

Crenshaw Boulevard and 105 Underpass:
Dark, no crosswalk.
BEFORE


Crenshaw Boulevard and 105 Underpass:
With crosswalk and bike lane improvements.
AFTER


Crenshaw Boulevard and 105 Underpass:
Dark, no crosswalk.
207
210
710
BUS STOP
BEFORE


Crenshaw Boulevard and 105 Underpass:
With crosswalk and bike lane improvements.
207
210
710
BUS STOP
AFTER


Crenshaw Station:
Dark, no bike parking.
BEFORE


Crenshaw Station:
Added lights and bike lockers and racks.
BIKE LOCKERS
AFTER

- Add bicycle racks (12) and lockers (12) near Crenshaw Station entrance under I-105 and/or in park and ride lot.
- Order-of-magnitude estimated project cost – Mid-block Crosswalk $300K.
- Order-of-magnitude estimated project cost - Total Project $1.3 (2015$), $1.49 (escalated 2017$).

PROJECT #2. STATION ACCESS TO NEAREST NORTH AND SOUTH INTERSECTIONS

The pedestrian and bicycle experience traveling from the Crenshaw Station transit platform and bus stations to the nearest two intersections is currently an intimidating and dangerous environment. Users must cross low-visibility freeway on/off ramps without crossing signals or indication for vehicles. This presents a major hazard for elderly, young, and those with accessibility issues. The remainder of the existing pathways consist of narrow sidewalks that pass within a few feet of oncoming vehicles, including semi-trucks. No bicycle pathway infrastructure exists along Crenshaw Boulevard requiring bicyclists to share these narrow and uneven sidewalks or travel on the roadway mixed with high speed traffic in a low visibility area. This unwelcoming environment puts pedestrians and bicyclists in danger and makes active transportation unattractive at this location.

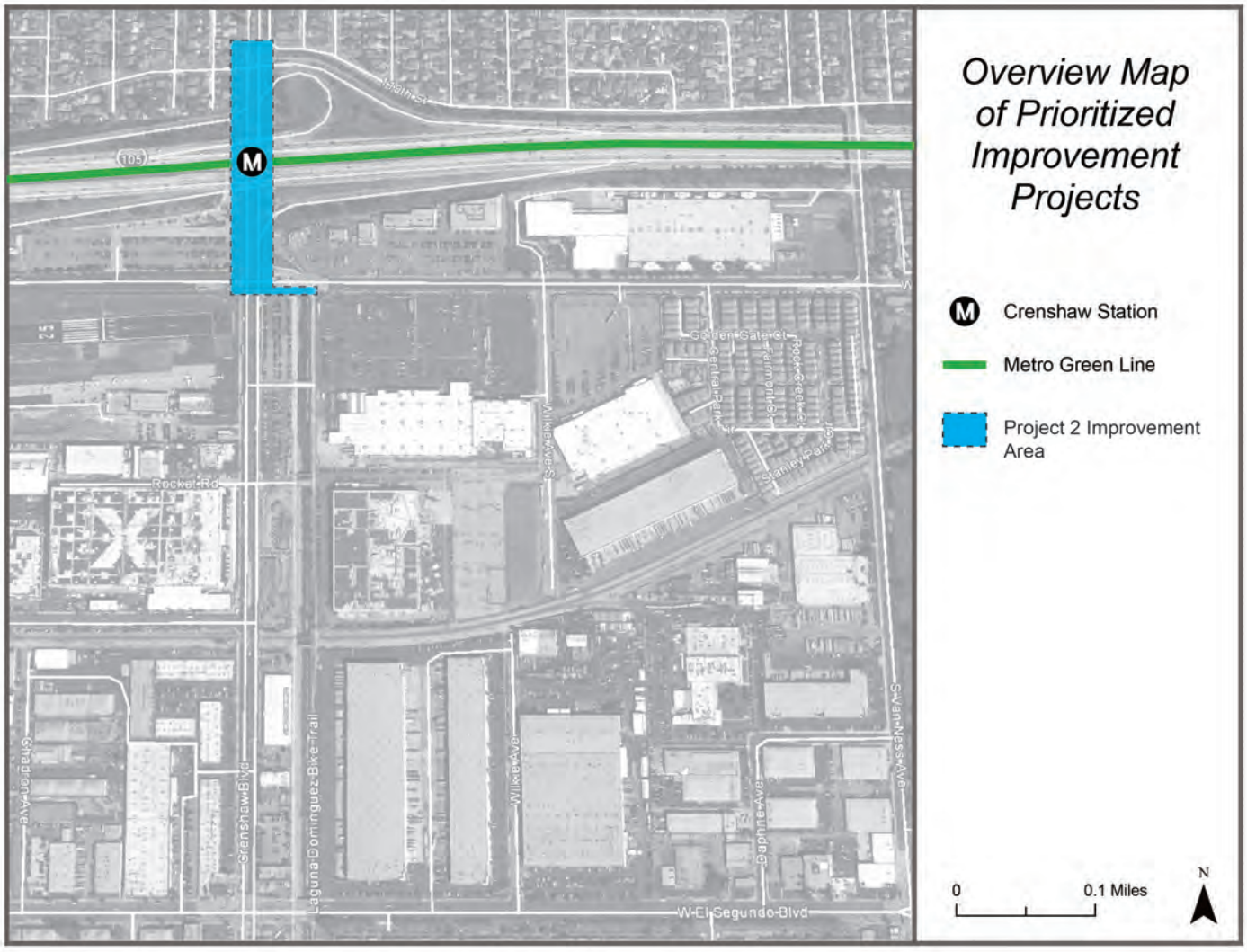
In order to cross from one side of the station to the other by way of the north side, one must cross six crosswalks, including two on/off ramps without any signaling. This creates a hazardous and unwelcoming environment to anyone on foot or any form of active transportation. On the south, a similar situation exists consisting of four crosswalks, including onw on ramp without signaling. A makeshift stairway was observed connecting to retail at the Northeast corner of 120th & Crenshaw during the site survey. Erosion control wooden railroad ties are being used as a pathway shortcut by those accessing the transit station from the retail, creating a significant risk of injury and lawsuit conditions for the property owners.

The proposed corrective action is to upgrade all crossings from the station to the nearest intersections at 120th & Crenshaw and 118th Place & Crenshaw on both the East and West sides, including curb bulb-outs to shorten the crosswalks, a new crossing signal added to the on/off ramp crossings, zebra striping, upgraded signals to existing crossings, and widened sidewalks along the path (Figure 7). Additionally, to improve bicyclist connections to the Crenshaw Station begin creating a path network on Crenshaw Boulevard between 118th and 120th on both the East and West sides. At 120th & Crenshaw, the bicycle pathway should continue to the South side of the intersection to link in and be closely coordinated with Project #3.

The makeshift stairway to the retail center at 120th & Crenshaw should be upgraded to a safe concrete stairway and ADA ramp. This access point provides a very convenient access point for transit users to connect to services traditionally needed by commuters, including coffee, restaurants, and convenience items. It is recommended that the City of Hawthorne work with the Exchange retail owner to develop an agreement to upgrade this access point. Due to the fact that the Exchange is the nearest retail location, there is great business potential to gain. Entrepreneurial business owners would be encouraged to take advantage of the revenue generating potential of being located adjacent to a major transit station, particularly if ridership is increased among the high-tech business clientele.

Deficiency/Issue:

- Street crossings are only fading solid lines, creating low visibility for pedestrians.
- Crossings at on-ramps are hidden around corners difficult for on-coming vehicles to see pedestrians.
- Pedestrian crossings are longer than needed for the number of vehicular lanes, creating unsafe conditions.
- No crossing signals exist at 105 westbound on-ramps, creating unsafe conditions for pedestrians.
- Signals at street crossings do not include countdown timing or audio assistance for seeing impaired.
- The sidewalks along both sides of Crenshaw from the transit station to the nearest crossings are narrow, creating intimidating and unsafe conditions.
- No bicycle pathway infrastructure exists between 118th and 120th resulting in dangerous conditions for bicyclists accessing the transit station.

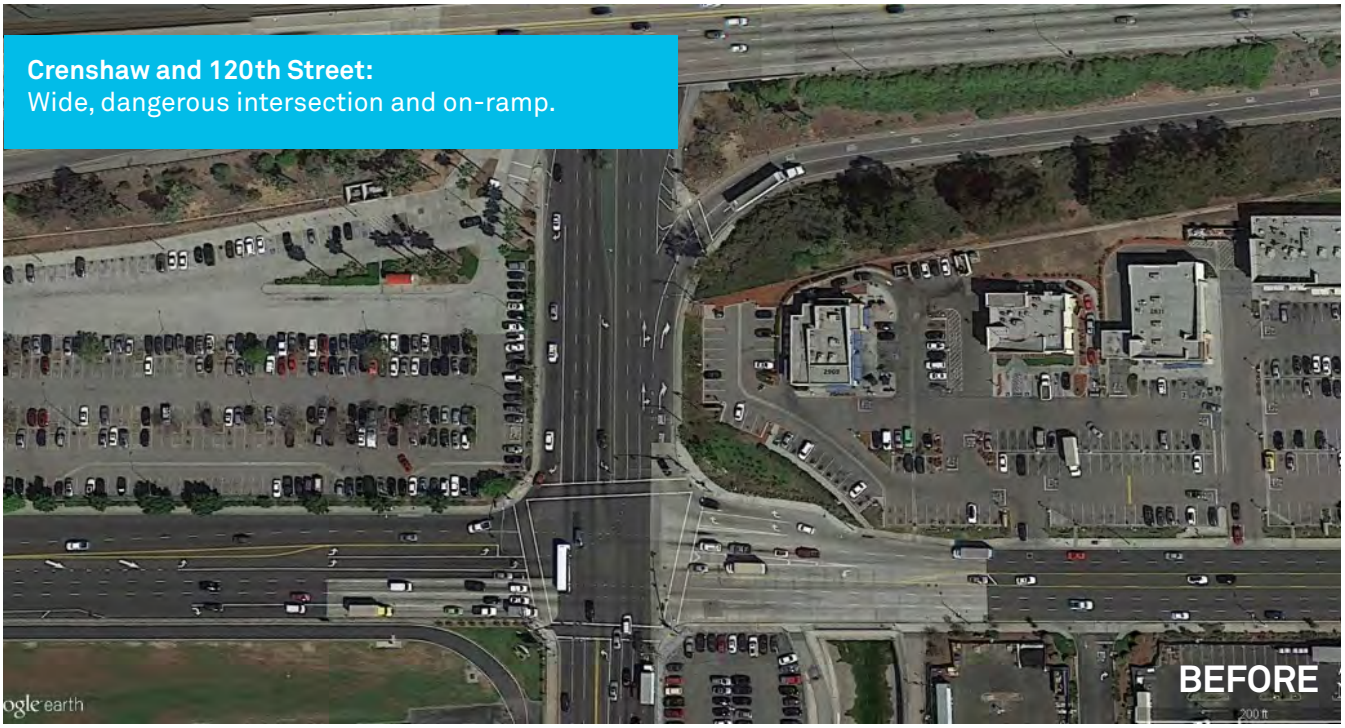


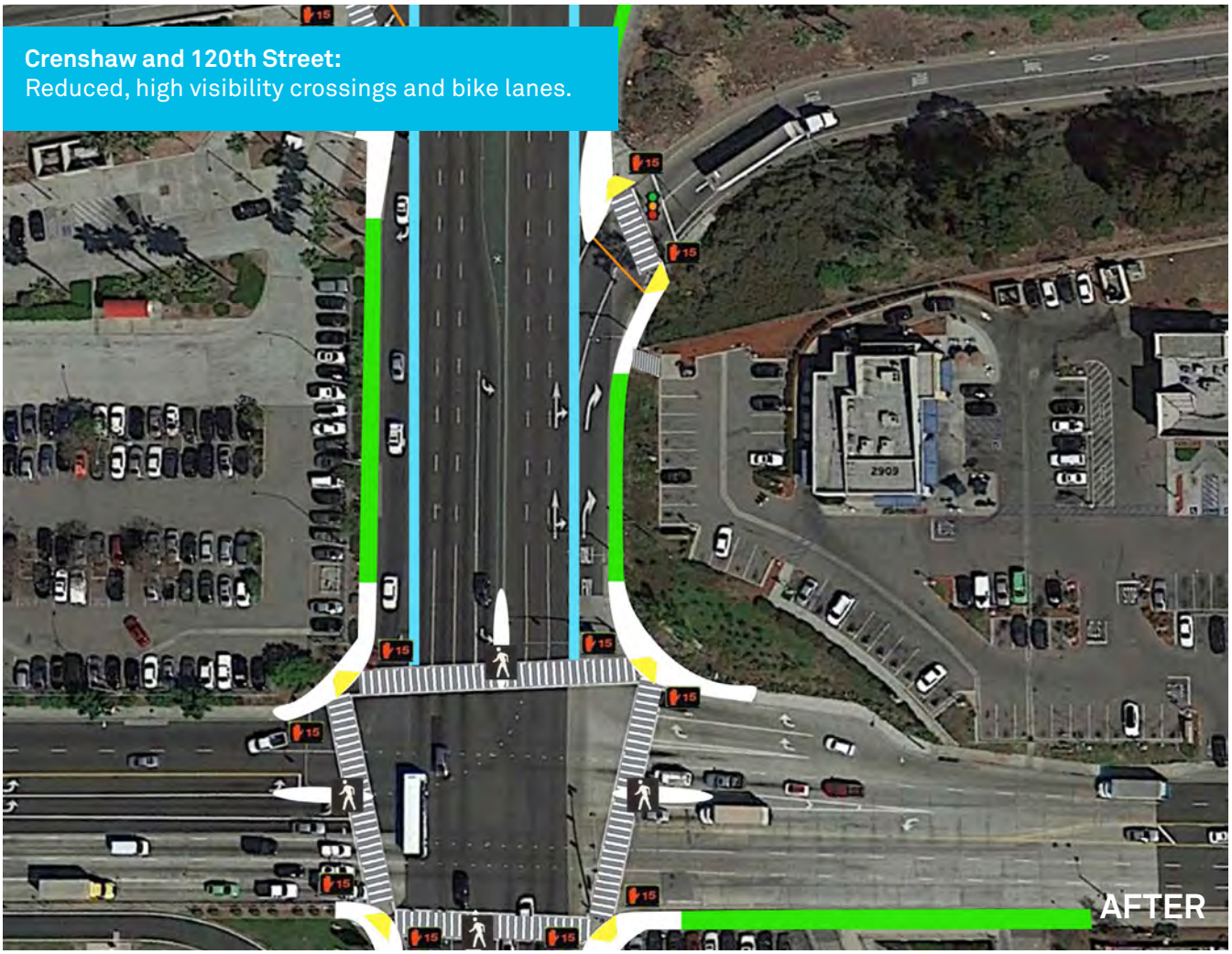
Overview Map, Figure 7

- No direct access from retail at Northwest corner of 120th & Crenshaw. Railroad ties are meant for erosion control are being used as stairway, creating safety hazard.

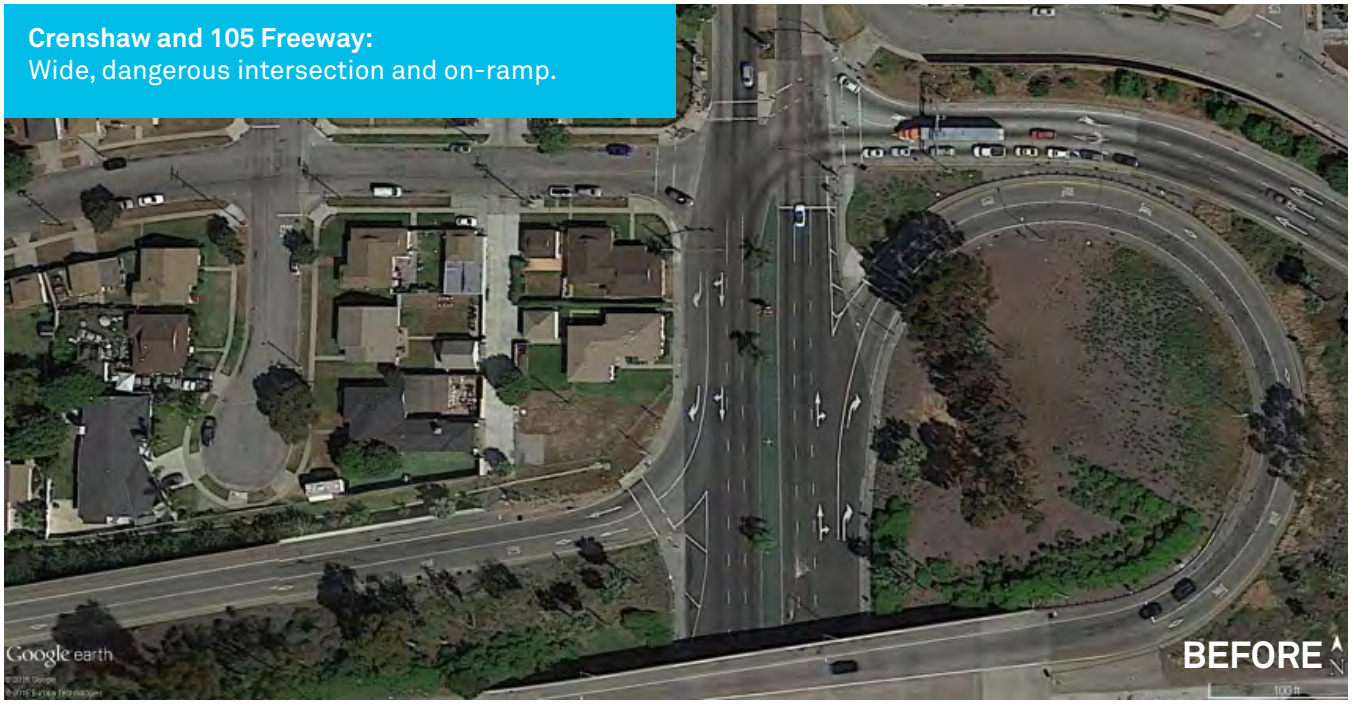
Recommendations:

- Provide new zebra striping to all pedestrian crossings (10 each).
- Relocate crossings for 105 Eastbound on-ramps to before the turn so that vehicles can see pedestrians easier (1 each).
- Relocate crossings for 105 Westbound on-ramps to before the turn so that vehicles can see pedestrians easier (2 each).
- Create curb extensions / bulb-outs to shorten the crosswalk length to the minimum width required for two vehicular lanes (14 each).
- Add pedestrian crossing signals, push buttons, and advanced stop striping for vehicles (3 each).
- Replace crossing signaling indication with countdown timers and audio signals (14 each).
- Widen sidewalk, reducing oversized lanes along Crenshaw (7 locations).
- Replace railroad ties with decorative concrete stair entrance to retail.
- Add bike lane connection from 120th Street & Crenshaw Boulevard Intersection to Dominguez Channel Pathways.
- Order-of-magnitude estimated project cost - $1.94M (2015$), $2.14M (escalated 2017$).

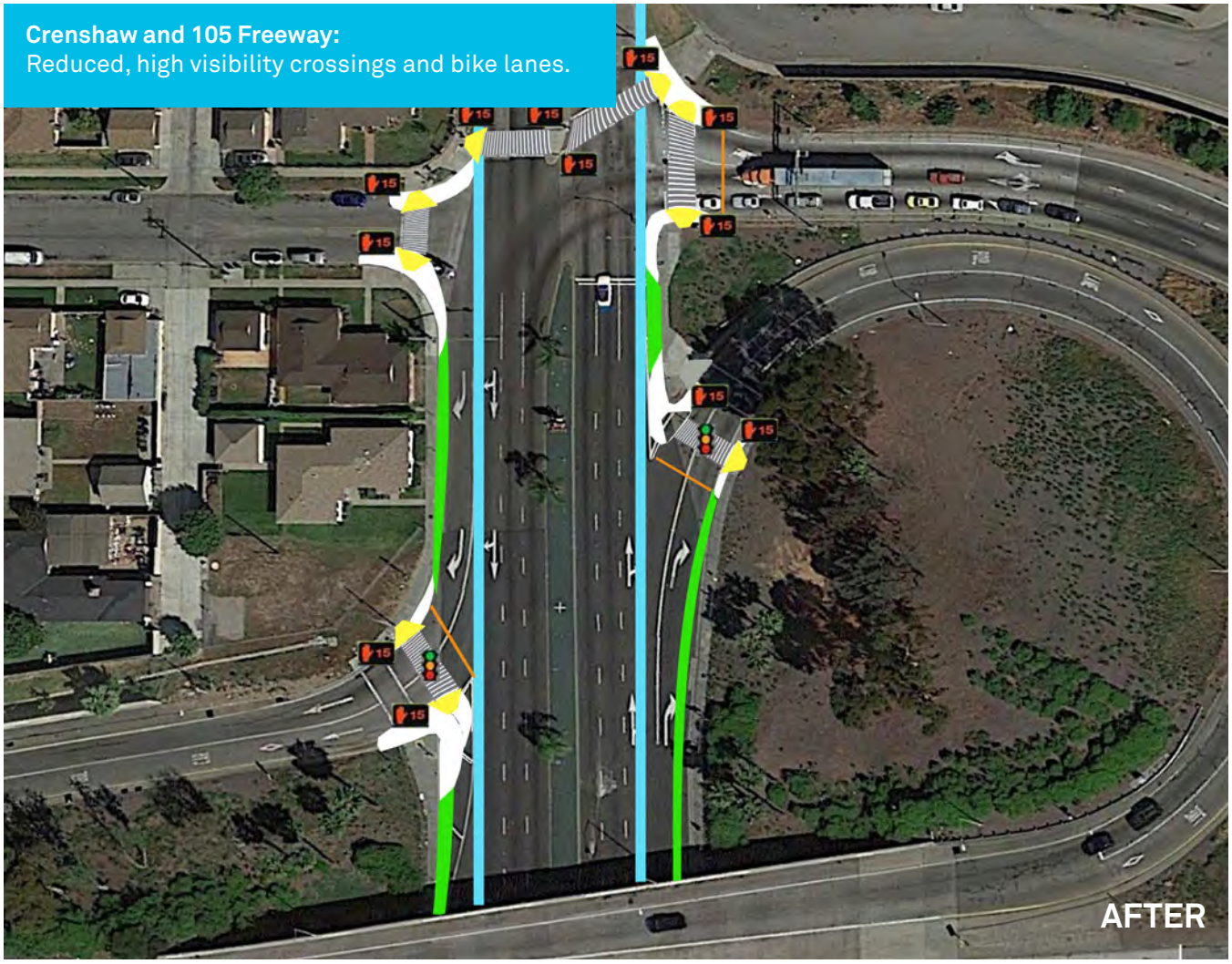

Crenshaw and 120th Street:
Wide, dangerous intersection and on-ramp.
BEFORE


Crenshaw and 120th Street:
Reduced, high visibility crossings and bike lanes.
AFTER

Crenshaw and 105 Freeway:
Wide, dangerous intersection and on-ramp.

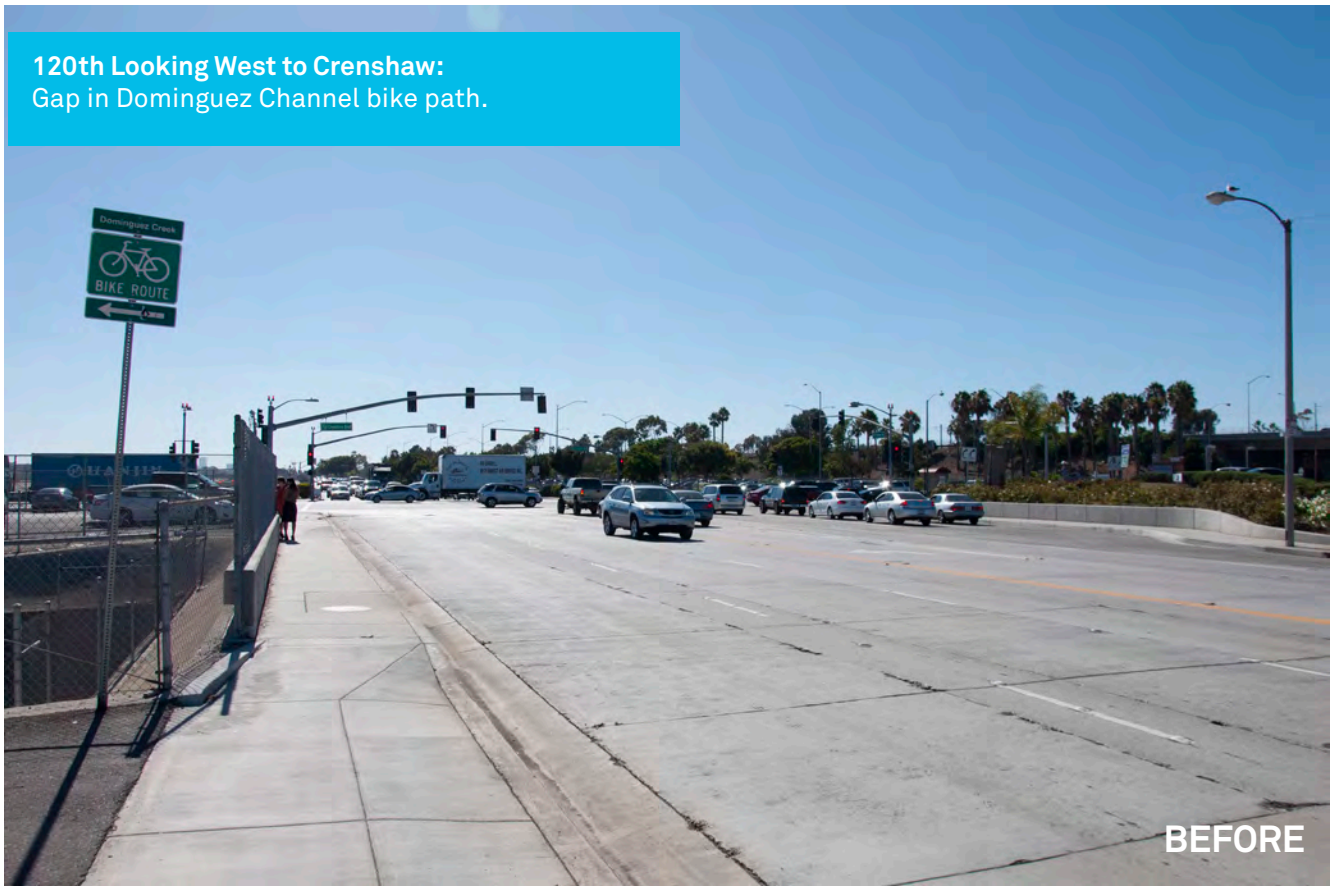


Crenshaw and 105 Freeway:
Reduced, high visibility crossings and bike lanes.



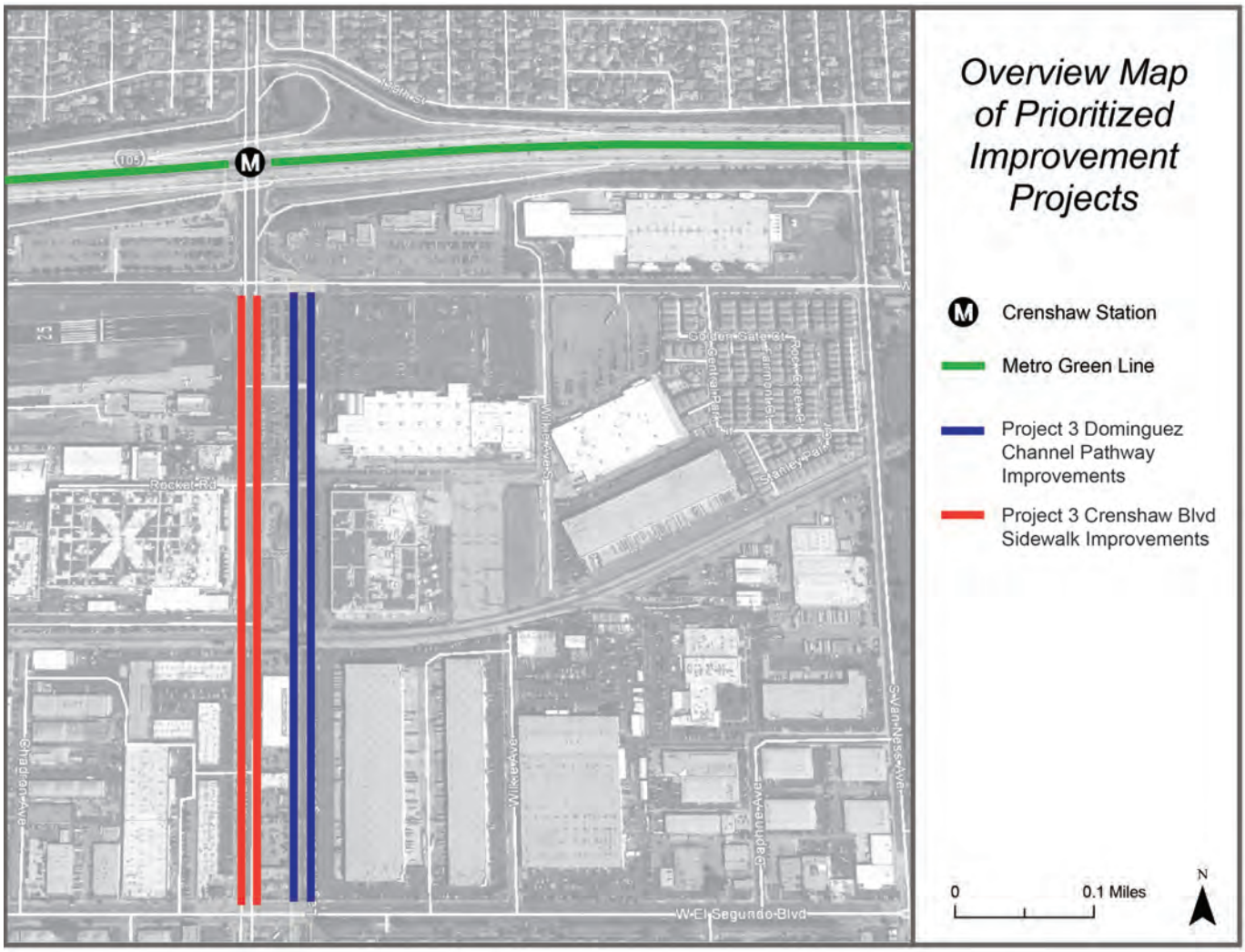

Crenshaw and 105 Freeway:
Wide, dangerous on-ramp.
BEFORE


Crenshaw and 105 Freeway:
Reduced, high visibility crossings and bike lanes.
STATE LAW
YIELD TO PEDESTRIANS
AFTER



120th Looking West to Crenshaw:
Gap in Dominguez Channel bike path.

120th Looking West to Crenshaw:
Gap in Dominguez Channel bike path closed.



Overview Map, Figure 8

PROJECT #3. LAGUNA DOMINGUEZ CHANNEL IMPROVEMENTS

This next project builds on the previous two projects by providing a necessary connection between the immediate station area and intersection upgrades to the employment centers within ½ mile of the station area. A somewhat hidden active transportation backbone already exists near the transit station that has great potential for being re-designed as an iconic first/last mile connection. The existing underutilized pathway is on both sides of the Laguna Dominguez Channel that could provide a direct link between the transit station and the agglomeration of businesses south of the Station. If upgraded, this path has tremendous potential to be used not only as a connector from Crenshaw Station to the employment centers directly to the south, but as a connection to the planned City of Hawthorne Eco Village, other residences, and El Camino community college.

The existing pathway has poor connectivity to the station as it lacks a safe, convenient place to cross 120th St. and Crenshaw Blvd at its northern terminus. The current condition encourages long mid-block crossings on a 40 mph street, which is a significant hazard and creates challenges for walking and biking to and from the rail station. The Dominguez Channel is underutilized and consists of a derelict concrete channel that has a Class 1 bike path along both sides. Even if bicyclists wished to use the trail, entrances are blocked by gates, trash blocks the way, and the area is invited for potential vagrant encampments.

Deficiency/Issue:

- Existing Class I bike path (Laguna Dominguez Trail) terminates within 2 blocks of the Crenshaw Station, resulting in a non-continuous network.
- Poor connectivity encourages dangerous crossings at northern terminus (120th/Crenshaw) to access the Crenshaw Station.
- Laguna Dominguez Trail is underutilized and provides no open greenspace.

The proposed corrective action involves upgrading the pathways in a two-phased project plan (Figure 8). The first phase would enhance and upgrade the existing pathways to make the corridor more attractive for transit riders, particularly to connect to the nearby employment centers. The second phase would involve a more substantial

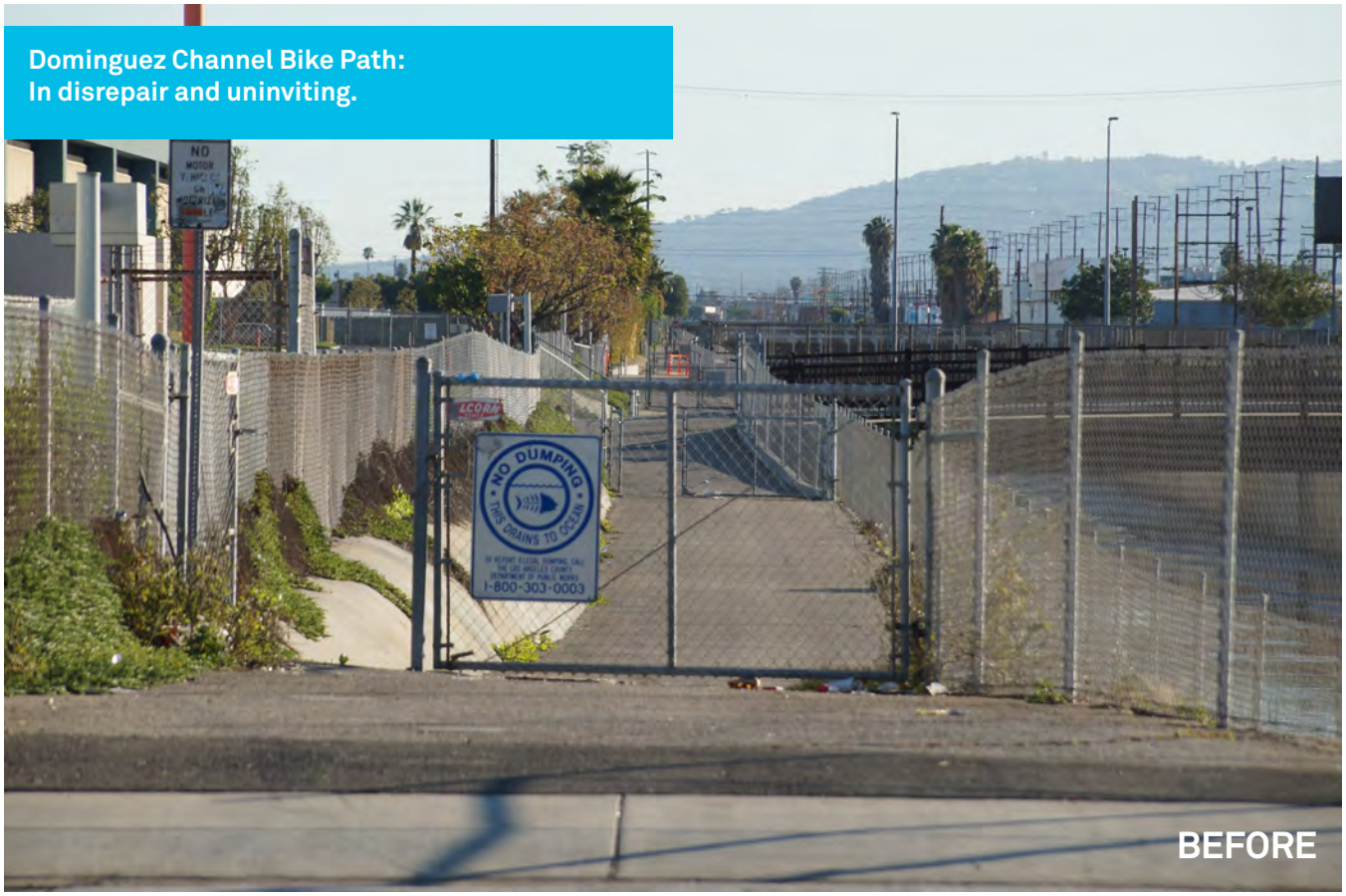
investment with benefits far beyond transit connection, including naturalization of the river bed, elevated pathway structures, and open space.

PHASE 1: UPGRADE EXISTING DOMINGUEZ CHANNEL BIKEWAY

The phase 1 improvements take advantage of the existing infrastructure and attempts to make the channel more attractive for uses. The design guidelines for phase 1 should encourage safety, comfort, and convenience, but minimize scope so that the project will be politically feasible for funding and construction. The pathway currently runs along the east side of the channel the entire length, but the west pathway stops at Rocket Road. The west pathway would be extended south to El Segundo and linked to the existing cut-throughs and streets. The existing pavement would be patched and repaired with new striping and signage throughout. Safety upgrades consist of lighting along the paths and emergency kiosks at key access points. Comfort would be enhanced by replacing the chain link with decorative entrances, landscaping, tubular steel fencing, and amenities.

Recommendations: Phase 1 Proposed Scope

- Patch and repair existing asphalt pathway on the east side of Dominguez Channel from 120th Streets south to El Segundo Boulevard.
- Build new a pathway on the west side of the channel from approximately Rocket Road south to El Segundo Boulevard. Patch and repair existing pathway from 120th Street to Rocket Road.
- Provide new pathway railroad crossing signal at freight railroad crossing for the new West side pathway.
- Replace chain link gates with decorative entrances and signage.
- Replace chain link fencing along pathways with a mixture of landscaping, tube steel fencing, and amenities.
- Add light fixtures along both pathways.
- Add emergency kiosks at pathway entrances with sirens and flashers.
- Add striping, way-finding signage, and informational signage along pathways.
- Order of Magnitude Cost Estimate- $3.89M ($2015$), $4.47M (escalated 2018$).



Dominguez Channel Bike Path:
In disrepair and uninviting.

Dominguez Channel Bike Path:
Upgraded paving and landscaping.

PHASE 2: NATURALIZATION OF DOMINGUEZ CHANNEL WITH GATEWAY PARK AND ELEVATED TRAIL

The Dominguez channel stretches far beyond the project area south to the Port of Los Angeles and to the Pacific Ocean. The development potential for this channel is greater than this individual plan and should be considered in other City of Hawthorne and regional plans for active transportation and community open space. Several river revitalization plans are being proposed in LA County, including the Los Angeles River Revitalization Masterplan and the Emerald Necklace Forest to Ocean Expanded Vision Plan, which includes the Dominguez Channel. The proximity of Crenshaw station to the channel creates an opportunity for the station to be a gateway to this envisioned regional river parkway. Given this potential, this location could be well-suited for becoming an iconic open space with decorative features worthy of being a destination within itself. The Phase 2 project concept builds on the visionary idea of a revitalized river pakway network.

The long term vision for the Los Angeles River Revitalization Masterplan includes the naturalization of the concrete channel. This could set precedence for transforming other rivers and drainage channels in the region. The existing Dominguez channel could be converted from its current function as a concrete gutter into a natural bioswale capable of infiltrating groundwater and replenishing the local aquifers. Tiered retaining walls and landscaping could be constructed in the channel in order to control erosion and provide greenspace. A new iconic nature trail on an elevated promenade could be envisioned along the eastern edge of the channel. This pathway could be designed to accommodate pedestrians, bikes, and NEVs.

At the northern terminus at 120th Street and Crenshaw Boulevard, the project would coordinate with the station area improvements and connections listed in Projects 1 and 2. In addition, there could be the opportunity for an open space park at the connection to 120th Street and Crenshaw Boulevard where a private parking lot is located. Considering the ample parking capacity in the immediate area such as the largely underutilized big box store parking located to the east of the channel, there is potential for parking capacity sharing. For example, leasing agreements could be made for SpaceX employees to utilize a portion of Lowe's underutilized parking space except for certain holidays and peak shopping. If such agreements were made and the overflow parking located between the channel and Crenshaw Boulevard were available to be converted into open space, this could be a unique river path gateway with amenities and features.

This proposed area is in the immediate landing zone of the Hawthorne Municipal Airport where there are specific restrictions for development and would need to be closely coordinated with the Hawthorne Municipal Airport and the Federal Aviation Administration (FAA). All landscaping would need to be compatible with aircraft operation per FAA guidelines. Landscaping must not promote the proliferation of wildlife that may disrupt or endanger the functioning of the airfield. As such plant materials should be restricted to those that: 1) have a sparse to moderately dense foliage growth, 2) do not produce fruits or seeds, 3) and do not require extensive maintenance to maintain an appropriate foliage. Additional requirements, such as tree spacing and the prohibition of casting and spraying of seed for sod installation will further reduce the possibility of attracting flocking birds. The unique location of the park also creates the opportunity for an aviation themed open space that, if embraced, could attract aviation enthusiasts. Public and private organizations could be encouraged to participate in creating a one-of-a-kind park with aviation artifacts, statues, and interactive games.

The conceptual ideas presented for an elevated path and open space are just a few of the many possibilities for this site meant to encourage visionary thinking about the potential of this river. Ultimately, whatever concept is implemented for upgrading the Dominquez Channel will have the potential to enhance the pedestrian, bike, and NEV connection to transit and encourage transit ridership. At minimum, the upgrades should enhance and encourage local connection to transit. At maximum, the enhancement has the potential to be a destination within itself.

Recommendations: Phase 2 Proposed Scope

- Support a shared parking strategy to make land currently used for parking adjacent to the Dominguez Channel available for open space.
- Naturalize the Dominguez Channel, transforming it into usable public space.
- Create aviation themed open space park at 120th Street and Crenshaw Boulevard in existing overflow parking area. Assist private business in entering into parking lease agreements and maximize underutilized retail parking in order to compensate for lost parking.

Aerial View of Dominguez Channel Improvements, Figure 9

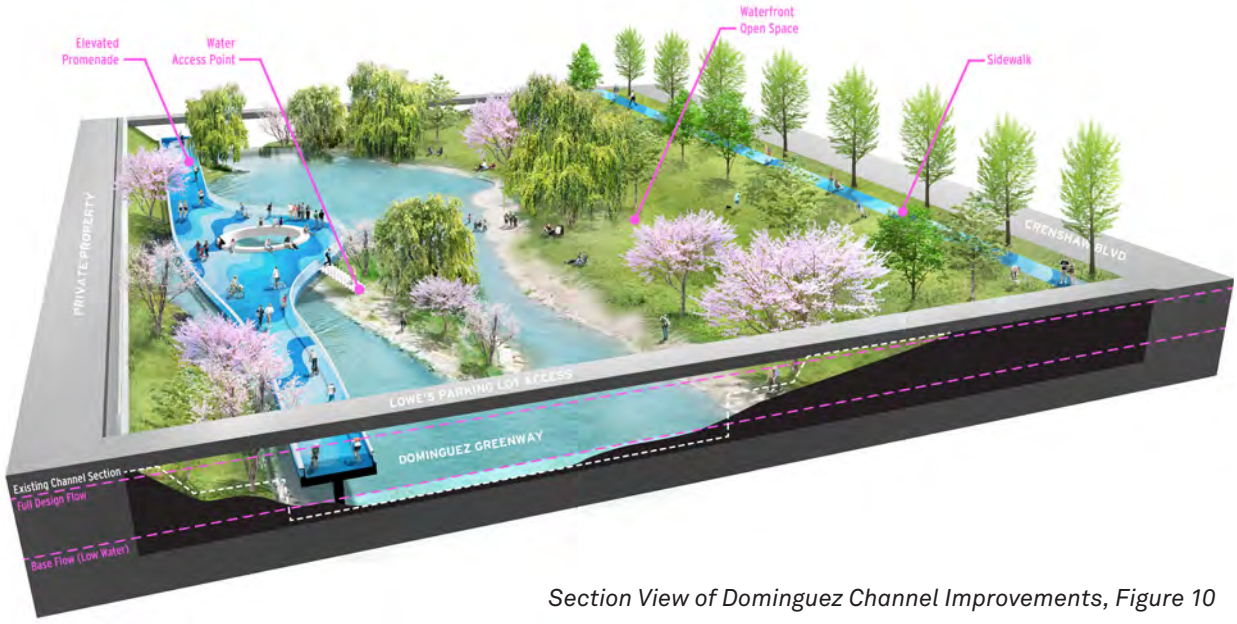
- Build new elevated nature trail usable by pedestrians, bicycles, and potentially NEVs.
- Provide safety and security improvements such as shade, lighting, and sidewalk paving and surface enhancements to enhance the attractiveness for all active transportation users.

Figure 9 is an aerial drawing showing a naturalized Dominguez Channel from the Crenshaw Station on the left to approximately El Segundo Blvd. on the right. A new pathway can be seen traversing the channel with a seamless connection to the 120th Street and Crenshaw Boulevard intersection and Crenshaw Station. A new open space can be seen near the intersection utilizing existing private parking under the assumption that parking lease agreements were made between the owner and adjacent underutilized parking lots. Upgraded passthrough bridges can be seen crossing the bridges from Crenshaw Boulevard to retail and businesses to the north.

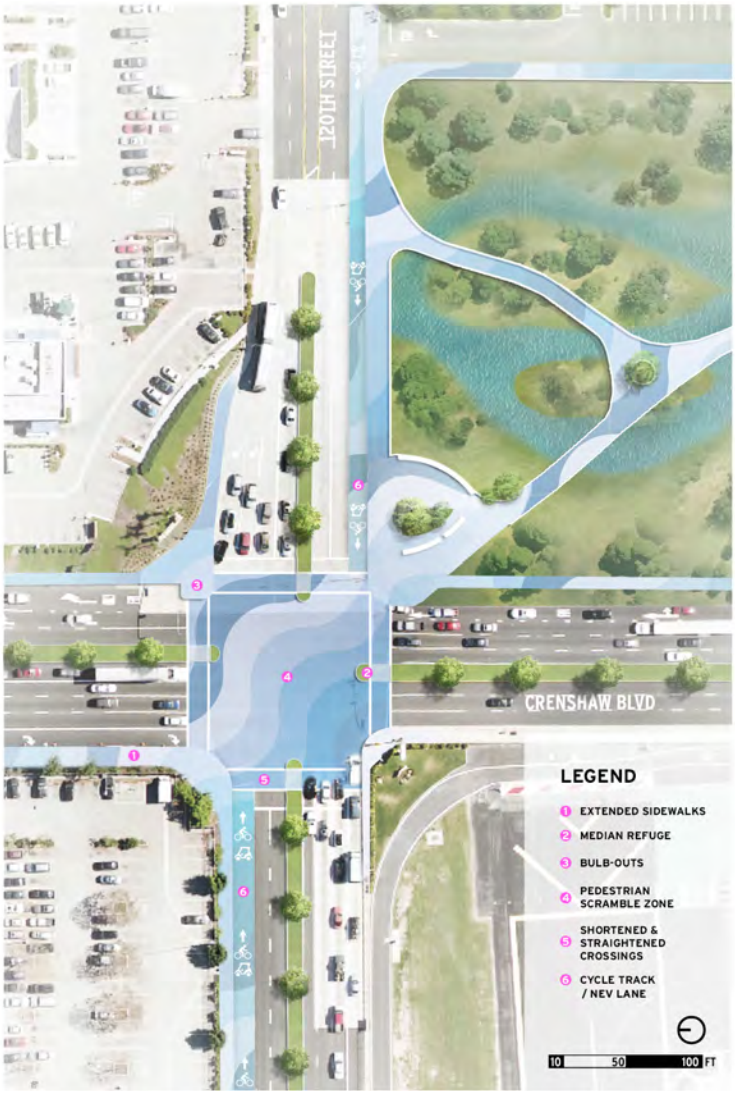
Figure 10 is a conceptual rendering depicting an expanded view of the proposed open space near Crenshaw Blvd. and 120th St. The elevated walkway along the Dominguez Channel can be seen to the left and the public open space park can be seen to the right.

Figure 11 shows an expanded view of the connection of the pathway to 120th Street and Crenshaw Boulevard intersection. A diagonal pathway leading directly to the transit station could create an inviting user experience, drawing in visitors and active transportation commuters. Bike lanes leading up to the intersection would allow a safe transition for bicyclists from the station to the Dominguez channel.

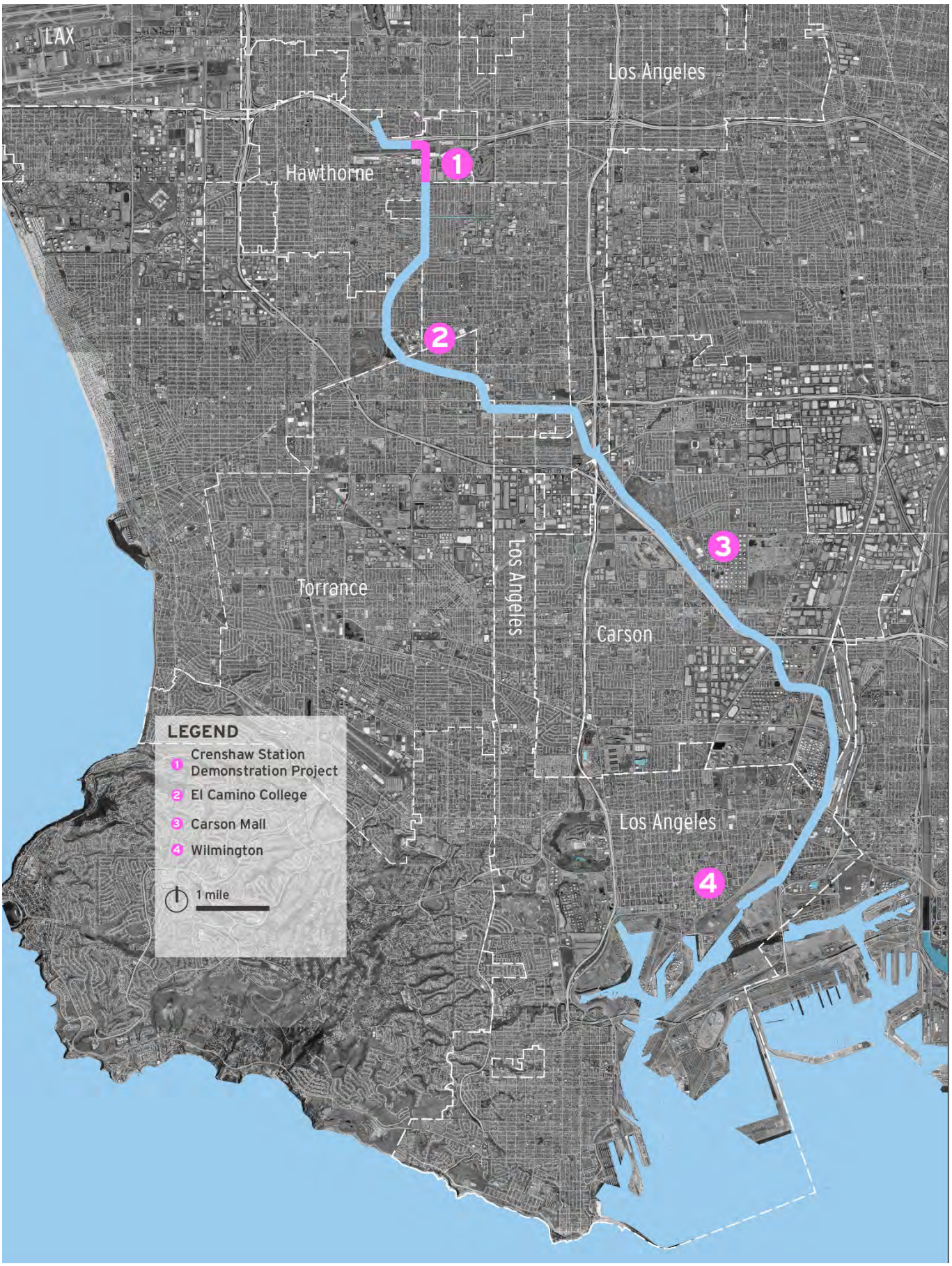
Figure 12 depicts potential future phases of the Domiguez Channel improvements, connecting from Hawthorne all the way south to Wilmington.



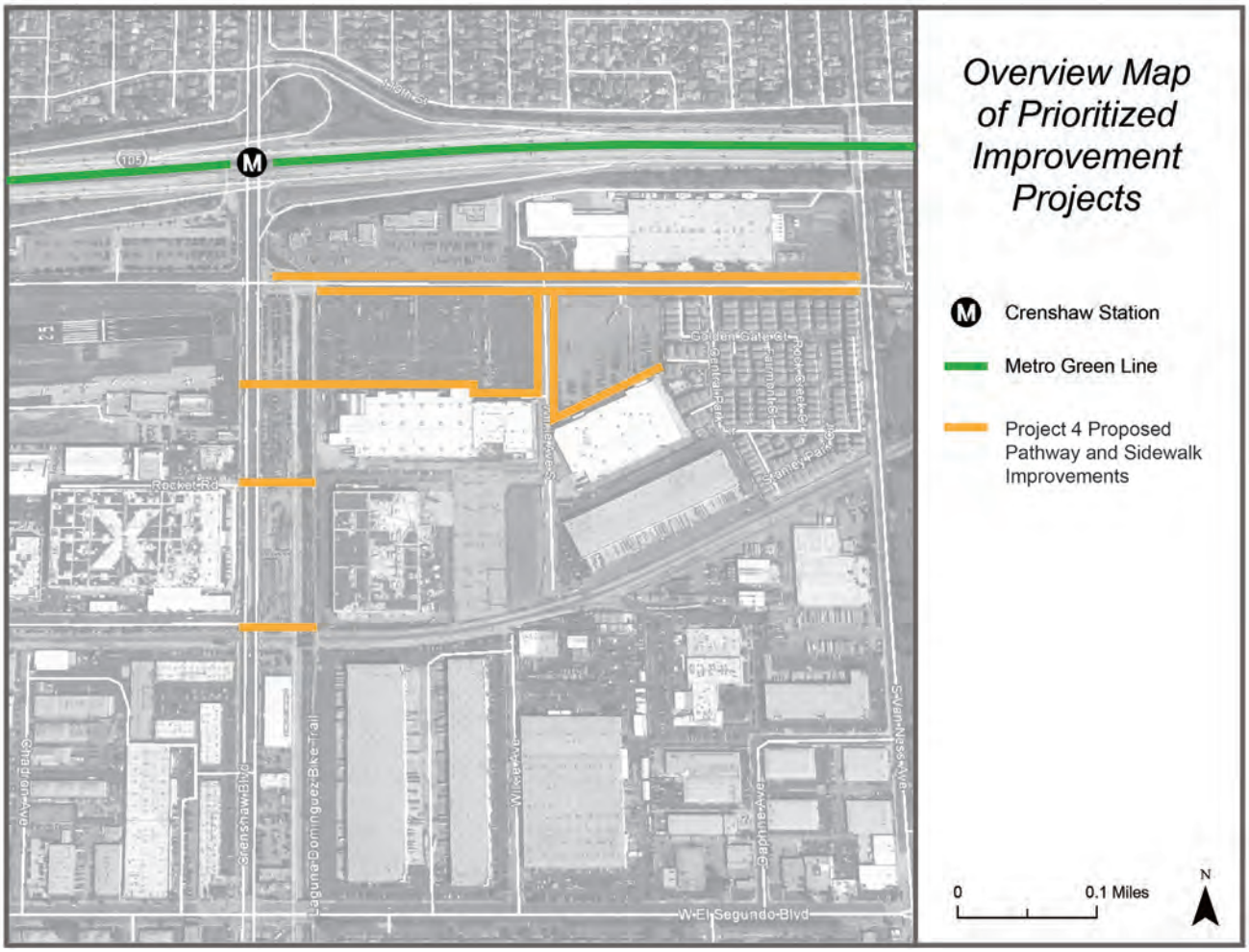
Section View of Dominguez Channel Improvements, Figure 10



Expanded View of Crenshaw and 120th Improvements, Figure 11



Potential Future Phases of Dominguez Channel Improvements, Figure 12



Overview Map- Project 4, Figure 13

PROJECT #4. LOCAL PATHWAY NETWORK CONNECTING EMPLOYMENT TO RETAIL

One major transit detractor is the inconvenience of not having a personal vehicle to run errands during lunch or after work. Many who have the option to take transit still choose not to because there is no other convenient way to access stores. They may be able to access their place of business, but nothing else. Even if Projects #1-3 were implemented in the station area, many employees who live along a Metro route and work in the Crenshaw Station area may still choose to drive because of simple conveniences such as accessing local retail. The proposed solution to combat this issue is to create a user-friendly local pathway network that would link local employment centers to local retail destinations.

Within a 1/2 mile radius, there are several large employers, including a high-tech agglomeration of businesses with thousands of individuals commuting every day. Also within this radius are several retail centers in the form of big box stores, fast food, fitness clubs, and others. If a safe, convenient, and user-friendly pathway were to be created linking these two, it would make this experience more inviting and employees could choose to make these local trips by walking or biking, instead of driving. By providing this local pathway network, users of this pathway could decide that they no longer need personal vehicles during the day and could, therefore, choose transit as a form of commuting to and from the workplace.

During the third community outreach event held in preparation of this ATP, representatives from local tech industry, SpaceX, and local retailer, The Exchange, discussed ways to connect their two centers. It was found that many employees in the area currently visit these retail centers at lunch or after work and already have created a somewhat make-shift pathway connecting the two. The following pathway builds on the ideas presented at that meeting.

The proposed local pathway network would build on Projects #1-3 by make further enhancements to directly connect employment centers to retail (Figure 13). The pathway would consist of three parts, including connection from businesses to the Dominguez Channel by way of upgraded cut-throughs, retail promenades that pass in front of the big box stores, and new sidewalk infrastructure along Wilkie Avenue leading to 120th Street.

Connect Employment to Dominguez Channel

The first step in connecting employment centers to retail is to provide an inviting walkway from business entrances to across the Dominguez Channel. The walkways should provide direct access that would be more convenient than driving. This includes providing direct access from the business entrances across the Dominquez Channel and to the front door on retail.

The intersections along Crenshaw Blvd between 120th Street and El Segundo Blvd are currently dangerous and intimidating environments to active transportation users. Lack of safe intersections hinders connections from the nearby businesses and neighborhoods to the Dominguez Channel. Having safe intersections and pass- throughs between Crenshaw Blvd and the upgraded Dominguez Channel will help minimize collisions and facilitate walking and biking across the channel and across to the retail centers to the east. The recommended improvements include upgrading Crenshaw Blvd's intersections at Rocket Rd, Jack Northrop Ave, and El Segundo with new crossing signals, zebra striping, modified signals to existing crossing, increased signage, and sidewalk paving and surface enhancements. Cut-throughs between the parking lots between Crenshaw Blvd and the Dominguez Trail could be enhanced by sidewalk paving, surface enhancements, and wayfinding signage to further encourage active transportation.

Retail Promenades

A pedestrian thoroughfare would enhance the connection of the pathway from the employment centers to the retail stores. Traditional big box site design is centered primarily on vehicles with hazardous pedestrian and vehicle crossings throughout. The existing parking lots in front of Lowes and Target, for example, contain only a narrow sidewalk with bare minimum safety features. If these pathways were enhanced to favor pedestrians, it would create a safer, friendlier, and more inviting environment for pedestrians. The concept of this retail promenade involves converting the existing driveways passing along the front entrances of these stores into a pedestrian walking promenade with special paving, seating, landscaping, and shops. The promenade would be designed to accommodate temporary and permanent shops, food trucks, and seasonal displays. Other user friendly amenities such as covered walkways, way-finding signage, lighting, emergency kiosks, and bike racks. The pathways would directly link to the Dominquez channel and to the cut-throughs leading to the employment centers.

Due to the fact that this portion of the proposed project is completely on commercially owned property, it would be under the direct purview of the private retailers. This concept is unique in that it would not be in a big box retailer's standardized business model. Therefore, significant negotiations and deal-making would need to occur to make this concept a reality. Only entrepreneurial retailers would likely be open to this concept. It would require a significant investment that could be shared between the retailer or business improvement district and the city funds. However, since the entire idea is driven around connecting potential customers to the retail, there is a real business case to be made. The concept of a retail promenade creates a great opportunity for retailers to add additional revenue by taking advantage of this promenade by selling their merchandise along the paths via kiosks or pop-up/temporary events. It also creates the opportunity to sell a broader range of merchandise targeted to active transportation.

Wilkie Avenue Upgrades

The final component of the local pathway connecting employment centers to retail is to add pedestrian and bike improvements along Wilkie Avenue, between the big box store lots, to 120ths and across the street to The Exchange retail center located at 120th Street and Crenshaw Boulevard. The Exchange is a retail mall that already contains a mix of uses, including a fitness center, restaurants, banks, and other services. Connecting this retail destination to the employment centers would be a crucial link in the local pathway network.

No sidewalks currently existing along Wilkie Avenue, which detracts from walking or biking along this street. However, both sides of the street have landscaped shoulders with ample room for constructing sidewalks. The minimum recommendations are to continue the sidewalk from 120th Street down passed the big box stores and to the freight warehouse to the south. A more robust enhancement would include continuing the retail promenade along both sides of Wilkie with smaller shops and destinations.

Recommend Project # 4 Proposed Scope:

- Add new pedestrian crossing at Cut-through half-way between 120th Street and Rocket Road.
- Upgrade intersections at Rocket Road, Jack Northrop, and Freight railroad crossing.

- Upgrade/reconfigure cut-throughs, adding pedestrian and bicycle infrastructure.
- Connect to Dominguez channel pathway already completed in project 3.
- Construct retail promenades by partnering with big box stores.
- Add new sidewalks along Wilkie Avenue.
- Upgrade intersection at Wilkie Avenue and 120th Street.
- Upgrade sidewalks along 120th street to strip mall retail.
- Order of Magnitude Cost Estimate- $3.47M (2015$), $4.14M (escalated 2019$).

Future Retail and Redevelopment Potential in the Crenshaw Station

Project #4 as proposed would achieve an enhanced connection from employment centers to the existing big box retailers in the Crenshaw Station area. This project could achieve the initial goals of this active transportation plan. However, the development potential of this area is far beyond the limits of this plan. If reimagined, the retail area at 120th Street and Crenshaw Boulevard could be transformed from a big-box retail destination to a walkable community town center.

The current street and parking configuration of the big box stores is designed solely to accommodate personal vehicle access. If Project # 4 is implemented which introduces a different type of access, including walking, biking, and potentially NEVs, new opportunities arise that would have not been possible before. The concept of adding a retail promenade not only creates the opportunity for additional areas for the existing retailers to sell merchandise, it creates the potential to add new types of retail businesses arranged oriented on walkable paths instead of oriented around parking. This new walkable retail center could be imagined by replacing the large surface parking lots with parking structures and adding new building types and mixed uses to attract a broader spectrum of clientele. The lots could be redesigned to create a traditional town feel oriented around pedestrians, with the Dominguez Channel being a main access point connecting to the nearby high tech agglomeration of business.

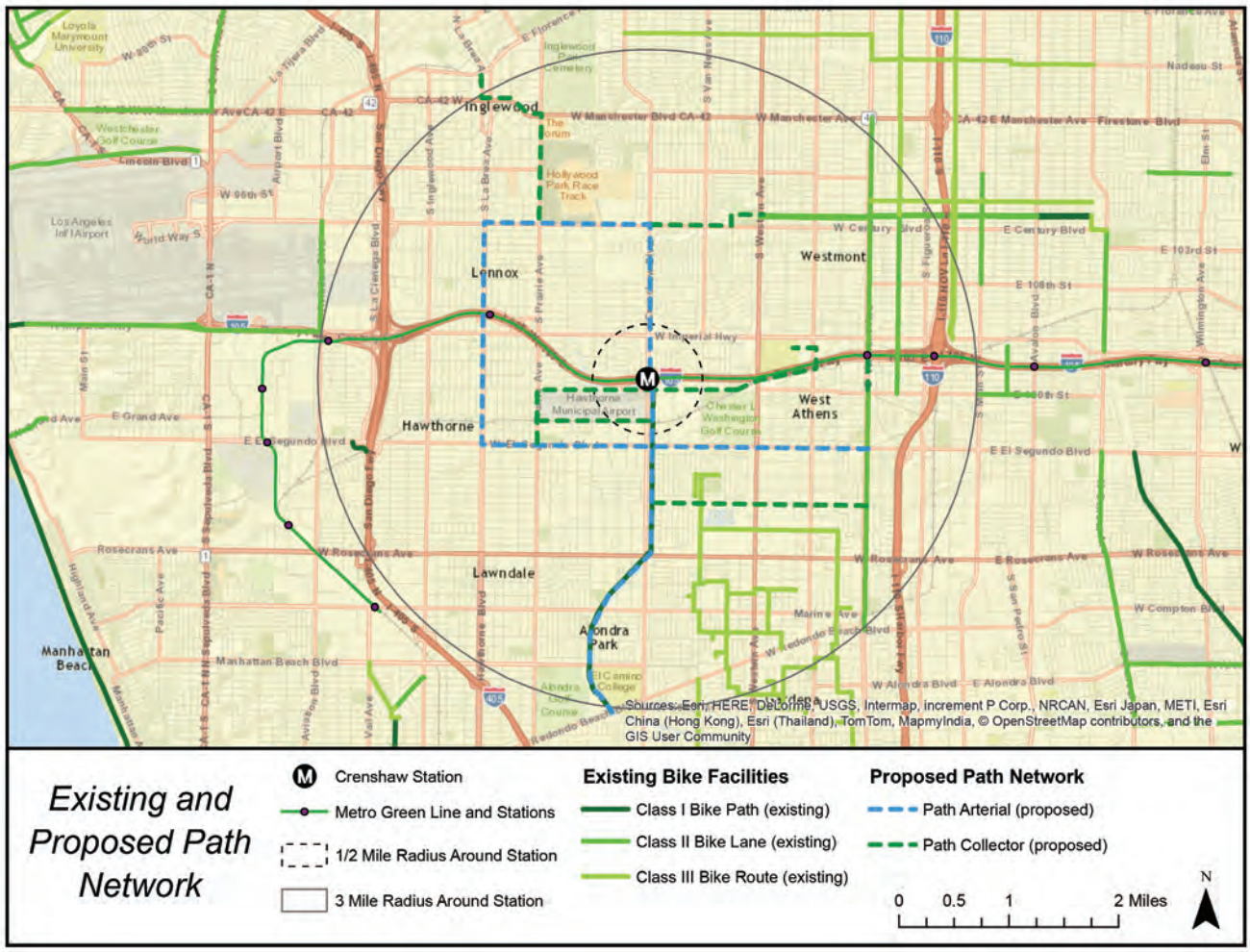
The following steps can be taken to transform existing big box retail into a town center (Tachieva, pg 117):

1. Introduce new building types and mixed uses, using the big box stores as anchors.
2. Connect and repair thoroughfares, using pedestrian promenades.
3. Rationalize parking, using structures instead of surface lots, provide only minimum parking.
4. Define open and civic space, taking advantage of Dominguez Channel.

PROJECT #5. BICYCLE / NEV NETWORK IN THE PROJECT STUDY AREA

The study area has an existing fragmented bicycle infrastructure network, including Class 1, 2, and 3 bike facilities. The Laguna Dominguez Trail is the only Class 1 bike path in the study area that runs parallel to Crenshaw Boulevard. The nearest Class 2 bike lanes to the Crenshaw Station are along Vermont Avenue, approximately two miles to the east and Imperial Highway at the edge of the study area, connecting to Los Angeles International Airport. The Class II bike lane on Vermont Avenue has a gap in the existing network for the 1/3 mile between I-105 and 120th Street. There is a cluster of Class 3 bicycle lanes around the Interstate 110 and 105 Freeways as well as residential neighborhoods in the southeast corner of the study area. This disjointed bicycle network deters people from choosing bicycling as a transportation option in the area because riders typically do not feel safe riding on 35 and 40 mph streets in mixed-flow traffic without any bicycle infrastructure or signage.

The proposed corrective action is to construct a network of path arterials and path collectors throughout the project study area that connect to important origins and destinations, including major employers, Hawthorne Airport, Hawthorne Mall, Hollywood Park, Great Western Forum, commercial destinations on 120th and 135th, neighborhood high schools, Los Angeles Southwest College and El Camino College (Figure 14). Additionally, the proposed paths should connect to the regional bicycle network through the existing Class 2 and Class 3 facilities in the east and southeast portions of the study area, including the completion of the Vermont Avenue bike lane between I-105 and 120th Street. Path Arterials extend from the station and act as main branch lines to support maximized throughput and efficiency



Existing and Proposed Path Network, Figure 14

for active transportation users. Path Collectors are streets and routes that feed into the path arterials from the existing network and also support crossing movements and station area permeability.

The upgraded Laguna Dominguez Trail discussed in Project #3 would remain a physically separated bike path and would be considered a Path Arterial in the new network. All other proposed arterial routes would be built on the roadways, but with a physical barrier between automobile traffic and bicyclists so this network could also operate NEVs. If the Path Network could not be constructed all at one time, Path Arterials would be prioritized over Path Collectors and constructed first extending to the north, south, east and west of the Crenshaw Station allowing bicycle and NEV access to all four quadrants around the station. Users could then access the local residential roadways throughout the study area to reach their final destination. The path collector along Northrup must be coordinated with the local railroad provider as the space required to add a path would encroach onto the freight railroad right of way, and could result in additional safety hazards without an adequate buffer. Additional recommendations include wayfinding signage, reduced vehicle travel lane widths, enhanced bike facilities, bicycle green zones at intersections, and signal modifications to give crossing priorities to active transportation users. Creating a network of arterials and collector facilities throughout the study area would increase the attractiveness of bicycling and NEV use in the area and encourage these as a modes of commuting to the nearby businesses.

Deficiency/Issue:

- Fragmented bicycle network with no direct connectivity to Crenshaw Station or regional network.
- NEV islands that create barriers to where NEVs can travel.
- Limited bicycle network deters people from riding bicycles as form of active transportation and commuting.
- Safety concerns with bicyclists riding on 35 and 40 mph streets in mixed flow traffic and no bicycle facilities.
- Gap in existing Class II bicycle network on Vermont Avenue south of I-105.

Recommendations:

- Construct a network of path arterial and path collector bicycle facilities throughout the project study area that

connects important origins and destinations, as well as to the regional bicycle network through the existing facilities in the east and southeast portion of the study area.

- Total length of proposed network is 20.7 miles in length (3.2 miles of those would be upgrades to the Dominguez Channel Trail).
- Proposed bicycle facilities along roadways should be at least 7-feet wide in each direction and a physically separated barrier from automobile traffic so NEVs can also use these lanes.
- Give crossing priorities to active transportation users by include wayfinding signage, reduced vehicle travel lane widths, enhanced bike facilities, bicycle green zones at intersections, and signal modification.
- Close 1/3 mile gap in existing Vermont Avenue bicycle network.
- Proposed network could be expanded westerly from western termini to connect to the beach cities.
- Order of Magnitude Cost Estimate- $29.34M (2015$), $35M (escalated 2020$).

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NEIGHBORHOOD ELECTRIC AND ELECTRIC VEHICLE STRATEGIES


CALL
BOX

1

NEIGHBORHOOD ELECTRIC VEHICLE STRATEGY

INTRODUCTION AND BACKGROUND

Neighborhood Electric Vehicles, or NEVs, are a type of slow speed, lightweight Local Use Vehicle. Local Use Vehicles include Medium Speed Vehicles (MSVs) and Low Speed Vehicles (LSVs). MSVs are not legal in California, although they are in a few states, and Low Speed Vehicles (LSV) can be powered by gas or by electricity. An NEV is a LSV that is powered by electricity. In order for the City of Hawthorne to achieve the full environmental benefits of this type of mode encouraged by AB32, the project focuses on NEVs.

NEVs have a maximum speed of 25mph and can drive on roads with speed limits up to 35mph. A city can submit an NEV Plan to the State Legislature under AB2353 for NEVs to seek permission to operate on streets with speed limits over 35mph for a period of five years. After five years, a report about the outcomes for safety and traffic and other impacts must be submitted to the legislature in order to maintain the permission to operate NEVs on street with speed limits of more than 35mph.

NEVs operate within certain regulations for speeds, location, and intersection crossings as follows:

Speed Limits

An NEV is a zero emission vehicle that can be driven on public streets subject to being registered, having a Vehicle Identification Number (VIN), being insured, and adhering to vehicle safety standards. NEV drivers must have a valid driver's license.

In 1998, the National Highway Traffic Safety Administration (NHTSA) of the Federal Department of Transportation defined street-legal Low Speed Vehicle (LSV) in the Code of Federal Regulations (Rule FMVSS 500). NEVs are recognized as a sub-class of LUVs (local use vehicles), limited to a maximum speed of 25 MPH and restricted to streets with speed zones of 35MPH or less (SBCCOG NEV Demonstration Plan Final Report).

Exception for roads over 35 mph with an NEV Transportation Plan

Operations on roadways with posted speed limits greater than 35 mph are permitted within specially marked lanes as identified in a qualified NEV Transportation Plan and pursuant to enabling state law (WRCOG 4-City NEV Transportation Plan).

Regulations for NEVs, including crossing state highways at intersections

NEVs must comply with all the rules and regulations for a motor vehicle as set for in the California Vehicle Code. Vehicle Code §21251 provides in relevant part that: "...a low-speed vehicle is subject to all the provisions applicable to a motor vehicle, and the driver of a low-speed vehicle is subject to all the provisions applicable to the driver of a motor vehicle or other vehicle, when applicable, by this code or any other code, with the exception of those provisions which, by their very nature, can have no application."

NEVs must be registered with the State Department of Motor Vehicles and the driver must hold a valid California driver's license and be insured.

NEVs may travel on any street with a posted speed limit of 35 miles per hour or less. However, the City, by local ordinance or resolution, may restrict or prohibit the use of NEVs. CVC §21266(a). The City plans to designate approved NEV travel routes to direct NEV traffic to the safest available route.

NEVs may cross state-highways at controlled intersections only. Crossing at uncontrolled intersections is permitted with the approval of the agency with primary responsibility for that intersection. CVC §21260(2) (City of Lincoln NEV

Transportation Plan).

STAKEHOLDER INPUT

Input on the use of NEVs was solicited from City staff and key stakeholders during the project kickoff meeting on July 24, 2014, the interagency stakeholder workshop on April 8, 2015, Community Workshop #1 on April 29, 2015, a

conference call with Space Exploration Technologies (SpaceX) on June 5, 2015, and Community Workshop #2 on June 10, 2015. Input received on the NEV strategy included:

- NEVs and EVs represent an opportunity to innovate. These are a priority for the project. Strategies should focus on businesses and daytime employee use, not residences. There is an opportunity to build some infrastructure for NEVs on private property. Can also use these for first/last mile connectivity. Charging infrastructure could also be a differentiating factor and can add value for industrial land if electric vehicles are used for shipping or deliveries (for example to and from LAX).
- NEVs could be beneficial for local goods deliveries and should be accessible to nearby employees.
- Some participants raised concerns over combining NEVs on streets with automobiles and bicycles.
- NEVs can share protected lanes with bicyclists.
- Concerns were expressed regarding sharing lanes, primarily for safety issues when group of novice and/or slow cyclists are on path and an NEV wants to pass.
- NEVs can make commuter vanpools (and commuting by transit) more attractive so employees can still have a vehicle during the day.
- Employer NEVs can be coordinated with residences, particularly at nighttime so the NEVs can be used after working hours.
- NEVs can be used by large employers to travel around their campuses.
- NEV parking can potentially be located at Metro's park and ride or within the big box retail parking lot.
- NEVs and/or NEV shuttles can be used by seniors or the mobility-limited for short distance trips.
- For NEVs to be used, they would need to be safer than current mobility options
- Concern over how NEV infrastructure could impact traffic, accidents, and goods movement (especially for large trucks).
- Major private employer expressed concerns over the time commitment and out of pocket expenses to launch a pilot program.

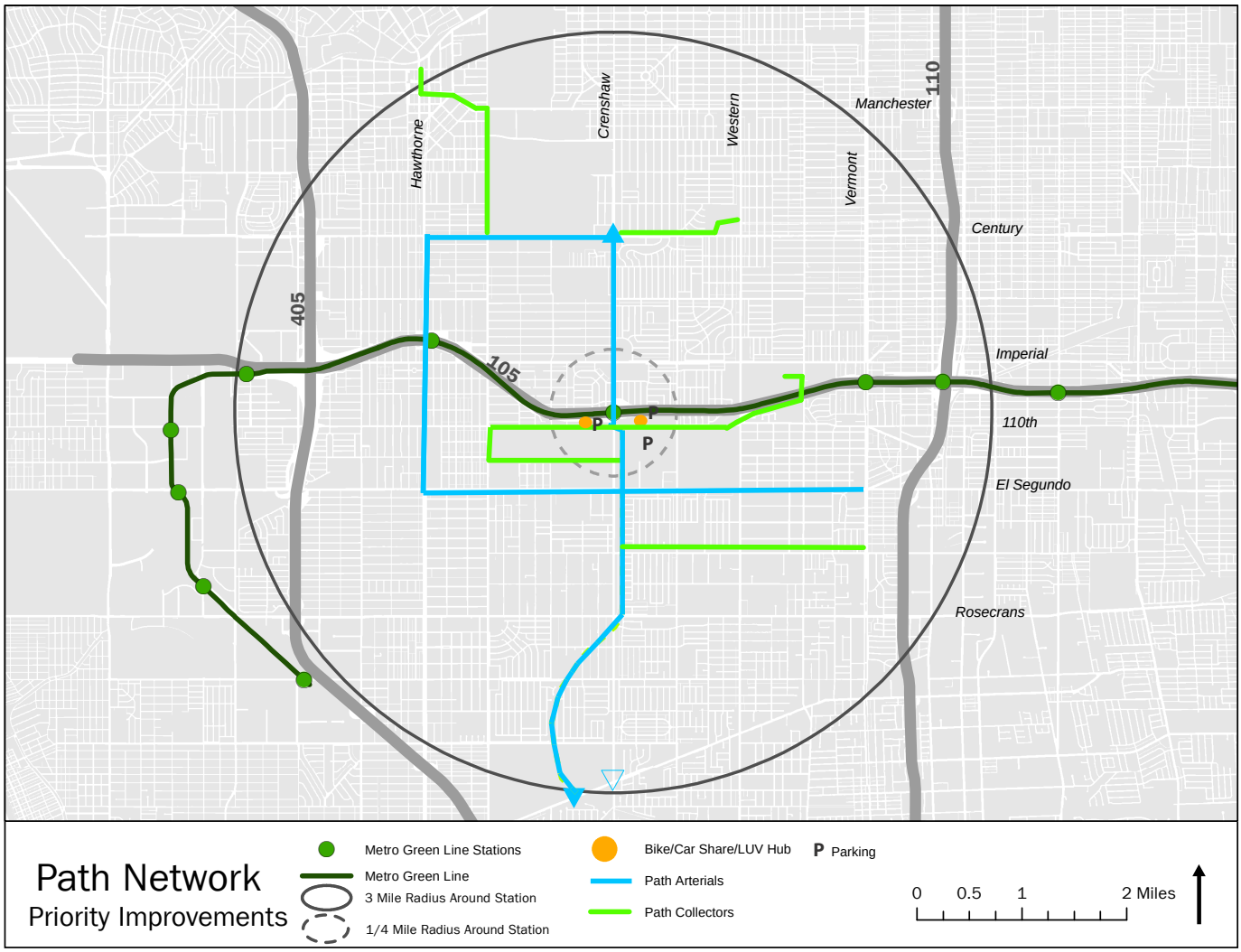
NEV STRATEGY

The NEV Strategy is composed of recommended changes to physical infrastructure to accommodate NEVs, as well as an implementation strategy for a long-term, self-sustaining program or pilot program. The following subsections outline the options related to these main components of the NEV Strategy.

PHYSICAL INFRASTRUCTURE AND REGULATION: THE ROADWAY NETWORK

Because NEVs do not have any safety equipment besides seatbelts, and because of the speed and volume of traffic on the arterials in the project area, NEVs are not good candidates to comingle with traffic on the streets with 40mph speed limits (For more information about the safety of NEVs please see Report to Congress: Operation of Neighborhood Electric Vehicles on Roadways with a Maximum Speed Limit of 40mph: Fuel Consumption Savings and Safety Ramifications, NHTSA, June 2012, p.5). Therefore, instead of recommending the creation of an NEV Plan to submit to the State Legislature for NEVs to be able to travel in Class 2 lanes, the project area would be better served by providing NEVs their own, separate Class 1 lanes, and those would be shared with bicycles and reinforce the separation of pedestrians from the roadway. The lanes would be separated from traffic by a physical barrier such as a curb or other type of separation.

The Class 1 roadway network for NEVs will be one and the same as specific portions of the proposed bicycle network/ Path Arterials and Collectors (Figure 15). The network of infrastructure for NEVs is made up of the protected, shared Class 1 lanes, on designated arterials, the network of streets with speed limits of less than 35mph, and the bike/NEV lane along the Dominguez Channel. In the future, this network can connect with NEV/Bicycle infrastructure in adjacent cities, forming a larger, sub-regional grid that extends across the South Bay and beyond. A linear, inter-city network "backbone", extending north or south and/or east and west, along the lines of the CV Link in the Coachella Valley, would be a much-needed catalyst for other cities to develop NEV/ Bike networks (http://www.coachellavalleylink.com/). Linked to a backbone, smaller, local networks such as the one



Path Arterial and Collectors, Figure 15

proposed for this project area can grow over time in order to achieve a robust, and useful, grid for zero-emissions local mobility.

NEVs have been proven to successfully share lanes with bicycles safely in other cities (Lincoln and Rocklin Report. P. 3) and the South Bay Cities Council of Governments encourages the strategy of shared lanes (SBCCOG Neighborhood Electric Vehicle Demonstration Final Report, June 2013, p. 72).

The City of Lincoln has had a system of NEV/bike shared lanes (in their case, Class 2 lanes which they won the approval for through the AB 2353 process of submitting an NEV Plan). As summarized in the City of Lincoln-Rocklin report to the legislature about the outcome of their five-year program of providing shared Class II lanes for NEVs and bicycles, NEV users perceive the greatest safety when separated from traditional automobiles. Roads with shared NEV lanes were perceived to be between “neither safe norunsafe” and “somewhat safe” while roads with separate lanes for NEVs were “somewhat safe” to “very safe”.

Additional studies have also supported NEVs sharing multimodal facilities, as follows:

NEV routes may in some circumstances be utilized as bicycle lanes, thereby increasing the miles of bicycle lanes throughout a city. A separated multimodal facility would increase safety for various types of users. (WRCOG 4-City Neighborhood Electric Vehicle Plan)

and:

The SBCCOG is collaborating with the South Bay Bicycle Coalition in the hopes that some of the proposed Class 2 bicycle lanes will be implemented as “combo lanes” that will accommodate NEV/LUVs as well as bicycles. (NEVs in Mature Suburbs, SBCCOG)

A Class 1 lane that accommodates NEVs would also be an excellent amenity for cyclists, and help protect pedestrians. Guidelines for signage for the NEV infrastructure would follow the same guidelines as for bicycles.

NEV Route signs can be placed on local streets, which have been designated as NEV Routes. Signs may be placed at the far side of collector street intersections at 1/2 mile intervals

on all continuous residential streets (WRCOG 4-City Neighborhood Electric Vehicle Plan).

The Level 1 charging infrastructure for NEVs can be co-located with public Level 2 charging, which is discussed in Section 2 of this chapter. The City would need to carry out a detailed design process for the shared NEV/bicycle infrastructure based on the concepts herein. By building protected Class I lanes shared by bicycles and NEVs, the City would encourage safety for roadway users and overcome regulatory barriers. If and when the number of NEVs grows significantly, it will take pressure off of parking since NEVs require less room. In a distant future, and the need arises, because they are zero emissions NEVs could be used both inside and outside buildings such as warehouses or even retail centers, blurring the line between zero-emissions roadway (or parking), and other functions.

IMPLEMENTATION STRATEGIES

There are two parts to any potential implementation strategy for NEVs. One is a realistic vision of a long-term, economically self-sustaining program, and the other is a pilot project that offers an opportunity for experimentation and marketing, to test and refine concepts of operation and revenue models, and to expand the number of future project partners. The key is to find a way to get more NEVs on the ground in order to prove the concept and introduce people to their benefits.

In all cases, the central issue is that NEVs are consumer products, and the logic for expanding a market for them is the logic of the market, not of policy or planning. An NEV program and pilot project would have to include cooperation and partnership from public and private sector entities including insurance companies, software and hardware manufacturers, vehicle manufacturers and businesses. It's not something the public sector can do alone.

Three potential scenarios are, first, the community has access to a fleet of NEVs to share; second, a large local employer has a fleet of NEVs for employees to use to get to local retail and transportation, and; third, a pilot for a shared fleet, either private or public, includes a pilot for an automated NEV.

A program could start with a small employer-based program, and have a second phase in which the NEVs are shared by the public in the first option described below. A program for shared NEVs can expand and adapt over time. It may also include partnership from Metro or other agencies. It should not be thought of a single program, but as a continuous long-term, step-wise implementation that will be persuasive to encourage more infrastructural investment, more NEV/bike lanes, and more NEVs available for local mobility.

1. Shared NEVs Available to the Public: The most equitable and broadly useful program for NEVs would allow members of the community to drive the vehicles for local trips. NEVs are relatively expensive, around $12K, and have a range of around 20 miles (however, the limited network of 35mph streets would present a challenge for driving them that far). They would most likely be used for local trips that are 3 miles or less (according to the outcome of the SBCCOG's NEV Demonstration Project Report of 2013). Because of their limited use, they are not necessarily a good investment as an alternative to a full speed car, especially for people of moderate or low incomes. This is the same population that also has the greatest mobility challenges. To offer access to benefits of NEVs without the expense, a shared fleet might be the most expedient. Shared vehicles carry extra expenses of insurance, software, hardware, and administration beyond the costs of the vehicles themselves. These expenses could potentially be shared by multiple parties, if they agree to do so. Some potential partners for sharing the cost of shared NEVs in the long term are: Metro, property owners, retail tenants, business associations, and members of the community who want to use the vehicles. Funding such a program might also be achieved through a location-based assessment district.

The participant in the market, of car-share operators and insurance, is changing constantly these days. Therefore, this strategy recommends that the City and its allies to keep a close eye on development in community based car sharing through the Shared Use Mobility Center (www.sharedusemobilitycenter.org), in order to track new opportunities as they arise.

A pilot project to jump start this longer-term strategy could be partly funded by AQMD, as an unsolicited proposal. AQMD matches, with funds, around 20% of in-kind donations of expertise, hardware, software or vehicles. Since insurance needs to be paid for and cannot be donated, a large portion of the AQMD contribution would likely go to covering insurance. There would also need to be a university partner such as UCR or UCLA to measure the air quality benefits of such a project. If a non-profit (local or otherwise) runs the project, they would need to identify a partner to operate the NEV-share, get a quote for insurance, and work out the verification system for users, determine a means of tracking

the vehicles for security and for calculating VMT and GHG reduction. There are software and hardware companies, and a specific vehicle manufacturer, who would be very interested in such a project, as might Metro, the County, the SBCCOG, and the LAEDC. Once all of the pilot project components are in place, it would take the AQMD eight months to review the application. A 30-month pilot could therefore start in a year after a focused project planning effort begins. This would depend on there being a road infrastructure in place for the NEVs.

2. Shared fleet for Major Employer(s): Another, simpler, program could be directed to employees of one of the major employers in the project area, such as SpaceX. The company could offer a fleet of NEVs for employees to move not only between their own buildings, but to take advantage of new and existing local retail opportunities on a day-to-day basis. Employees could leave the campus more often for lunch and recreation opportunities. The goal would be to make vanpools or use of transit more attractive by providing a local vehicle for daytime use, replace some vehicle trips with NEVs, and support and expand local retail, and make the most of the employer's presence in the City. On an ongoing basis, such a program would likely have to be funded by employers and participating employees. It would likely take a non-profit to assemble the more detailed implementation strategy in collaboration with the employers.

It may be more difficult to make a case for this type of project to the AQMD since, although the project takes place in an underserved community, the users of the NEVs would not necessarily be residents of the community. AQMD's efforts through grant programs are focused, to the extent possible, on disadvantaged populations. Perhaps such a pilot project can be established in conjunction with fostering new local retail and other amenities. If there is no direct benefit to the underserved community, it is possible that such a project would have to be funded almost entirely by the employers, land-owners, employees and software and hardware or vehicle providers (the latter, through donations).

3. Autonomous NEV Pilot: At the time of writing, there is a lot of interest, on behalf of the LAEDC and the SBCCOG, to carry out a pilot for an automated shuttle or automated NEV. This would be a project small in scale, integrated with a larger shared NEV pilot. This is a very immediate issue. The organization or company carrying out the pilot would have to work with the City, and local stakeholders such as employers, to determine the best use case for an automated demo or pilot, and dovetail it with the NEV program.

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ELECTRIC USE VEHICLE STRATEGY

INTRODUCTION AND BACKGROUND

Southern California Association of Governments (SCAG) and the South Bay Council of Governments (SBCOG) see Electric Vehicles as key to reducing the fleet of 600,000 fossil-fueled vehicles currently in the South Bay (SBCCOG PEV Readiness Plan, p. 6). The SBCOG's research has shown that most trips are less than 3 miles in length, making them good candidates for full-speed and low-speed electric vehicles (SBCCOG NEV Demonstration Project Final Report, p.15). As part of the City of Hawthorne's Crenshaw Station Active Transportation Plan, this Crenshaw Station Electric Vehicle (EV) Strategy proposes electric vehicle infrastructure in the project area and identifies regulatory changes needed to enable electric vehicle use.

Several electric vehicle types exist that can be used in the study area. Plug-in hybrids, such as the Toyota Prius and the Honda Civic Hybrid, are the most common plug in electric vehicles. The Nissan Leaf and the Chevrolet Volt are completely electric and are charged by plugging in a rechargeable battery. Neighborhood Electric Vehicles (NEVs), which only reach 25MPH and can be used on streets with a speed limit of less than 35MPH or in specific lanes, also recharge by plugging in.

The Electric Vehicle Supply Equipment and related infrastructure needs differ for the various vehicle types. Level 2 chargers are by far the most common source of energy for full speed electric vehicles. Charging takes 4-6 hours, and the equipment can be installed in homes, in apartment buildings and commercial buildings, or in outdoor spaces. Level 1, which is the only kind of charger that can be used by NEVs, uses a standard household outlet. A plug in hybrid or fully electric full-speed vehicle can also be charged using Level 1, but charging takes 8-12 hours instead of 4-6 hours. Level 3 chargers are not compatible with plug-in hybrids, but can charge specific fully electric vehicles, such as the Nissan LEAF, in 30 minutes. Tesla has it's own proprietary Level 3 charger which can charge its vehicles in 20 minutes. More detail on Electric Vehicle Supply Equipment (EVSE) can be found below.

DEVELOPING EVSE STRATEGY FOR HAWTHORNE

The EVSE Strategy for Hawthorne considers both physical and regulatory changes needed to support and incentivize EV use. Typically, Plug-in Electric Vehicles (PEVs) could be fully recharged at home, overnight. Charging in a single-family dwelling is arguably the most straightforward since the owner of the vehicle can also make decisions about the charging infrastructure, which could be as simple as a standard household 110V outlet.

Ideal for promoting the cause of zero-emissions mobility would be for EVSE to be commonly, and predictably, available in many different places: public parking lots, employment centers, shopping malls, community centers, and multi-unit dwellings. The widespread availability of charging stations would overcome the impression that Plug in Electric Vehicles (PEVs) are marginal, and inconvenient, so consumers would have more confidence in choosing them over fossil fuel powered cars.

The SBCCOG PEV Readiness Plan explains the chicken-and-egg dynamic between demand for electric vehicles and the availability of charging stations. Facilitating access to charging is the best way the public sector can encourage the PEV market - however, "The initial picture, in general, is that employers, municipal governments, and MUD owners and managers are neither ready nor preparing to get ready to accommodate a rapid influx of plug-in electric vehicles. Their interest in getting ready is waiting for demand to increase" (SBCCOG PEV Readiness Plan, p.4).

SCAG, and the SBCCOG, suggest there are cost effective things municipalities should consider doing to pave the way. Immediate issues are the eliminating the cost and improving the ease of applying for electrical permits, and the timeliness of inspections to certify the changes. The City could provide charging at public buildings, and facilitate employers and owners of multi-unit dwellings in providing EVSE by offering them information on the costs and benefits. The City could set an example and convert its fleet to EVs.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE) LEVELS

EVSE is grouped into three different levels, by voltage:

Level 1 equipment provides charging through a 120 volt (V), alternating-current (AC) plug and requires a dedicated circuit. Level 1 charging refers to the use of a standard household outlet. On one end of the cord provided with PEV's is a standard, three-prong household plug. On the other end is a connector, which plugs into the vehicle. Depending on the battery technology used in the vehicle, Level 1 charging generally takes 8 to 12 hours to completely charge a fully depleted battery. The most common place for Level 1 charging is at the vehicle owner's home and is typically conducted overnight.

Level 2 equipment offers charging through a 240V, AC plug and requires installation of home charging or public charging equipment. These units require a dedicated 40 amp circuit. Level 2 charging equipment is compatible with all electric vehicles and plug-in electric hybrid vehicles. Level 2 chargers have a cord that plugs directly into the vehicle in the same connector location used for Level 1 equipment. Depending on the battery technology used in the vehicle, Level 2 charging generally takes 4 to 6 hours to completely charge a fully depleted battery. Charging time can increase in cold temperatures. Level 2 chargers are commonly found in residential settings, public parking areas, places of employment and commercial settings.

Level 3 equipment, also commonly known as DC fast charging, charges through a 480V, direct-current (DC) plug. Most Level 3 chargers provide an 80% charge in 30 minutes. Level 3 equipment is not compatible with all vehicles, and all vehicles do not accept the charge. There is currently no industry standard for this level of charging; however, Level 3 chargers are being deployed across the United States in public or commercial settings. Currently, the Mitsubishi "i" and Nissan LEAF can accept a Level 3 charge. Other vehicles, such as the Chevy Volt cannot. Level 3 Tesla Supercharger The Tesla Supercharger will only work for the Tesla Model S, providing half a charge in approximately 20 minutes.

Source: Levels of Charging, EVTown, www.evtown.org

But beyond these implementation measures, it is important to note that cities that are ahead of the curve in terms of EVSE, for example the City of Santa Monica, have an entire planning framework that supports sustainability and livability as an achievable goal, starting with their Vision, and General Plan. The General Plan addresses the ecosystem of sustainable mobility, with special attention on focused, mixed-use areas such as those around transit stations. General Plan policy provides a consistent foundation that encourages the use of active transportation and EVs even as technology or market conditions change. At a more detailed level, Specific Plans and Zoning Ordinances provide direction for the City and property owners on EVSE, parking EVs, pedestrians and bicycles.

The Luskin Center's South Bay Cities Plug-In Electric Vehicle Deployment Plan of 2013 applies, at the sub-regional scale, the same principles as the Luskin Center's earlier, 2012 report, the Southern California Regional PEV Readiness Plan. The 2013 South Bay Cities PEV Deployment Plan provides inventories of land uses at the sub-regional and municipal level to help prioritize PEV planning efforts at three types of locations: multi-unit dwellings (MUDs), workplaces, and commercial/retail centers. It provides an evaluation of the suitability of hundreds of individual parcels to host PEV charging using criteria that represent supply of parking spaces, the relative cost of installing chargers, and parcel-level demand for charging; and maps of PEV registrations and travel patterns to daytime destinations within 15 South Bay cities.

This EVSE Strategy for Hawthorne zooms in further, to the municipal level. According to the Luskin Center's SBCCOG PEV Deployment Plan, in 2013, there were only between 1 and 5 NEVs registered in the City of Hawthorne, and a single Level 2 charger (Luskin, SBCCOG PEV Deployment Plan, p. 100).

The key issue in Hawthorne is the relationship between EV adoption and equity. As of 2015, PEVs remain vehicles for the wealthy and upper middle class. It remains to be seen if once vehicles such as the Toyota Prius become more common on the secondary market, the number PEVs will increase in moderate-income communities. Even a second hand Prius is more expensive than many vehicles powered by fossil fuels, and if cost and reliability are the most important decision factors in vehicle purchase, there are no compelling reasons for people to purchase a plug-in hybrid. However, if the EVSE was widely available and charging was convenient and significantly less expensive than gasoline, then the market would shift to PEVs. It would help the cause of second-hand electric vehicles if people saw that charging was a convenient, affordable and accessible refueling option. For this to happen, electric charging stations need to be widely, and equitably distributed. The Luskin PEV Readiness Plan predicts a minimum of 88,000 PEVs in the South Bay by 2022, and it would be important to take steps to encourage access to them across all income levels so they are not just concentrated in the wealthier cities (SBBCOG PEV Readiness Plan, p.7).

INFRASTRUCTURE IMPROVEMENTS

In order to best support EV use in the City of Hawthorne, changes to physical infrastructure must occur. The primary infrastructure components needed to facilitate widespread EV use include charging stations, and wiring and power to those stations adequate to the level of charging equipment, signage indicating that charging is available, and that specific parking places are designated for EV charging only.

The research in the Luskin SBCCOG Deployment Plan is based on the premise that parking facilities associated with types of land uses where people stay for several consecutive hours are the most appropriate for EV charging. With Level 2 being the most common EVSE equipment available today, charging typically takes four to six consecutive hours, therefore charging stations are best located where cars are parked for this duration. The report analyzes potential physical locations for EVSE according to parking available for three categories of land use: multiple unit dwellings (MUDs), employers, and local government. Locations that might be promising in Hawthorne, such as retail malls, new and used auto dealers were not factored into the Deployment Plan (SBBCOG PEV Readiness Plan, p.4).

Hawthorne has a good concentration of multi-unit dwellings (MUDs), retail locations, and a park and ride. However, the Luskin center's research has shown significant barriers to installing EVSE in existing MUDs, as discussed herein. Public charging stations, in publicly owned lots, would be a better focus since charging could occur near transit and active transportation, integrating vehicle charging with the trip chain. Employers and large commercial establishments would be good candidates for installing EVSE, but the Luskin SBCCOG Deployment Plan explains that the most effective way of encouraging more electric vehicles in the City is by requiring charging stations for new construction. Recommended regulatory changes to enable EV use are found in Chapter C.

If locating chargers was based entirely on the presence of parking spaces, the Deployment Plan presumes that "The municipality of Hawthorne will prioritize multi-unit dwelling charging because most of its residential housing is MUD, representing 40% (19,411) of all parking spaces by land use" (Luskin, SBCCOG PEV Deployment Plan p. 11), although it is important to note that a very close second, 39% (19, 689) of parking, is for employees, and 21% (10,345) at single family dwellings. Since the land use dedicated to parking at MUDs and employers is almost the same, and because the priorities of property owners may not be in line with the public benefits of EVs, other strategic factors need to be considered in encouraging the adoption of EVSE.

Steps in achieving an EVSE charging infrastructure should include reaching out to specific employers and existing commercial centers in order to make them aware of the benefits of EVs and the help available to them in installing chargers. Most importantly, the City should require EVSE in new construction of MUDs, commercial centers and employer-owned parking, as well as in new and shared public facilities. These will be the most effective way of achieving more EVSE in the City of Hawthorne, combined with the City installing publicly available chargers in their existing facilities according to what the City can afford to pay for through grant programs.

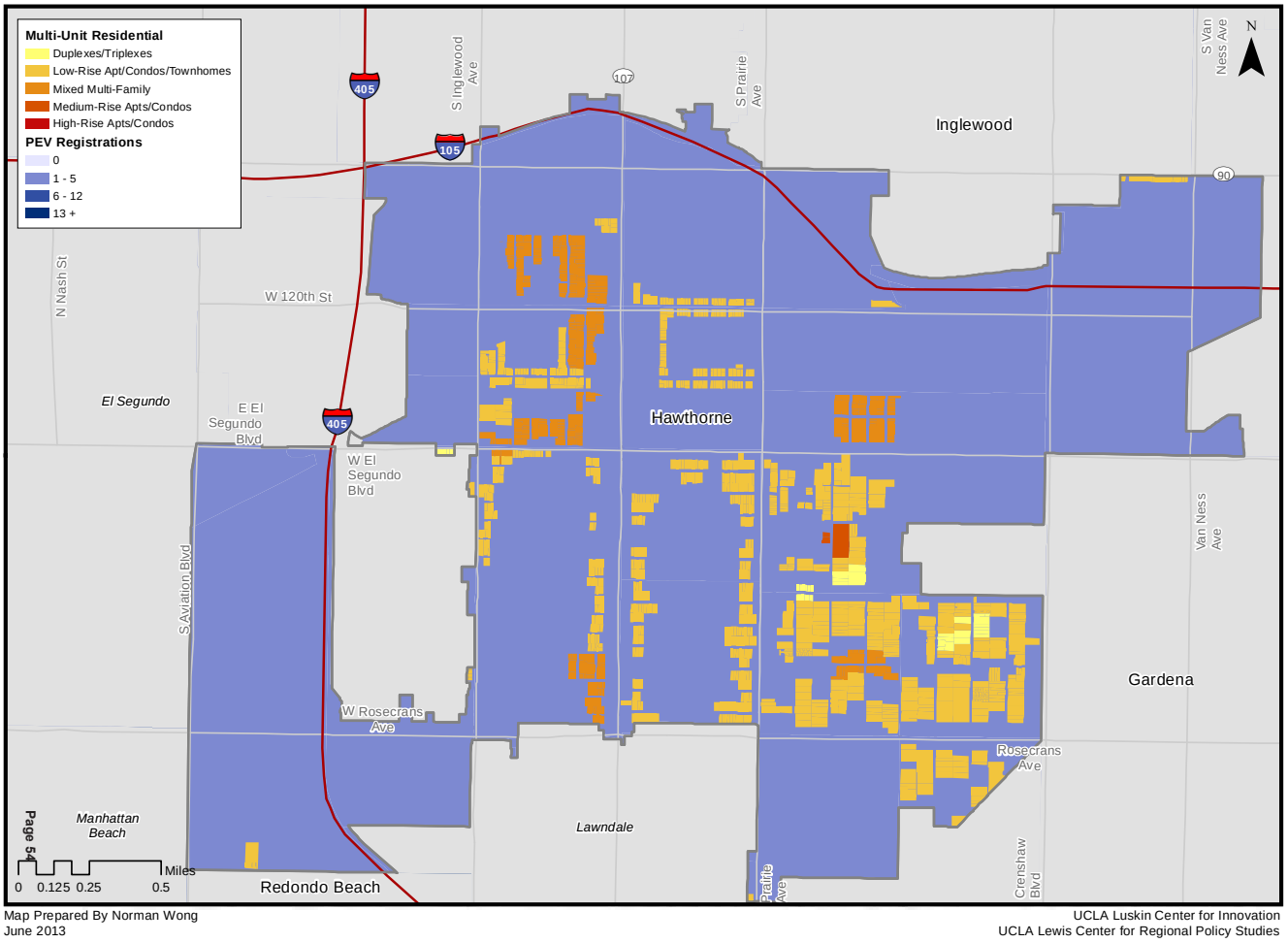
INFRASTRUCTURE IMPROVEMENTS: EXISTING MULTIPLE UNIT DWELLINGS

No MUDs in Hawthorne currently have EVSE (Figure 16). It is likely that, as reported by the SBCCOG PEV Readiness Plan, as in the rest of the South Bay, building owners have not thought of charging, because there is no demand or reason to do it, and there is some cost and complexity involved.

If the owner of an existing multi-unit dwelling wants to install EVSE, Level 2 is the most likely choice since it balances speed of charging and compatibility with existing electrical systems. The largest multi-use dwellings in Hawthorne were built after 1970, facing lower installation costs for Level 2 chargers than ones built earlier (Luskin, SBCCOG PEV Deployment Plan, p.55). The City can help by having a qualified electrician available to verify the building's panel size, age, and distance between the panel and where vehicles are parked. These factors determine the necessity for an upgrade, which would increase the cost of accommodating Level 2 EVSE. It might prove to be feasible for only the largest multi-unit buildings to have chargers.

Podium and underground parking structures usually have 110V outlets that could serve as Level 1 chargers where a full

> "Installing a 220v outlet in the garage or even simply moving a 110v outlet to a more convenient location requires an electrical permit from the city. One dimension of municipal readiness is the degree to which the city assists the new PEV owner to make the necessary changes and to make the process simple and easy." (SBBCOG PEV Readiness Plan, p.25)



Map Prepared By Norman Wong
June 2013

UCLA Luskin Center for Innovation
UCLA Lewis Center for Regional Policy Studies

MUDs and PEV Registrations in Hawthorne, Figure 16

speed vehicle, or an NEV, could use to recharge overnight. Installing EVSE in a carport or parking lot might be more expensive, all depending on the length of the conduit needed to connect to the electricity source.

In order to determine if a Level 2 Charger is a good option, an electrician and/or owner would need to know:

- Power available from the pole to the building
- Power available from the electrical panel for distribution to the building (200 amperes of service usually does not require upgrade).
- Metering arrangement – meters for the "house" versus for individual units
- Distance between electrical panel to parking stalls
- Existing outlets in the parking area – 110v and 220v, and how they are metered.
- Type of parking – none, surface, car-port, pedestal, subterranean, gated or not.
- Number of dwelling units and number of parking spaces
- Spaces are deeded, assigned, or common
- Laundry room in parking area with 220 or 110 outlets or service
- Elevator in parking area, indicating the probability of 220v power availability.
- Accessing the SCE's special rates for PEV charging would require a new meter.

(Source: SBBCOG PEV Readiness Plan, p.11)

Another recommendation in the Readiness Plan is for the City to work with the County, the SBCCOG and other cities to encourage the adoption of a streamlined Los Angles County-wide standard, online EVSE permit form. "Realistically, it seems that creating the capacity for online permitting would be most cost-effective if all city permits were included, not just those for EVSE" (SBBCOG PEV Readiness Plan, p.28).

INFRASTRUCTURE IMPROVEMENTS: NEW MULTIPLE UNIT DWELLINGS

New buildings offer the opportunity for Level 2 charging to be built-in at the design stage. The City could require the installation of wiring for PEV infrastructure, or require the installation of charging stations, in new construction. In other jurisdictions, current zoning codes for new construction require one parking space with EVSE equipment per the first 25 parking places. Recommended zoning language for requiring EVSE equipment in new construction is included in Chapter C.

INFRASTRUCTURE IMPROVEMENTS: EMPLOYERS

In the South Bay, 8% of employers already have EVSE, compared to 0% of Multi Unit Dwellings (SBCCOG PEV Readiness Plan, p.18). This indicates that the barriers to offering EVSE by employers might be lower. This may prove to be a more significant factor for the potential of EVSE than the fact that most of the longer term parking in Hawthorne is at Multiple Unit Dwellings.

SpaceX, with almost 1200 workers, is the largest employer in Hawthorne (Luskin, SBCCOG PEV Deployment Plan p. 15), and the workforce is of the income and education level that fits the profile, in 2015, of drivers of PEVs. This makes SpaceX the obvious candidate for providing EVSE at Level 2, and Level 1 charging for NEVs. Only one other employer in the City has between 1400 and 3700 employees, and 28 have between 76 and 475 (Luskin, SBCCOG PEV Deployment Plan p. 52). All of these might be good candidates to approach about EVSE. Other candidates for Level 2 charging are car dealerships and any large retail centers such as Costco. Surfair might also want to consider offering charging for cars left at the airport. Employers should determine how many of their workers commute from a distance of less than five miles. For these workers, it might be relatively easy for employers to offer even Level 1 charging for both full-speed PEVs, and Local Use Vehicles since “4 to 8 hours of 110v charging will get most drivers home” (SBCCOG PEV Readiness Plan, p. 21).

INFRASTRUCTURE IMPROVEMENTS: THE CITY AND PUBLIC AGENCIES

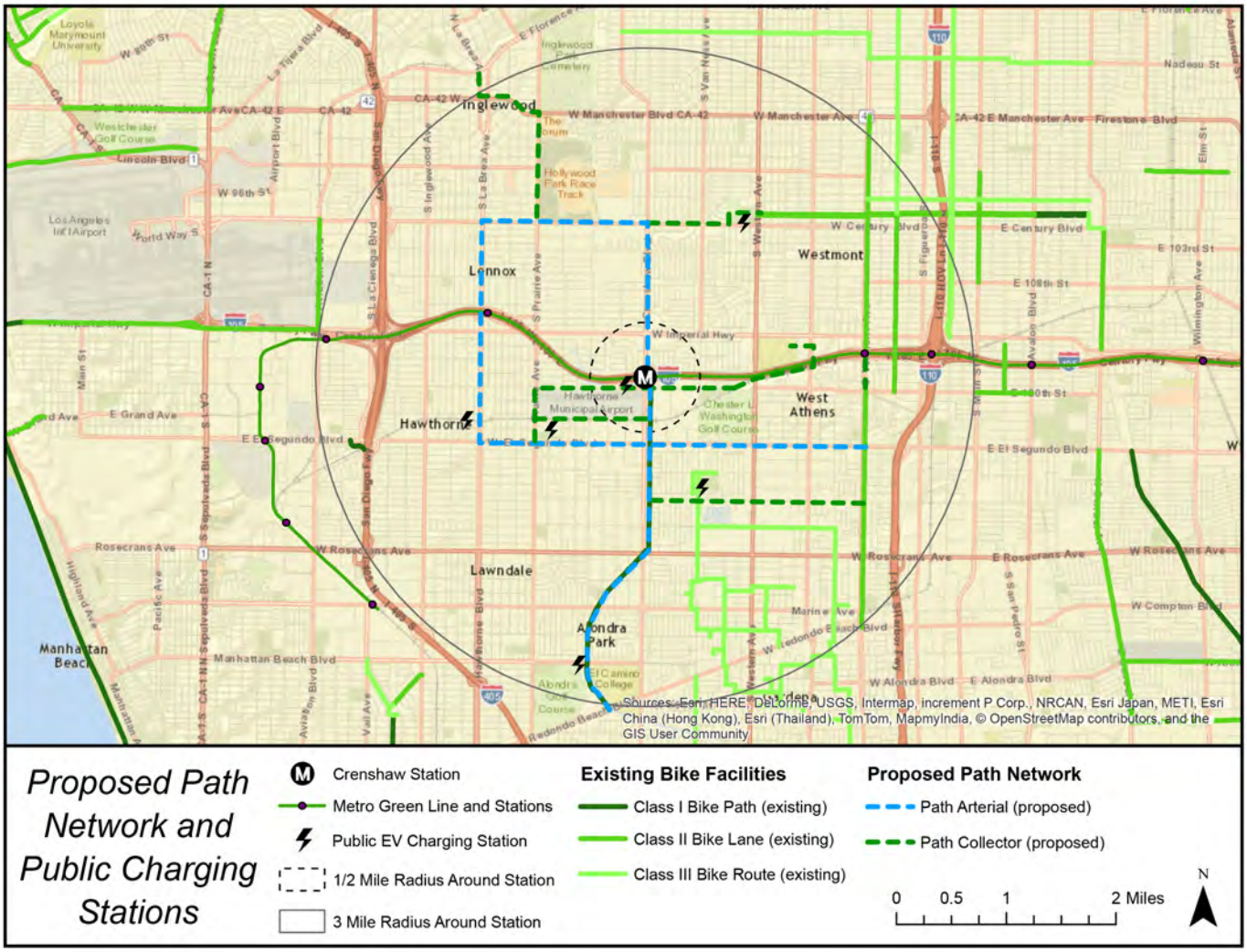
The City might consider applying for a grant, for example from Edison AQMD or others in the State, to install EVSE at the Hawthorne Memorial Center and making at least Level 1 charging available at City Hall. AQMD does accept unsolicited proposals, so that, at least, is one “consistent” potential funder. The EVSE manufacturers themselves are a good source of information about funding opportunities. For more information about this, please see the Implementation subsection.

Most importantly, the City should consider working with Metro to offer charging stations at the parking facilities at Green Line Stations, including the Crenshaw Station, and in parking facilities adjacent to any bicycle/NEV paths, incorporating charging PEVs in the trip chain with transit, and the active transportation system (Figure 17). A resident who commutes to work using the Green Line should be able to charge his or her car while at work in the Metro owned lot near the Green Line Station. The location of future car-share hubs (or NEV-share hubs) in association with the Green Line station or new commercial or mixed-use developments would make ideal locations for EVSE. The City should coordinate its network of EVSE collocated with active transportation and public transit, with concentrations of retail and new mixed use developments. These would become part of networks of EVSE in adjoining communities. The SBCCOG has information about the location of EVSE throughout the jurisdiction. The County would ideally have an up-to-date resource on the network of publicly available EVSE, and planned EVSE. At the time of writing, no agency has such a resource. This is something that might be incorporated into the work of the Los Angeles Economic Development Corporation’s e4 (Economy, Energy, Efficiency, Economy) Alliance.

DEPLOYMENT STRATEGIES

REGULATORY CHANGES NEEDED TO SUPPORT EV USE

Based on information currently available, the City of Hawthorne does not have explicit policies, zoning provisions, or permit processes to support and incentivize EV use. It would be important to have language in many elements in General Plan to support sustainability and livability as an achievable goal. The General Plan should address sustainable mobility integrated with community transportation, health, economic development and housing with special attention on focused, mixed-use areas such as those around transit stations. General Plan policy should provide a consistent foundation that encourages the use of active transportation and EVs even as technology or market conditions change. At a more detailed level, Specific Plans



Proposed Path Network and Public Charging Stations, Figure 17

and Zoning Ordinances should provide direction for the City and property owners on EVSE, parking EVs, pedestrians and bicycles.

The City should facilitate employers in providing both Level 1 and Level 2 EVSE by providing them with information on the costs and benefits, streamlining permitting and inspection, and eliminating fees, as in the example of the No-Fee Permit for EVSE from Hermosa Beach in Appendix V. The permitting process should be quick, predictable and inexpensive.

Zoning language is proposed to facilitate EV use in the City of Hawthorne is included in Chapter C and Appendix V.

CITY POLICIES AND STRATEGIES

Below are measures the City can take now to encourage the use and ownership of zero-emissions Plug-in Electric Vehicles based on the recommendations of the South Bay Cities COG PEV Readiness Plan of 2014.

- Make available online guidance and hard copy pamphlet at the counter and at auto dealerships: provide information on vehicle types, potential cost savings from PEV driving, electrical service, and the charging equipment installation process.
- Have PEV savvy front counter personnel that can efficiently guide PEV adopters through the permit and inspection process.
- Online permit applications that are straightforward, clear and easy to get 'right' the first time. Ideally, these would be the same throughout the County.
- Same day approval for permits applications.
- Free permits.
- Provide access to an electrician.
- Online inspection scheduling.
- Have an inspection checklist available to applicants/ contractors prior to installation that will lead to more first inspection 'successes'. Like the application itself, this would ideal be County-wide.
- Next day inspection guarantee.
- No requirement that the contractor be present at inspections (for simple installations).

- Building codes that require installation of PEV infrastructure in new construction and extensive remodels for all building types.
- Flexible installation guidelines for retrofits in existing developments.
- Targeted technical assistance, workshops and outreach.
- Approach high- value stakeholders who may be less aware of the technical or procedural aspects of installing charging and using PEVs or who may require more detailed decision support.
- Plan and strategize for demonstration projects on sites owned by the City or public agencies, especially in concert with transit and active transportation, and in key commercial areas, multi-unit dwellings.
- If the City hasn't already done so, it could gradually also replace vehicles in its gas powered fleet with EVs.

IMPLEMENTATION STRATEGIES

There are two separate dimensions of the organizational challenge of encouraging EVs through making EVSE available in Hawthorne. One stems from the need for the City to inform residents and others doing business with the City about advantages of EVs, incentives, permitting and requirements, and the other stems from the need for the City to be informed about funding options for the implementation of projects and programs.

Given the fact that the City has limited financial and staff resources, it would be by far the most efficient for the City (and for other cities in the region) if much of this information, including the permitting process, were carried out on a County website, removing the burden of having to create and update such a resource by the City. The City counter staff would have to be able to point permit applicants in the right direction, but it would be preferable if permitting, which should be free of charge for applicants, could be supported by informational resources, and an online tool for applications, housed outside the City. The City should have material available for people on how to obtain reliable, up-to-date information on EVSE and the benefits of EVs. This information, again, should be available from a centralized clearinghouse such as the LAEDC's e4 Alliance, described in more detail below.

Because the City needs quick and direct access to grant programs (or other funding sources) available to assist with implementing EVSE it would be very helpful to Hawthorne, as well as to neighboring cities and the rest of the region, if reliable, up-to-date information was available from a single source. The information about available incentives rebates and grants changes monthly, if not weekly. The funds available for EVSE and incentives for EVs ebbs and flows according to public policy directives at the State level, and at other agencies such as SCAG and AQMD. Strategic decisions on the part of energy industry, the automotive industry and EVSE manufacturers significantly influence the availability of funding and incentives. Decision-making for these industries is shaped by far-ranging factors such as oil prices, geo-politics, federal and international policy and shifting global markets. It is not an exaggeration to say that it is impossible for a single municipality, large or small, to stay completely up to date with the programs and incentives, available for EVSE and EV drivers, and moreover, to anticipate new programs and trends in the industry.

At the time of writing, many grant programs from SCAG, AQMD and Edison are over and a new cycle has not yet begun. More significantly, the sources of information for grants are in an extreme state of balkanization. The newly formed Advanced Transportation Center of the Los Angeles Economic Development Corporation's e4 (Economy, Energy, Efficiency, Economy) Alliance should, by fall 2015, provide a clearinghouse for the latest, up-to-date EVSE and EV and programs, grants, incentives. It is anticipated that in the next few months a concerted effort will be made to encourage the creation of a clearinghouse for EVSE information.

EVSE PROGRAM INFORMATION RESOURCES

The following listprovides resources for EVSE information. These links could be provided on a centralized City of Hawthorne webpage in order to provide information to interested parties:

- LAEDC E4 Alliance Advanced Transportation Center

www.advancedtransportationcenter.org/

- South Bay Environmental Services Center www.sbesc.com
- Energy Upgrade California www.energyupgradeCA.org
- So Cal Edison www.sce.com/pev
- Calstart www.calstart
- Drive Clean Driveclean.ca.gov/pev

CONCLUSION

In conclusion, targeting large residential developments (MUDs), specific employers and new and existing commercial centers, is the most effective way of encouraging more EVSE in the City of Hawthorne. The City should install publicly available chargers at strategic locations: City Hall, the Community Center, and in conjunction with key origins and destinations adjacent to active transportation, and work with Metro to install EVSE at the Crenshaw and other transit stations. Commuters who drive to the Crenshaw Green Line station should be able to charge their cars while at work in the Metro owned lot. The location of future car-share hubs (or NEV-share hubs) in association with the Green Line station or new commercial or mixed-use developments would make ideal locations for EVSE.

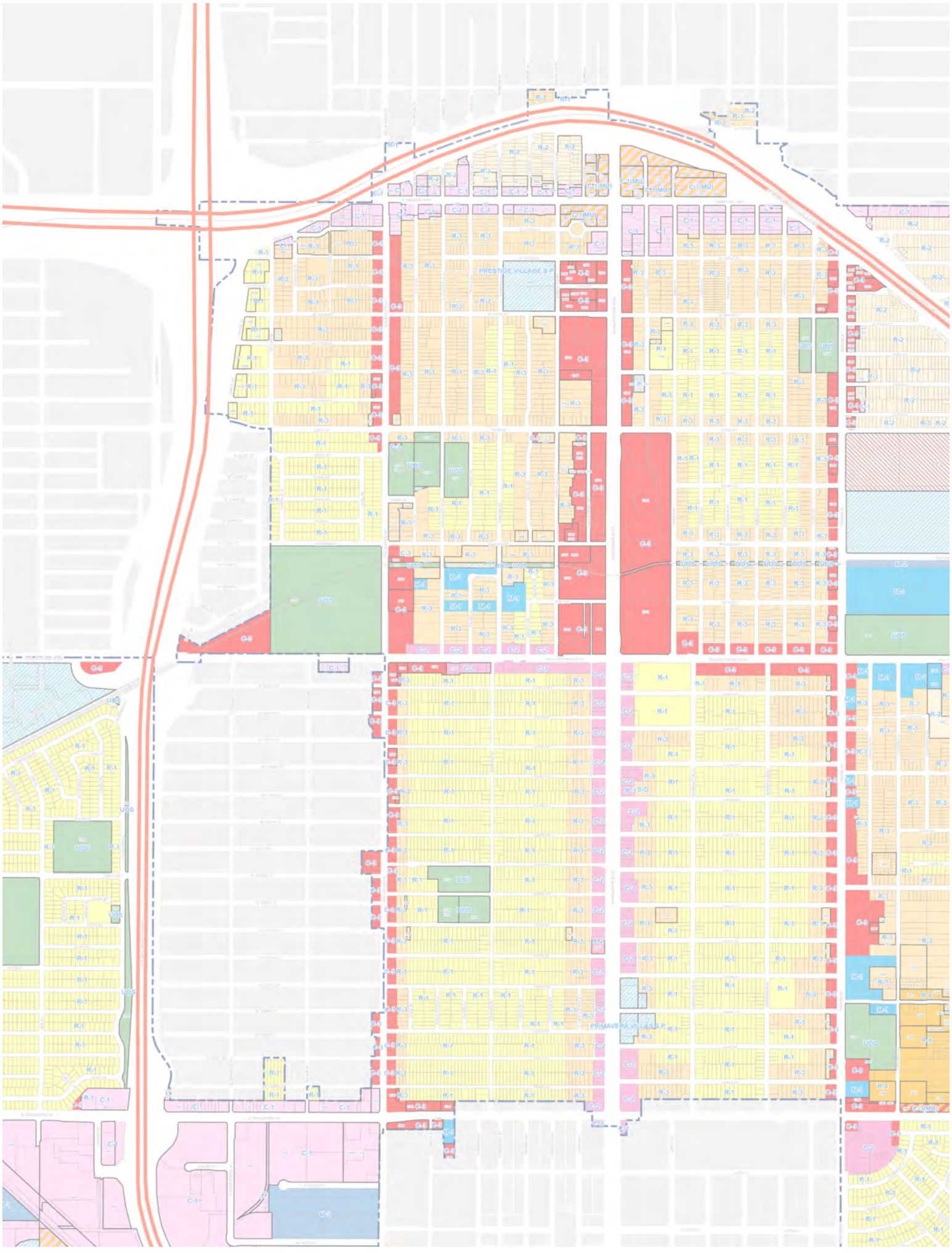
If the City hasn't already done so, it could gradually also replace vehicles in it's gas powered fleet with EV's.

Going forward, the City should stay informed about the efforts of the SBCCOG in expanding the EVSE network in the sub-region to hear about new funding opportunities, and to know the location (and frequency) of new EVSE facilities. The City could pay for public EVSE through grant programs, but the City would first need to know about grants as they come up, and have the resources to apply for the grants.

Hawthorne can, in turn, provide information to employers and citizens on costs and benefits of EVSE. It can encourage property owners to install EVSE by having a qualified electrician available to verify the building's panel size, age, and the distance between the panel and where vehicles are parked. It might prove to be feasible for only large, and new, multi-unit dwellings and commercial developments to have chargers, or even just the wiring for chargers. In other jurisdictions, current zoning codes for new construction require one parking space with EVSE equipment per the first 25 parking places. The City should make the permit process simple and free of charge, ideally (in the future) using Countywide permitting forms. The City could have a qualified electrician available for installation inspections and to verify the building's panel size, age, and distance between the panel and where vehicles are parked.

C

OVERLAY ZONE


PRESTIGE VILLAGE S P
PRIMAVERA VILLAS S P
UOS
C-1(MU)
C-2
C-3
M-1
M-2
R-1
R-2
R-3
R-4

C

OVERLAY ZONE

INTRODUCTION

There are many ways to expand, improve, and design better active transportation and NEV facilities in Hawthorne. Building off the existing network of sidewalks, bike paths, and trails, the best course of action is to strategically build active transportation infrastructure in order to close existing gaps, connect existing facilities to one another, and link activity centers within and outside of the City. Sidewalks currently only serve pedestrians and even then have significant impediments to their use as documented in the Crenshaw Station Active Transportation Plan Existing Conditions Report (Appendix II). Choices available to cyclists include traveling on the already constrained sidewalks, or on streets with little infrastructure besides signage where they do not feel comfortable. Upgrading sidewalks to multi-use paths where the right-of-way is available and during the design of future road retrofitting and beautification projects would provide for future growth in bicycle and pedestrian use.

General Plan policy that has envisioned the City's arterial roadways as cut-throughs as opposed to local circulators has created an automobile dominated right-of-way over the past few decades. Streets are a means to move as many automobiles as possible as opposed to comfortably moving people. The City's public right-of-ways are its greatest open space assets, and should be treated as such. Providing transportation options for all modes, "complete streets", should be the overriding policy as the City rebuilds and retrofits its roadways. This concept of complete streets marks a critical distinction for the future of Hawthorne.

Multi-use paths (at least 10 feet wide sidewalks) are the safest and best mode of travel as they accommodate users of all abilities and can be shared by NEVs when protected from full-speed vehicles. With the average speed limit in Hawthorne at 45 miles per hour, all riders, except perhaps for expert road bicyclists, do not feel comfortable being in the same roadway as automobiles and trucks. Due to this concern, all existing bike lanes should be upgraded, and all new bike lanes should be buffered from automobile traffic. Improving the areas where automobiles interface bicyclists and pedestrians is critical to the future expansion and use of the active transportation system. Interventions like raised and/or patterned crosswalks, bicycle boxes, and other markings raise awareness of each mode of travel at these critical junctions.

Another critical and often overlooked best practice is signage and wayfinding designed specifically for pedestrians, bicyclists, and NEV users. A system of signs and pavement markings will help guide users along preferred routes to activity centers across the City and connect into adjacent active transportation systems. They not only provide directional, destination and distance information, but can also signal to drivers that they need a heightened awareness to the presence of active transportation users.

FACILITY TYPOLOGIES

Below is a list of facility definitions for several variations of roadway configurations.

1. Sidewalk: Sidewalks are intended for pedestrian circulation only. Sidewalks should be on both sides of the street where possible.

2. Pedestrian paths: Paved pathways or otherwise designated pedestrian zones that link sidewalks in the public-right-of-way to the front entrances of buildings.

3. Multi-use path: An expanded 10-foot sidewalk that allows for both pedestrian and bicycle traffic going both directions. Multi-use paths should be on both sides of the street where possible.

4. Shared Roadways: Shared roadways are designated by signage and pavement markings (i.e., "sharrows") to inform automobile drivers to "share the road". Bicyclists are expected to act like vehicles taking up an entire lane, signaling, and obeying all other traffic laws.

5. Bicycle Lane: While several design variations exist, most typically, bicycle lanes are between either the curb or parked car lane and the first lane of automobile traffic. Bicycle lanes are parallel to each lane of travel.

6. Buffered Bicycle Lane: Buffered bicycle lanes are typically 4 feet wide with a one to two foot buffering, and are designated by markings on the street and signage. Most typically buffered bicycle lanes are between either the curb or parked car lane and the first lane of automobile traffic with the buffering occurring on the side of moving traffic. Buffered bicycle lanes run parallel to each lane of travel.

7. Cycle Track: The most advanced form of bicycle infrastructure, a cycle track is a grade separated two-way bicycle path, generally 10 feet wide. Unlike a multi-use path, a cycle track is designed for bicycles only (no pedestrians), and it is typically at a grade between a sidewalk and the roadway. NEVs could share cycle-track infrastructure.

8. Trail: Similar to multi-use paths, trails are a minimum 10 feet wide, and a bi-directional route for both pedestrians and bicyclists. The clear distinction is that all trails are outside the typical road right-of-way, and exist mostly in open spaces or other utility easements (i.e., Dominguez channel). NEVs could share trail infrastructure.

9. Pedestrian furniture: Seating provided for pedestrians on sidewalks and multi-use paths, which should be located in such a way that it does not obstruct safe pedestrian travel.

RECOMMENDATIONS

Expanding active transportation options in the City of Hawthorne has a huge potential to change the way people move around their community. Some 75% of work trips in Hawthorne are in a single occupancy automobile (2013 American Community Survey (5 year estimate) Table B08301 Means of Transportation to Work). Improving the active transportation system and making people feel more comfortable when they walk and bike can change people's travel habits. While this plan creates a foundation for a conversation about mobility, accessibility, and expanded transportation options in Hawthrone focused around the Crenshaw Station area, it is not a substitute for a more in-depth study of active transportation citywide. Many of Hawthrone's peer cities and neighbors have begun developing and implementing bicycle master plans, pedestrian plans, and/or active transportation plans to specifically develop an implementation strategy. Moving forward, the City should consider updating its own bicycle master plan, or a more comprehensive active transportation plan that focuses on bicycles, pedestrians, and NEV users, as well as the first and last mile of travel.

The following recommendations seek to address the critical needs of the City to make active transportation a viable alternative. They seek to leverage existing facilities to expand the network, transform sidewalks to multi-use paths (10 foot sidewalks for bikes and pedestrians), and plan for multi-use paths during future roadway projects. Any on-street bike facility should occur on a street with a minimum threshold of 3,000 vehicles per day. After that threshold, it is up to future analysis to determine the facility type be it bike lanes, protected bike lanes, a cycle track, and/or multi-use path. Based on our analysis, these on-street bike facilities should at the very least be buffered to match neighboring jurisdictions and best practices, and sharrows should only be used on residential streets.

ACTIVE TRANSPORTATION RECOMMENDATIONS:

To ensure the successful implementation of a balanced transportation network, the following policies encourage the development of an integrated transportation network with bicycle, pedestrian, and NEV facilities throughout Hawthorne:

1. All streets should be designed as complete streets, balancing the needs, safety, and use of the public right-of-way for all users.

2. Where no active transportation infrastructure is currently provided, the expansion of multi-use paths (10 feet wide) should take priority over all other facility types where appropriate to improve bicycle and pedestrian safety.

3. Where bike lanes are provided or planned, preference should be given to buffered bicycle lanes when appropriate to improve rider comfort. If appropriate, road lane widths should be reduced to make room for the bicycle facilities.

4. Intersection improvements should be made for all active transportation facilities through raised crosswalks, painted bicycle lanes, median refuges, and other markings (i.e. bike boxes) and signage to ensure automobiles yield for pedestrians.

5. Gaps in the active transportation network along priority corridors, and to connect existing facilities, should be closed in order to improve the user experience.

6. The use of sharrows should be minimized and when provided should be accompanied by appropriate on-road markings for only short distances and within residential neighborhoods as a connection for other facilities. Sharrows are only appropriate for streets with posted speed limits of 35 mph or less.

7. An Implementation Committee should be created by the Hawthorne City Council with the power to advise and provide guidance for the comprehensive development of this active transportation strategy and network in order to achieve a balance transportation network.

8. The City of Hawthorne should develop a special overlay district in and around the Dominguez Channel to promote trail-oriented development.

9. The City of Hawthorne should take the lead to advocate and build consensus around the development of the Dominguez Channel greenway project.

GENERAL PLAN UPDATE/AMENDMENT

The City of Hawthorne's General Plan is largely out of date. Its many Elements and component parts have been updated independently, but have not seen a comprehensive review since the 1980s. The City should consider a comprehensive update to its General Plan in order to determine and realign the entire community around a common vision for the future. Since the overall vision of the City is now nearly 30 years old, it risks being obsolete, inconsistent, and irrelevant to the development of a more active, walkable community as envisioned in this planning process. Additionally, an update to the City's General Plan creates an opportunity to redefine the character of each commercial corridor, and the design of every street typology to be more inclusive of active transportation and electric vehicles.

Upon a review of the City's General Plan, the following is a list of updates and additions to existing policy organized by Element:

1. Circulation Element

    a. New 1.1: The City shall design all streets as complete streets, balancing the needs, safety, and use of the public right-of-way for all users of all abilities.

    b. New 1.2: The City shall identify bicycle corridors within City limits and adjacent municipalities in order to integrate into the regional bikeway plan and connect residents to activity centers.

    c. New 1.3: The City shall build local and regional consensus and support for the advancement of the Dominguez Channel Greenway as a new active transportation corridor and connector from Hawthorne to the Port of Los Angeles.

    d. New. 1.4: The City shall support the retrofitting of existing arterials to be safe, accessible, and comfortable transportation corridors to meet the needs of all modes of transportation, prioritizing resurfaced or rebuild streets for the first retrofits.

2. Land Use Element

    a. New 1.1: The City shall support the development and implementation of a mixed-use, commercial, residential, and light industrial corridor along the Dominguez Channel Greenway.

    b. New 1.2: The City shall support the revitalization of existing commercial corridors to be mixed-use residential and commercial corridors that support and contribute to the use of the City's active transportation system.

    c. New 1.3: The City shall develop a transit-oriented development policy and plan in order to develop dense, diverse, connected, and well-designed developments within ½ mile of the Crenshaw, Hawthorne/Lennox, El Segundo, Douglas, and Redondo Beach Metro Green Line stations.

    d. Delete Existing 1.1: The Century Freeway (I-105) and San Diego (I-405) Corridors shall be planned for freeway-related commercial uses where appropriate.

    e. Update 2.8: The residential character of the City shall be single-family detached housing along residential collector streets, transitioning to low-density multi-family lots, and mixed-use commercial corridors.

ZONING ORDINANCE UPDATE

While the City of Hawthorne's Zoning Ordinance was recently updated in July 2014, there is a need to strategically address, incentivize and regulate the provision of active transportation and NEV/EV facilities and amenities in new development. The City should be encouraging the provision of said amenities to make it easier and more comfortable to ride a bike, walk, or use NEV/EVs throughout the City.

As such, there are several best practices that should be integrated into every zoning category. The zoning ordinance should be updated to include:

1. A provision for shared automobile parking and parking maximums to disincentivize the use of the automobile and create regulatory room for the provision of other active transportation amenities.
2. The provision of bicycle amenities in various intensity depending on the zone and accompanying land use density, including but not limited bicycle parking, bicycle lockers, quasi-public showers, and bicycle repair shops.
3. The orientation of buildings towards the street and the consolidation of access points.
4. Requirements for EVSE.

DRAFT ZONING LANGUAGE

The following are proposed draft provisions that are applicable throughout the City of Hawthorne and are distinct from the Trail-Oriented Development zoning language presented herein. Provisions identified as alternative represent a less ambitious approach, but may be more palatable to adopt as an interim step.

Bicycle Parking Purpose: Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for several hours, a secure weather-protected place to park bicycles. The intent of these standards is to allow bicycle parking to be within a reasonable distance in order to encourage bicycle use.

1. Bicycle Parking Facilities: Bicycle parking shall be provided in accordance with the following guidelines. All projects submitted for site plan approval shall identify bicycle racks, lockers, and other amenities in accordance with these guidelines.
2. Bicycle Parking shall be defined as bicycle racks intended for short-term parking and/or bicycle lockers intended for long-term parking. Other potential facilities and amenities include a changing room, showers, bike tuning station, and/or hydration station.
   All bicycle parking devices shall be provided in accordance with guidelines published by the Association of Pedestrian and Bicycle Professionals (APBP).
3. The following minimum amounts of bicycle parking shall be provided:
   a. Residential (Multi – Family): 1 bicycle parking space per dwelling unit
   b. Commercial Uses: bicycle parking spaces = 10% of required auto parking
   c. Institutional (Schools): 1 bicycle parking space for every 10 students and staff
   d. Government: 1 bicycle parking space per every 10 employees
   e. Industrial Uses: 1 bicycle parking space per 10 employees.

Bicycle Parking Facilities (Alternate): All new development, except single family dwellings, shall provide at a minimum a five space covered bicycle parking rack within 50 feet of an entrance to the building. In any development required to provide six or more parking spaces, bicycle parking shall be provided. Bicycle parking shall be bike rack or locker-type parking facilities unless otherwise specified herein:

1. Off-street parking areas shall contain at least one (1) bicycle parking space for every 12 spaces required for motor vehicles except as follows:
   a. The Director may reduce bike rack parking facilities for patrons when it is demonstrated that bicycle activity will not occur at that location;
   b. The Director may require additional spaces when it is determined that the use or its location will generate a high volume of bicycle activity. Such a determination will include but not be limited to the following uses:
      i. Park/playfield,
      ii. Library/museum/arboretum,

iii. Elementary/secondary school,

iv. Sports club, or

v. Retail business (when located along a developed bicycle trail or designated bicycle route).

2. Bicycle facilities for patrons shall be located within 100 feet of the building entrance and shall be designed to allow either a bicycle frame or wheels to be locked to a structure attached to the pavement.

3. All bicycle parking and storage shall be located in safe, visible areas that do not impede pedestrian or vehicle traffic flow, and shall be well lit for nighttime use.

4. When more than 10 people are employed on site, enclosed locker type parking facilities for employees shall be provided. The Director shall allocate the required number of parking spaces between bike rack parking and enclosed locker type parking facilities.

5. One indoor bicycle storage space shall be provided for every two dwelling units in townhome and apartment residential uses, unless individual garages are provided for every unit. The Director may reduce the number of bike rack parking spaces if indoor storage facilities are available to all residents.

Model Bicycle Lockers and Shower Provision: Worksites are required to provide lockers and showers for any new building, addition or change in use in compliance with the following:

Commercial, institutional, and government facilities.

Floor Area	# of Lockers	# of Showers
0-10,000 sq. ft.	10	0
10-50,000 sq. ft.	20	2
>50,000 sq. ft.	40	4

Alternate fomula based on the number of employees.

Floor Area	# of Lockers	# of Showers
0-10,000 sq. ft.	10	0
10-50,000 sq. ft.	20	2
>50,000 sq. ft.	40	4

Pedestrian On-Site Circulation: These standards are intended to provide safe and efficient circulation for pedestrians within all developments and within the site and neighborhood context.

1. Applicability of Standards. As more specifically provided in this section, the standards in this section apply to any development that creates a new building entrance, but not to a minor building alteration or change in use.

   a. On-site pedestrian paths shall be constructed in the following cases for institutional, office, commercial and industrial development:

      i. Between all new building entrances and all streets adjacent to the development site. On-site pedestrian paths shall be designed and constructed to provide a direct connection to existing public right-of-ways and public accessways.

   b. All on-site pedestrian paths provided for the purposes of complying with this zoning code shall conform with the following standards:

      i. On-site pedestrian paths shall provide direct access from public ways to building entrances

      ii. On-site pedestrian paths shall be constructed of concrete or a comparable hard surface material

      iii. On-site pedestrian paths shall be raised to the standard curb height when adjacent to public and private streets and driveways

      iv. Where necessary for traffic circulation, on-site pedestrian paths may be intersected by driving aisles as long as the crossing is marked with striping or constructed with a contrasting paving material to indicate a pedestrian crossing area

Bicycle Lanes: Wide outside lanes (typically 15 feet) shall be incorporated into the design of all new and/or improved arterial streets. Marked bicycle lanes or unmarked wide outside lanes shall be incorporated in the design of all minor collectors. On local streets low traffic speeds and volumes allow bicyclists and motorists to safely share the road. Sidewalks are not acceptable as substitutes for bike lanes.

Crosswalks: Crosswalks shall be distinguished from driving surfaces to enhance pedestrian safety by using either different pavement materials, pavement color or pavement textures in conjunction with signage.

Pedestrian Furniture (Exterior): All new development shall provide exterior pedestrian furniture in appropriate locations at a minimum rate of one (1) seat for every 10,000 square feet of gross floor area.

Pedestrian Furniture (Interior): For individual retail stores of 40,000 sq. ft. or greater, the retailer shall provide interior pedestrian furniture in appropriate locations at a minimum rate of two (2) seats for every 10,000 square feet of gross floor area. Seating in food service areas, or other areas where food or merchandise purchasing activities occur shall not count toward this requirement. A minimum of four (4) of the required seats shall be located within the store with a clear view through exit doors to a passenger pickup or dropoff area.

Pedestrian facilities maintenance: All new development eighty thousand (80,000) square feet in total gross floor area or greater shall provide central area(s) or feature(s) such as a patio/seating area, pedestrian plaza with benches, outdoor playground area, water feature, and/or other such deliberately designated areas or focal points that adequately enhance the development or community. All such areas shall be openly accessible to the public, connected to the public and private sidewalk system, designed with materials compatible with the building and remainder of the site, and shall be maintained over the life of the building project.

Level 2 or 3 Residential Electric Vehicle Charging:

1. The total load calculations shall include a load for future electrical vehicle charging. This load shall be calculated at ten kilowatts per five percent of the parking spaces provided.

2. The minimum rating of the main service panel and the ampacity of the service entrance conductors shall be based on the total calculated load and the requirements of Chapter 2 of the California Electrical Code.

3. A separate multi-meter distribution section shall be provided for electrical vehicle charging only. The minimum number of meters in this multi-meter section shall be based on five percent of the parking spaces provided. The minimum rating of this multi-meter distribution section shall be calculated at ten kilowatts per five percent of the parking spaces provided. Each meter shall have a space for a two-pole 208/240 volt circuit breaker where the space is identified as “Electric Vehicle Charging” or “Future Electric Vehicle Charging,” as applicable. This distribution panel section shall be permanently and conspicuously marked “Electric Vehicle Charging Only.”

4. If the continuous rating of Level 2 and/or Level 3 EVSE is known at the time of installation then these ratings shall be applied to the load calculations in subsection a). but in no case shall less than ten kilowatts per five percent of the parking spaces be provided.

5. Where the calculated number of parking spaces results in a fraction of one-half or greater, the calculated number shall be rounded to the next higher whole number.

Level 2 EVSE in New Development Projects:

1. Electric Vehicle Supply Equipment should be provided in new development projects required to provide at least 25 parking spaces; and

2. For remodeling and expansion of existing development projects that would result in an increase of 10% or more 50 additional parking spaces.

Requirements: All electric vehicle charging stations shall be shown on the building plans and provide the following amounts:

1. 25-49 parking spaces: 1 charging station.

2. 50-99 parking spaces: 2 charging stations, plus one for each additional 50 parking space.

Location, Design:

Signage

1. Signage shall be installed designating spaces with charging stations for electric vehicles only.

2. If the parking spaces are not being used, a written request may be made to the Director for parking spaces for general usage for a specific time period.

3. Charging stations and associated equipment or materials may not encroach on the minimum required clear areas from driveways, parking spaces, garages or maneuvering areas.

4. 4. Charging stations shall be installed adjacent to standard size parking spaces.
5. 5. Charging stations must be adjacent to a designatedparking space.

TRAIL-ORIENTED DEVELOPMENT (TROD) OVERLAY ZONE

Trail-Oriented Development is development that is served by trail, greenway, or other active transportation and NEV infrastructure and amenities and has a distinct economic advantage because of those amenities and infrastructure. Pedestrian and cyclist activity from the trail infrastructure, as well as aesthetic improvements and the presence of the amenity itself, drive higher sales and increase property values, but only if the surrounding is able to adapt to the trail infrastructure. The Trail-Oriented Development Overlay Zone is intended to help facilitate that adaptation while still allowing productive industrial uses that are so critical to the economy of the City of Hawthorne. Figure 18 shows the proposed TrOD Overlay Zone, responding to the envisioned Dominguez Channel Greenway. However, this language is crafted to be applied to any areas of the City of Hawthorne served by trail or active transportation infrastructure.

17.XX.010 Definition, Intent, and Applicability

The Trail-Oriented Development Overlay Zone is intended to be applied to those areas located adjacent or near to existing or planned trail and greenway infrastructure. For the purposes of this ordinance, trail and greenway infrastructure is defined as a multi-use path for non-motorized and NEV travel and recreation and in most cases separate from street right-of-way. This ordinance serves primarily to protect public investment in trail and greenway infrastructure by limiting incompatible uses and/or design treatments, and secondarily to maximize the benefits of this public investment by encouraging its use. Trail and greenway infrastructure provides a form of alternative transportation to residents, workers, and visitors to Hawthorne and lessens the burden on conventional infrastructure. This infrastructure also provides a natural amenity that improves environmental quality, public health, and quality of life.

The TrOD Overlay Zone shall be superimposed upon existing zoning districts. The restrictions and permissions outlined in the TrOD Overlay Zone are additions to standard zoning classifications. Standard zoning classifications are defined here as non-overlay and non-master plan districts, including H, R-1, R-2, R-3, R-4, C-1, C-2, C-3, M-1, and M-2 classifications. In the event of conflict between these standard districts and the TrOD Overlay Zone, the TRoD Overlay Zone prevails over the standard zoning classifications. The Trucking Intensive Overlay (TIO), Mixed Use Overlay (MU), Airport Master Plan (AMP), and Specific Plan (SP) standards prevail over TrOD Overlay Standards, where conflicts may exist.

17.XX.020 Uses Permitted

The following uses shall be permitted in the TrOD Overlay Zone where otherwise prohibited by standard zoning classifications:

- Multifamily residential
- Mixed use residential (as defined in 17.87.040, part B and C)

17.XX.030 Uses Prohibited

The following uses are prohibited in the TrOD Overlay Zone, where otherwise allowed by standard zoning classifications:

- Major and minor automobile repair
- Drive-thru restaurant
- Car wash

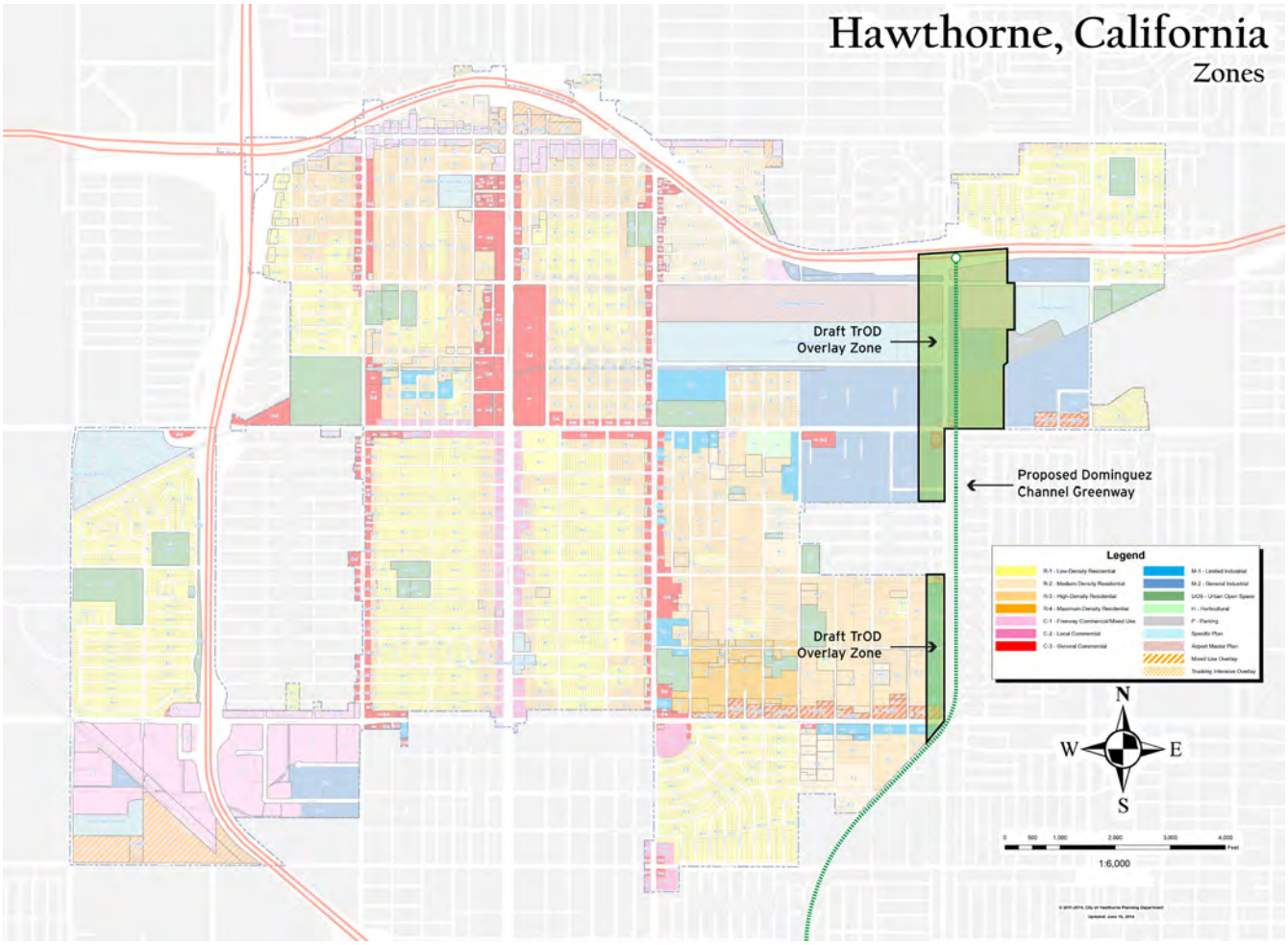
17.XX.040 Density Bonus

The maximum permitted floor area to be contained in all buildings on a lot or site may exceed the maximum permitted floor area allowed in standard zoning classifications but shall not exceed three times the area of the lot or site.

17.XX.050 Site Plan Review

A site development plan shall be submitted for all lots directly adjacent to existing trail infrastructure or planned trail right-of-way. Its approval, approval with conditions, or denial shall be recommended by the Planning Director and decided by the Planning Commission.

A. Trail Access. New development shall provide access to the trail or greenway at access points designated in the trail or greenway plan or by the Planning Director. Where applicable and at the discretion of the Planning Director, new development shall provide public access through the site to other existing public right-of-way.



TrOD Overlay Zone, Figure 18

B. Building Orientation. Buildings and major pedestrian entrances should be oriented toward the primary trail frontage. Where deemed appropriate by the Planning Director, the primary building entrance may be oriented toward the street frontage, with secondary access provided to the trail frontage. Short-term bicycle parking facilities shall be provided at the trail-side entrance.

C. Landscaping Plan. New development shall provide a landscaping plan with low-water use species described in Appendix A. While landscaping may be used as screening between the trail and greenway and building, fences are discouraged. The height and material of any fence or screening material shall be approved by the Planning Director.

D. Driveways. Vehicular access shall not cross the trail or greenway. Where possible, vehicular access points to off-street parking should be shared by multiple property owners.

17.XX.060 Parking Standards

A. Reduction in Minimum Standards. Uses within the TrOD Overlay Zone may reduce their minimum parking requirement by 25% of the parking minimums established in 17.58.030

B. Parking Maximums. Uses within the TrOD Overlay Zone may provide no more than 150% (one and one half times) the parking spaces established per the parking minimums in 17.58.030.

17.XX.070 Development Impact Fees

Trail and greenway infrastructure very clearly mitigates the impact of new development. These impacts, such as increased traffic, added noise and air pollution, increased temperatures from hard surfaces, and increased stormwater runoff from impervious surfaces, are reduced by trail and greenway infrastructure, which provides a non-motorized transportation alternative and natural amenity. The City of Hawthorne may direct a portion of development impact fees established in 17.66 for the construction and maintenance of trail and greenway infrastructure, including the Dominguez Channel Greenway.

D

IMPLEMENTATION PLAN


Los Angeles
Hawthorne
1
2
3
Torrance
Los Angeles
Carson

D

IMPLEMENTATION PLAN

INTRODUCTION

Project implementation is a critical element in realizing the desired vision for the Crenshaw Station area that has been articulated throughout this planning process. The key priorities that have been identified are intended to promote opportunities for active transportation and encourage new economic activity in the plan area. As implemented the project aims to improve the quality of life for the residents, employers, employees and visitors to Hawthorne in general and to the Crenshaw Station area in particular. This vision includes the need for new investments in the public realm in addition to actions that will need to be taken by property owners and local businesses. Effective investment would be ideally supported by a partnership between the City and the private sector as new development occurs.

Several significant funding sources are potentially available at the federal, state, regional, county, and local levels for the City of Hawthorne to implement the projects identified in this plan. This section includes a description of applicable funding programs available. Additionally, because the transformation of the Dominguez Channel is a key infrastructure improvement in the project area, a specific implementation strategy is included for that project.

PLAN RECOMMENDATIONS

This ATP includes a series of recommendations that are designed to improve the physical environment of the plan area and to create conditions that will facilitate active transportation and mobility in the plan area. The plan specifically identifies public investments and improvements to the public realm. Because the plan is focused on the transportation infrastructure and its associated public realm, the primary role for the City will be to provide mechanisms that will facilitate this investment and to coordinate with other partner agencies. Opportunities for direct public private partnerships may also exist to support specified projects that confer a direct benefit to property owners.

On December 29, 2011, the California Supreme Court upheld AB1X-26, which dissolved all of the redevelopment agencies in California, and struck down AB1X-27. By upholding ABX1-26 which abolished redevelopment agencies, and by striking down the companion legislation that would have allowed agencies to survive if they contributed money to the State, the 400 Redevelopment Agencies throughout the State of California, were forced to dissolve their operations. Communities across California are reacting to the loss of redevelopment funding and the lack of available tools to replace the lost ability to fund public improvements. The State has moved to support housing affordability programs through the Strategic Growth Council and this may grow to include support for other projects, especially in transit oriented locations, in the future. One of the stated goals of the elimination of redevelopment, was to shift growth in property tax revenues back to municipalities. Just as the school districts and counties will benefit from the “release” of incremental growth, so too will general fund accounts of cities. Of course all cities in California have multiple claims, uses and stresses on general fund accounts but, one consequence of this is that capital projects will increasingly need to compete with other municipal priorities in order to be funded. This represents a significant shift from past practices.

Due to the nature of changing economic conditions and trends, it may be necessary for the City to revisit and reprioritize the implementation steps that are recommended in this plan. The tools and funding sources described in this implementation section recognize that funding policy shifts and changing development conditions will require flexibility to accommodate new improvements in the plan area.

PUBLIC IMPROVEMENTS

This ATP identifies the following public improvements:

1. Freeway On-ramp Crosswalk
2. Crosswalk upgrades
3. Sidewalk Widening / Upgrades
4. Mid-Block Crosswalk under Bridge
5. Upgrade Stairs to Retail

6. Sidewalk Widening / Upgrades
7. Connection to Dominquez Channel
8. Upgrade of Dominguez Channel
9. Potential Bike Lanes / Routes in Project Area
10. Potential Shared Bike Lanes / NEV Routes in Project Area
11. Pass Throughs
12. Curb Extensions
13. Station Security
14. Signage and Maps at Station
15. Upgraded Bike Parking at Station
16. Station Lighting
17. Connection to Beach Cities

ECONOMIC DEVELOPMENT OBJECTIVES

This ATP will have the ability to drive additional rounds of private investment within the plan area. By funding improvements to the public realm and creating more opportunities for active transportation and improved mobility, additional private investment is likely to occur over time. New development in the plan area will add to the tax base and provide new employment opportunities.

Key economic development objectives include:

1. Maintain and enhance the station area's status as a healthy economic and employment center which encourages the location of new employment and land uses that support commercial activity.
2. Strengthen the City's economic base through retention, expansion, and attraction of new businesses.
3. Increase revenues for businesses and the City by attracting resident and regional visitor's retail spending.
4. Increase employment opportunities for Hawthorne residents.
5. Develop funding mechanisms, where appropriate and feasible, to implement public improvements and business-improvement activities.

In order to accomplish the goals included in the Crenshaw Station area, Hawthorne can no longer use tax increment financing and redevelopment authority as a funding mechanism for public improvements. Redevelopment would have been the main tool used in the past to fund the improvements specified in the plan. However with redevelopment unavailable, Hawthorne, like other California communities, will need to use an array or available public financing tools that can raise revenues from new private investments as they are developed.

FUNDING MECHANISMS

The following describes the various funding mechanisms that are available at the Federal, State, and local level that may be pursued by the City and/or partner agencies to implement the planned public improvements as well as to support some annual operations and maintenance costs. The discussion below includes potential funding sources for improvement described in the plan. The majority of public funds for active transportation projects are derived through a core group of federal and state programs. Federal funds from the Surface Transportation Program (STP), Transportation Enhancements (TE), and Congestion Mitigation Air Quality (CMAQ) programs are allocated to the County and distributed accordingly.

FEDERAL FUNDING SOURCES

MAP-21

This program has discretionary funds that are available through a grant process administered by the federal government through 2012 federal legislation. Federal and State statutes require the preparation of a Transportation Improvement Program (TIP) for Los Angeles County. The TIP process funding is allocated to all surface transportation modes based on requirements specified in the MAP-21 program and state requirements mandated by the California Transportation Commission.

The MAP-21 program places high priority on enhancing connections between highways, transit and pedestrian movement, and integrating these systems in the community. The program also provides financial support for surface transportation projects that enhance mobility or encourage

quality of life in and around transportation facilities. These projects include pedestrian-and bicycle-oriented projects, historic highway programs, landscaping and other scenic beautification.

The Federal Transportation Admiration (FTA) administers this financial assistance according to authorization, under MAP-21 which authorizes specific dollar amounts for each program. Each year Congress provides an annual appropriation which funds the programs specified in the act.

TRANSPORTATION ENHANCEMENTS

Under the Transportation Enhancements (TE) program, California receives approximately $60 million per year from the federal government to fund projects and activities that enhance the surface transportation system. The program funds projects under 12 eligible categories, including the provision of bicycling lanes, trails, bicycle parking, and other bicycling facilities; landscaping, and streetscaping projects. In California, 75 percent of TE funding is distributed by the regional transportation planning agencies. For the Los Angeles County, the Metropolitan Transportation Authority (Metro) manages the disbursement of funds. The remaining 25 percent of the state budget is allocated by Caltrans at the district level.

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

As a participant in the CBDG program, Hawthorne receives funding from the US Department of Housing and Urban Development (HUD) to support community investment. Projects in the Crenshaw Station plan area would be eligible to receive funds through CDBG. The key uses for this funding include the acquisition, rehabilitation, construction of and improvements to public facilities. CBDG funds are mainly used for the provision of affordable housing and related services and general economic development activities. The current consolidated action plan for the CBDG program in Hawthorne calls for infrastructure improvements, public services, youth services, and tenant/landlord counseling were high priority needs as high priority non-housing needs. Some of the uses identified in this plan could be eligible for non-housing CBDG funds. The current CBDG consolidated plan allows for investment in infrastructure as a non-housing need, pedestrian improvements such as sidewalks, and street lighting are identified as well as ADA compliant upgrades to public facilities.

LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund (LWCF) provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources

RECREATIONAL TRAILS PROGRAM

The Recreational Trails Program (RTP) provides funds to states to develop and maintain recreational trails and trail related facilities for both non-motorized and motorized recreational trail uses. The RTP is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). The RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from non-highway recreational fuel use. RTP funds are distributed to each state by legislative formula: half of the funds are distributed equally among all states, and half are distributed in proportion to the estimated amount of non-highway recreational fuel use in each State. RTP funds may be used for maintenance and restoration of existing trails, purchase and lease of equipment to construct or maintain trails, administrative costs associated with the program, or operation of educational programs to promote safety and environmental protection related to trails.

STATE FUNDING SOURCES

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

The Highway Safety Improvement Program (HSIP) is a core federal-aid program that aims to reduce traffic fatalities and serious injuries on public roads. Caltrans administers the program in California HSIP funds can be used for projects such as bike lane or sidewalk projects on local roadways, improvements to Class I multi-use paths, or for traffic calming measures. Applications that identify a history of incidents and demonstrate their project's improvement to safety are most competitive for funding.

SOUTH COAST AQMD

SCAQMD has a number of programs that provide monetary incentives for implementing cleaner technologies. These programs are generally rooted in the initiatives and policies adopted by the SCAQMD Governing Board or in state and

federal programs designed to spread the use of cleaner technologies that reduce air pollution. Incentive programs cover the gamut from large fleet replacement projects to the replacement of wood-burning fireplaces using gas-log inserts to new transportation systems that help reduce mobile emissions.

CALIFORNIA INFRASTRUCTURE AND ECONOMIC DEVELOPMENT BANK--- INFRASTRUCTURE REVOLVING FUND PROGRAM

This loan program provides low-cost financing to public agencies for a variety of infrastructure programs, including streets, bridges, drainage, water supply, flood control, environmental mitigation measures, sewage collection and treatment, solid waste collection and disposal, water treatment and distribution, educational facilities, and parks and recreational facilities. Funding assistance ranges from $250,000 to $10,000,000. There must be a dedicated source for debt service of the loan and the term of the loan can be as long as 20 years.

GASOLINE TAXES/OPERATIONS AND MAINTENANCE

The City receives state gasoline taxes that may be used for operating and maintenance expenditures related to streets and roads. While these funds are limited, the City's annual budgeting process may designate a portion of these revenues for specific facilities within the Crenshaw Station Area plan area subject to annual budgeting priorities.

BICYCLE TRANSPORTATION ACCOUNT (BTA)

The BTA is a Caltrans-administered program that provides funding to cities and counties for projects that improve the safety and convenience of bicycling commuting. Eligible projects include secure bicycle parking; bicycle-carrying facilities on transit vehicles; installation of traffic-control devices that facilitate bicycling; planning, design, construction and maintenance of bikeways that serve major transportation corridors; and elimination of hazards to bicycling commuters. To be eligible for BTA funds, a city or county must prepare and adopt a bicycling transportation plan that meets the requirements outlined in the California Streets and Highways Code.

OTS GRANT OPPORTUNITIES

The California Office of Traffic Safety (OTS) provides grants for safety programs and equipment. Bicycle and Pedestrian Safety is a specifically identified funding priority. This category of grants includes enforcement and education programs, which encompass a wide range of activities, including bicycle helmet distribution, design and printing of billboards, bus posters and other public information materials.

COUNTY FUNDING SOURCES

COUNTY PUBLIC HEALTH, POLICIES FOR LIVABLE, ACTIVE COMMUNITIES AND ENVIRONMENTS (PLACE)

The funding that is available through the Los Angeles County Department of Public Health focuses on policy and program development to support active transportation Key strategies PLACE uses for infusing public health into land-use and transportation policies and plans include:

- Provide active living policy grants to cities and non-profits
- Provide input on city and county policies and plans
- Provide varying degrees of technical assistance to help cities pursue policy change

In the context of this plan, PLACE funding may be applied in the future for planning extensions of the active transportation approach to connections with neighboring cities and regional projects

METRO CALL FOR PROJECTS

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). The Call for Projects program is a competitive process that distributes discretionally capital transportation funds to regionally significant projects. Metro accepts applications for this program every other year. Funding levels for each mode is established by the Metro Long Range Transportation Plan.

CITY OF HAWTHORNE FUNDING SOURCES

CITY GENERAL FUND (CIP)

This is the most accessible and flexible funding source available to local agencies. Local revenues are collected in the City General Fund from property tax, sales tax and

transient occupancy tax and are expended on projects and programs as defined in the City's adopted budget. Projects and programs that may be funded by this source of money generally include those items which cannot be paid for by other funding sources and which provide a direct community-wide benefit for the residences or businesses in the city. This funding source is the City's primary operating capital and is very limited and highly competitive. Projects involving purely local improvements such as crosswalk striping and lane demarcation on local streets which are an important part of this plan, will need to look to these operating funds from the city. Other capital projects may need to use CIP funding as part of a larger array of sources.

DEVELOPMENT IMPACT FEES

While most of the plan area is built out, some of the planned improvements could be necessary because of the pressures from either new development or recent growth in the surrounding area. Therefore, it could be possible to attach an appropriate portion of the financial responsibility of these improvements to new development. A mechanism commonly utilized for funding various roadway improvements is development impact fees. Impact fees collected through this mechanism are based on the proportion of impact relative to the improvements necessary, providing a clear connection or "nexus" between development and a particular improvement. Since most of the project area is built out, development impact fees will not likely be one of the primary mechanisms for paying for improvements but could be considered as part comprehensive plans.

ASSESSMENT DISTRICTS

Assessment districts are most commonly established to finance the construction of public capital improvements and are authorized to operate and maintain costs of certain public facilities. Assessment districts are formed in two different ways: (1) Property owners petition the appropriate public agency to form a district and provide a needed public improvement, or (2) A public agency foresees the need for an improvement and approaches the affected property owners with an assessment district proposal.

COMMUNITY FACILITIES DISTRICTS

Community Facilities Districts, also known as Mello-Roos districts or CFDs, can fund the planning, design, purchase, construction, expansion, improvement, or rehabilitation of capital facilities, defined as having a useful life of five or more years. CFDs can also fund the provision of a variety of public services, such as public safety, parks and recreation, schools, library and cultural facilities, landscape maintenance and lighting, flood control, and site remediation.

CFDs levy a special tax instead of a special assessment. This tax may be applied to the value of each property, rather than assessed based on the level of special benefit received. However, because it is a special tax on real property, a two-thirds majority vote is required to approve the levy of the special tax. If the district has twelve or more registered voters, the election polls voters with each having an equal vote. If there are less than twelve registered voters, the election polls property owners with each vote weighted by acreage owned within the district boundary. Properties within the district need not necessarily be contiguous. Finally, establishing a CFD requires only a general description of the facilities, services, and costs associated with the district, not the detailed engineer's report required for assessment districts described below.

CFDs may fund the construction of the following types of facilities:

- Local park, recreation, parkway, and open-space facilities.
- Elementary and secondary school sites and structures.
- Libraries.
- Childcare facilities.
- Transmission/distribution facilities for water, natural gas, telephone, electrical energy, and cable television.
- Flood and storm protection, and storm drainage facilities.
- Other governmental facilities the legislative body creating the district is authorized by law to contribute revenue toward, construct, own, or operate.
- Work to bring public or private buildings or real property into compliance with seismic safety standards and regulations.

CFDs may also fund the following types of services:

- Police protection services.
- Fire protection and suppression services, and ambulance and paramedic services.

- Recreation program services, library services, maintenance services for elementary and secondary school sites and structures, and the operation and maintenance of museums and cultural facilities.
- Maintenance of parks, parkways, and open space.
- Flood and storm protection services including, but not limited to, the operation and maintenance of storm drainage systems and sandstorm protection systems.
- Removal or remedial action services for the cleanup of any hazardous substance released or threatened to be released into the environment.

The City may choose to establish a CFD for a portion of the plan area and define the district area to include less than 12 registered voters in order to simplify the process of establishing the district. The City could also choose to establish a CFD for all or a portion of the plan area and define the district area to include more than twelve registered voters, if the City believes that resident registered voters might be more likely to approve the CFD than property owners. The City could also establish multiple CFDs across the plan area to accommodate phased growth.

A new approach that is beginning to be used in established urban areas involves creating a small district tied to specific projects. As additional properties are developed, the CFD boundaries can be amended to incorporate those properties. Because such a CFD would only contain property owners who wish to join, it avoids the need for a larger election with many property owners and the potential for rejection of the creation of the District. This approach can work for site specific improvements to the public realm.

PROPERTY AND BUSINESS IMPROVEMENT DISTRICTS

A Property and Business Improvement District (PBID) is an established benefit assessment district that can be formed based on the provisions of AB 3754. PBID districts are geographically defined business areas in which private property owners join together to gain legal standing and generate sufficient revenue to realize common goals for improving the service and facilities of an area. All types of businesses and some residential zones can be included within this district, including commercial, professional office, finance institutions and high-density residential. The PBID can perform a number of activities designed to supplement existing City services, such as marketing district businesses and activities, promotion of public events, street and sidewalk cleaning, graffiti removal, promotion of tourism, sanitation, and retail retention and recruitment. Physical improvements such as benches, kiosks, pedestrian shelters, signs, lighting, restrooms, and trash receptacles, planting area, fountains and plazas are often also funded by a PBID.

Within the plan area, the following activities would be suited for PBID funding:

- Marketing activities (including planning, media/banner development, special events organization and ongoing advertising);
- Landscape and streetscape improvements
- Parking improvements.

There are several legal forms of PBIDs authorized by California law. The most common are districts formed under the Parking and Business Improvement Act of 1989. Business Improvement Areas (BIAs) formed under the 1989 law impose a fee on the business licenses of the businesses (rather than the property owners) operating in the area. The collected funds are used to pay for the improvements and activities specified in the formation documents.

A similar assessment procedure was authorized by the Property and Business Improvement District (PBID) Law of 1994. The distinction is that the PBID makes the assessment on the real property and not on the business itself.

Generally speaking, the BID format works well for marketing and other programmatic activities that serve to directly benefit area businesses (i.e., tenants), whereas a PBID may be more appropriate for permanent physical improvements that stand to improve property values in the area.

LANDSCAPE AND LIGHTING DISTRICT

The City of Hawthorne can establish landscape and lighting districts to maintain landscape and lighting in sub-areas of the city, the maintenance cost being paid for by assessments on property owners within each district. These districts are based on land use type and are used to supplement maintenance costs. The Landscaping and Lighting Act of 1972 (Streets and Highway Code Section 22500) enables assessments to be imposed in order to finance:

- Acquisition of land for parks, recreation and open space.

- Installation or construction of planting and landscaping, street lighting facilities, ornamental structures, and park and recreational improvements (including playground equipment, restrooms and lighting).
- Maintenance and servicing any of the above.

MAINTENANCE ASSESSMENT DISTRICT

Maintenance Assessment Districts (MADs) are authorized in the Landscape and Lighting Act of 1972. MADs usually fund:

- Maintenance services, construction and installation.
- Open space and small parks.
- Street medians and street lighting.
- Security.
- Flood control and drainage.

Maintenance Assessment Districts can be combined with Landscape Lighting Districts to form a LLMD. This is often undertaken in urban areas where a combined streetscape program is undertaken.

ENHANCED INFRASTRUCTURE FINANCING DISTRICT

An Enhanced Infrastructure Financing District (EIFD) is a relatively new mechanism allows the use of tax increment funds to help pay for infrastructure. This can increase the funds available for infrastructure without additional burden on the property but at the expense of the general fund. It may have limited potential, as each agency sharing in the property tax revenues may veto the use of its portion of the tax increment. Even motivated agencies would be taking what would otherwise be general fund revenues and spending them on infrastructure.

Enhanced Infrastructure Financing District (EIFD). One or more of these districts may be created within a city and can be used to finance the construction or rehabilitation of a wide variety of public infrastructure and private facilities. An EIFD may fund these facilities and development with the property tax increment of those taxing agencies (cities, counties, special districts, but not schools) that consent. EIFD's are also authorized to combine tax increment funding with other permitted funding sources including:

- Property tax revenue distributed to a city, county or special district after payment of a successor agency's debts.
- Revenues dedicated by a city or county to the EIFD from property tax corresponding to the increase in assessed valuation of taxable property attributed to those property tax shares received by the City pursuant to in lieu of Vehicle License Fee (VLF). Facilities financed by an EIFD may include but are not limited to:

Public Infrastructure and Facilities:

- Highways, interchanges, ramps and bridges, arterial streets, parking and transit facilities.
- Sewage treatment, water reclamation plants and interceptor pipes.
- Facilities for the transfer and disposal of solid waste, including transfer stations and vehicles.
- Facilities to collect and treat water for urban uses.
- Flood control levees and dams, retention basins, and drainage canals.
- Parks, recreational facilities, open space and libraries.
- Brownfield restoration and other environmental mitigation.
- Projects on a closed military base consistent with approved base reuse plans.

Private Facilities:

- Acquisition, construction and repair of industrial structures for private use.
- Transit priority projects as defined under Section 21155 of the Public Resources Code.
- Projects which implement a sustainable communities strategy.
- Mixed-income housing developments (An EIFD may fund only those units dedicated to low or moderate income housing, and child care, after-school care and social services integrally linked to the tenant of the restricted.
- Reimbursement of a developer located within the boundaries of a district for permit and other expenses

incurred when constructing affordable housing pursuant to the Transit Priority Project Program.

- Facilities constructed to house providers of consumer goods and services
- Child care facilities.

PROPERTY OWNER FUNDING

DEVELOPMENT AGREEMENTS

The City may require a development agreement for development projects proposed within the project area. A development agreement can stipulate how the proposed project will pay its fair share of the capital improvements called for in the plan and ensure that the proposed project will be served by adequate public infrastructure and services.

In some cases, the development of one or more parcels in the Station area may require the construction of off-site infrastructure improvements, the size of which may be larger than what is needed to serve just the proposed development. In such cases the property owner or developer may agree, through a development agreement, to pay for the full cost of the off-site infrastructure improvement and to be repaid as additional development occurs. The development agreement would stipulate the terms of such repayment.

DOMINGUEZ CHANNEL CATALYTIC PROJECT IMPLEMENTATION STRATEGY

The Los Angeles basin has been going through an urban renaissance of sorts along its once natural waterways. Along with the massive Los Angeles River Revitalization Master Plan and the San Gabriel River greenway, there are thousands of other small-scale projects that are working to reduce impervious surfaces. Every time a municipality, non-profit, or private property owner improves water retention and filtration, they are working to improve water quality, and therefore the network of streams and rivers that ultimately drain the region.

In order to move the naturalization of the Dominquez Channel forward there must be a strategic vision to lead the process to implementation. As a part of Los Angeles County's stormwater management system, the channel's transformation must become functional not just during storm events, but year round and to the benefit of local communities. More than simply expanding bicycle and infrastructure facilities and amenities, the Dominguez Greenway seeks to create a unique sense of place that draws potential users to it and incentivizes adjacent development to support it. Below is a 5-step framework for a strategy to leverage regional support for the renaissance of the County's waterways into functional open spaces:

1. Build Community Consensus

Using the Crenshaw Station Active Transportation Plan process as a platform, the Dominguez Greenway concept has already begun to reach local stakeholders and advocacy groups, including From Lot to Spot, the City of Hawthorne, Southern California Association of Governments (SCAG), Caltrans, and others. The City should leverage this momentum throughout the remainder of the planning process to continue spreading awareness and engaging more residents, stakeholders, and partner agencies to participate in an open dialogue about the idea. An accompanying public outreach strategy should be developed to educate the public on the opportunities and benefits of transforming the channel into a greenway. Specifically, the greenways impacts on public health and economic development.

2. Develop Implementation Committee

When a community has true consensus for a project, there is a strong sense of ownership in its successful implementation. The City should identify and appoint a Dominguez Greenway Implementation Committee to advocate for and lead the project to fruition. This Committee would champion on-going outreach, education, and advocacy efforts, grow the membership of the Committee as the scope of the project expands along the channel across the South Bay, and identify benefits, obstacles, next steps, and funding sources for implementation. The Committee should consist of residents, businesses, City staff, and other relevant stakeholders, and periodically report back to the Hawthorne City Council on progress and ultimately a final recommendation.

3. Grow Partner Agencies

While the project should stay focused on a Phase 1 approach at the source of the Dominguez Channel, the Committee must begin to build partnerships along the entire course of the channel in order to build regional support for the project. The Committee must continue to promote the idea to local neighborhoods adjacent to the proposed greenway, the City of Hawthorne, other South Bay Cities, the South Bay Council

of Governments (COG), and finally to SCAG, while it is still in its infancy to build and sustain momentum for the project.

Of particular interest is the agency responsible for the operation and maintenance of the existing channel for drainage, the Los Angeles County Stormwater Management District. The municipalities of Torrance, Gardena, Los Angeles, and Carson, as jurisdictions adjacent to the channel, should be engaged in a regional analysis, planning and eventually implementation process. While only these cities are directly adjacent to the Dominguez Greenway, local and regional active transportation connections must be coordinated with and integrated into this newly reimagined regional transportation corridor.

4. Introduce Idea to Region

Once a grassroots campaign within the City (Phase 1) has begun, and the City and its Implementation Committee have begun to recruit new partner agencies and other Cities to join in the efforts to realize a revitalized Dominguez Greenway, the City should develop a promotional presentation of the concept. Beginning with the South Bay COG and SCAG, a speaker's bureau (collection of trained advocates tasked with making presentations on the project) for the project should be created and trained so that multiple presentations can occur at once. The presentation should focus on the benefits, challenges, and vision of the Dominguez Greenway, as well as next steps and a call for action. With the right amount of community support, thoughtful analysis, and media attention, the Dominguez Greenway can capture the imagination of the entire region, and thereby be one step closer to gaining the type of political support necessary for funding and ultimately implementation.

5. Research Funding Opportunities

Working closely with partner agencies, the Implementation Committee should develop multiple funding options to ensure the Dominguez Greenway becomes a reality. Whether these are public-private partnerships, exactions on new development or stormwater impact fees, grants for further planning study and preliminary engineering, or federal funding, demonstrating regional collaboration, work completed, and the feasibility of the project are important steps to gain the confidence of potential funders, especially in an increasingly competitive funding environment.

There are two unique funding opportunities that deserve special consideration for this effort:

a. California Enhanced Infrastructure Financing District (EIFD): EIFDs are a relatively new funding tool development by the State of California to fill the gap left by the dissolution of redevelopment agencies. The EIFD captures State and other sales taxes for the purpose of infrastructure projects to promote economic development.

b. Crowdsourcing: Another potential funding source is also a means for community engagement. In recent years, the idea of crowd source funding has been very successful for small scale art projects, community efforts, and businesses start-ups. A new platform called Neighborly (neighborly.com) takes this approach specifically for civic minded projects. Neighborly is currently in the final stages of becoming a bond agency, where they will be able to sell municipal bonds in small increments for project like the Dominguez Greenway. This is a unique way to engage the public in the development and betterment of their community while realizing a return on investment.

IMPLEMENTATION RECOMMENDATIONS

The implementation matrix shows which financing tools can be used for each of the identified public improvements. Note that this is a combination of discretionary expenditures and grant programs. None of these financing programs are "as of right" and it will require active coordination by the City to create a policy and public outreach strategy that would allow for these mechanisms to be accepted by either the affected parties or by outside funding sources. The priority approach for each identified improvement is detailed on table II-2. The priorities illustrated are as follows:

1. Funding sources marked "1" should be the primary vehicle used in financing the identified improvement. In some cases these sources should be able to carry the costs associated with a specific project.

2. Funding sources marked "2" should be seen as supplemental in nature and used when a primary funding source is unable to completely cover identified costs or as a leverage source to either backstop or secure a complete funding package.

3. These third tier funding priorities marked "3" should be viewed as opportunistic in nature and should only be pursued as programmatic opportunities and grant programs arise that can contribute to financing of the improvement.

This three-tiered strategy follows the pay-as-you-go and beneficiary pays principles as closely as possible. As new funding mechanisms, grant programs and fiscal policies are developed over the life of the ATP, the funding priorities should be adjusted accordingly.

For example the State of California Strategic Growth Council's funding priorities, which are tied to the costs of carbon emissions and are part of the state's overall greenhouse gas reduction strategy, are currently set to fund projects that support affordable housing and infill development in transit oriented districts with fixed transit links this source of funding may become available to support infrastructure improvements within the plan area. In addition, state and county wide infrastructure programs are periodically made available through the initiative process. Funds from future initiatives may be able to be used to finance surface transportation improvements within the plan area.

Several of the funding mechanisms that have been identified will require planning and outreach prior to their adoption. One or more potential funding sources for each major improvement or program proposed as part of the project have been identified. After agreeing on the funding priorities among those improvements that will require public funding, it will then be necessary for the City to integrate those funding priorities with overall citywide priorities. Many of the funding sources involve revenues that must be allocated not only among different improvements identified for the plan area but among projects located throughout the City. Therefore, it will be important for the City of Hawthorne to integrate the financing needs identified for this project with the City's existing financing plans and programs, including the CIP, and the process for allocating grant funds to local projects and activities. Once this process is complete and infrastructure costs are available, the City can refine the implementation schedule with more specific funding dates that reflect the anticipated availability of funds for projects and programs, consistent with updated citywide financing plans.

	County		City		Public/Private					
	Metro Call for Projects	PLACE	City General Fund (CIP)	Dev. Impact Fees	Community Facilities Districts	Property and Business Improvement Districts	Landscape and Lighting District	Maint. Assessment District	Enhanced Infrastructure Financing District	Development Agreements
1. Freeway On-ramp Crosswalk			1							
2. Crosswalk upgrades			1							
3. Sidewalk Widening / Upgrades			1							3
4. Mid-Block Crosswalk under Bridge			1							3
5. Upgrade Stairs to Retail			1	3		3				
6. Sidewalk Widening / Upgrades			1							
7. Connection to Dominquez Channel			3		3					
8. Upgrade of Dominguez Channel			3							
9. Potential Bike Lanes / Routes in Project Area		3	1	3						
10. Potential Shared Bike Lanes / NEV Routes in Project Area			2					3	1	
11. Pass Throughs			1							
12. Curb Extensions			1							
13. Station Security	1						3			
14. Signage and Maps at Station	1						3			
15. Upgraded Bike Parking at Station	1						3			
16. Station Lighting	1						3			
17. Connection to Beach Cities		3	3					3	1	

Implementation Matrix

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