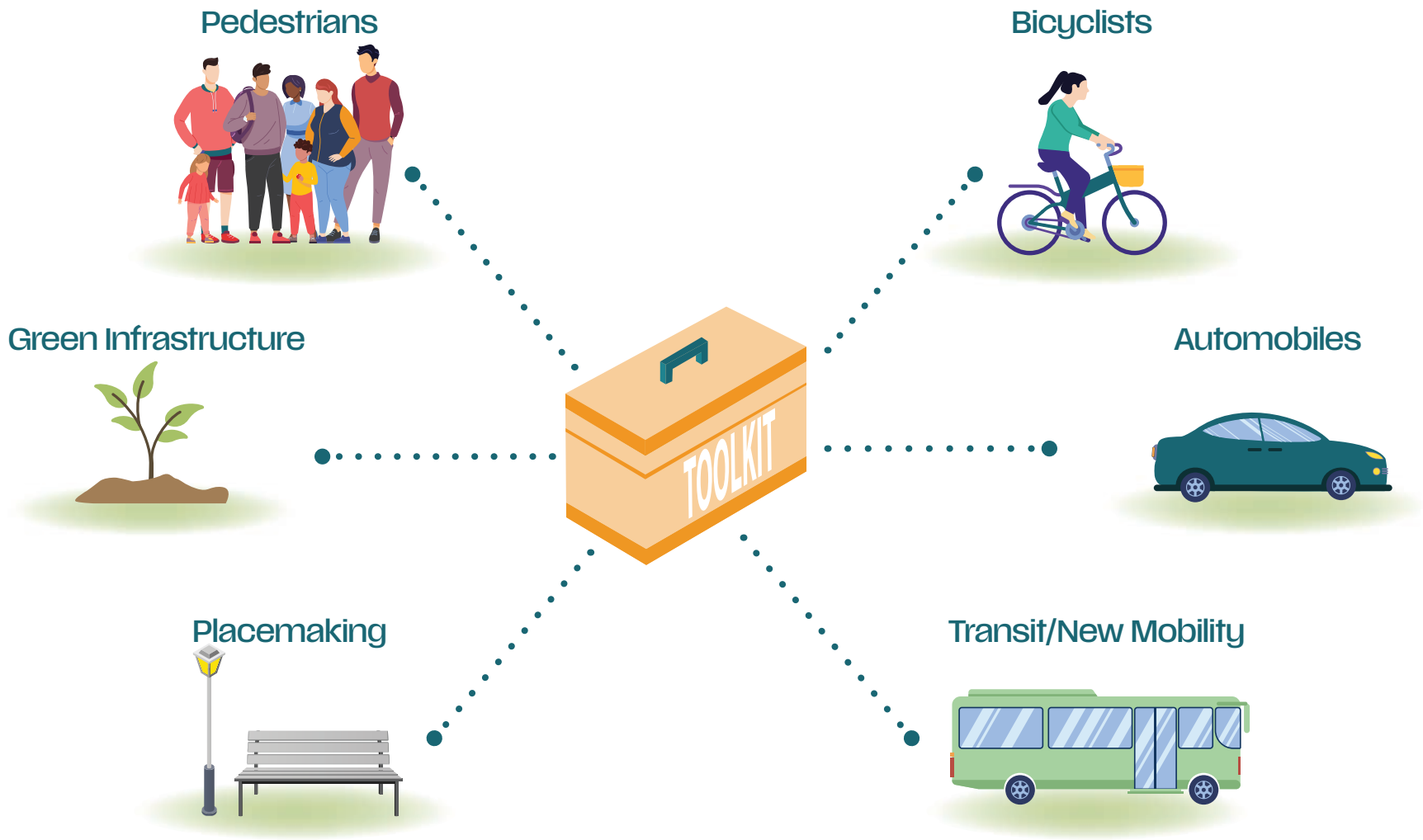

EXIT
ROUTE

4 Recommendations

4.1 Complete Streets Toolkit

A wide range of infrastructure elements exist that can be incorporated in the development of Complete Streets. Each potential improvement will need to be evaluated further on a case by case basis during the final design and implementation phase. The following section outlines a 'toolkit' which includes different categories and types of street treatments that are often found or can be incorporated in the development of Complete Streets. Several of these elements can be found in the Imperial Avenue Preferred Concept described later in this chapter. The corresponding regulations, policies, guidelines, and standards should be further analyzed and followed upon implementation.



4.1.1 Pedestrian Facility Enhancements

Imperial Avenue is an auto-centric corridor and main truck route. Therefore, pedestrians often opt for the use of motor vehicles as a safer mode of travel to, from, and throughout the corridor. Pedestrian facility enhancements can be incorporated throughout Imperial Avenue for a safer and more accessible environment.

Pedestrian Refuge Islands (Median Refuge Islands)

Pedestrian refuge islands or median refuge islands are raised protected spaces in the center of the streets, creating a safe space for pedestrians and bicyclists to wait as they cross one direction of the street to another.[1] This is beneficial to pedestrians and bicyclists when they have to cross major streets.

Mid-Block Crossings

Mid-block crossings provide a convenient location for pedestrians to cross the street where intersection crossings are far apart, preventing out-of-route travel for pedestrians. These types of crossings are typically developed where common use occurs such as schools, parks, and everyday uses.[2]

Curb Extensions (Bulb-outs or Neck-downs)

Curb extensions are also referred to as bulb-outs or neck-downs and shorten the distance needed for pedestrians to travel when crossing the street. This is due to the offset of the curb into the street that increases the pedestrian area and encourages drivers to make slower turns. Curb extensions can also be used along streets, supplementing on-street parking space and an opportunity for increased street furnishings and landscaping.[3]

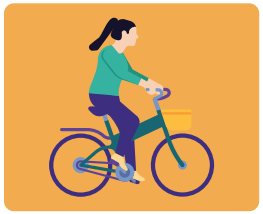
Pedestrian-Scale Lighting

Pedestrian-scale lighting provides many practical and safety benefits, such as illuminating the path and making crossing walkers and bicyclists more visible to drivers. Lighting can also be designed to be fun, artistic, and interactive.

Pedestrian Refuge Island

Mid-block crossing with Pedestrian Refuge Island

Curb Extension



4.1.2 Conventional Bicycle Facility Types

In the state of California, four conventional bicycle facility types are recognized by the California Department of Transportation and guidance on standards and specifications are found in the California Manual on Uniform Traffic Control Devices (CA MUTCD)[4] and CA Highway Design Manual (HDM)[5]. The numerical designation of bicycle facility types does not represent a hierarchy and application of each should be considered where deemed appropriate.

According to the National Association of City Transportation Officials (NACTO)[6], the benefits of conventional bike lanes are:

- The increase of bicyclist comfort and confidence on busy streets.
- The creation of separation between bicyclists and automobiles.
- Increased predictability of bicyclist and motorist positioning and interaction.
- Increased capacity of streets carrying mixed bicycle and motor vehicle traffic.
- Visually reminds motorists of bicyclists' right to the street.

Class I Multi-Use Paths (Bicycle Path)

Class I multi-use paths, frequently referred to as "bicycle paths", are two-way facilities physically separated from motor vehicle routes that grant exclusive right-of-way to non-motorized users, like pedestrians and bicyclists. They require physical buffers to ensure safety and comfort of the user.

Class II Bicycle Lanes

Class II bicycle lanes are one-way facilities that dedicate right-of-way to bicyclists within the same direction of roadway adjacent to motor vehicles. They are not physically separated from motor vehicle traffic. For this reason, Class II bicycle lanes can include an additional buffer striping space whenever possible to reduce the risk of collision between bicyclists and motor vehicles.

Class I Multi-Use Path

Class II Bike Lane

Class IIB Buffered Bike Lane

Class III Bicycle Routes

Class III bicycle routes, are one-way shared facilities typically on low speed and low volume roadways where bicyclists and motorists are expected to share the road. Therefore, these roadways can be designated as bicycle boulevards/neighborways with enhancements that include signing and pavement markings, volume management strategies, and speed management strategies such as neighborhood traffic circles.

Class IV Separated Bikeways (Cycle Track)

Class IV Separated Bikeways, also commonly referred to as “cycle tracks”, are one-way or two-way on-street bike facilities that include horizontal and vertical buffer separation from vehicles for increased bicyclist safety. Class IV separated bikeways are for the exclusive use of bicycles and may be raised.

4.1.3 Enhanced Bicycle Facility Types Treatments

To create Complete Streets, enhancements to the different bicycle facility types can be low cost and be effective in increasing safety for all users. Installation of the following outlined enhancement can often be coordinated with street resurfacing projects.

Buffered Bicycle Lanes

Buffered Bicycle Lanes provide an additional space between bikeways and motor vehicles for increased comfort and safety. Buffers are created through but are not limited to road markings, posts, barriers, on-street parking, and landscaping. The buffer also encourages bicyclists to avoid riding too close to parked vehicles, keeping them out of the “door zone” where there is the potential danger of drivers or passengers suddenly opening doors into the bicyclists’ path.

Shared Lane Marking (“Sharrows”)

Sharrows are commonly used for Class III Bikeways when on-street parking is allowed adjacent to motor vehicle travel lanes. To ensure the adequate amount of separation between bicyclists, motor vehicles, and parked vehicles, sharrows are often centered within the rightmost travel lane.


Class III Bike Route with Sharrow Marking


Class IV Separated Bikeway (Two-Way)


Class IV Separated Bikeway (One-Way)

Bike Boxes

Bike Boxes are often installed at the front of travel lanes where signalized intersections are located and they designate bicyclists with a safe area to wait during red traffic signals.

Two-Stage Turn Box

A two-stage turn box is a designated waiting area at the right of a bike lane for bicyclists to advance in a multi-lane intersection or the left side of a bike lane if turning right.

Green Colored Conflict/Transition Striping

Green-colored striping can be used to highlight conflict areas between bicyclists and vehicles, such as where bicycle lanes merge across vehicle turn lanes or driveways.

Colored Bike Facilities

Colored Bike Facilities consist of colored pavement that increases visibility of bikeways and can help minimize bicyclists and motor vehicle collisions. Green-colored pavement for bicycle facilities is the standard in California and limitations include but are not limited to bicycle lanes, two-stage turn boxes, and separated bikeways within the roadway. For the full list of limitations and standards refer to Part 9 Traffic Control for Bicycle Facilities of the CA MUTCD.

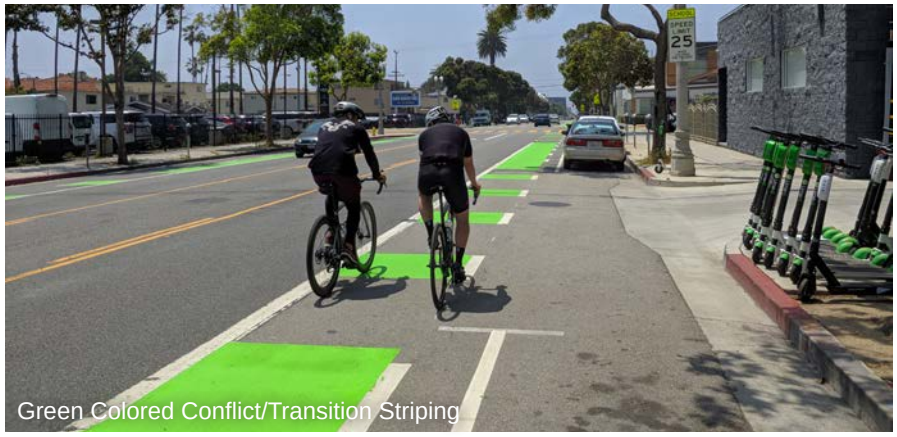
4.1.4 Low Stress Bicycle Facility Types

In the process of creating safer, more comfortable, and equitable Complete Streets, the City of El Centro may find that in some cases the conventional bicycle facility types may not meet the needs of the community. Therefore, this section outlines a comprehensive list of low-stress bicycle facility types that are used in different parts of the country successfully and can be found in the NACTO Urban Bikeway Design Guide or AASHTO Guide of the Development of Bicycle Facilities.

Neighborway/Bike Boulevards

A neighborway, sometimes called a bike boulevard, is an approach to reduce traffic, slow car speed, and improve safety for those biking,


Two-stage Turn Box



Green Colored Conflict/Transition Striping

Bike Boulevard

walking, and rolling on quiet residential streets. They are typically located on more narrow, slow speed streets and combined with other traffic calming infrastructure like speed tables.

Protected Intersections

Protected intersections maintain physical separation between bicyclists and motor vehicles, creating a higher sense of safety and comfort. Protected intersections are set back from motor vehicles and bicyclists are not obligated to merge with traffic because they are provided a dedicated path.

Bicycle Signals

Bicycle signals, also referred to as bicycle beacons, are typically three lens signal heads with green, yellow, and red bikeway icons. They allow bicyclists to have clarity when met with intersections and make crossing intersections safer. The use of bicycle signals is dependent on a variety of factors such as speed limits, bicycle crossing traffic, and planned or existing bicycle facilities.

Bicycle Detection

Bicycle detection is used at actuated signals which prioritize movement along primary corridors. Actuated signals can create conflicts for pedestrians if it is timed for the prioritization of motor vehicles. Bicycle signals at activated signals alert the signal controller that a bicycle crossing event has been requested. However, bicycle detection can occur automatically or by the use of a push button.

Protected Intersections


Bicycle Signals

4.1.5 Traffic Calming

Traffic calming is a process that involves changes in street alignment, installation of barriers, and other physical measures to minimize collisions between vehicles and pedestrians. The intent of traffic calming is to decrease the negative impact to pedestrians, bicyclists, and residents that is caused by reckless driving. Successfully implementing traffic calming measures can increase street safety - making the city a more livable place.

Traffic Roundabout/ Traffic Circle

Traffic roundabout and traffic circles are traffic calming measures that slow and divert traffic to nearby streets, reducing right-of-way conflicts between bicyclists, pedestrians, and motor vehicles. However, traffic roundabouts consist of intersection points with yield control at its entry that allows a driver to proceed at controlled speeds in a counter-clockwise direction around a central island. Traffic circles on the other hand are often used on bicycle boulevards and on low volume residential streets to avoid or reduce right-of-way conflicts because the overall footprint is smaller when compared to roundabouts.

Signals and Warning Devices

Signals and warning devices are used to warn and control traffic at unsignalized intersections and other locations to assist pedestrians when crossing the street. Pedestrian Hybrid Beacons (PHB) and Rectangular Rapid Flashing Beacons (RRFB) are typical signals used in lower volume and lower speed streets.

Speed Humps ("Bumps") and Speed Cushions (Speed Humps)

Speed humps or "bumps", slow traffic speeds on low volume and low speed streets due to their protruding parabolic shape. Speed cushions are similar to speed humps with the exception of including wheel cutouts and extending longitudinal for larger vehicles to pass safely.


Traffic Circle

Signals and Warning Devices


Class IIB Buffered Bike Lane

Speed Tables (Raised Crosswalks)

Speed tables or raised crosswalks are a midblock traffic calming measure that allow pedestrians to cross a street when intersections are too far apart. Speed tables are similar to speed humps but are longer and flat-topped that reduce speeds and enhance pedestrian safety.

Speed Displays

Speed displays measure the speed of approaching vehicles by radar and an LED display to inform drivers of their speeds, creating awareness of how fast they are traveling and effective in reducing motor vehicle speeds.

Reflective Border on Signal Head

Reflective borders on signal heads improves visibility of signal heads with a backplate and is made even more conspicuous by framing it with a yellow retroreflective border. These are more visible in both daytime and nighttime conditions.

Chicanes

Chicanes are a traffic calming measure that through a series of narrowing or alternating curb extensions increase the amount of public space and reduce traffic speeds.

Truck Aprons

Truck aprons allow large vehicles: trucks, buses, and recreational vehicles, to turn without striking pedestrians walking, rolling, bicycling, or any fixed objects. They are typically slightly raised pavement located between the road surface and the sidewalk, or the inner circle of a roundabout due to large vehicle turning radius.

On-Street Edge Friction

On-street edge friction is created by a combination of vertical speed control elements such as on-street parking, bicycle facilities, chicanes, curb extensions, site furnishings, and landscaping that reduces the apparent width of the street. Not only does this create a safer environment, it can make walking and biking more attractive for pedestrians.


Speed Tables


Chicanes


Truck Apron

4.1.6 Green Street Improvements

Green street improvements incorporate tried and true stormwater management practices into transportation infrastructure to reduce stormwater runoff, prevent flooding, improve water quality, provide habitat for local flora and fauna, and create an enjoyable streetscape. These improvements can be installed alongside sidewalks, roadways, parking lots, medians, and more to create a more sustainable and resilient corridor. The green street improvements listed below are from the U.S. Environmental Protection Agency's Green Streets Handbook.[7]

Bioretention Area

A bioretention area, or rain garden, is a shallow surface depression planted with vegetation to retain, infiltrate, and filter stormwater runoff and pollution. Bioretention areas can vary in size, shape, and site and can take the form of cells, rain gardens, or bioswales. Bioretention areas can be located on sidewalks, street frontages, intersections, road medians, road shoulders, and parking lot islands or perimeters.

Permeable Pavement

Permeable pavements allow stormwater runoff to infiltrate through void space into the ground below or another stormwater management system instead of becoming surface runoff. Types of permeable pavement include porous asphalt, porous recycled surface products, pervious concrete, and pavers arranged with void spaces. Permeable pavement can be used instead of impervious materials on parking lots, parking lanes, driveways, sidewalks, walking paths, bicycle lanes, parkways, road shoulders, and low-traffic roads.

Stormwater Curb Extensions

Stormwater curb extensions, or stormwater bump outs, combine two street improvements - traffic calming and stormwater filtration - to produce multiple streetscape benefits. This strategy involves filling the area behind the curb with a bioretention soil media and vegetation similar to a bioretention cell or bioswale. Stormwater curb extensions can be located at intersections, midblock crossings, neighborhood or collector streets, or any length of a roadway.


Bioretention Area


Permeable Pavement


Stormwater Curb Extensions

Stormwater Curb Cuts

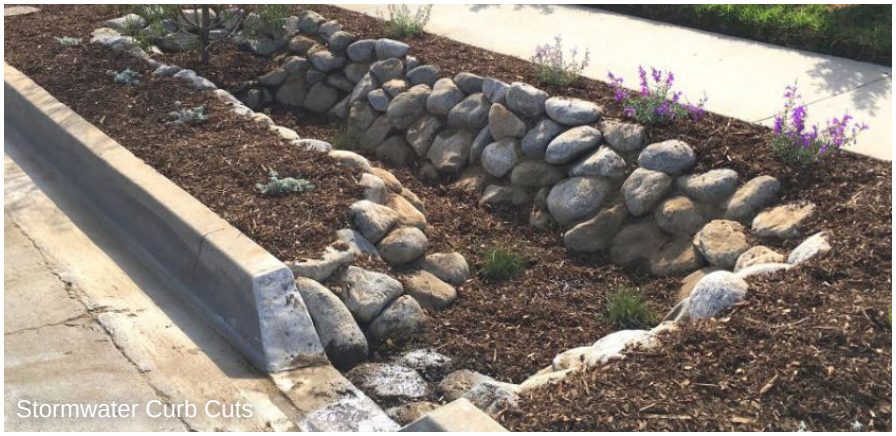
A curb cut is a cut in into a curb allowing for easier water access for collection and percolation of stormwater.

Stormwater Tree Systems

Stormwater tree systems, such as tree pits or tree trenches, contain a tree or shrub planted in a bioretention soil mix and a gravel reservoir designed to capture stormwater. Stormwater tree systems are typically located along sidewalks, medians, and parking lots and receive stormwater runoff through a curb cut, catch basin, or stormwater inlet.

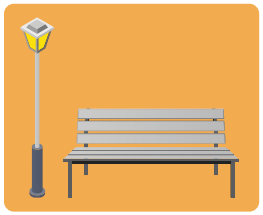
Mini Parks (Pocket Parks)

Mini parks or “pocket parks” are small outdoor spaces found in already built out cities and can be designed in smaller lots than typical parks.[8] They offer an opportunity to integrate green infrastructure treatments in an urban environment to create socializing and resting spaces along a corridor which can also support placemaking.


Stormwater Curb Cuts


Stormwater Tree Systems

Mini Park



4.1.7 Placemaking

Cities can feel like built-out spaces but communities can continue to be improved and built around existing places. Placemaking started as a concept credited to prominent historical figures in the field of city planning and it has been adopted as an approach to designing and managing public spaces, or the public realm, to strengthen connections between people and spaces. The City of El Centro can adopt some of the following placemaking elements on Imperial Avenue that can contribute to the creation of a Complete Street.

Signage and Wayfinding

Signage and wayfinding creates a system that allows pedestrians and bicyclists better awareness and orientation for increased safety. Signs may be placed at important points and locations to call attention to users and inform them of any road changes as well as an opportunity for the City to incorporate branding.

Street Furnishings and Public Art

Furnishings are an important part of encouraging the use of alternative modes of transportation and can help steer away from autocentric streets by providing shelter, bike racks, seating, and other amenities for people of all ages. Furnishings such as bus shelters and trash receptacles are opportunities for the city to incorporate branding and public art from local artists. Enhancing the public realm visually while also being functional can draw more people to walk, bike, and roll.

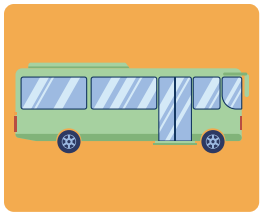
Intersection Paving and Crosswalk Art

Special intersection paving and crosswalk art provide unique opportunities to highlight crossings at key locations while simultaneously integrating context-sensitive art. They are a great opportunity to incorporate culturally representative local art of El Centro. Paving treatments and crosswalk art do not define a crosswalk and should not be seen as a safety measure. Standard transverse or longitudinal high-visibility crosswalk markings are still required.

Signage and Wayfinding


Public Art


Crosswalk Art



4.1.8 Transit/New Mobility

New mobility refers to evolving and emerging forms of clean and/or shared forms of transportation, which can include micromobility, ride-hailing, carpools, and automated and connected vehicles. These forms of transportation can provide alternatives to gas-powered, single-occupancy cars and help reduce air pollution and GHG emissions. Clean mobility and shared options also help address transportation equity by providing affordable transportation choices for lower-income households and those who are unable to drive or own a car.

Real-Time Bus Information

Real-time bus information allows riders to predict their journey and manage their time more effectively. This increases the convenience of transit for riders by providing accurate, updated location of their bus.

Transit Stop Amenities

Transit stop amenities such as shelters with overhead protection, seating, trash receptacles, and lighting are essential for encouraging people to use public transit.

Floating Bus Island

A floating bus island is located between travel lanes and bicycle lanes where transit passengers board and alight transit vehicles. Pedestrians cross the bicycle lane when traveling to or from the platform where the bus stop is located. This eliminates conflict between bicyclists traveling in bicycle lanes and transit vehicles that must pull curbside to load and unload passengers.

Electric Shuttles

Electric shuttles can help address gaps within a community by supplementing the existing transit network or by creating new transit routes where they currently don't exist. Depending on the make and model, electric-powered shuttles can be used to offer transit services within a specified radius.

Real-time Bus Information

Transit Stop Shelter


Floating Bus Island

Carsharing Service

An electric carsharing service could be established by purchasing a fleet of electric cars. These cars could be rented by residents to address their transportation needs, such as commuting to work, running errands, or getting to medical appointments. The City would have its own EV charging infrastructure which could be combined with other electric mobility options, such as electric shuttles and electric vanpool/carpool services.

Bikeshare

Docked bikeshare is a shared transport service in which bicycles or e-bicycles are made available for shared use to individuals on a short-term basis for a price or for free. Docked bikeshare systems allow people to borrow a bicycle from a "dock" or station and return it to another dock belonging to the same system. Docked bikeshare systems often include electric-assist bicycles that provide extra comfort for users.

E-Scootershare

Scootershare programs are popular forms of shared transportation services that involve the rental of electric motorized scooters for short trips. These programs involve the use of a mobile app to look for, rent, pay, and park the rented scooter. Scootershare programs provide a high degree of flexibility for the individual user and can be an effective method for closing mobility gaps. Short trips to visit family members and access to schools, parks, commercial areas, and transit stops are all possible with a scootershare program.

Carsharing

Bikeshare

E-scooter

4.2 Goals, Objectives, and Actions

Policies that contain goals, objectives, and actions were developed to assist El Centro staff implement the preferred concept. These policies were developed using the existing conditions analysis, public engagement process, and feedback from city staff.

Goal 1: Provide Safe Modes of Transportation for Pedestrians, Bicyclists, and Drivers

As a part of a Complete Street, providing safety for all modes of transportation for people of all ages and abilities is vital and can be pursued through strengthened connectivity, an enhanced network, and the implementation of Complete Street principles.

Objective 1 Improve pedestrian connections for increased safety and comfort.

- Action 1.1 Implement the currently adopted Active Transportation and Safe Routes to School Plan to increase the number of pedestrian and bicyclist trips from everyday destinations and transit stops.
- Action 1.2 Update the Active Transportation and Safe Routes to School Plan to meet future trends and re-engage community members on existing conditions and opportunities.
- Action 1.3 Implement high-visibility crosswalks and accessible pedestrian signals at high-volume intersections.
- Action 1.4 Identify opportunities to add or enhance safe bicycle and pedestrian crossings along Imperial Avenue that connect to major destinations.
- Action 1.5 Mitigate the impact of vehicular traffic to the pedestrian public realm by identifying and establishing curb extensions at intersections.

Objective 2 Create a safe bicyclist network that encourages use of active transportation.

- Action 2.1 Identify hot spot locations of bicycle and pedestrian collisions with motor vehicles to develop countermeasures such as midblock crossings, bicycle facilities, and bicycle signals.
- Action 2.2 Install bicycle facilities that connect to proposed pathways and future transit stops along Imperial Avenue.
- Action 2.3 Identify a curb space management program that could be prioritizing adapting curb space, specifically in front of commercial area, to the current needs of the corridor such as bicycle parking, rideshare pick-up/drop-off, and pedestrian amenities.

Objective 3 Promote safe driving through Complete Street principles.

- Action 3.1 Construct raised medians or hardened centerlines where applicable to improve traffic safety.
- Action 3.2 Traffic-calming tools should be considered along Imperial Avenue where joined to collector streets.
- Action 3.3 Repurpose unneeded right-of-way where space allows to implement bicycle and pedestrian improvements.
- Action 3.4 Implement traffic calming measures and programs that encourage safe driving.
- Action 3.5 All signalized arterial intersections should integrate monitoring and traffic flow control infrastructure for future roadway improvements and maintenance.

Goal 2: Increase Opportunities for Equitable Access

Imperial Avenue as a highly used corridor at the heart of El Centro and is a major connector that can increase opportunities for equitable access for all users. Imperial Avenue as a Complete Street has the potential of enhancing safety for pedestrians walking, bicycling, rolling, using public transit, and driving.

Objective 1 Prioritize the needs of underinvested and underserved transit users.

- Action 1.1 Pedestrian and bicycle crossings should be accessible by all and include safe traffic signals, marked crosswalks, and follow ADA guidelines.
- Action 1.2 Improved pedestrian treatments for a safer walking experience should be prioritized at the intersection of Adams Avenue and Imperial Avenue due to the future planned improvements for Opportunity Area 1 as stated within the El Centro General Plan Update.
- Action 1.3 The City of El Centro should coordinate with the City of Imperial to align efforts to promote bicycle connections and enhance public transportation connections.
- Action 1.4 Focus complete street principles along Imperial Avenue and create connections to vital services like health and wellness services, recreational uses, and retail food services.
- Action 1.5 Incorporate the identified Complete Streets goals, objectives, and actions in a sensitive manner that recognize the different needs among neighborhoods and communities.
- Action 1.6 Imperial Avenue should be universally accessible and accommodate children, seniors, and people of all abilities.

Objective 2 Explore implementation of programs and projects that reduce transportation costs.

- Action 2.1 Coordinate with Imperial Avenue Transit (IVT) to improve access for those who work, live, and play along Imperial Avenue per Public Right-of-Way Accessibility Guidelines (PROWAG) and compliance with the Americans with Disabilities Act (ADA).
- Action 2.2 Implement projects identified in Public Works' ADA Self-Evaluations and Needs Assessments.
- Action 2.3 Innovative technologies or smart transportation programs should be incorporated to increase efficiency.
- Action 2.4 Identify, increase, and maintain shared mobility programs for the population who is highly-dependent on alternative modes of transportation.
- Action 2.5 Increase transportation options between employers and employees commuting to Imperial Avenue from areas with limited transportation access.

Objective 3 Create connected multimodal networks that meet the needs of all users.

- Action 3.1 Imperial Avenue lane widths should be minimized where appropriate to discourage high vehicle speeds and to shorten pedestrian crossing distances.
- Action 3.2 Introduce traffic calming elements and bicycle and pedestrian amenities to slow vehicle speeds along Imperial Avenue, such as at intersections and midblock crossings.

Goal 3: Provide a Reliable Corridor to Promote the Use of Public Transit

Designing a Complete Street includes providing the necessary infrastructure improvements for the use of public transit along Imperial Avenue which takes riders to their desired destinations along the corridor, throughout El Centro, and neighboring communities. Therefore, Imperial Avenue should be designed to be a reliable means for public transportation.

Objective 1 Identify and provide safe and pleasant bus shelters along Imperial Avenue.

- Action 1.1 Enhance the Imperial Avenue streetscape by following adopted bus shelter guidelines to encourage the use of public transit.
- Action 1.2 Enhance bus stop and waiting area amenities along the Imperial Avenue corridor by providing seating, shade, lighting, real-time travel informational displays, and trash receptacles.
- Action 1.3 Coordinate with Imperial Valley Transit (IVT) and Imperial County Transportation Commission (ICTC) to provide bus shelters and waiting area in locations that accommodate Imperial Avenues future growth as identified in El Centro General Plan and supporting documents.
- Action 1.4 Locate areas where there is a possible need for ride-share pick-up and drop-off joint bus shelter waiting areas.

Objective 2 Enhance streetscape along Imperial Avenue transit routes to promote use of bus stops.

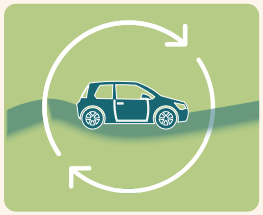
- Action 2.1 Revitalize and enhance pedestrian and bicycle infrastructure through coordination with future Visual Enhancement Area (VEA) plans or guidelines. El Centro General Plan identifies Imperial Avenue as a VEA.
- Action 2.2 Streetscape should acknowledge cultural and environmental considerations.
- Action 2.3 Install sidewalks where currently missing to create a consistent public right of way that creates areas for future transit stops.

Objective 3 Create a secure environment/corridor for pedestrians and traffic at bus stops and transit centers.

- Action 3.1 Provide direct access to transit facilities and ensuring visibility to and from vehicles by avoiding blind spots often created by inappropriate landscape, fencing, and other structures.
- Action 3.2 Provide and maintain lighting at all transit facilities (i.e., bus stops, bus shelters, transit center).

Objective 4 Encourage public transit improvements between neighboring cities.

- Action 4.1 The City of El Centro should coordinate with Imperial County Transportation Commission (ICTC), Caltrans, and neighboring cities to identify necessary regional roadway improvements for improved transit access between El Centro and adjacent cities.
- Action 4.2 Foster relationships with adjoining communities identified in the El Centro Vision 2050 Strategic Plan for the improvement of adjoining roadways.
- Action 4.3 Promote the use of public transportation options offered along Imperial Avenue that can improve the reach of transit for El Centro residents.
- Action 4.4 Monitor and evaluate the need to implement transit priority treatments, such as dedicated bus lanes, queue jumper lanes, and transit signal priority strategies, to improve transit on-time performance and reliability.



Goal 4: Design a Comfortable and Sustainable Street Environment

Designing and creating a comfortable and sustainable street environment impacts community well-being and identity along Imperial Avenue. Comfort can be enhanced by creating space for pedestrians and bicyclists and sustainability improved by implementing a visually appealing streetscape through thoughtful placemaking and urban greening. With these improvements, Imperial Avenue can be a vibrant corridor encouraging physical activity and strengthening community ties.

Objective 1 Design Imperial Avenue as a comfortable environment that promotes physical activity.

- Action 1.1 Prioritize establishing a sidewalk network that is safe and accessible with pedestrian amenities that connect pedestrians to schools, shopping, dining, parks, medical facilities, and public facilities.
- Action 1.2 Sidewalks and pedestrian crossings should be continuous and free of obstructions to ensure adequate capacity and comfort.
- Action 1.3 Promote and support sustainable transportation choices such as shuttle services, direct transit routes, or rideshare programs.

Objective 2 Reinforce community culture and identity through sustainable design solutions.

- Action 2.1 Opportunities should be identified along Imperial Avenue where trees and landscaping can be incorporated to provide a “green corridor” to strengthen community identity, character, and culture.
- Action 2.2 Buffers with urban greening should be considered along the corridor to create shade and decrease the heat island effect.
- Action 2.3 Consider the implementation of an “Adopt a Tree Program” to enhance the public realm of Imperial Avenue.

Objective 3 Design a visually attractive streetscape through placemaking.

- Action 3.1 Integrate new signage, wayfinding, decorative lighting, branding, and public art into the bicycle and pedestrian network; and near identified key locations.
- Action 3.2 Opportunities for the integration of public art should be explored at crosswalks and intersections.
- Action 3.3 Coordinate with the appropriate Visual Enhancement Area Plans for the development of future gateways and wayfinding along Imperial Avenue.
- Action 3.4 Utilize streetscape to provide a visually attractive and physically comfortable environment that promotes environmental justice.
- Action 3.5 Coordinate the relocation or visual improvement strategies of utilities with utility companies to allow space for complete street elements.

Goal 5: Coordination with Future Citywide Improvements

As El Centro continues to flourish, Imperial Avenue will need to adapt to the community's changing needs as demand for multimodal transportation increases. City staff should work to develop a Complete Street and plan to maintain and invest in the continuous betterment of Imperial Avenue with the present and future in mind.

Objective 1 Encourage open communication and coordination among City departments and agencies for successful implementation of Complete Street Strategies.

- Action 1.1 Dedicate staff time to create an advisory committee that meets routinely to guide the implementation of the Imperial Avenue Complete Streets Plan.

Objective 2 Ensure the planning process incorporates best practices for implementation.

- Action 2.1 Develop a phased implementation strategy for incremental improvements.
- Action 2.2 Incorporate Complete Street policies into future planning documents.

Objective 3 Construct, maintain, and invest in an infrastructure for all.

- Action 3.1 New development should promote connectivity through direct and safe pedestrian connections to parks, schools, shopping, medical facilities, and employment destinations.
- Action 3.2 Ensure new development provides a roadway, pedestrian, and bicycling network that meets the needs of future development.
- Action 3.3 The City is encouraged to work with existing and future developments to continue the street grid network of short blocks for enhanced connectivity.
- Action 3.4 Maintain facilities to meet the needs of the community.
- Action 3.5 Plan, construct, and maintain infrastructure to avoid future upsizing while meeting future growth goals.

Objective 4 Identify funding partnership opportunities.

- Action 4.1 Partner with schools to ensure transportation facilities such as sidewalks and bicycle lanes are suitable for students.
- Action 4.2 New developments should extend improvements to the public realm/public right of way.

Objective 5 Pursue Federal and State infrastructure funding to improve and maintain corridor.

- Action 5.1 Create a walkable corridor by identifying sidewalk gaps along Imperial Avenue and seek funding to fill in gaps.
- Action 5.2 Identify funding sources to fund ongoing routine maintenance of sidewalks, roadways, and transit amenities/facilities.

4.3 Imperial Avenue Preferred Concept

The following section depicts the Preferred Complete Streets Concept that is based on extensive analysis of Imperial Avenue, feedback received throughout the public engagement process, and coordination meetings with City Staff. The Preferred Concept includes recommended Complete Streets Toolkit treatments such as:

- Class I Multi-use Path
- Class IV Separated Bikeway
- Green conflict striping/transition striping where bike facilities intersect with driveways
- High Visibility Crosswalks (Sidewalk Art Opportunity)
- Pedestrian-scale Lighting
- Medians (Green Street Infrastructure Opportunity)
- Placemaking (Mini/Pocket Park Opportunity)
- Wayfinding and Signage at key points along the entire corridor
- Enhanced Bus Shelters (Floating Bus Island Opportunity)

The Preferred Complete Streets Concept has been developed as preliminary conceptual plans, found in **Appendix A.5**, along with three-dimensional sections and can be used by City Staff in the pursuit of funding for future implementation.

Implementation is recommended once the study area is relinquished to El Centro since at the time of the development of this CSP, Caltrans has ownership of the study area. While El Centro anticipates gaining control of the study area in the future, Caltrans reviewed and provided guidance — included in **Appendix A.1.**

Segment A

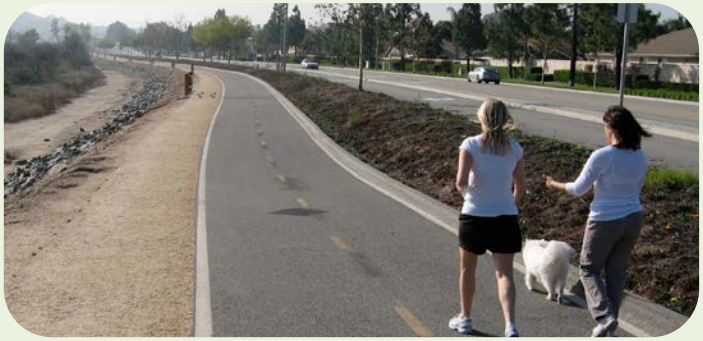
FROM	TO
Adams Avenue	Scott Avenue

Segment B

FROM	TO
Scott Avenue	Lincoln Ave

Segment C

FROM	TO
Lincoln Ave	Treshill Road



Segment A

FROM	TO
Adams Avenue	Scott Avenue

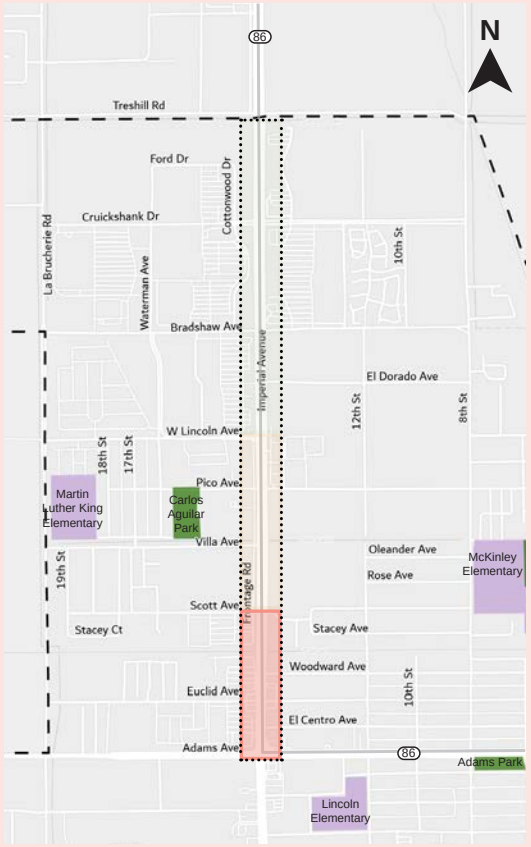
0.4 Miles

35-45 MPH

8 Min

4 Min

3 Min



Segment A Summary

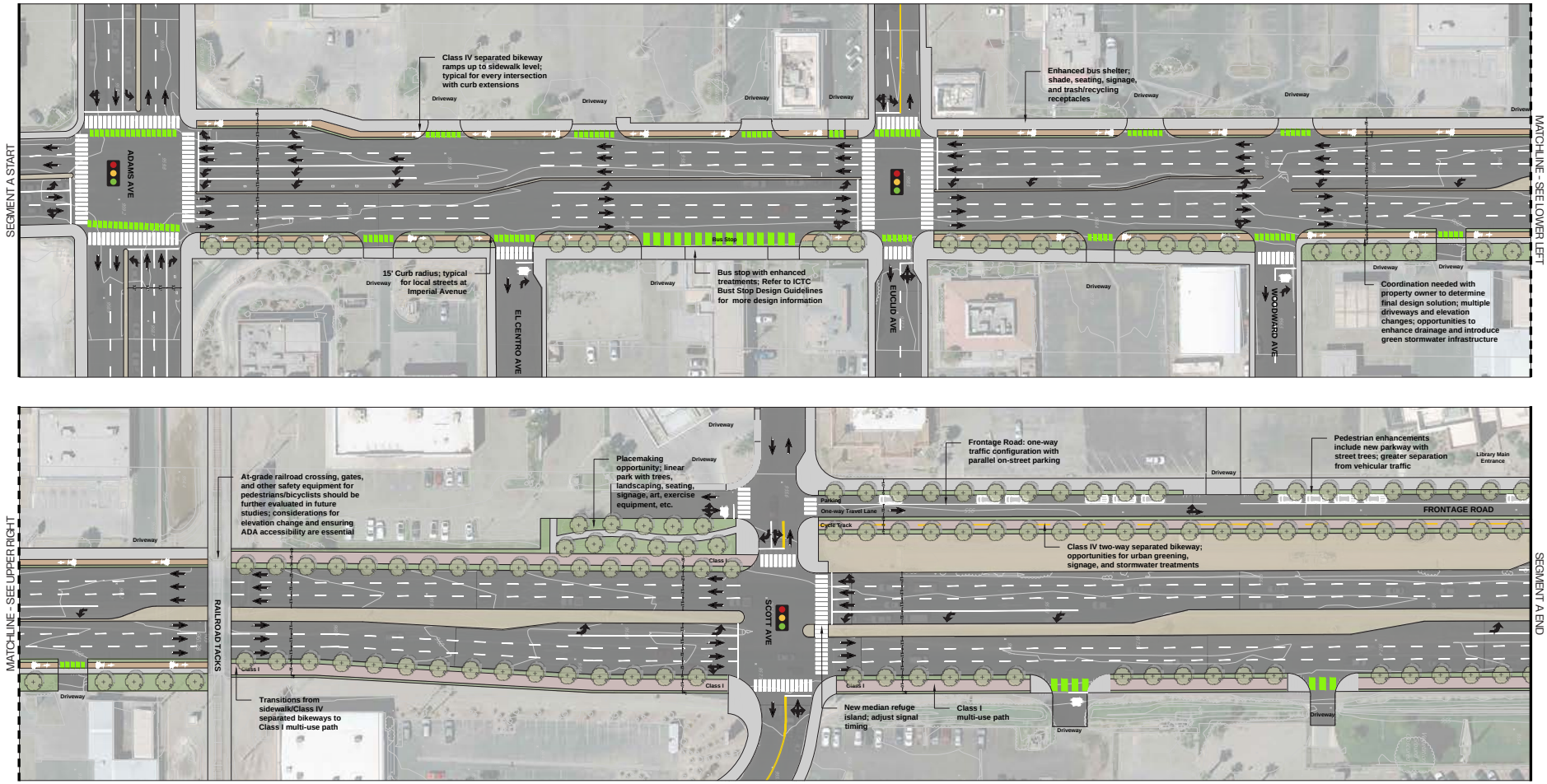
Segment A is the southernmost segment of the Imperial Avenue study area from Adams Avenue and Scott Avenue. This segment has existing sidewalks, bus shelters for bus lines 2 and 3, raised narrow medians, wide travel lanes, and a railroad crossing between Woodward Avenue and Scott Avenue. Attractions on this segment include take-out and dine-in eateries, hotel accommodations, and retail businesses. Although sidewalks exist along most of Segment A, they are missing or need improvement from Woodward Avenue to Scott Avenue on both the east and west sides. The railroad bisects this connection and grade changes along with drainage considerations exist.

Recommendations

The proposed improvements for Segment A include the addition of a Class IV separated bikeway on both the east and west sides from Adams Avenue north towards the railroad crossing. At-grade railroad crossings, gates, and other safety equipment for pedestrians/bicyclists should be further evaluated in future studies. Considerations for elevation changes and ensuring ADA accessibility are essential. From the railroad crossing north towards Scott Avenue, Class I multi-use paths are proposed that can be used by both pedestrians and bicyclists. At the intersection of Imperial Avenue and Scott Avenue, a potential placemaking opportunity exists for the inclusion of a linear park with trees, landscaping, seating, wayfinding signage, public art, and more that can contribute to creating a gathering space to strengthen community character.

Note: El Centro will need to verify speed reduction and final design requirements, such as Clear Recovery Zones (CRZ), during the engineering design phase

Figure 4-1: Segment A Preferred Concept

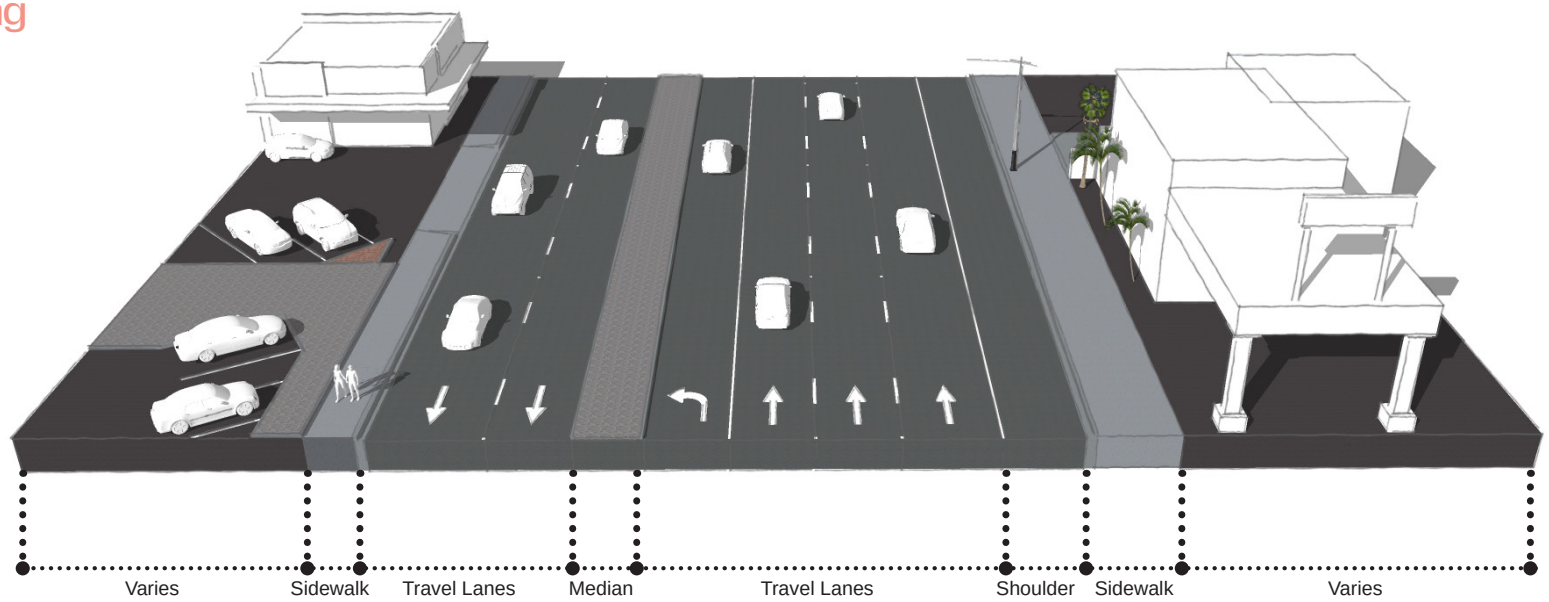


City of El Centro 1275 Main St El Centro, CA 92243	KTU+A 3916 Normal St San Diego, CA 92103	MBI 9635 Granite Ridge Drive San Diego, CA 92123	**City of El Centro** **Imperial Avenue Complete Streets Plan**	**Conceptual Plan** **Imperial Avenue from Adams Ave to Scott Ave**	**Scale: 1" = 80'-0"** **January 2025**	**Sheet 1 of 1**

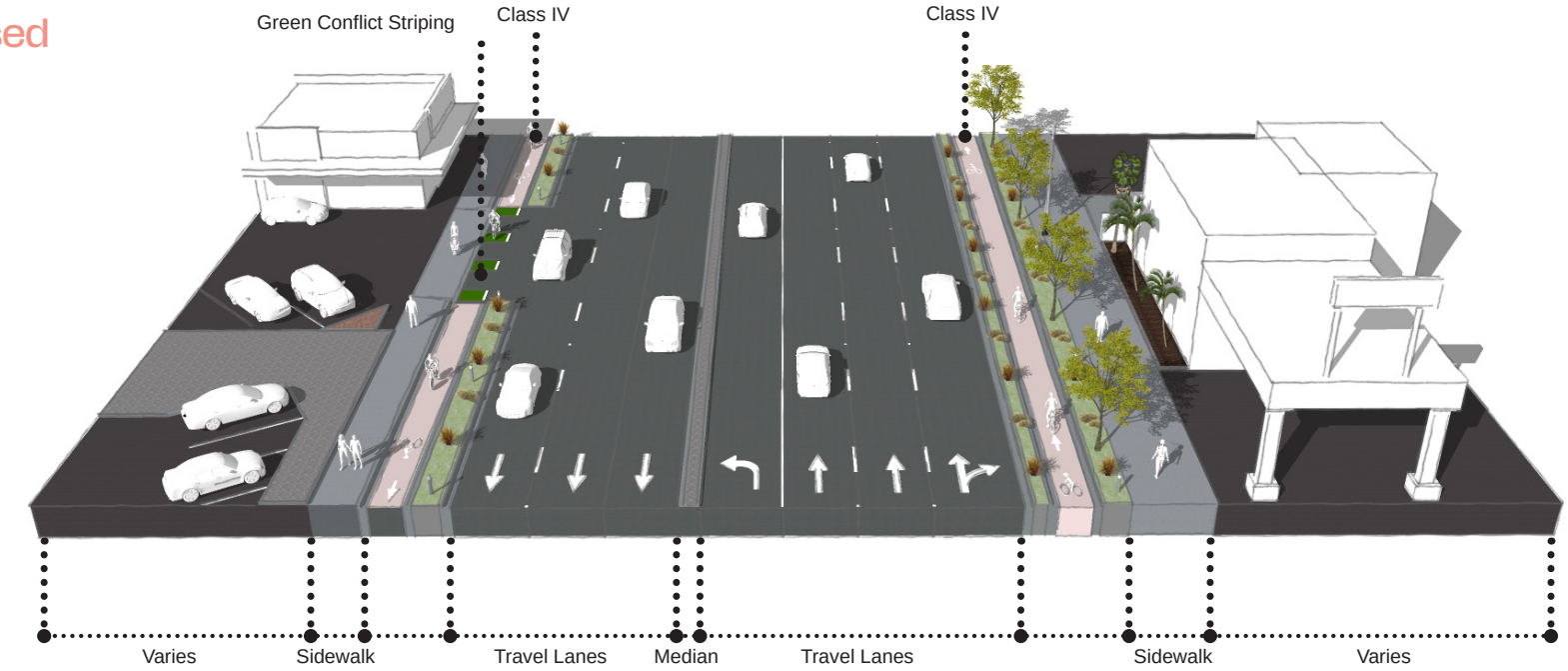
Note: Higher-resolution versions of these cutsheets can be found in the Appendix

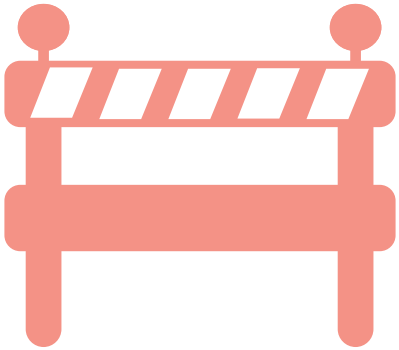
Figure 4-2: Segment A Preferred Concept Sections

Existing



Proposed





End of Segment A

Segment B

FROM	TO
Scott Avenue	Lincoln Ave

0.4 Miles

45 MPH

8 Min

4 Min

3 Min

Note: El Centro will need to verify speed reduction and final design requirements, such as Clear Recovery Zones (CRZ), during the engineering design phase

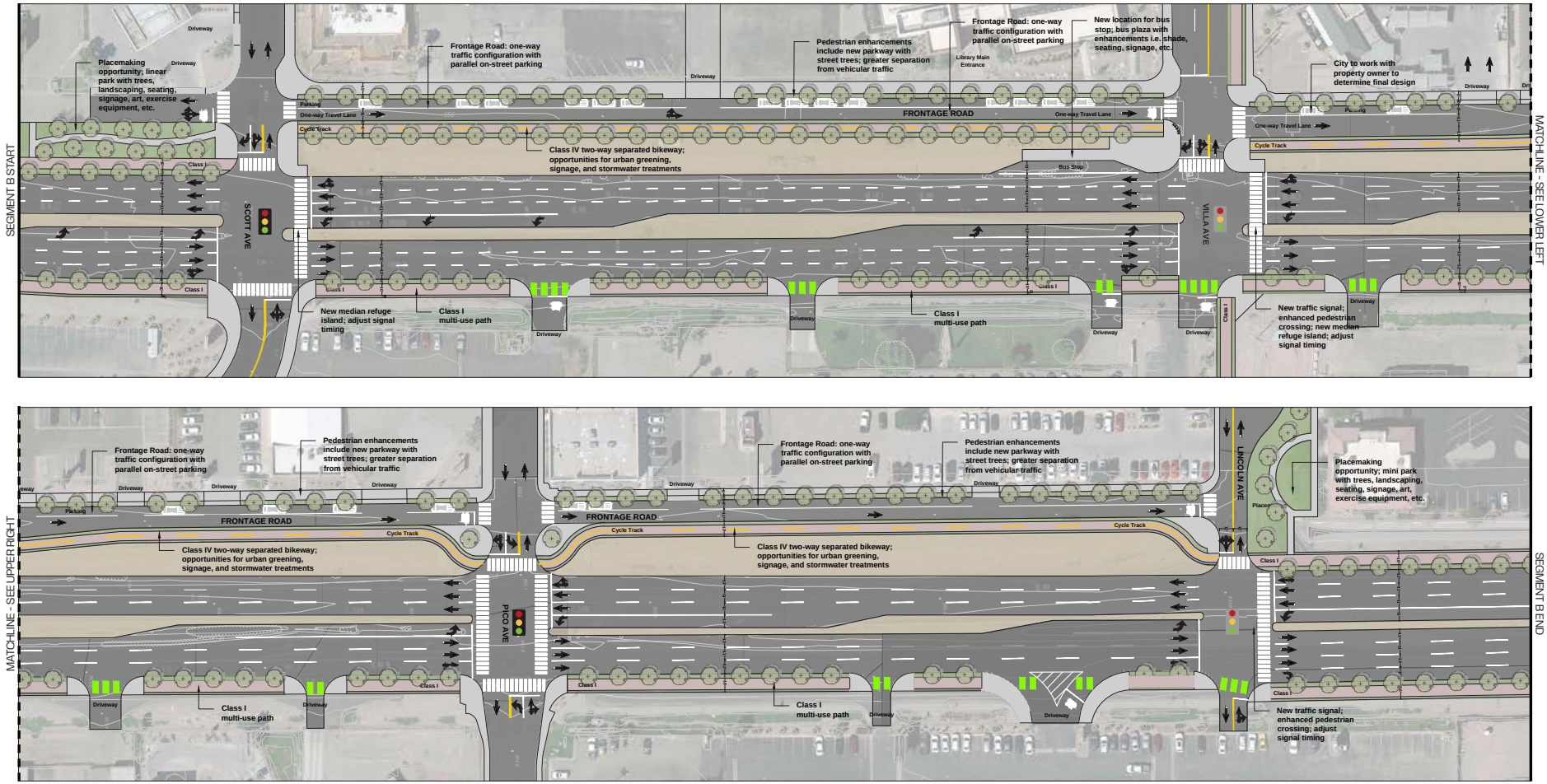
Segment B Summary

Segment B, Scott Avenue to Lincoln Avenue, is the middle segment of this study along Imperial Avenue. The segment has a frontage road on the west side for two-way traffic, a mixture of raised and earthen medians, and a lack of sidewalks on the east and west sides directly on Imperial Avenue. However, sidewalks exist along the western side of the Frontage Road. A key attraction on Segment B includes El Centro Library which offers informational, educational, cultural, and recreational materials and programming for the diverse community of El Centro. Other attractions include take-out and dine-in eateries, federal facilities, medical establishments, and retail businesses. Although not directly along the corridor, but important to highlight, are the park and school facilities on the west of Segment B, as they are major attractions for the community. Existing public transportation includes bus routes 2 and Green next to the El Centro Library.

Recommendations

The proposed improvements for Segment B include the addition of a two-way Class IV separated bikeway on the east side of the frontage road from Scott Avenue north towards Lincoln Avenue. The two-way Class IV separated bikeway creates opportunities for the integration of urban greening, signage, and stormwater treatments on the west side of Imperial Avenue. A Class I multi-use path is another facility proposed on the east side of the entirety of Segment B. Class I multi-use paths can include a tree-lined buffer adjacent to Imperial Avenue that provides separation for bicyclists and pedestrians and provides stormwater catchment opportunities. The existing frontage road at the time of this study accommodates two-way traffic. However, it is recommended that it be converted to a one-way northbound travel lane. Additionally, along the east side of the frontage road, designated on-street parking is proposed. Further study is recommended to coordinate with businesses and to study traffic flow along the frontage road to determine special access considerations. To accommodate the proposed northbound one-way couplet on Frontage Road, the southbound bus stop is relocated to Imperial Avenue with improvements such as a bus pad, bus shelter with seating and lighting, and wayfinding signage. On Imperial Avenue, two proposed signalized intersections fall within Segment B and are located at Villa Avenue and Lincoln Avenue. The proposed signalized intersections are recommended to include traffic signals, high-visibility pedestrian crossings, and adjusted signal timing.

Figure 4-3: Segment B Preferred Concept



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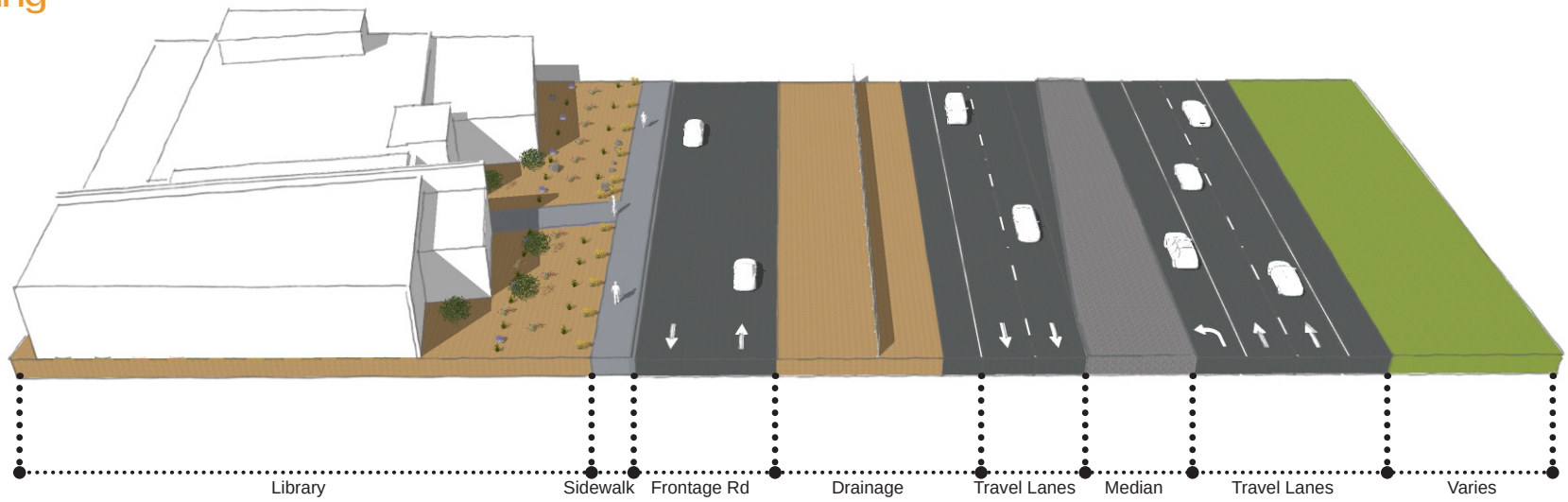
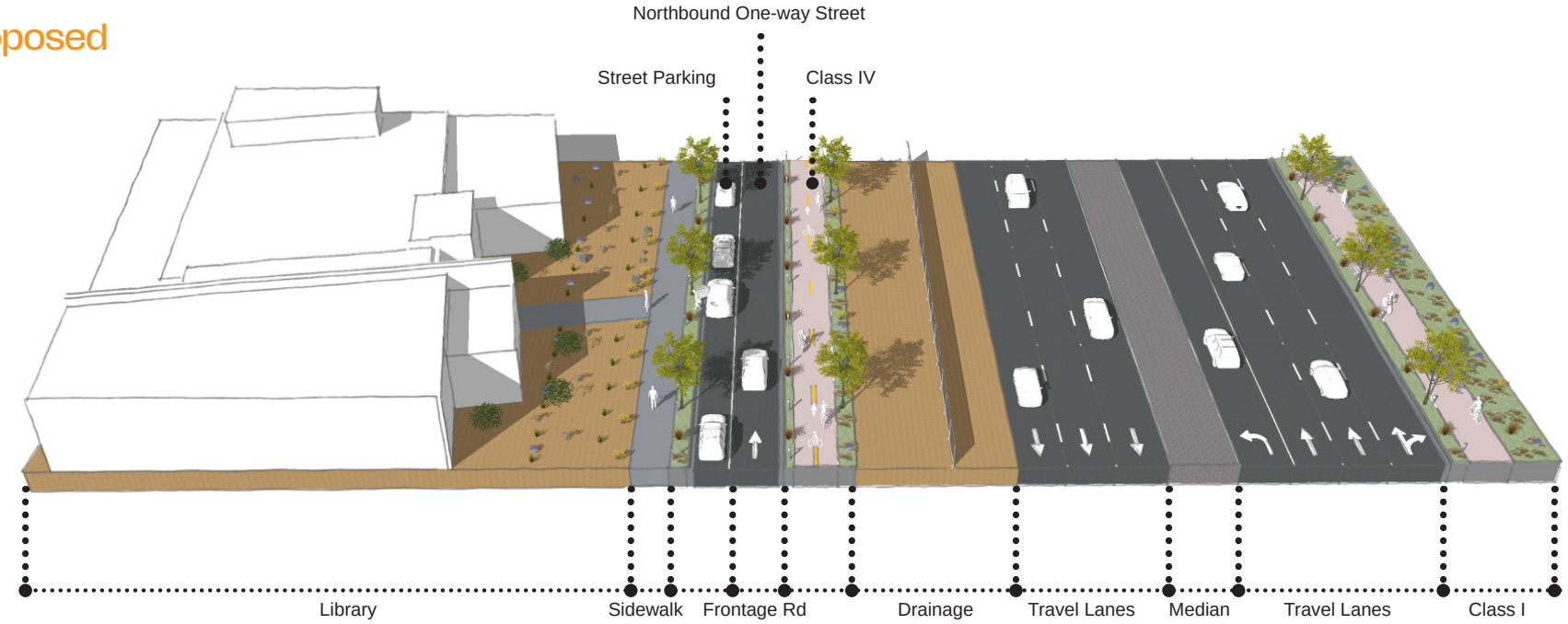
Note: Higher-resolution versions of these cutsheets can be found in the Appendix

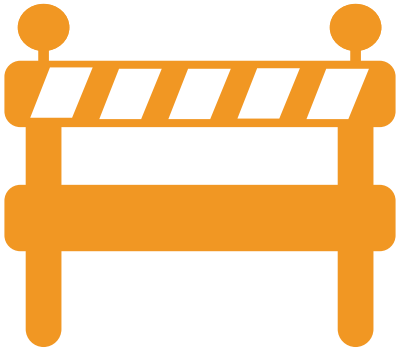
Figure 4-4: Segment B Preferred Concept Sections

Existing



Proposed





End of Segment B

Segment C

FROM	TO
Lincoln Ave	Treshill Road

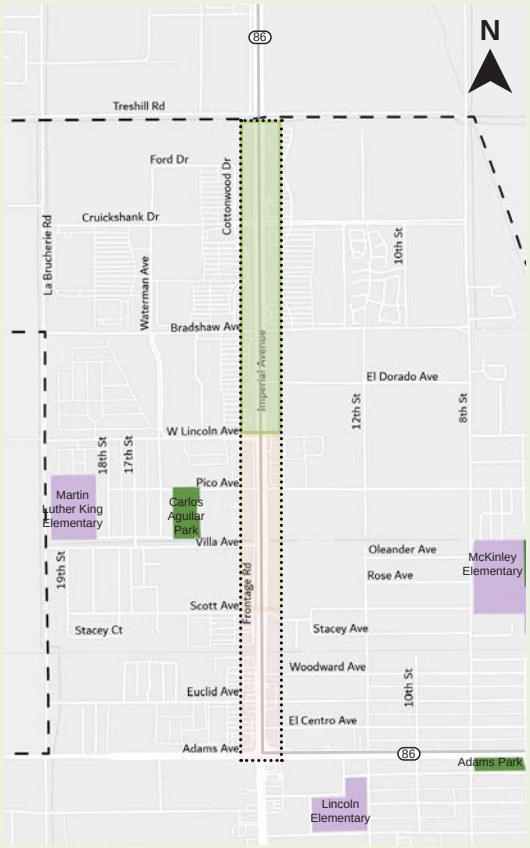
0.8 Miles

45-55 MPH

17 Min

10 Min

5 Min



Segment C Summary

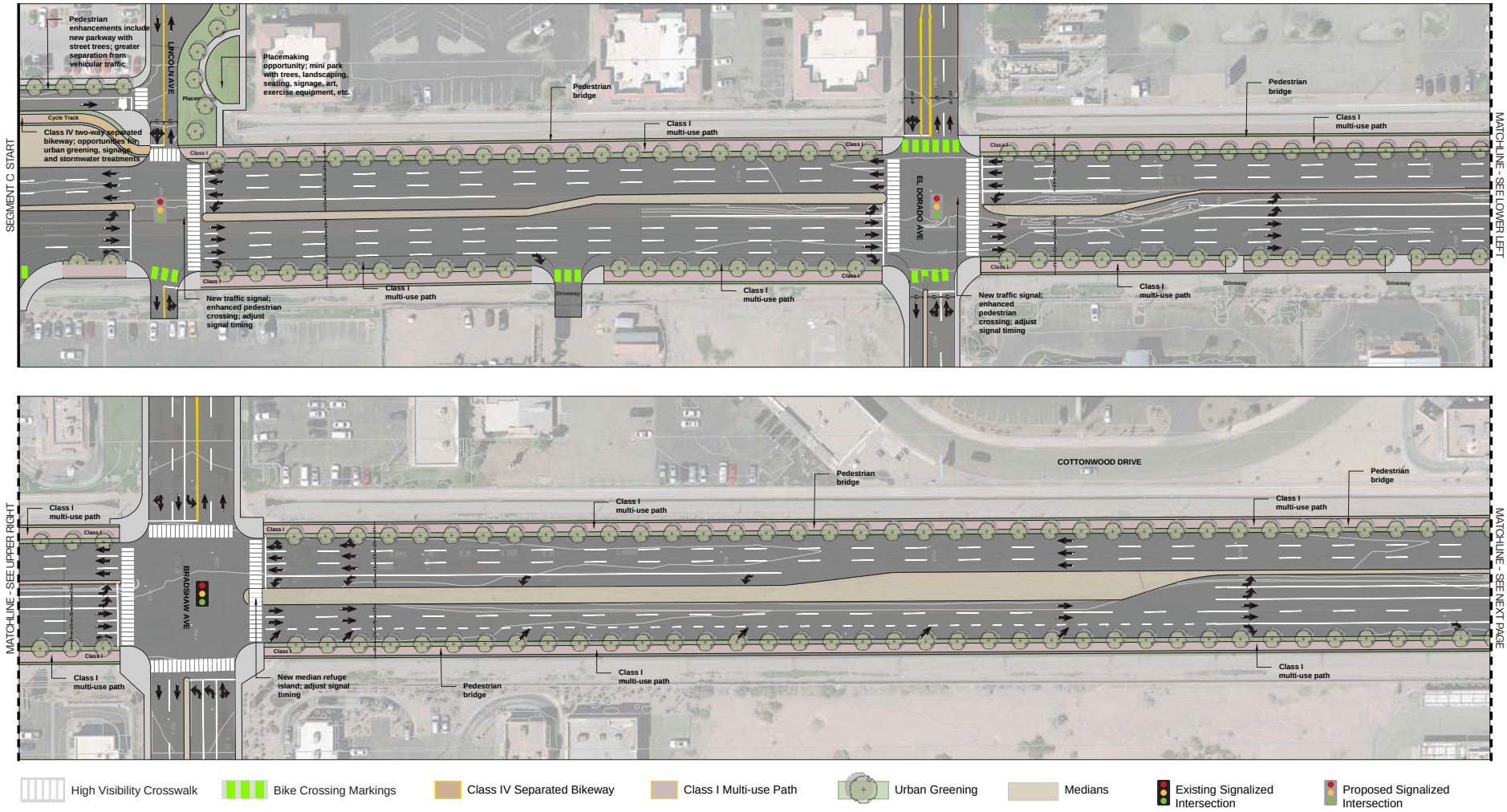
Segment C is the northernmost segment of this study from Lincoln Avenue to Treshill Road near the Central Drain and northern city boundary. This segment has wide earthen medians, a lack of sidewalks along the entire segment, and undeveloped shoulders with an earthen irrigation channel on the east side and a channelized flood control system on the west side. Attractions on this segment include take-out and dine-in eateries, places of worship, grocery stores, medical establishments, federal facilities, and retail businesses. Although there are no bus stops directly on this segment of Imperial Avenue, there is transit access nearby on Bradshaw Avenue and Cruickshank Drive.

Recommendations

The proposed improvements for Segment C include the addition of Class I multi-use path facilities on both sides of Imperial Avenue. At the intersection of Imperial Avenue and Lincoln Avenue, a placemaking opportunity exists for a mini park with urban greening elements such as trees and landscaping. A mini park also creates a space for the potential display of art by local artists and amenities such as exercise equipment. A proposed signalized intersection falls within Segment B and is recommended at the intersection of Imperial Avenue and El Dorado Avenue with the addition of high-visibility crosswalks and adjusted signal timing. Throughout the outreach efforts of this CSP, community members expressed a desire for more direct connections to business storefronts and building frontages. This feedback was incorporated by proposing pedestrian/bicycle bridges over the channelized flood control system throughout Segment C. El Centro will coordinate with the City of Imperial to ensure continuity of the proposed recommendations.

Note: El Centro will need to verify speed reduction and final design requirements, such as Clear Recovery Zones (CRZ), during the engineering design phase

Figure 4-5: Segment C Preferred Concept (1 of 2)



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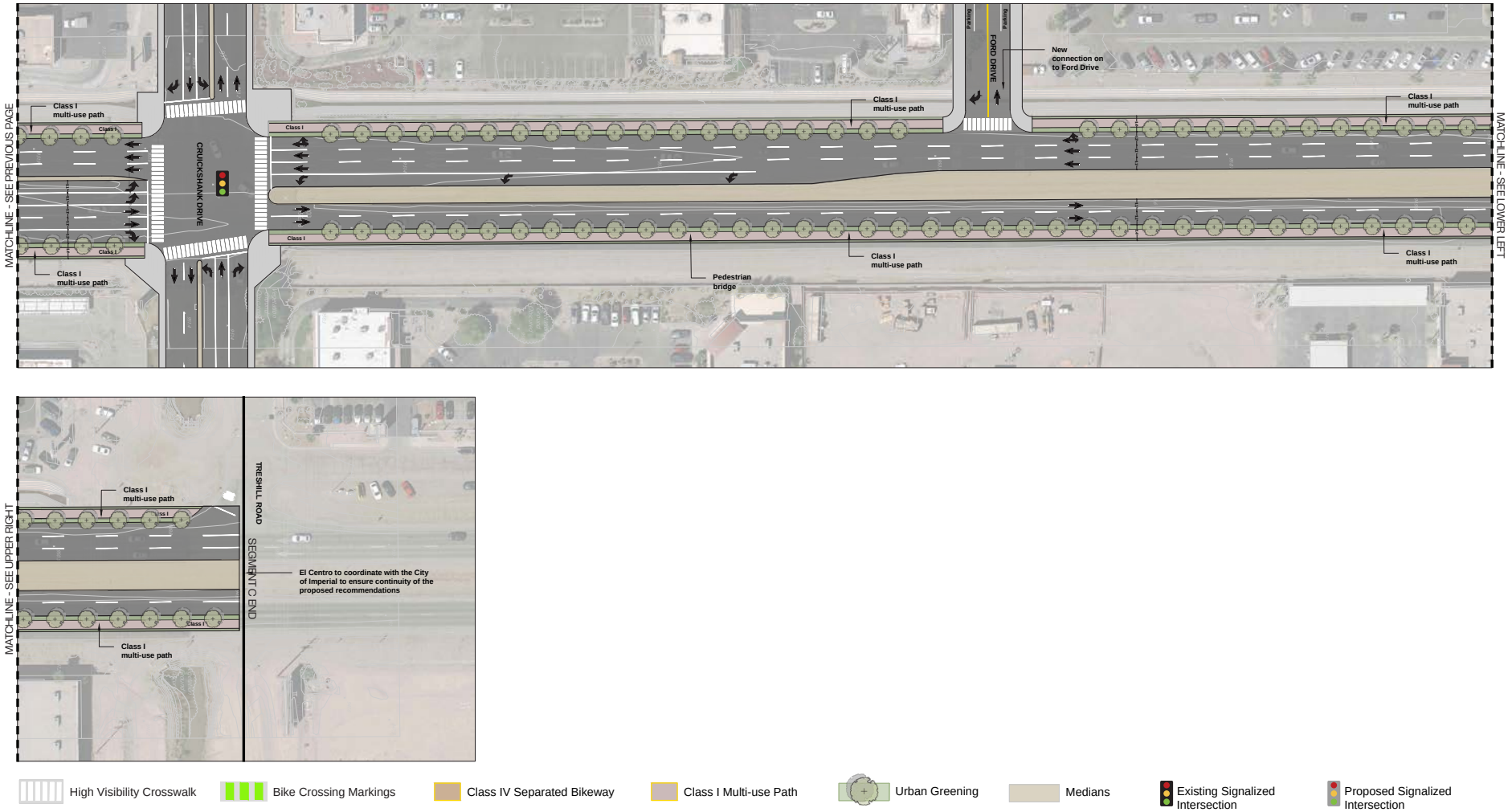
Note: Higher-resolution versions of these cutsheets can be found in the Appendix

Figure 4-6: Segment C Preferred Concept (2 of 2)

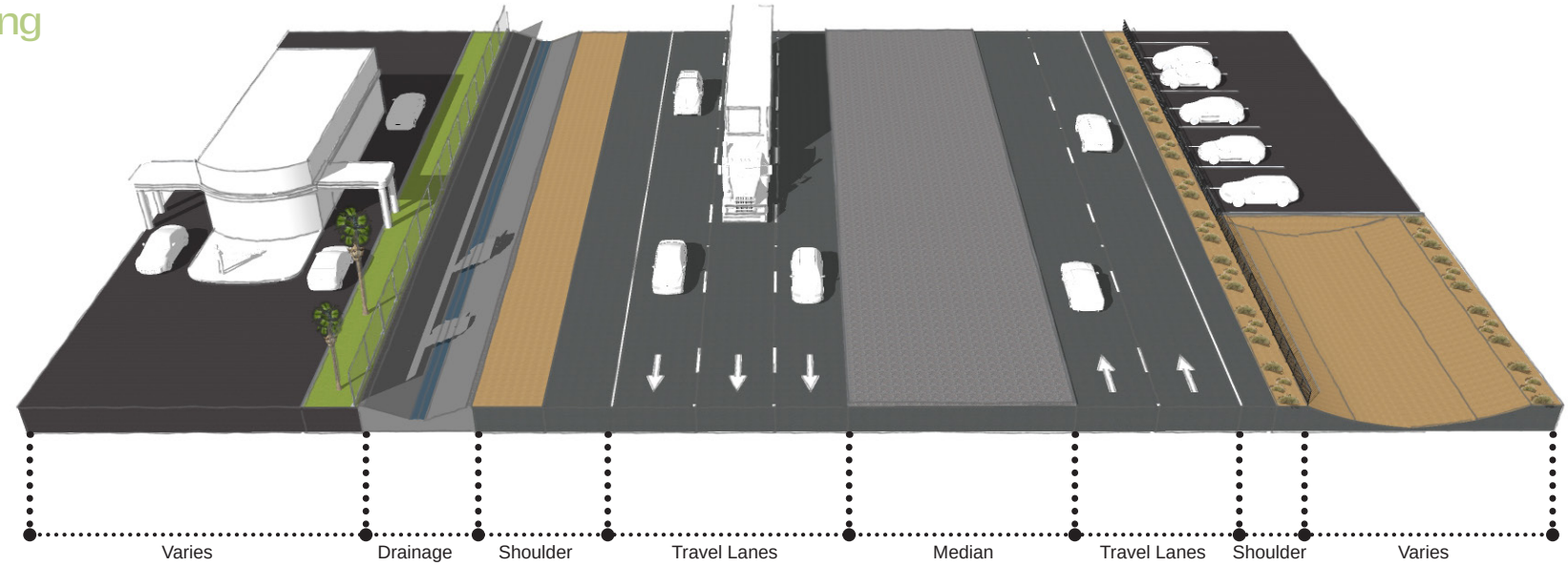


City of El Centro 1275 Main St El Centro, CA 92243	KTU+A 3916 Normal St San Diego, CA 92103	MBI 9635 Granite Ridge Drive San Diego, CA 92123	**City of El Centro** **Imperial Avenue Complete Streets Plan**	**Conceptual Plan** **Imperial Avenue from Lincoln Ave Treshill Ave**	**Scale: 1" = 80'-0"** **January 2025**	**Sheet 2 of 2**

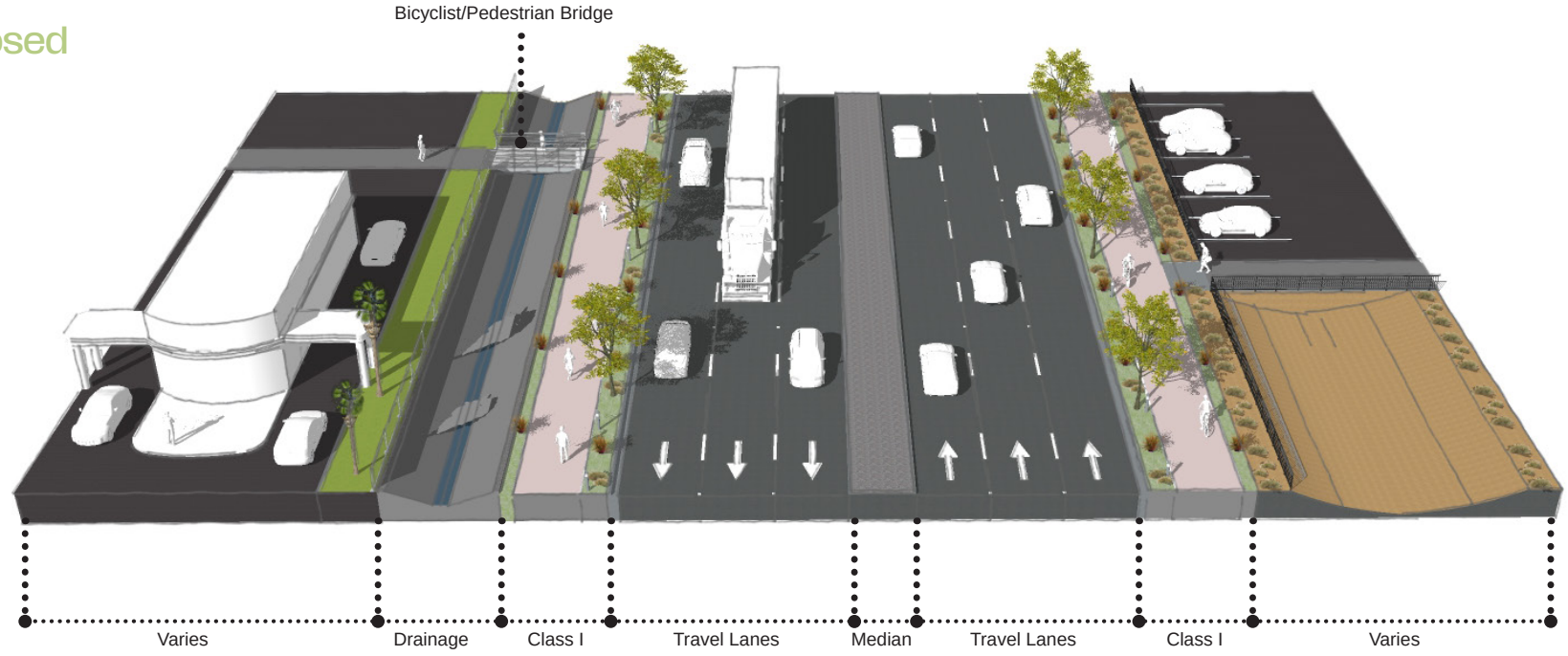
Note: Higher-resolution versions of these cutsheets can be found in the Appendix

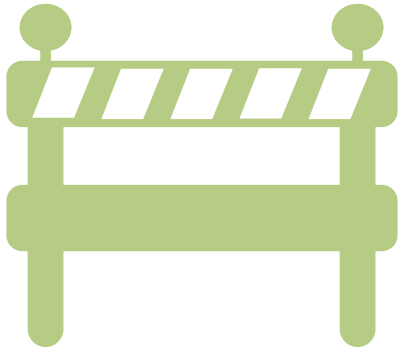
Figure 4-7: Segment B Preferred Concept Sections

Existing



Proposed





End of Segment C

Endnotes

1 National Association of City Transportation Officials. (2011). Urban Bikeway Design Guide. Major Street Crossings. Retrieved February 6, 2024.

2 National Association of City Transportation Officials. (2011). Urban Bikeway Design Guide. Midblock Crossings. Retrieved February 6, 2024.

3 National Association of City Transportation Officials. (2011.) Urban Street Design Guide. Curb Extensions. Retrieved February 6, 2024

4 Caltrans. (2014). California Manual on Uniform Traffic Control Devices. https://dot.ca.gov/programs/safety-programs/camutcd. Retrieved February 6, 2024

5 Caltrans. (2020). Highway design Manual. https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm. Retrieved February 6, 2024

6 National Association of City Transportation Officials. (2011). Urban Bikeway Design Guide. Conventional Bike Lanes. Retrieved February 6, 2024

7 U.S. Environmental Protection Agency. (2021). Green Streets Handbook.

8 National Recreation and Park Association. (n.d). Creating Mini-Parks for Increased Physical Activity. Retrieved November 20, 2024.


PlayCraft

5 Implementation

5.1 Implementation

Implementing the CSP may require a phased approach for further analysis and feasibility. The following phasing is recommended to implement the recommendations. However, El Centro reserves the right to implement recommendations at their discretion or as funding becomes available.

Phase One - Segment B

Imperial Avenue between Scott Road and Lincoln Road, or Segment B, has a high concentration of key destinations and recreational resources, such as the El Centro Library, Carlos Aguilar Park, the future Villa Avenue class I facility, connections to several schools, and many businesses. While there are sidewalks along the west side of the frontage road, there are no sidewalks along Imperial Avenue, and there are minimal east-west crossings. Given the high concentration of destinations and opportunity for local connectivity in the activity areas, Segment B is recommended for phase one implementation.

Phase Two - Segment C

Imperial Avenue from Lincoln Avenue to Treshill Road, or Segment C, is recommended for phase two implementation for its importance as a regional connector and density of destinations. By constructing the proposed class I facility, pedestrians and bicyclists can more easily travel between the Cities of Imperial and El Centro, connecting with Segment B improvements at Lincoln Avenue.

Phase Three - Segment A

While Segment A of Imperial Avenue, from Adams Avenue to Scott Avenue, demonstrates a need for Complete Street improvements, it is recommended for phase three implementation. Segment A currently has existing sidewalks, crosswalks, and bus shelters. Although bike facilities are currently missing, the existing infrastructure provides adequate space for other modes of travels.

For planning-level cost estimates of the Preferred Concept Plan, intended for planning purposes only, refer to **Appendix A.6**.

5.2 Potential Funding Sources

Federal, state, and local government agencies invest billions of dollars annually in the nation's transportation system. However, only a fraction of those funds are used to develop policies, plans, and projects to improve conditions for bicyclists and pedestrians which is key to creating Complete Streets. Obtaining funds is a competitive process and often limited. Projects desired and championed by the community are often unfunded due to municipalities applying for the wrong type of funding or the unawareness of existing funding opportunities. This chapter serves as a guide and resource for the City of El Centro in the pursuit of funding.

Where Does the Money Come From?

The Legislative Branch of government proposes appropriations — a law that provides an agency with budget authority — of taxpayer funds for government functions, including federal agencies in the Executive Branch of government, like the U.S. Department of Transportation. Once The President signs the appropriations bills, they become law and make funds available to agencies that can allocate funding through grant programs. Local agencies, like the City of El Centro, can then apply to secure available funds for implementing priority projects identified in a document such as this CSP.

5.2.1 Funding Tables

The following **Table 5-1** and **Table 5-2** identify an extensive list of potential federal, state and local funding opportunities that may be used for a wide range of projects such as the design of a corridor with pedestrian, bicycle, transit, automobile, placemaking, and urban greening enhancements.

Table 5-1: Federal Funding Matrix

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Choice Neighborhoods Planning Grants	U.S. Department of Housing and Urban Development (HUD)	Choice Neighborhoods Planning Grants support the development of comprehensive neighborhood revitalization plans which focus on directing resources to address three core goals: Housing, People, and Neighborhood. (U.S. Department of Housing and Urban Development)	Annually		✓		• Development and implementation of a comprehensive community driven plan for the revitalization of HUD assisted housing to increase investment and opportunities in the neighborhood for residents. • Transformation Plan.
Community Development Block Grants (CDBG)	U.S. Department of Housing and Urban Development (HUD)	The Community Development Block Grant (CDBG) Program provides annual grants on a formula basis to states, cities, and counties to develop viable urban communities through decent housing and a suitable living environment, and by expanding economic opportunities for principally low- and moderate-income communities. (U.S. Department of Housing and Urban Development)	Annual	✓			• Construction of public facilities and improvements, such as: water and sewer facilities, streets, neighborhood centers, and the conversion of school buildings for eligible purposes.
Enhanced Mobility of Seniors and Individuals with Disabilities	Federal Transit Administration (FTA)	The goal of this program is to improve mobility for seniors and individuals with disabilities by removing barriers to transportation service and expanding transportation mobility options.	Annually	✓	✓		• Mobility management programs • Building an accessible path to a bus stop • improving signage, or way-finding technology
Formula Grants for Rural Areas	Federal Transit Administration (FTA)	The Formula Grants for Rural Areas program provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations. The program also provides funding for state and national training and technical assistance through the Rural Transportation Assistance Program. (Federal Transit Administration)	Annually		✓	✓	• Eligible activities include planning, capital, operating, job access and reverse commute projects, and the acquisition of public transportation services.

INF = Infrastructure NI = Non-infrastructure PL = Planning

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Highway Safety Improvement Program (HSIP)	Federal Highway Administration (FHWA)	The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads with a focus on performance. (U.S. Department of Transportation Federal Highway Administration) California's share of HSIP funds are split between the State HSIP for state highways and the Local HSIP for local roads	Annually / Biennial	✓		✓	• Safety improvements at signalized and non-signalized intersections • Pedestrian, bike, and roadway safety improvements • Install hybrid pedestrian signals • Improve pedestrian and bicycle safety at locations with uncontrolled crossings • Plans
Innovative Coordinated Access and Mobility (ICAM) Pilot Program	Federal Transit Administration (FTA)	This funding opportunity seeks to improve mobility options through employing innovative coordination of transportation strategies and building partnerships to enhance mobility and access to vital community services for older adults, individuals with disabilities, and people of low income.	Annually		✓	✓	• Transportation projects with a focus on employing mobility management strategies, vehicle purchase, IT purchase, leasing equipment or a facility for use in public transportation etc
Mobility on Demand (MOD) Sandbox Demonstration Program - 5312	Federal Transit Administration (FTA)	The MOD Sandbox Program is a foundational element of FTA's strategic research focus on mobility innovation. The Sandbox allows communities to creatively leverage a range of mobility options from bike- and car-sharing systems to demand-responsive bus services.	Annually			✓	Eligible activities include: • All activities leading to the demonstration of the innovative MOD and transit integration concept, such as planning and developing business models, obtaining equipment and service, acquiring/developing software and hardware interfaces to implement the project, and operating the demonstration.

INF = Infrastructure NI = Non-infrastructure PL = Planning

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Rebuilding American Infrastructure with Sustainability and Equity / RAISE Discretionary Grant Program	U.S. Department of Transportation	Previously known as the Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant, The Rebuilding America Infrastructure with Sustainability and Equity/ RAISE Discretionary Grant Program, funds projects that have a significant local or regional impact. Half of the funding is granted to projects in rural areas, and half of the funding will go to projects in urban areas. (U.S. Department of Transportation)	Annually	✓			• Road, rail, transit and port projects that promise to achieve national objectives.
Reconnecting Communities and Neighborhoods Grant Program (RCN)	U.S. Department of Transportation/ Caltrans	Reconnecting Communities Pilot (RCP) and Neighborhood Access and Equity (NAE) programs combine two major discretionary grants into one Notice of Funding Opportunity (NOFO). Together, this combined program will be known as the Reconnecting Communities and Neighborhoods (RCN) Program. Both programs remain separate for the purpose of award Under the combined RCN Program, USDOT offers three grant types: Capital Construction, Community Planning , and Regional Partnerships Challenge. (U.S. Department of Transportation)	Annually	✓		✓	• Prioritizing disadvantaged communities • Aiming to improve access to daily needs such as jobs, education, healthcare, food, and recreation. • Fostering equitable development and restoration. • Reconnecting communities by removing, retrofitting, or mitigating highways or other transportation facilities that create barriers to community connectivity, including to mobility, access, or economic development.

INF = Infrastructure NI = Non-infrastructure PL = Planning

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Road to Zero Community Traffic Safety Grant Program	National Highway Traffic Safety Administration	The Road to Zero Community Traffic Safety Grant Program is focused on supporting innovative and promising approaches for implementing evidence-based countermeasures, supporting a Safe System approach, and performing necessary research to address traffic fatalities and serious injuries, and disparities in mobility safety and access.	Annually			✓	• Projects must be realistically achievable within a one-year time frame and have measurable objectives. • Proposals should demonstrate the promising nature of the countermeasure by describing the innovative implementation approach, citing the evidence of effectiveness or identifying how effectiveness will be evaluated, and/ or discussing how the project fills a gap or addresses existing disparities in traffic safety.
Safe Streets and Road for All (SS4A)	U.S. Department of Transportation	The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. There are two types of SS4A grants: Action Plan Grants and Implementation Grants. - Action Plan Grants assist in developing or complete an Action Plan or to conduct supplemental planning activities. - Implementation Grant includes infrastructure, behavioral, and operational safety activities identified in an Action Plan (U.S. Department of Transportation)	Annually	✓	✓	✓	• Development of a comprehensive safety action plan (Action Plan) • Implement projects and strategies identified in Action Plan to address a roadway safety problem • Engagement & Collaboration • Planning structure • Transforming a roadway corridor • Installing pedestrian safety enhancements and closing network gaps • Supporting the development of bikeway networks • Evaluating and improving the safety of intersections
Transit Oriented Development Planning (TOD) Pilot Program	Federal Transit Administration (FTA)	The Pilot Program for TOD Planning helps support FTA's mission of improving America's communities through public transportation by providing funding to local communities to integrate land use and transportation planning with a new fixed guideway or core capacity transit capital investment. (Federal Transit Administration)	Annually			✓	• Comprehensive planning funded through the program must examine ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access for pedestrian and bicycle traffic, engage the private sector, identify infrastructure needs, and enable mixed-use development near transit stations.

INF = Infrastructure NI = Non-infrastructure PL = Planning

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Transportation Alternatives (TA)	Federal Highway Administration (FHWA)	The Transportation Alternatives (TA) Set-Aside from the Surface Transportation Block Grant (STBG) Program provides funding for a variety of generally smaller-scale transportation projects. (U.S. Department of Transportation Federal Highway Administration)	Annually	✓		✓	• Pedestrian and bicycle facilities • Construction of turnouts, overlooks, and viewing areas • Community improvements such as historic preservation and vegetation management • Environmental mitigation related to stormwater and habitat connectivity • Recreational trails • Safe routes to school projects • Vulnerable road user safety assessments
Urban and Community Forestry Program	U.S. Forest Service	The Urban and Community Forestry is a covered program under the Agency's Justice40 Initiative. The program delivers 40% of the program's investments through established and new partnerships working to support disadvantaged communities experiencing low tree canopy and environmental justice issues. (U.S. Department of Agriculture Forest Service & USDA)	Varies	✓			• Supports urban tree-planting • Urban forest planning and management and related activities (particularly in disadvantaged communities)

INF = Infrastructure NI = Non-infrastructure PL = Planning

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
FEDERAL FUNDING							
Urbanized Area Formula Grants	Federal Transit Administration (FTA)	The Urbanized Area Formula Funding program (49 U.S.C. 5307) makes federal resources available to governors and other recipients for transit capital and operating assistance and transportation-related planning in urbanized areas. (Federal Transit Administration)	Annually	✓	✓	✓	• Eligible activities include: planning, engineering, design and evaluation of transit projects and other technical transportation-related studies. • Capital investments in bus and bus-related activities such as replacement, overhaul and rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities. • Capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, station infrastructure, track, signals, communications, and computer hardware and software. • In addition, associated transit improvements, workforce development activities, and certain expenses associated with mobility management programs are eligible under the program.

INF = Infrastructure NI = Non-infrastructure PL = Planning

Table 5-2: State Funding Matrix

FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
STATE FUNDING PROGRAMS							
Active Transportation Program (ATP)	Caltrans	The program encourages increased use of active modes of transportation by the increase of trips accomplished by biking and walking, increasing safety and mobility for non-motorized users, advance active transportation efforts to achieve greenhouse gas (GHG) reduction goals, enhance public health, ensuring that disadvantaged communities fully share in the benefits of the program, and providing projects that benefit various types of active transportation users. (Caltrans)	Annually	✓	✓	✓	• Safe Routes to School Plan • Transportation Alternatives Program • Bicycle Transportation Account
Affordable Housing and Sustainable Communities Program (AHSC)	Strategic Growth Council and Department of Housing and Community Development	The Affordable Housing and Sustainable Communities Program (AHSC) funds land use, housing, transportation, and land preservation projects to support infill and compact development that reduce greenhouse gas emissions. (California Climate Investments)	Annually	✓	✓		• Class I, II, III, & IV bike lanes • Active transportation projects to encourage connectivity to transit networks • Bikeways and sidewalks to affordable housing and transit center • Install dedicated bicycle facilities • Pedestrian facilities such as bulb-outs
Clean Mobility Options Voucher Pilot Program	California Climate Investments	The Program makes $20 million available for zero emissions shared mobility projects (such as car sharing, bike sharing, and on-demand sharing) in disadvantaged and low-income communities, including some tribal and affordable housing communities (California Climate Investments)	Varies	✓			• Bikeshare programs • “Quick build” right-of-way safety improvements for bicycles and scooters

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FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
				INF	NI	PL	
STATE FUNDING PROGRAMS							
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	Federal Transit Administration (FTA)	The purpose of the program is to provide flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. The program supports surface transportation projects and other related efforts that contribute to air quality improvement and congestion relief. (U.S. Department of Transportation Federal Highway Administration)	Annually	✓			• Travel Demand Management to promote clean commutes • Public Education and Outreach • Bicycle amenities; Class I, II, III, & IV bike lanes
Local Highway Safety Improvement Program (HSIP)	Caltrans Local Assistance/ FHWA	The Program funds work on any public road or publicly owned bicycle or pedestrian pathway or trail, or on tribal lands for general use of tribal members, that improves the safety for its users. Project maximum funding- $10M. Solicitation varies from annually to semi-annually. (Caltrans)	Annually / Biennial	✓		✓	• Install hybrid pedestrian signals • Improve pedestrian and bicycle safety at locations with uncontrolled crossings • Plans
Local Partnership Program (LPP)	California Transportation Commission	The primary objective of this program is to provide funding to counties, cities, districts, and regional transportation agencies in which voters have approved fees or taxes dedicated solely to transportation improvements or that have imposed fees, including uniform developer fees, dedicated solely to transportation improvements. Funding includes $200M/year to improve aging Infrastructure, Road Conditions, Active Transportation, Transit and rail, Health and Safety Benefits. (California Transportation Commission)	Biennial	✓			• Close sidewalk gap, install class II bike lanes and cycle track, curb extensions, pedestrian enhancements, improvements to lighting and signage • Construct 4 single-lane and 1 multi-lane roundabouts, and improvements to street, pedestrian and bicycle facilities • Expressway pedestrian overcrossing

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FUNDING SOURCE	FUNDING AGENCY	PURPOSE/ DESCRIPTION	FUNDING CYCLE	PROJECT TYPE			PROJECT EXAMPLES
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STATE FUNDING PROGRAMS							
Local Streets and Roads (LSR) Program	California Transportation Commission	The purpose of the program is to provide funds to cities and counties for basic road maintenance, rehabilitation, and critical safety projects on the local streets and roads system. (California Transportation Commission)	Annually	✓			• Basic road maintenance, rehabilitation, and critical safety projects. • Complete Streets Components • Bike Lanes
Office of Traffic Safety Grant Program	CA Office of Traffic Safety	The Program provides annual funds to prevent serious injury and death resulting from motor vehicle crashes so that all roadway users arrive at their destination safely. Funds can be used for bicycle and pedestrian safety. (California Office of Traffic Safety)	Annually		✓	✓	• Safety education and encouragement • Campaigns to promote safety • SRTS safety programs
Recreational Trails Program (RTP) Non-motorized	Federal Highway Administration (FHWA)	The Recreational Trails Program (RTP) is a federal U.S. Department of Transportation grant program administered by the California Department of Parks and Recreation. The RTP provides funding to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The Recreational Trails Program (RTP) provides funds annually to develop non-motorized recreational trails and trails-related facilities. (California Department of Parks and Recreation)	Annually	✓	✓		• Construction of Class I trails to close gaps • New hiking trails, drainage crossings, retaining walls, fencing, and signage, landscaping • Acquisition of land • Rehabilitation of trails, Trailside and Trailhead Facilities • Construction of new trails • Maintenance of existing trails
Riding for Focus	Outride	This program is a school- based rider education program that promotes cycling as an outlet for middle school students to improve their cognitive, physical, and social well-being.	Annually		✓		• A fleet of bikes and helmets • 14-lesson curriculum for students • Online training course for teachers • Program evaluation and data analysis support • In-person training conference and ongoing support

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				INF	NI	PL	
STATE FUNDING PROGRAMS							
Solutions for Congested Corridors (SCCP)	California Transportation Commission	The purpose of the program is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. (California Transportation Commission)	Annually	✓		✓	• New or existing transit infrastructure improvements for new or improved service • Adding new or improving existing rail infrastructure • Addition of high-occupancy vehicle lanes and managed lanes. • Closing gaps in the street network • Bicycle facilities such as dedicated bicycle lanes, separated bikeways, bicycle parking, and secure storage • Pedestrian facilities
State Highway Operations and Protection Program (SHOPP)	The State Highway Account (SHA), Federal Highway Trust Fund (HTF), and Road Maintenance and Rehabilitation Account (RMRA)	The Program is the State Highway System's "fix it first" program that funds repairs and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System. (Caltrans)	Annually	✓			• Upgrade sidewalks to ADA compliance • Reconstruct damaged pavement • Add bike lanes to updated corridors • Upgrade pedestrian push buttons, refresh striping, and improve pedestrian and bicycle access

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STATE FUNDING PROGRAMS							
State Transportation Improvement Program (STIP)	California Transportation Commission	The STIP is a multi-year program adopted by the Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. Local agencies should work through their Regional Transportation Planning Agency (RTPA), County Transportation Commission, or Metropolitan Planning Organization (MPO), as appropriate, to nominate projects for inclusion in the STIP. (Caltrans)	Biennial	✓			• Bike/ped overcrossing and access Improvements and bicycle and pedestrian bridge • Class I, II, III, & IV bike lanes • Multi-Use paths • Complete Streets improvements
Statewide Park Program (SPP)	California Department of Parks and Recreation	The goal of this program is to create new parks and new recreation opportunities in underserved communities across California.	Unknown	✓	✓		• Acquisition of land • Jogging and walking loop, par course, running track • Non-motorized trail, pedestrian/bicycle bridge, greenbelt/linear
Sustainable Transportation Equity Project (STEP)	Air Resources Board	The Program makes funds available for one to three implementation block grants to fund clean transportation and land use projects in disadvantaged communities. Funded projects will work together to increase community residents' access to key destinations so they can get where they need to go without the use of a personal vehicle (California Climate Investments)	Annually	✓	✓	✓	• New bike routes (Class I, Class II, or Class IV) and supporting infrastructure • Publicly-accessible bike parking, storage, and repair infrastructure (e.g., bike racks, bike lockers, bike repair kiosks) • New walkways that improve mobility/access/ safety of pedestrians (nonmotorized users) • Street crossing enhancements, including accessible pedestrian signals • Plans

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STATE FUNDING PROGRAMS							
Sustainable Transportation Planning Grants	Caltrans	The program includes funding to encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission. The Sustainable Transportation Planning Grant Program includes the Sustainable Communities Grants, Climate Adaptation Planning Grants, and the Strategic Partnership Grants.	Annually			✓	• Safe Routes to School Plan • Active Transportation Plan • Bike/ped Trail/Path Feasibility Study • Complete Streets Plan • Sustainable Communities Plan • Transit-Oriented Development Plan • First/Last Mile Connectivity Plan"
Transformative Climate Communities (TCC)	Strategic Growth Council and Department of Conservation	The Program funds community-led development and infrastructure projects that achieve major environmental, health, and economic benefits in California's most disadvantaged communities. (California Climate Investments)	Annually	✓			• Bike share program • Creating and considering active transportation corridors for better non-motorized connections • Multi-use paths • Urban greening for pedestrian facilities
Transit and Intercity Rail Capital Program (TIRCP)	CalSTA and Caltrans Division of Rail and Mass Transportation	The TIRCP provides grants from the Greenhouse Gas Reduction Fund (GGRF) to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems, to significantly reduce emissions of greenhouse gases, vehicle miles traveled, and congestion. (California State Transportation Agency)	Annually	✓	✓	✓	• Pedestrian and bike trail • First/last mile connections via bike lanes and separated paths • Bike share programs • Bike parking facilities • Plans

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STATE FUNDING PROGRAMS							
Urban Greening	California Natural Resources Agency	The Program supports the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Must include at least one of the following: • Sequester and store carbon by planting trees • Reduce building energy use by strategically planting trees to shade buildings • Reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. (California Climate Investments)	Annually	✓			• Non-motorized urban trails that provide safe routes for both recreation and travel between residences, workplaces, commercial centers, and schools • Projects that expand or improve the usability of existing active transportation routes (e.g., walking or bicycle paths) or create new active transportation routes that are publicly accessible by walking • Complete Green Streets

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