Re:Imagine Garden Grove

Garden Grove ACTIVE STREETS

APPENDICES

DECEMBER 2016

GARDEN GROVE ACTIVE STREETS MASTER PLAN

Transforming Transportation for a Healthy and Vibrant Future

Prepared for: Garden Grove

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APPENDICES

"This is the vision–to create a changed transportation system that offers not only choices among travel modes for specific trips, but more importantly presents these options so that they are real choices that meet the needs of individuals and society as a whole. Making this vision a reality must begin now. "

– USDOT FEDERAL HIGHWAY ADMINISTRATION, The National Bicycling and Walking Study, 1994

Contents

Appendix A - Existing Plans & Policy Review

INTRODUCTION

This section provides a summary of bicycle and pedestrian planning-related efforts in Garden Grove, California, as well as relevant regional, state, and federal plans. The nine plans are listed in Table A-1 and reviewed below.

SUMMARY OF RELEVANT PLANNING EFFORTS

Table A-1: Relevant Bicycle and Pedestrian Planning Documents Reviewed

Plan	Agency	Year
Harbor Corridor Specific Plan	City of Garden Grove	1985
City of Garden Grove General Plan 2030	City of Garden Grove	2008
OCTA Commuter Bikeways Strategic Plan	Orange County Transportation Authority (OCTA)	2009
Outlook 2035: Long Range Transportation Plan	Orange County Transportation Authority (OCTA)	2010
Nonmotorized Metrolink Accessibility Strategy	Orange County Transportation Authority (OCTA)	2013
SCAG Regional Transportation Plan/ Sustainable Communities Strategy	Southern California Association of Governments (SCAG)	2012
OCTA Districts 1 and 2 Bikeways Strategy	Orange County Transportation Authority (OCTA)	2013
OCTA Streetcar	Orange County Transportation Authority (OCTA)	2015

CITY OF GARDEN GROVE

GENERAL PLAN 2030 (2008)

The Garden Grove General Plan was updated in 2008 as the City's main policy document to assist and guide local decision makers in planning the future of the City. The City is currently in the process of updating their General Plan. There are four Elements in the General Plan 2030 that provide guidance on bicycle and pedestrian planning in the City. These include: Circulation, Parks, Recreation, and Open Space, Community Design, and Land Use Elements.

Circulation Element

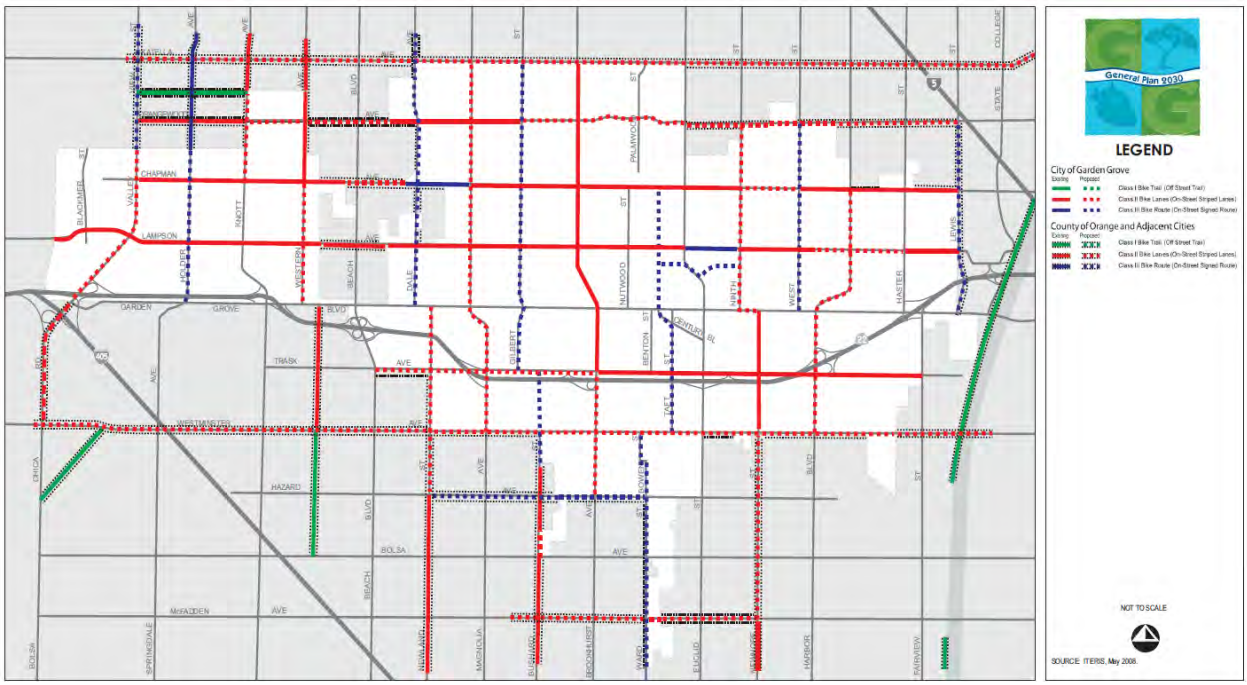
The Circulation Element states that it aims to identify and establish the City's policies governing the multi-modal transportation system, including bicycle and pedestrian paths. The Element includes the OCTA Transit Vision and Go Local Project, which is a partnership between the Cities of Garden Grove and Santa Ana to expand the multi-modal transportation network by accommodating streetcars, bus rapid transit, automobiles, bicycles, and pedestrians. The Element also includes the Master Plan of Bikeway Facilities, as seen in **Figure A-1,** which includes a combination of the following three types of facilities:

- **Class I multi-use path:** a facility that is physically separated from a roadway and designated primarily for the use of bicycles.
- **Class II bicycle lane facility:** a facility that features a striped lane on the paved area of a road for preferential use by bicycles.
- **Class III bicycle route:** a facility typically identified by green and white "Bike Route" guide signage only.

The Circulation Element notes that several Class II and III bikeway segments have been developed in Garden Grove. In total, there is one half-mile of Class III facilities, 22.75 miles of Class II facilities, and one half-mile of Class I facilities in the city. It is important to note that the Element states that there is no existing bicycle parking facilities identified in the city.

The Master Plan of Bikeway Facilities identifies several priority bikeway project in the city, including a 1 mile Class I bikeway project along a north-south Union Pacific rail corridor near Stanton and a total of 11.75 miles of Class II projects.

Figure A-1: Garden Grove Master Plan of Bikeway Facilities



The Circulation Element also includes a section on pedestrian facilities, which include sidewalks and trails for both transportation and recreation purposes. The Circulation Element states that currently there is no sanctioned walking or hiking trail system in the City of Garden Grove and that the city is not included in the County Master Plan of Riding and Hiking Trails. However, in the County Master Plan of Arterial Highways, which includes the majority of arterial highsways in Garden Grove, all facilities must provide sidewalks as a mean of pedestrian transportation and parkways.

The Circulation Element includes goals, policies, and implementation programs that emphasize a multi-modal transportation system, including an attention on bikeways and pedestrian facilities and access. Goals that pertain to bicycles and pedestrians include increasing awareness of alternative forms of transportation, with attention on bicycle and pedestrian access throughout the City of Garden Grove, and the creation of a safe, appealing and comprehensive bicycle network for transportation and recreation opportunities. **Table A-2** outlines select policies and implementation programs listed to carry out these goals.

Table A-2: Circulation Element Policies and Implementation Programs Relevant to Bicycles and Pedestrians

Policy	Text
Policy CIR-5.3 Alternative Transportation	Provide appropriate bicycle access throughout the City of Garden Grove.
Policy CIR-5.4 Alternative Transportation	Provide appropriate pedestrian access throughout the City of Garden Grove.
Policy CIR-6.1 Bikeways	Continue to implement an updated Master Plan of Bikeways and its amendments.
Policy CIR-6.2 Bikeways	Continue to maintain roadways and remove barriers on streets with bikeway facilities.
Policy CIR-6.3 Bikeways	Encourage existing major traffic generators, and new major traffic generators to incorporate facilities, such as bicycle racks and showers, into the development.
Policy CIR-6.4 Bikeways	Continue to pursue and monitor funding sources for bikeway facilities.
Policy CIR-6.5 Bikeways	Sponsor bicycle safety and education programs
Implementation Programs	
• **CIR-IMP-5B Alternative Transportation** Encourage the creation of programs such as Transportation Systems Management (TSM), public transit, carpools/ vanpools, ride-match, bicycling, and other alternatives to the energy-inefficient use of vehicles. • **CIR-IMP-6A Bikeways** Encourage the Public Works Department to consider bikeways in their prioritization of re-paving, and street sweeping. • **CIR-IMP-6B Bikeways** Consider amending the City's Zoning Code to require major traffic generators to include bikeway facilities. • **CIR-IMP-6C Bikeways** Provide incentives to developers who incorporate bikeways into developments. • **CIR-IMP-6D** Update the existing Master Plan of Bikeways to comply with Caltrans standards in order to qualify for funding of new bikeway facilities. • **CIR-IMP-6E** Consider implementing the Safe Routes to schools program to qualify for funding • **CIR-IMP-6F** Maintain awareness of Orange County Transit Authority (OCTA) grants opportunities. • **CIR-IMP-6G** Encourage bicycle safety awareness classes at community centers or parks where facilities are currently located. • **CIR-IMP-6H** Encourage the placement of signage that educates and informs automobiles and bicyclists that use the facility.	

Parks, Recreation, and Open Space Element

The Parks, Recreation, and Open Space Element highlight bikeways and pedestrian trails as important recreation components for the City of Garden Grove. The Element aims to also provide guidance to develop future bikeways, promote bikeway connections, and encourage multi-use trails (see **Figure A-2).**

Goals that pertain to bicycles and pedestrians include the encouragement of pedestrian-oriented trails to connect users to destinations throughout the city and the provision of a comprehensive bicycle network. **Table A-3** outlines select policies and implementation programs listed to carry out these goals.

Figure A-2 Rendering of Multi-use path in the City of Garden Grove

Table A-3: Parks, Recreation, and Open Space Element Policies and Implementation Programs Relevant to Bicycles and Pedestrians

Policy	Text
Policy PRK-6.1 Pedestrian Trails	Encourage pedestrian-oriented trails and amenities within and linkage to parks, new development and redevelopment projects, and commercial centers
Policy PRK-6.2 Pedestrian Trails	Encourage the planning and development for on- and off-street pedestrian trails throughout the community by the Community Services Department.
Policy PRK-6.3 Pedestrian Trails	Explore public and private funding sources to provide additional pedestrian facilities within the City.
Policy PRK-7.1 Bikeways	Continue to implement an updated Master Plan of Bikeways and its amendments.
Policy PRK-7.2 Bikeways	Coordinate with the Traffic Engineer/ Public Works Department to link bikeways to create a larger connected network.
Policy PRK-7.3 Bikeways	Continue to work with OCTA to lease or purchase the right-of-way and create a bike trail through this area.
Policy PRK-7.4 Bikeways	Encourage existing major traffic generators, and new major traffic generators to incorporate innovative solution for safe bicycle crossings, and include bicycle facilities, such as bicycle racks and showers, into the development.
Policy PRK-7.5 Bikeways	Continue to pursue and monitor funding sources for bikeway facilities.
Policy PRK-7.6 Bikeways	Sponsor bicycle safety and education programs.
Implementation Programs	
• **PRK-IMP-6A Pedestrian Trails** Work with adjacent property owners to create an interconnected trail that extends along the public right-of-way. A path will benefit business by increasing exposure and access, and benefit the community through encouraging fitness, improved access, and a connected community. • **PRK-IMP-6B Pedestrian Trails** Coordinate with OCTA to provide trails within the right-of-way.	

- **PRK-IMP-6C** Design pedestrian trails/paths with multiple access points to maximize accessibility and minimize concentrating access.
- **PRK-IMP-6D** Seek to create links between trails or new urban trails along the public right-of-way. Coordinate with City departments to create a method for modifying existing corridors to incorporate pedestrian trails along roadways.
- **PRK-IMP-6E** Create design standards for trail development that includes distance markers (1/4, 1/2, and 1 mile), standardized signage, identifiable logo, street furniture, drinking fountain, and identifiable plant palette.
- **PRK-IMP-7A** Encourage the Public Works Department to consider bikeways in their prioritization of re-paving, and street sweeping.
- **PRK-IMP-7B** Provide incentives to developers who incorporate bikeways into developments.
- **PRK-IMP-7C** Update the existing Master Plan of Bikeways to comply with Caltrans standards in order to qualify for funding of new bikeway facilities.
- **PRK-IMP-7E** Promote the Public Works program for the Safe Routes to schools to qualify for funding.
- **PRK-IMP-7F** Maintain awareness of Orange County Transit Authority (OCTA) grant opportunities.
- **PRK-IMP-7G** Encourage bicycle safety awareness classes at community centers or parks where facilities are currently located.
- **PRK-IMP-7H** Encourage the placement of signage that educates and informs automobiles and bicyclists that use the facility.

Community Design Element

The Community Design Element addresses goals that pertain to physical design opportunities in the City of Garden Grove, most notably, provisions to enhance pedestrian access, amenities and experience. In addition, bike trails are referenced in goals to create linkages amongst districts in the city. Relevant goals include creating comfortable and safe corridors that accommodate all modes of transportation, and creating activity nodes that include pedestrian amenities. **Table A-4** outlines select policies and implementation programs listed to carry out the aforementioned goal.

Table A-4: Community Design Element Policies and Implementation Programs Relevant to Bicycles and Pedestrians

Policy	Text
Policy CD-4.2 Paths and Corridors	Develop a comprehensive or a series of focused streetscape programs to retrofit/redevelop primary and secondary corridors with appropriate design features, including sidewalks, paving patterns, street trees, parkways, , median planting, lighting, benches, trash receptacles, etc.
Policy CD-7.3 Districts	Promote linkages between separate districts through bike trails, pedestrian paths, common medians or parkway landscaping in connecting streets, and other physical improvements as necessary.
Implementation Programs	
• **CD-IMP-4B Paths and Corridors** Review and update all street standards to support design features that will create an attractive and safe environment for pedestrians, transit users, and bicyclists. • **CD-IMP-7D Districts** Establish minimum standards for pedestrian-oriented circulation in the International West, Brookhurst Triangle/Garden Grove Boulevard, Civic Center, and other pedestrian-oriented districts.	

Land Use Element

The Land Use Element includes goals, policies, and implementation programs that directly relate to bicycle and pedestrian planning. Relevant goals include using the right-of-way under the jurisdiction of OCTA for alternative transportation systems, recreation, and parklands, and encouraging mixed-use, pedestrian–friendly streetscapes. Table A-5 outlines select policies and implementation programs listed to carry out the aforementioned goal.

Table A-5: Land Use Element Policies and Implementation Programs Relevant to Bicycles and Pedestrians

Policy	Text
Policy LU-1.4	Encourage active and inviting pedestrian-friendly street environments that include a variety of uses within commercial and mixed use areas.
Policy LU-1.5	Mixed Use should be designed to: • Create a pleasant walking environment to encourage pedestrian activity. • Create lively streetscapes, interesting urban spaces, and attractive landscaping. • Provide convenient shopping opportunities for residents close to their residence. • Integrate with surrounding uses to become a part of the neighborhood rather than an isolated project. • Use architectural elements or themes from the surrounding area, as appropriate. Provide appropriate transition between land use designations to minimize neighbor compatibility conflicts.
Policy LU-1.6	Encourage workplace development in close proximity to residences in areas designated as Mixed Use.
Policy LU-8.1	Work with OCTA to ensure the proper maintenance of the right-of-way until beneficial interim uses are developed on the right-of-way.
Policy LU-8.2	Prepare a plan for the first phase of use of the OCTA right-of-way that lies between Chapman Avenue to the north and Garden Grove Boulevard to the south.
Implementation Programs	
• LU-IMP-1B Amend the Zoning Code to implement mixed use zoning districts that provide development standards for mixed use development, which should address minimum density and intensity requirements; allowable uses; horizontal and/or vertical mix of uses, building heights; and parking standards. • LU-IMP-1C Evaluate mixed use projects to ensure that there is an adequate mix of uses on the site and in the area. • LU-IMP-8A Enter into a cooperative agreement with OCTA and the City of Santa Ana to develop a “Go Local” transit extension from Harbor and Westminster Boulevards in Garden Grove to the Santa Ana Regional Transportation Center. • LU-IMP-8B Work with OCTA and the City of Santa Ana to include a bikeway and pedestrian trail in the “Go Local” transit extension plan between Garden Grove and the Santa Ana Regional Transportation Center. • LU-IMP-8D Work with residents, property owners and neighborhood associations to determine their preference for use of the OCTA right-of-way. Potential uses include: 1) a linear park developed and maintained with joint City/neighborhood responsibility; 2) landscaped park space for the use of multi-family developments; 3) one segment of a landscaped recreational trail incorporating pedestrian and bicycle paths with marked lanes	

through paved areas – the trail to be developed and maintained by the City; 4) children's play area adjacent to the shopping center parking for use of shopper's families – to be developed and maintained by shopping center proprietors; 5) extension of parking, storage, and service areas available to adjoining commercial and industrial facilities – such extensions to be developed and maintained by the industrial and commercial occupants; and 6) other beneficial uses supported by the community. The potential uses may be explored in combination with one another to provide multiple benefits to the community.

Specific Plans

The City of Garden Grove has one Specific Plan that intends to constitute the primary zoning provisions for defined areas of the city. Each guides development with the overall goal of ensuring that development projects meet the goals and objectives of the entire district. The following outlines content of the City of Garden Grove's Specific Plans that pertains to bicycle and pedestrian planning.

Harbor Corridor Specific Plan (1985)

The Harbor Corridor Specific Plan does not directly reference bicycles or pedestrians, but does provide design guidance and regulations that are associated as pedestrian-friendly. Examples include development standards that emphasize urban character and regulations for a mixed-use district.

Mixed Use Zoning

A key focus of the General Plan 2030 is to expand areas that will allow the development of mixed use zones. Mixed Use zones provide opportunities to blend residential, commercial, industrial, and/or civic/institutional uses as integrated developments or single-use structures. One intent of Mixed Use zoning is to facilitate a more pedestrian-oriented environment with facilities that encourage walking, interacting, and more. This can be accomplished through Civic Center (CC) zones and Neighborhood Mixed Use (NMU) zones; see more details about these zones in Table A-6.

Civic Center Zones

Civic Center zones are pedestrian-oriented districts in which developments are linked via local streets and pedestrian ways to create easy access to complementary uses, and to provide a center in the community where people can engage in civic, business, educational, and recreational activities near their homes. The Civic Center, such as downtown Garden Grove, should be more than just another shopping center – it should be a place that is the heart and soul of the community where people can meet in public gathering spaces.

Neighborhood Mixed Use

Neighborhood Mixed Use (NMU) zones are intended to enhance, revitalize, and provide opportunities for new development in neighborhood commercial centers. This zone allows for retail and service commercial businesses and moderate-density residential uses.

Municipal Code

This section presents sections in the Garden Grove Municipal Code that are relevant to bicycling and walking. Relevant ordinances are shown in Table A-6.

Table A-6: Bicycle- and Pedestrian-Related Municipal Code Ordinances

Section	Regulation
Title 9, Chapter 8 Peace, Safety and Morals	
8.40.090 Public Skate Park Facilities	Any person who rides a skateboard or BMX *bicycle* or uses in-line skates at a public skate park facility shall wear a helmet, elbow pads, and knee pads at all times while utilizing the facility.
Title 9, Chapter 9: Mixed Use Regulations and Development Standards	
9.16.040.160 Parking-Special Requirements	E. Bicycles. All nonresidential buildings and places of assembly shall provide adequate locking facilities for bicycle parking at any location convenient to the facility for which they are designated.
9.16.040.190 Loading Areas	4. Loading areas shall not interfere with parking or with vehicle and *pedestrian* access.
9.18.010.020 Mixed Use Zones Establishment and Intent	Standards requiring enhanced building design; trees; landscaping; amenity areas for pedestrian activity, including plazas, walkways, and allowed outdoor dining; and creative use of open spaces contribute to an exciting pedestrian experience. Pedestrian orientation is emphasized in site and building design through active street frontages, well-scaled and designed buildings, and engaging outdoor spaces
9.18.090.030 Civic Center Zone Development Standards	C. Storefronts and Commercial Uses Required at Ground Floors. Storefronts provide a means for commercial uses to orient display toward and access directly from public sidewalks. By providing visibility into these commercial spaces, pedestrian interest is enhanced to contribute to the pedestrian experience and encourage high pedestrian volumes. Storefronts and associated ground floor commercial space shall be required for certain properties with lot lines along Garden Grove Boulevard, Acacia Parkway, Main Street, and Euclid Street
9.18.090.060 Additional Regulations Specific to the CC-3 Zone	A. It is the City's intent to create a Civic Center district that consists of a several distinct neighborhoods connected to the Civic Core and public park areas by a series of pedestrian pathways, thereby enhancing district cohesion and allowing people to easily walk to uses throughout the Civic Center district, as defined in the General Plan. While public sidewalks provide the primary means of pedestrian mobility within the district, additional connections can be provided via pathways, paseos, trails, and walkways that traverse private properties.
9.18.090.070 Neighborhood Mixed Use Zone (NMU) Development Standards	C. Pedestrian-Oriented Plaza Requirement. Each project in the NMU zone shall provide a pedestrian plaza. The purpose of the pedestrian-oriented plaza is to provide a place for passive recreation, public gathering, landscape amenities, display of public art, and similar uses that enhance the appearance and function of development and integrate multiple uses on a site. For a building that is constructed with orientation toward the street, the pedestrian-oriented plaza shall be in the form of a boulevard garden plaza along the front. For other development approaches and types, the plaza shall be a pedestrian plaza that provides enhanced pedestrian circulation and connects the various uses/buildings

Section	Regulation
	on the site. In particular, for sites at Brookhurst Street and Chapman Avenue, efforts shall be made to physically and/or visually connect pedestrian pathways to uses across the street from each other.
9.18.140 Parking Requirements	*Bicycle* Parking. For all new developments where parking is not provided in the form of individual garages, secure and convenient *bicycle* parking shall be provided at a rate of one *bicycle* space for every 10 required parking spaces. (2814, 2012)
Title 10, Chapter 10: Vehicles and Traffic	
10.68.030 Pedestrian Indications at Signalized Intersections	A. The City Traffic Engineer is directed to install and maintain pedestrian traffic signal indications at those signalized intersections where the City Traffic Engineer has determined that there is a particular hazard to pedestrians crossing the roadway. B. Pedestrians shall obey the indication of traffic signals installed for pedestrian's use only and shall not proceed on the vehicular traffic signal indication at any location where pedestrian traffic signals are in place. (2804 § 1, 2011; 1572 § 1, 1977; prior code § 3143)
10.68.020 Use of Certain Crosswalks Prohibited	A. The City Traffic Engineer may place signs at or adjacent to an intersection in respect to any unpainted crosswalk directing that pedestrians shall not cross in the crosswalk so indicated. B. Whenever authorized signs are erected prohibiting the use of certain crosswalks, no pedestrian shall disobey the directions of any such signs. (2804 § 1, 2011; 1572 § 1, 1977; prior code § 3142)
Title 10, Chapter 16: Enforcement and Obedience	
10.16.050 Application to Bicycle or Animal Riders	Every person riding a bicycle, or riding, or driving an animal upon a highway shall be granted all of the rights and shall be subject to all of the duties applicable to the drive of a vehicle by this Title, except those provisions by their very nature can have no application (Ordinance 2804 § 1, 2011; Prior Code § 3111).
10.16.140 Obstructions within Parkway	Whenever the City Traffic Engineer determines that any fence, hedge, shrubbery, tree, or other object within the parkway obstructs the view of any traffic upon the roadways, or is an undue obstruction to pedestrians attempting to walk within the parkway at locations where no sidewalks exist, he shall cause the obstruction to be removed or altered in such a manner as to permanently eliminate the problem (Ordinance 2804 § 1, 2011; Ordinance 1572 § 1 (part), 1977; Prior Code § 3169).
Title 10, Chapter 28: Miscellaneous Regulations	
10.28.060 Freeway Use Restrictions	No person shall drive or operate any bicycle, motor-driven cycle, or any vehicle that is not drawn by a motor vehicle upon any street established as a freeway, as defined by State law, nor shall any pedestrian walk across or along any such street so designated and described except in space set aside for the use of pedestrians, provided official signs are in place giving notice of such restrictions (Ordinance 2804 § 1, 2011; Prior Code § 3138).

Section	Regulation
Title 11, Chapter 04: Streets and Sidewalks	
11.04.290 Traffic Crossings- Barriers	A. No person shall make any excavation in any street or sidewalk, without maintaining safe crossings for vehicle traffic at all street intersections and safe crossings for pedestrians where necessary. B. If any excavation is made across any street or alley at least one safe crossing shall be maintained at all times for vehicles and pedestrians, unless permission to close such street or alley is first obtained from the City Engineer.
11.04.350 Vehicle and Pedestrian Traffic	After operation referred to in Sections 11.04.320 through 11.04.340 on all streets or portions thereof having an improved surface, including sidewalks, the top surface of the backfill shall be covered with not less than one (1) inch nor more than two (2) inches of premixed bituminous material satisfactory to the City and shall conform closely enough to the level of the adjoining surface and shall be compacted so that it is hard enough and smooth enough to be safe for pedestrian travel over it as well as for vehicular traffic to pass safely over it at a legal rate of speed. The permittee shall maintain the surface of the backfill safe for pedestrian and vehicular traffic until the excavation has been resurfaced. If it is impracticable to maintain the surface of the backfill in safe condition for pedestrian travel or vehicular traffic, then the permittee shall maintain barriers and traffic control consistent with the requirements of the Department of Public Works, around it until the excavation has been resurfaced. (Ordinance 2804 § 2, 2011; Prior Code § 7110.16(d)).
Title 11, Chapter 36: Benches and Shelters	
11.36.110 Location	A bench or shelter shall be placed to allow on the sidewalk an unobstructed pedestrian travel-way or thirty-six (36) inches, minimum, four (4) feet preferred

ORANGE COUNTY TRANSPORTATION AUTHORITY

OC STREETCAR

The OC Streetcar is Orange County's first streetcar that aims to increase transportation options and provide greater access along its 4.15 mile route (in each direction). It is an effort led by OCTA and funded by Measure M program funds. The OC Streetcar is expected to have:

- 18 OCTA bus connections
- 6-7 fleet size
- 12 stations
- 150 streetcar capacity
- 10-15 minute frequency
- 67 daily trains at the Santa Ana Regional Transit Center

The Santa Ana Regional Transit Center, a multimodal transit hub, will be located in Garden Grove, at Harbor Boulevard and Westminster Avenue, connecting the city with Downtown Santa Ana (see **Figure A-3).** The OC Streetcar is expected to connect employment, restaurants and retail centers in the County, as well as serve as a last mile connection between Metrolink trains and other transportation modes at Santa Ana Regional Transportation Center. Bicycles will be allowed on the streetcar, which reinforces the OC Streetcar's multimodal connection goal.

The project was approved in May 2015 to enter into the Project Development phase under the Federal Transportation Authority's New Starts Program. The Design and Engineering phase will begin in summer 2016 - fall 2017 and the Construction phase will begin fall 2017 to fall 2019. Lastly, the Testing and Operation phase is expected to begin late 2019.

OCTA COMMUTER BIKEWAYS STRATEGIC PLAN (2009)

OCTA developed the Commuter Bikeways Strategic Plan (CBSP), which outlines OCTA's roles in bikeways planning. These include:

- Suggesting regional priorities for optimal use by local jurisdictions
- Assisting in coordinating plans between jurisdictions
- Providing planning and design guidelines; and
- Participating in outreach efforts to encourage bicycle commuting

OCTA DISTRICTS 1 AND 2 BIKEWAYS STRATEGY (2013)

The Regional Bikeways Planning effort led by OCTA expands upon the 2009 OCTA Commuter Bikeways Strategy Report. The Regional Bikeway Planning process has been ongoing since 2011, addressing four different subareas of Orange County. West/ Central Orange County, or Supervisorial Districts 1 and 2 (which includes Garden Grove), was completed in 2013.

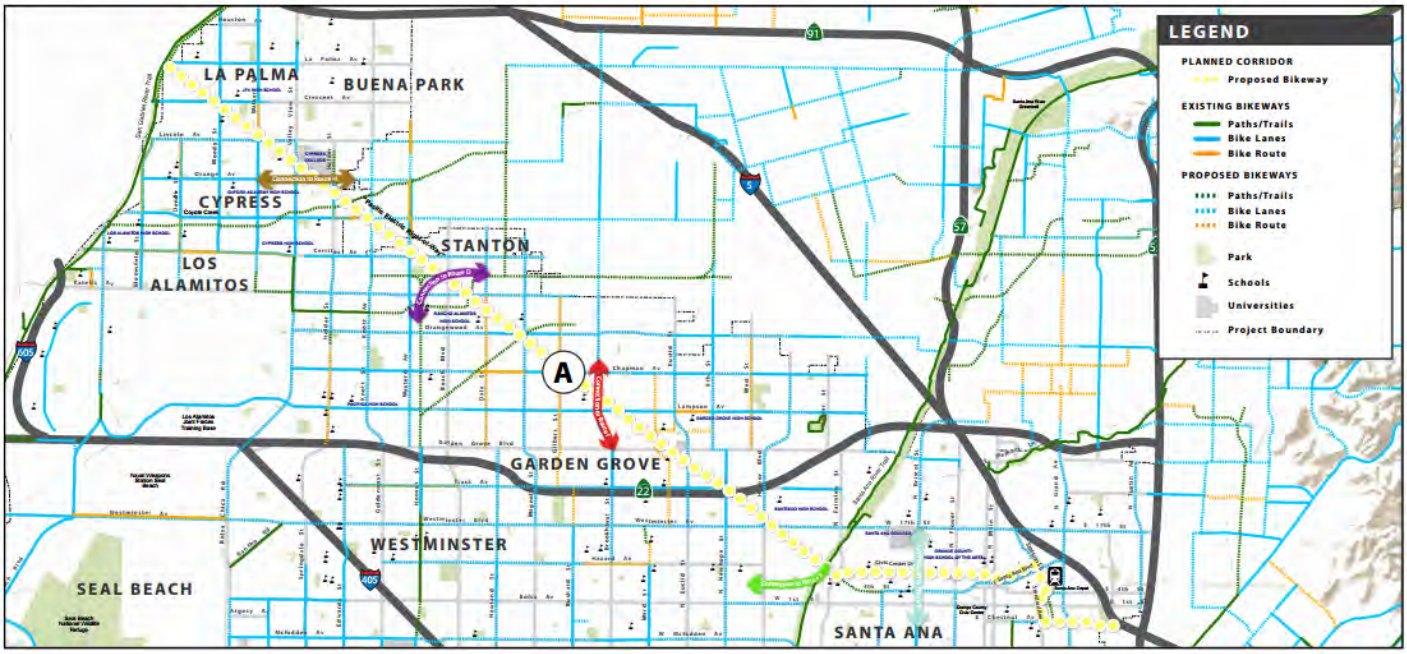
The purpose of the Bikeways Strategy is to identify regional bikeway corridors that connect to major activity centers including employment areas, transit stations, colleges and universities. The regional bikeway corridors identified in the report are based on consensus-building and facilitation efforts. Secondly, the Bikeways Strategy provides feasibility studies and design recommendations to the local jurisdictions.

A total of eleven regional bikeway corridors were identified, five of which are partially within Garden Grove. The corridors include key connections to existing regional bikeway routes, as well as to major destinations within the districts. The corridors in Garden Grove are discussed below and accompanied by alignment maps.

Corridor A: Pacific Electric ROW

This diagonal corridor primarily runs southeast from La Palma to Santa Ana within the OCTA-owned Pacific Electric ROW, a total of 15.6 miles. It is composed of a combination of off-street paths and on-street bikeway segments that links Coyote Creek Trail with the Santa Ana River Trail. Due to the diagonal alignment, the Pacific Electric ROW corridors links to several other regional corridors (see **Figure A-4).**

Figure A-4: Corridor A: Pacific Electric ROW



Corridor A
Bikeway Improvement Details

4.5 miles of new bike lanes
11.1 miles of new trails

= 15.6 miles of bikeway

23
Schools + Universities within 1/4-mile Served

18
Parks within 1/4-mile Served

104k
People within 1/4-mile Served (approx.)

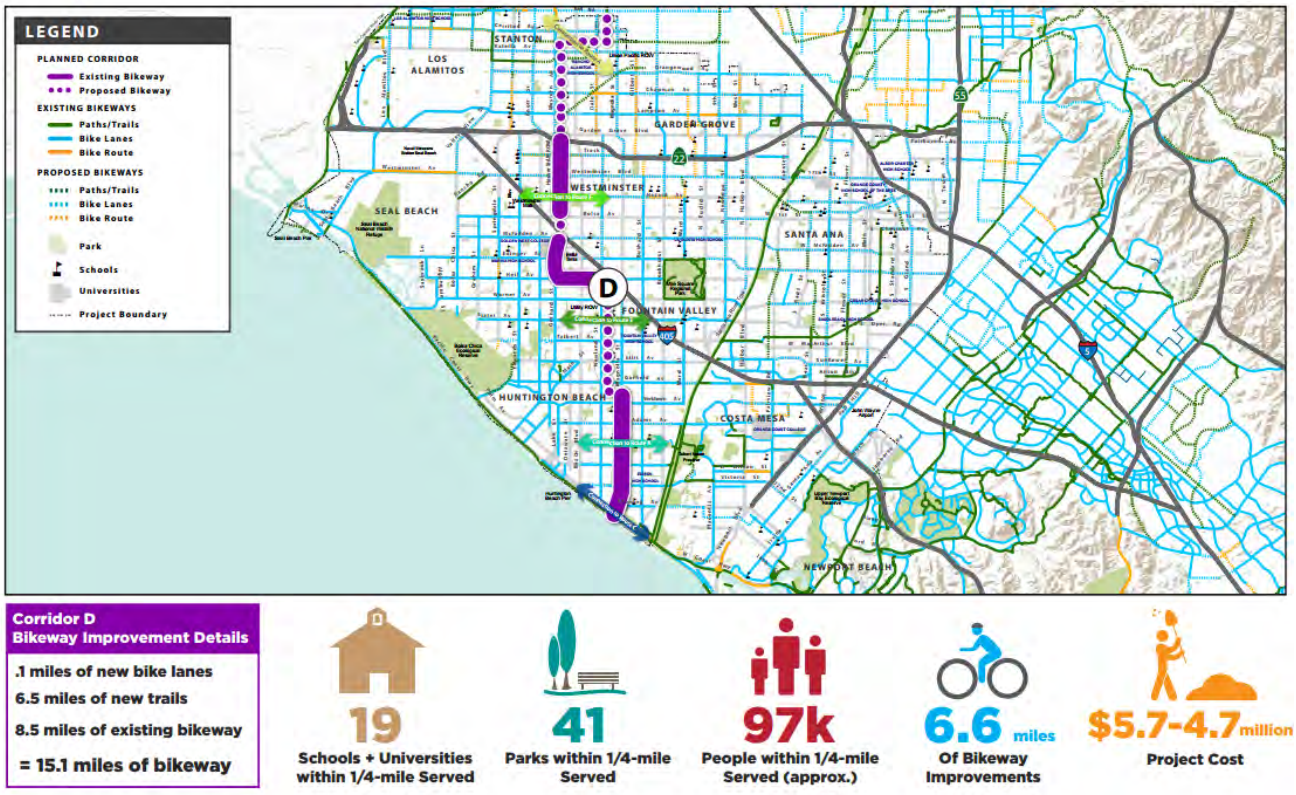
15.6 miles
Of Bikeway Improvements

$32-26 million
Project Cost

Corridor D: Magnolia-Hoover

This corridor runs north-south through the center of the study area, utilizing both roadways and off-street paths. The corridor connects with several other routes, including the Pacific Electric Right-of-Way, Westminster-Hazard, Slater-Segerstrom, Bristol-Bear, Indianapolis-Fairview, and Pacific Coast Highway corridors. The existing Hoover Street trail would be used to cross under the SR-22 freeway, and the railroad right-of-way is identified as a strategy to cross under the I-405 freeway (see **Figure A-5).**

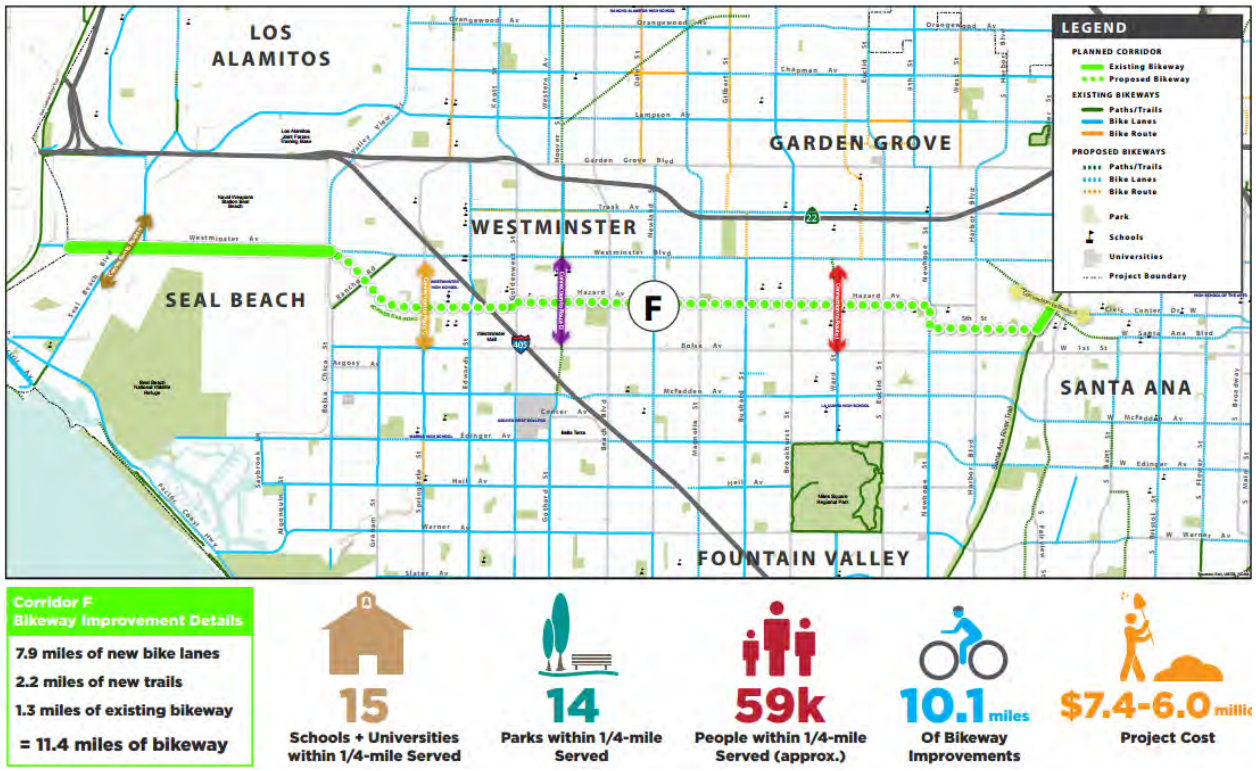
Figure A-5: Corridor D: Magnolia-Hoover



Corridor F: Westminster-Hazard

This east-west corridor passes through the cities of Seal Beach, Westminster, and Fountain Valley, with a small segment in western Santa Ana that links to the Pacific Electric Right-of-Way corridor. Most of the corridor enhancements are new Class II on-street bike lanes, primarily along Westminster Boulevard and Hazard Avenue. This route connects with the Seal Beach-Orange Avenue, Knott-Springdale, Magnolia-Hoover, Brookhurst-Ward, and Pacific Electric ROW corridors (see **Figure A-6).**

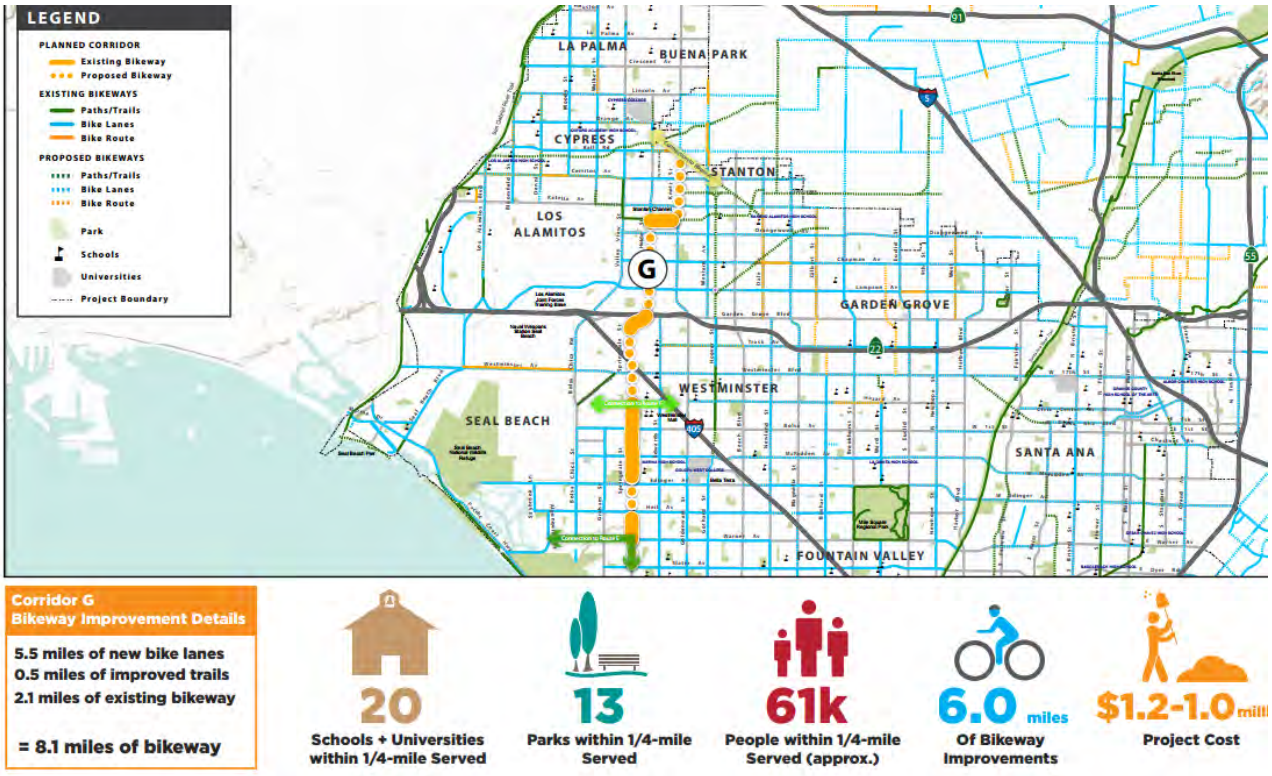
Figure A-6: Corridor F: Westminster-Hazard



Corridor G: Knott-Springdale

The proposed Knott-Springdale corridor runs north and south between the Pacific Electric ROW (Corridor A) and Slater Avenue (Corridor E). Additional corridor connections could be made to the proposed Westminster-Hazard corridor. This corridor consists mostly of Class II on-street bike lanes (see **Figure A-7).**

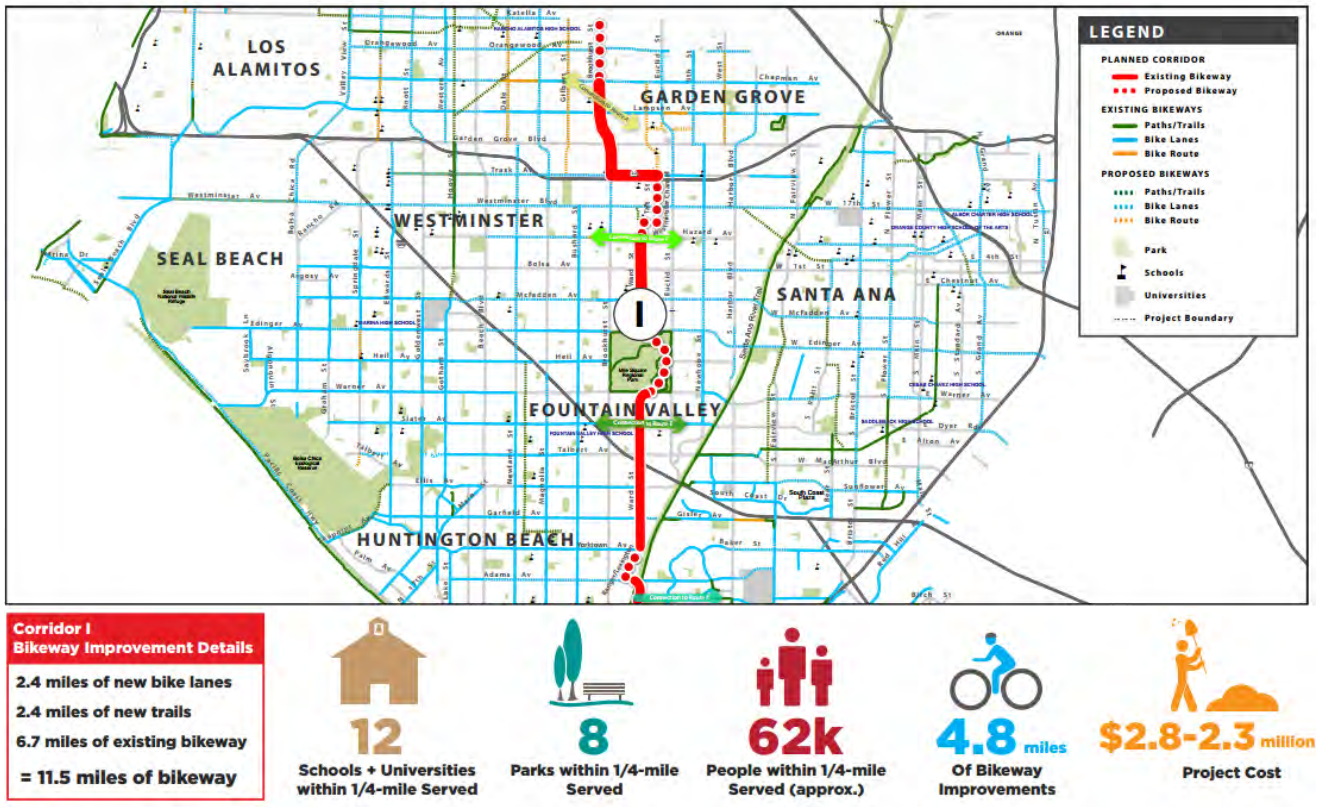
Figure A-7: Corridor G: Knott-Springdale



Corridor I: Brookhurst-Ward

The Brookhurst-Ward corridor runs primarily north-south from Katella Avenue to the Santa Ana River Trail at Adams Avenue, via Mile Square Regional Park. The route traverses Garden Grove, Westminster, Fountain Valley, and Huntington Beach, ending just inside Costa Mesa at Fairview Park. The Brookhurst-Ward corridor connects with the Pacific Electric ROW, Westminster-Hazard, Slater-Segerstrom, and Indianapolis-Fairview corridors; the northern end links to District 4's Brookhurst-Gilbert Corridor. Most of the improvements are Class II on-street bike lanes, with a small segment of off-street trail (see **Figure A-8).**

Figure A-8: Corridor I: Brookhurst-Ward



OUTLOOK 2035: OCTA LONG RANGE TRANSPORTATION PLAN (2014)

The 2014 Long-Range Transportation Plan (LRTP), shown in Figure A-9 is OCTA's vision of how people, goods, and services will use the transportation system for work, commerce, school, and recreational travel. The LRTP is updated every four years, with the most recent update in 2014. The LRTP is reflective of the projects and services identified as part of Orange County's voter-approved sales tax for transportation, Measure M2.

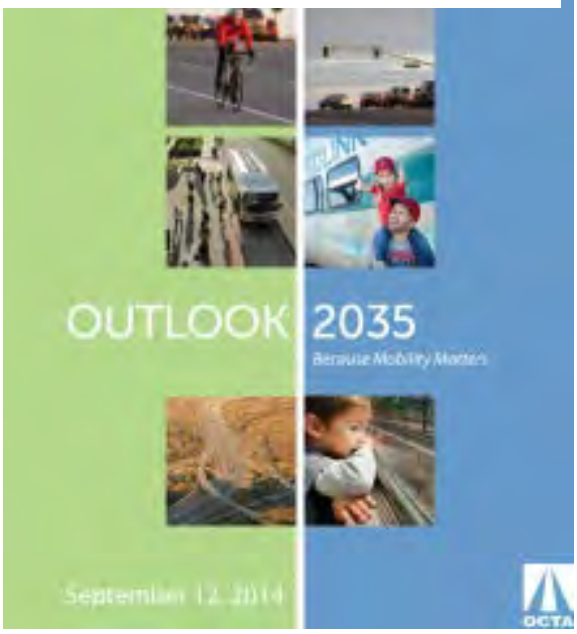
Goals and objectives have been developed that address travel needs and challenges associated with providing a balanced transportation system that meets the future needs of the residents, workers, and visitors. The goals of the LRTP are to:

- Deliver on commitments of Measure M2 projects and to ensure consistency with M2020 Plan.
- Improve transportation system performance to reduce delay from congestion, increase facility speeds and increase transit ridership.
- Expand transportation system choices by investing in new facilities, expanding transit services and improving multimodal integration.
- Support sustainability through investment in infrastructure maintenance, reinforcement of the Orange County Sustainable Communities Strategy (SCS), implementation of environmental strategies and assurance of a financially sustainable transportation system.

OCTA's ongoing role in regional bikeways planning includes the following:

- Promoting the consideration of bicyclists within environmental and planning documents prepared by local agencies
- Maintaining the countywide bicycle transportation plan
- Encouraging local agencies to coordinate their bikeways planning efforts with the CBSP
- Working with local agencies to submit projects for state, federal and local funding opportunities as these become available

Figure A-9: Outlook 2035: Long Range Transportation Plan (2014)



The LRTP highlight's OCTA's role in the Regional Bikeways Strategy, stating that OCTA will continue to facilitate planning of the regional bikeways network, coordinate both internal and external agencies, and address regional priorities. To date, a Bikeways Strategy has been completed for the 1st, 2nd, 4th and 5th supervisorial Districts in Orange County, with 3rd expected in 2015. The Plan highlights the 66-mile bicycle loop, which will close gaps that currently exist between the Santa Ana River Trail, the San Gabriel River/Coyote Creek, and the Pacific Coast Highway.

NONMOTORIZED METROLINK ACCESSIBILITY STRATEGY (2013)

OCTA developed the Metrolink Station Nonmotorized Accessibility Strategy in 2013 to identify needs and opportunities for improvements that enhance non-motorized transportation (walking and biking) access to and from Orange County's Metrolink stations. The Accessibility Strategy builds upon other efforts by OCTA and local cities to expand transportation choices. The Accessibility Strategy will serve as a reference for local cities to improve safety, address existing barriers and increase the number of Metrolink riders who walk or bicycle to/from the stations through changes to the physical environment.

Although Metrolink does not directly connect to Garden Grove, the nearest station in Anaheim is about five miles away, or a 30 minute bike ride. Additionally, Garden Grove, in partnership with the City of Santa Ana, is in the final planning phases of a street car system which would extend the reach of Metrolink by providing direct connections from the Anaheim Station to the Santa Ana Regional Transit Center with several stops in Garden Grove.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG)

SCAG REGIONAL TRANSPORTATION PLAN/ SUSTAINABLE COMMUNITIES STRATEGY (2012)

The Regional Transportation Plan (RTP) has the primary goal of increasing mobility for the region's residents and visitors. The Sustainable Communities Strategy (SCS), part of the RTP, demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the ARB. The 2012–2035 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. Its emphasis on transit and active transportation will allow residents to lead a healthier, more active lifestyle.

The RTP/SCS contains a host of improvements to the region's multimodal transportation system, including increasing bikeways from 4,315 miles to 10,122 miles, bringing a significant amount of sidewalks into compliance with the Americans with Disabilities Act (ADA), safety improvements, and various other strategies. Figure 2 8 shows proposed bikeways in the SCAG planning region.

The following are policies and goals related to preparation of the Garden Grover Bicycle and Pedestrian Plan includes:

- Policy 4: Transportation demand management (TDM) and non-motorized transportation will be focus areas, subject to Policy 1
- Goal: Encourage land use and growth patterns that facilitate transit and non-motorized transportation
- The entire RTP/SCS can be found at: http://rtpscs. scag.ca.gov/Pages/default.aspx

SCAG is currently in the process of developing the 2016 RTP SCS, specifically, updating planning assumptions, conducting transportation financial analysis, and developing land use/transportation scenarios development, among others. The draft is expected to be released in Fall 2015 for public comment.

STATE OF CALIFORNIA

CALIFORNIA GREEN BUILDING CODE (2011)

The California Green Code includes standards for bicycle parking requirements for new development. The California Green Code requirements are presented in **Table A-7.**

Table A-7 California Green Code Bicycle Parking Requirements

Category	Description
Bicycle Parking and Changing Rooms	Comply with sections 5.106.4.1 and 5.106.4.2; or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.
Short-Term Bicycle Parking	If the project is expected to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.
Long-Term Bicycle Parking	For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include: • Covered, lockable enclosures with permanently anchored racks for bicycles • Lockable bicycle rooms with permanently anchored racks • Lockable, permanently anchored bicycle lockers

AB 1358 – CALIFORNIA COMPLETE STREETS ACT OF 2008

The 2008 California Complete Streets Act requires that municipalities, "upon any substantive revision of the circulation element of the general plan, modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, people bicycling, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan."

For more information: *opr.ca.gov/docs/Update_GP_ Guidelines_Complete_Streets.pdf*

CALTRANS DEPUTY DIRECTIVE DD-64-R1 – COMPLETE STREETS-INTEGRATING THE TRANSPORTATION SYSTEM (2008)

Following passage of the State's Complete Streets Act, Caltrans adopted its own Complete Streets policy, which requires Caltrans to provide "for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System." The Caltrans policy is supported by Federal law requiring safe accommodation for all users and State law that Caltrans provide an integrated multi-modal system. It also helps local governments meet their requirement under State law (AB 1358) to include Complete Streets in their general plans.

State and federal laws require the Department and local agencies to promote and facilitate increased bicycling and walking. The California Vehicle Code (CVC) (Sections 21200-21212) and the Streets and Highways Code (Sections 890-894.2) identify the rights of people bicycling and walking and establish legislative intent that people of all ages using all types of mobility devices are able to travel on roads. People bicycling and walking and other non-motorized travelers are permitted on all State facilities, unless expressly prohibited (CVC, section 21960). Therefore, the Department and local agencies have the duty to provide for the safety and mobility needs of all who have legal access to the transportation system.

Department manuals and guidance outline statutory requirements, planning policy, and project delivery procedures to facilitate multimodal travel, which includes connectivity to public transit for people bicycling and walking. In many instances, roads designed to Department standards provide basic access for bicycling and walking. This directive does not supersede existing laws. To ensure successful implementation of "complete streets," manuals, guidance, and training will be updated and developed.

More information can be found at: *http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html*

COMMUNITY IN MOTION (2015)

The Spring 2015 606 Studio Team of the Department of Landscape Architecture at California State Polytechnic University, Pomona released their vision for a new Garden Grove. Through a partnership with the City of Garden Grove and public outreach consisting of crowdsourcing, public workshops, and focus group meetings, the Plan developed three main focus areas of revitalization: the city's non-motorized mobility network, the open space network, and the Civic Center/Downtown District. The ultimate vision for the city the Plan has is for a common identity/brand of "gardens and groves" while a non-motorized mobility network connects Downtown to city parks and regional facilities.

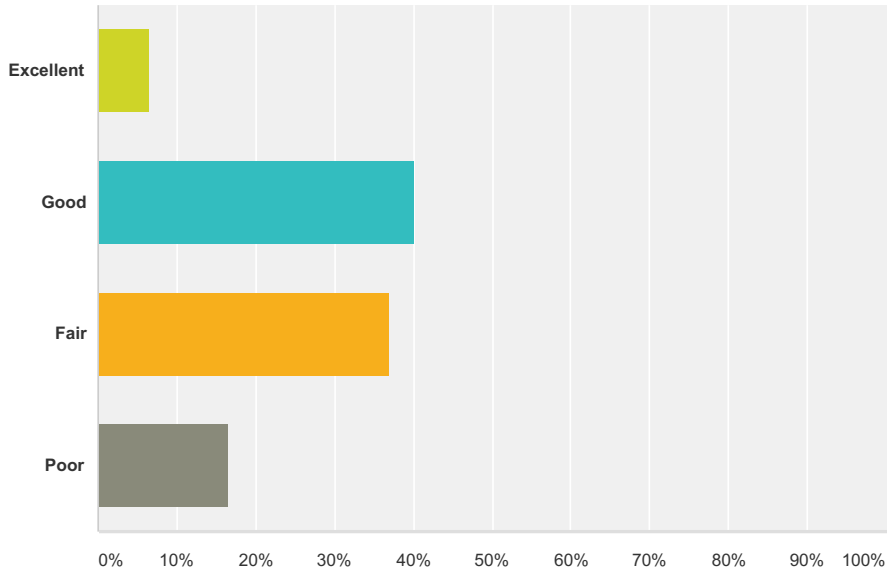
Appendix B - Detailed Outreach Results

SURVEY MONKEY ACTIVE STREETS SURVEY

QUESTION 1 RESULTS

Q1 How would you rate overall walking conditions in Garden Grove?

Answered: 200 Skipped: 4

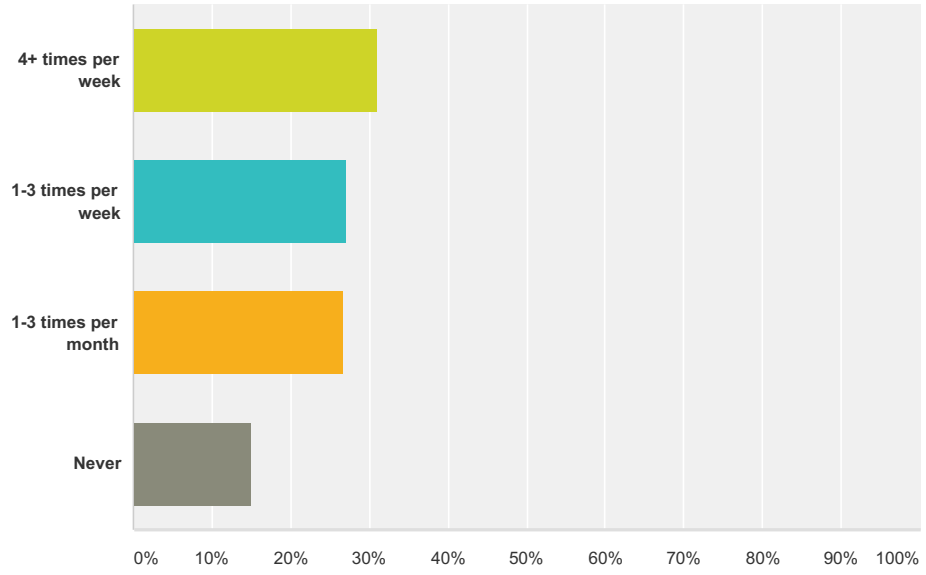


Answer Choices	Responses	
Excellent	**6.50%**	13
Good	**40.00%**	80
Fair	**37.00%**	74
Poor	**16.50%**	33
Total		**200**

QUESTION 2 RESULTS

Q2 How often do you walk for a significant distance, i.e., more than 5 minutes for a single trip? (Check one)

Answered: 199 Skipped: 5

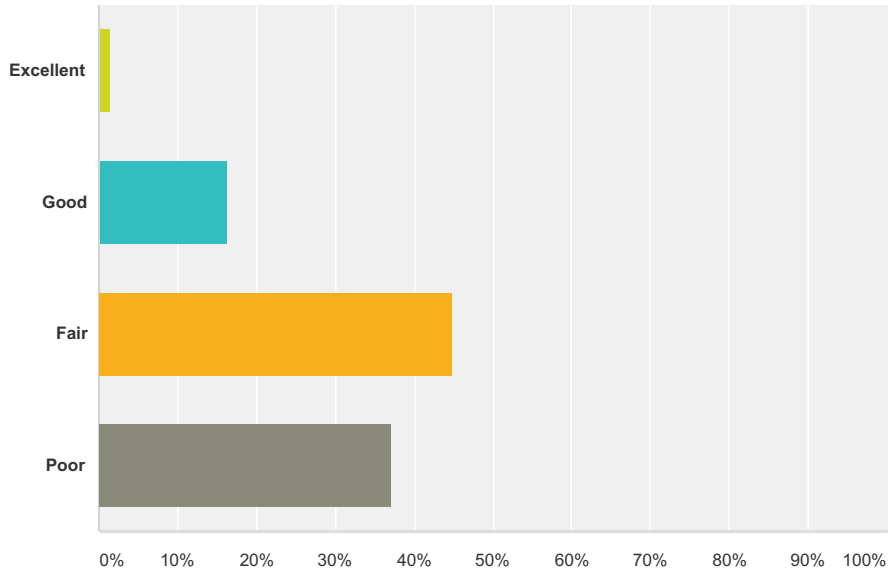


Answer Choices	Responses	
4+ times per week	**31.16%**	62
1-3 times per week	**27.14%**	54
1-3 times per month	**26.63%**	53
Never	**15.08%**	30
Total		**199**

QUESTION 3 RESULTS

Q3 How would you rate overall bicycling conditions in Garden Grove?

Answered: 196 Skipped: 8

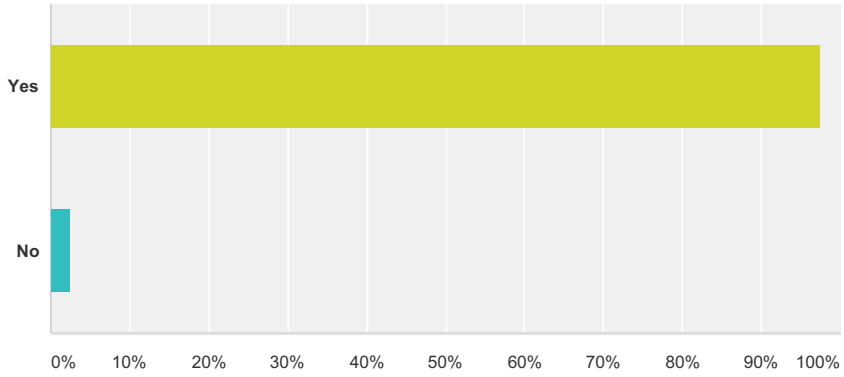


Answer Choices	Responses	
Excellent	**1.53%**	3
Good	**16.33%**	32
Fair	**44.90%**	88
Poor	**37.24%**	73
Total		**196**

QUESTION 4 RESULTS

Q4 Do you know how to ride a bike?

Answered: 197 Skipped: 7

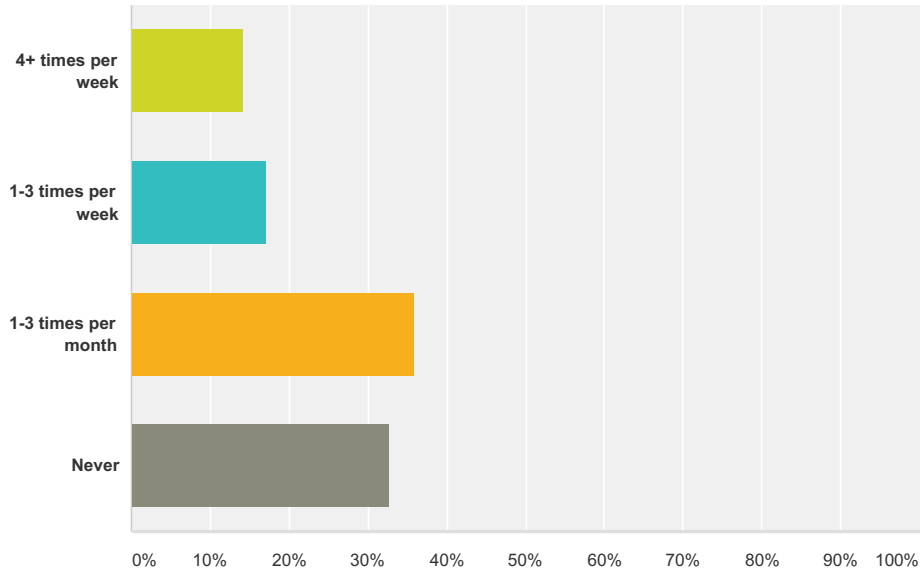


Answer Choices	Responses	
Yes	**97.46%**	192
No	**2.54%**	5
Total		**197**

QUESTION 5 RESULTS

Q5 How often do you ride a bicycle for any purpose?

Answered: 198 Skipped: 6

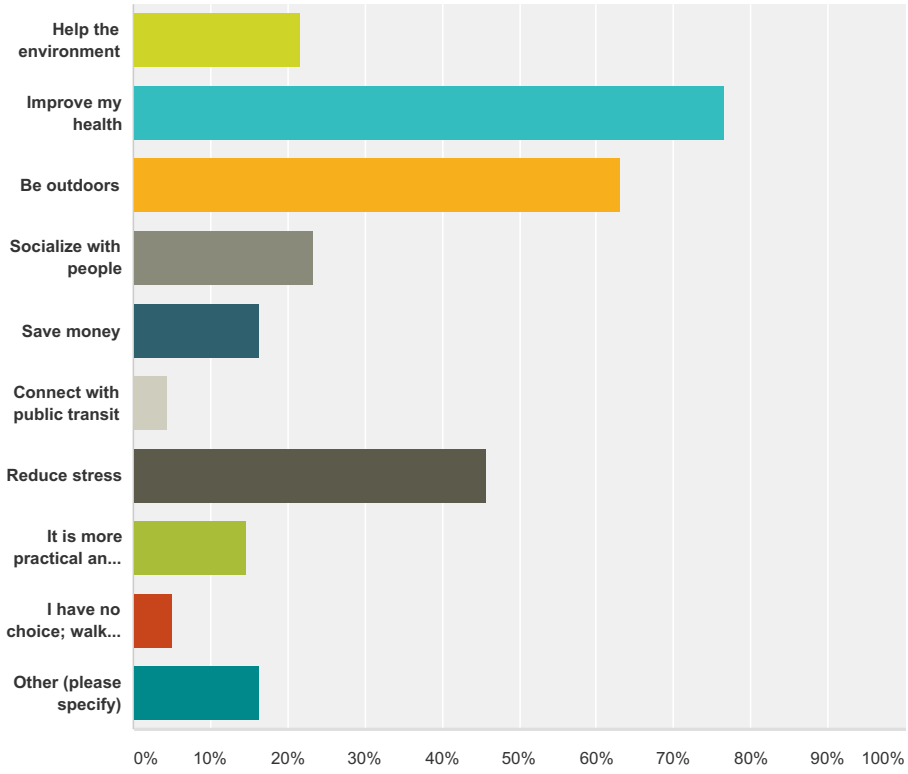


Answer Choices	Responses	
4+ times per week	**14.14%**	28
1-3 times per week	**17.17%**	34
1-3 times per month	**35.86%**	71
Never	**32.83%**	65
Total		**198**

QUESTION 6 RESULTS

Q6 Why do you walk or ride a bicycle? (Select your top 3)

Answered: 179 Skipped: 25



Answer Choices	Responses	
Help the environment	**21.79%**	39
Improve my health	**76.54%**	137
Be outdoors	**63.13%**	113
Socialize with people	**23.46%**	42
Save money	**16.20%**	29
Connect with public transit	**4.47%**	8
Reduce stress	**45.81%**	82
It is more practical and convenient than other modes of travel	**14.53%**	26
I have no choice; walking or bicycling is my only or primary form of transportation or recreation	**5.03%**	9
Other (please specify)	**16.20%**	29
Total Respondents: 179		

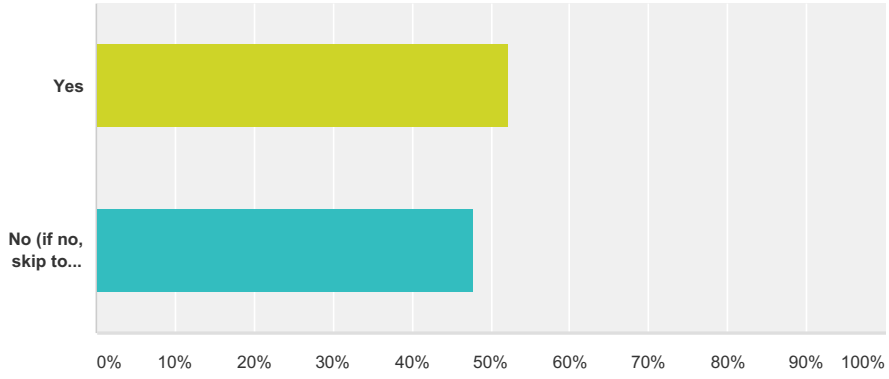
QUESTION 6 RESULTS - A SAMPLE OF "OTHER" RESPONSES

	Other (please specify)	Date
	family bike rides	12/7/2015 6:09 PM
	I love riding a bike	12/6/2015 8:17 PM
	excercise	11/28/2015 11:25 PM
	I love to walk with my children.	11/21/2015 3:36 AM
	I live close to where I work.	11/19/2015 11:51 AM
	I use a wheel chair	11/18/2015 11:05 PM
	Workout	11/18/2015 3:17 PM
	Fun	11/17/2015 8:31 PM
	Walk my dogs	11/17/2015 12:15 PM
	Walk our dogs.	11/17/2015 10:32 AM
	Exercise	11/17/2015 10:02 AM
	So I don't drink and drive.	11/17/2015 10:00 AM
	preventing drinking and driving	11/5/2015 11:04 AM
	I do not ride due to how unsafe the roads are in G.G. If I felt safe I would ride for exercise.	11/5/2015 7:30 AM
	walk my dog	11/4/2015 4:04 PM
	I'm 75 years old & I don't have a bike.	10/31/2015 4:17 PM
	I walk to get to things for which driving is not an option, or from my car to my destination if I must park a ways away from it.	10/30/2015 7:32 PM
	I don't ride in the streets it is to dangerous. I ride at the gym.	10/30/2015 11:37 AM
	I use to ride to work, but it became too dangerous.	10/30/2015 9:24 AM
	commute to work	10/30/2015 7:45 AM
	Unable to walk or bicycle any distance due to health and age.	10/30/2015 7:38 AM
	Walk the dog.	10/29/2015 7:17 PM
	It's a fun activity to do with my family	10/25/2015 7:04 AM
	Good Training, in the army, so its like marching	10/24/2015 1:18 PM
	You really see the city on a bike. You notice things that would overlooked if you were driving.	10/23/2015 10:18 AM
	To give my dog some exercise	10/23/2015 9:39 AM
	Go to store	10/10/2015 5:31 PM
	Spend time teaching my kids to be active	10/10/2015 3:39 PM
	Convenience in parking downtown also (car show and farmers market)	10/9/2015 9:17 PM

QUESTION 7 RESULTS

Q7 Do you have children?

Answered: 182 Skipped: 22

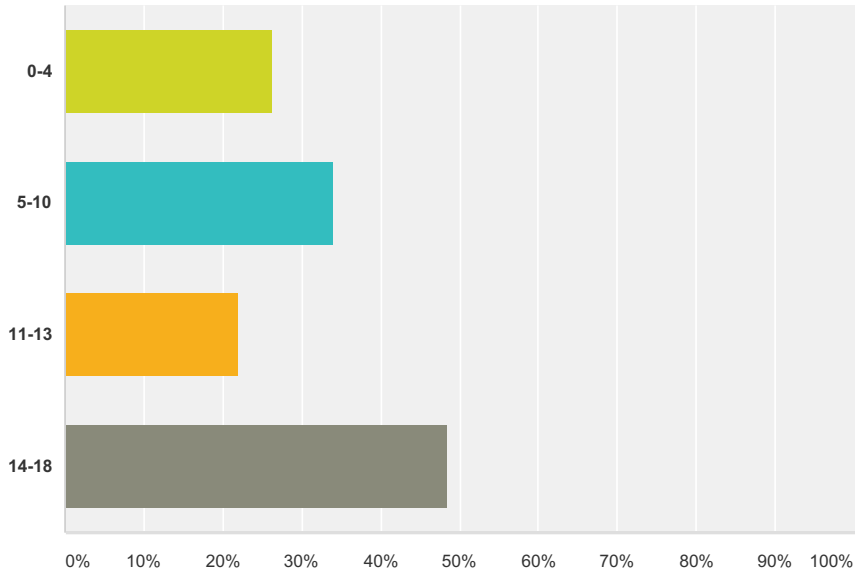


Answer Choices	Responses	
Yes	**52.20%**	95
No (if no, skip to question # 13)	**47.80%**	87
Total		**182**

QUESTION 8 RESULTS

Q8 How old are your children? (Select all that apply if you have more than one child)

Answered: 91 Skipped: 113

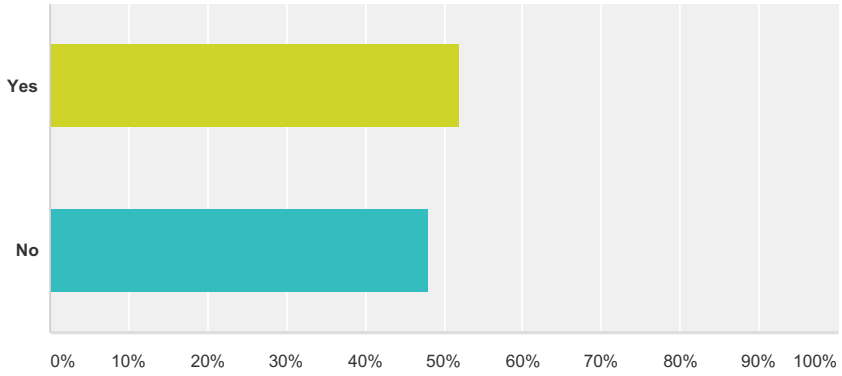


Answer Choices	Responses	
0-4	**26.37%**	24
5-10	**34.07%**	31
11-13	**21.98%**	20
14-18	**48.35%**	44
Total Respondents: 91		

QUESTION 9 RESULTS

Q9 Do you ride your bike with your children?

Answered: 102 Skipped: 102

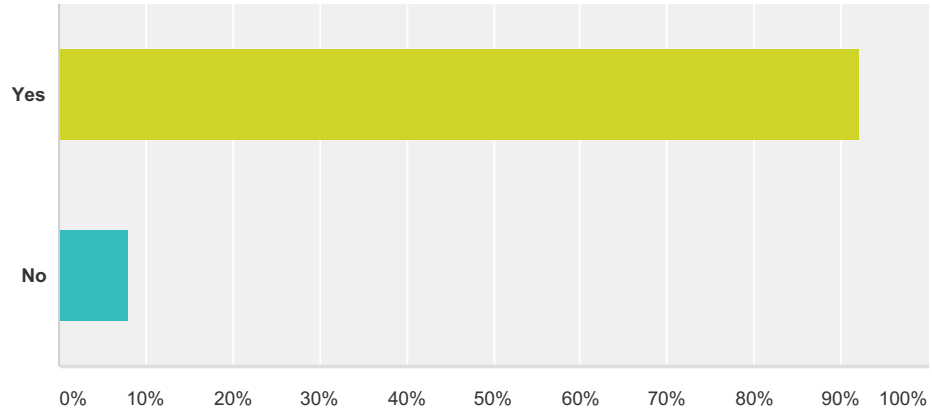


Answer Choices	Responses	
Yes	**51.96%**	53
No	**48.04%**	49
Total		**102**

QUESTION 10 RESULTS

Q10 Do your children know how to ride a bike?

Answered: 101 Skipped: 103

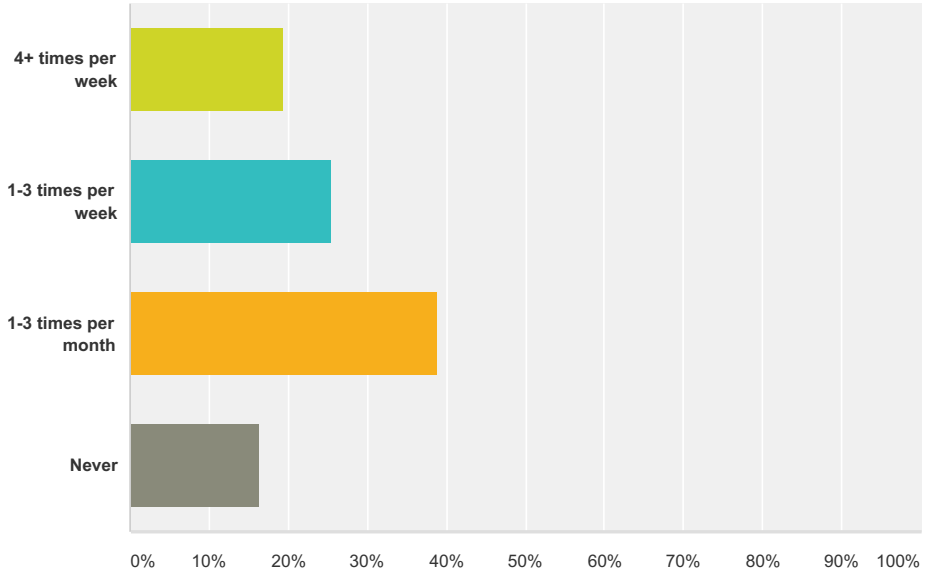


Answer Choices	Responses
Yes	**92.08%**
No	**7.92%**
Total	

QUESTION 11 RESULTS

Q11 How often do your children ride their bike?

Answered: 98 Skipped: 106

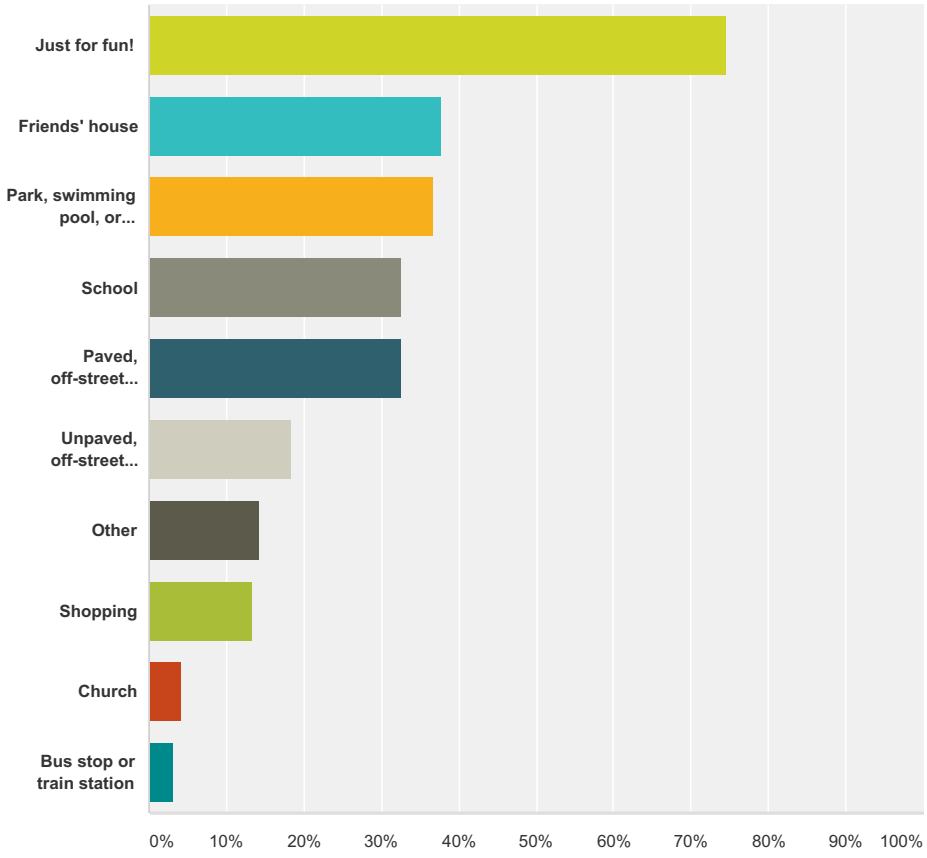


Answer Choices	Responses	
4+ times per week	**19.39%**	19
1-3 times per week	**25.51%**	25
1-3 times per month	**38.78%**	38
Never	**16.33%**	16
Total		**98**

QUESTION 12 RESULTS

Q12 Where would your children ride their bicycles to? (Select all that apply)

Answered: 98 Skipped: 106

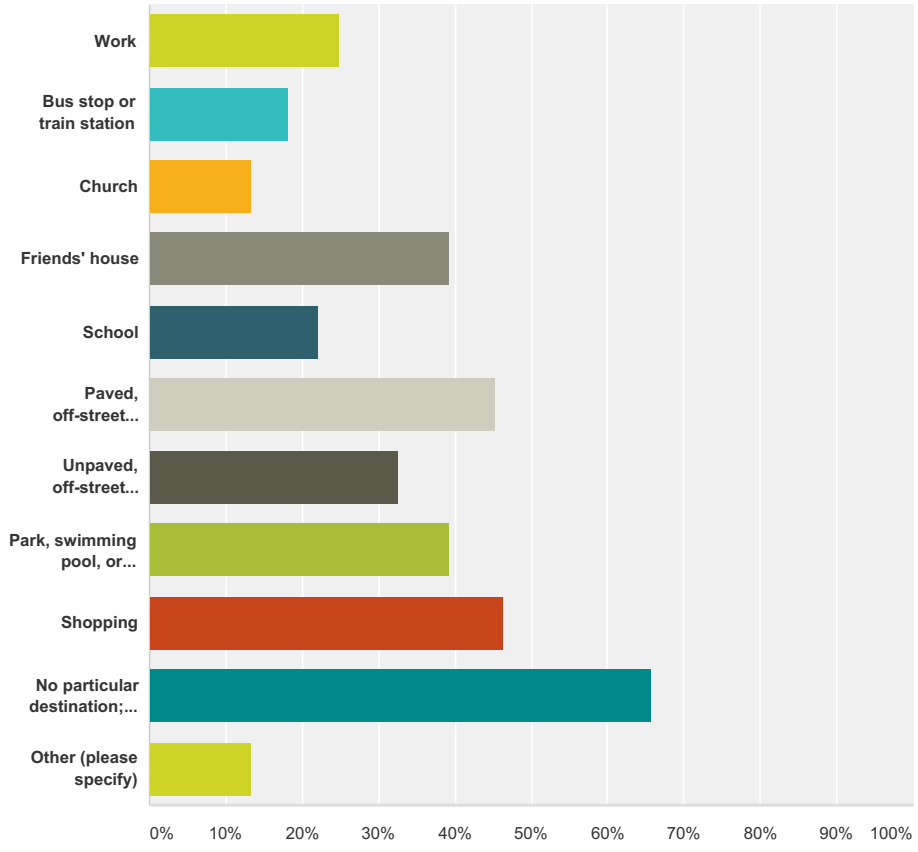


Answer Choices	Responses	
Just for fun!	**74.49%**	73
Friends' house	**37.76%**	37
Park, swimming pool, or recreation area	**36.73%**	36
School	**32.65%**	32
Paved, off-street paths	**32.65%**	32
Unpaved, off-street paths/ trails	**18.37%**	18
Other	**14.29%**	14
Shopping	**13.27%**	13
Church	**4.08%**	4
Bus stop or train station	**3.06%**	3
Total Respondents: 98		

QUESTION 13 RESULTS

Q13 To which destinations do you or would you like to walk or ride a bicycle in Garden Grove? (Select all that apply)

Answered: 181 Skipped: 23



Answer Choices	Responses	
Work	**24.86%**	45
Bus stop or train station	**18.23%**	33
Church	**13.26%**	24
Friends' house	**39.23%**	71
School	**22.10%**	40
Paved, off-street paths	**45.30%**	82
Unpaved, off-street paths/trails	**32.60%**	59
Park, swimming pool, or recreation area	**39.23%**	71
Shopping	**46.41%**	84
No particular destination; walking for fitness or leisure	**65.75%**	119
Other (please specify)	**13.26%**	24
Total Respondents: 181		

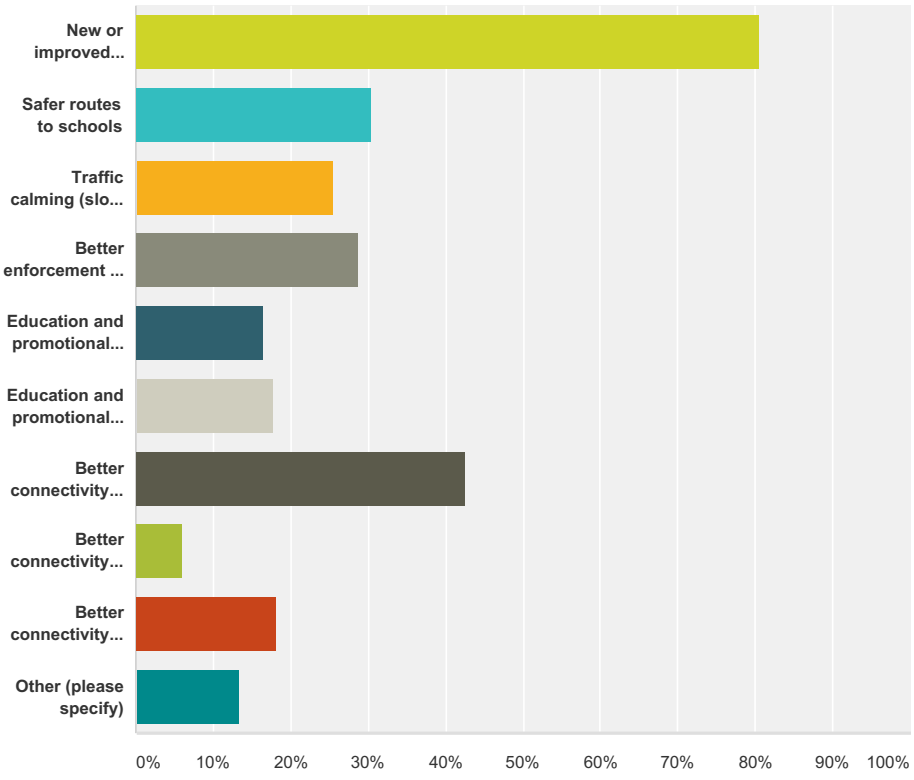
QUESTION 13 RESULTS - SAMPLE OF "OTHER" RESPONSES

	Other (please specify)	Date
	Santa Ana River Trail	11/19/2015 6:48 PM
	We should be able to bike EVERYWHERE!	11/19/2015 2:05 PM
	in the neigborhood	11/19/2015 1:54 PM
	Library	11/18/2015 1:20 PM
	Downtown main st or the block, downtown disney	11/17/2015 9:03 PM
	To main st	11/17/2015 8:49 PM
	Restaurants	11/17/2015 5:39 PM
	Eating	11/17/2015 12:57 PM
	local business and entertainment	11/17/2015 10:21 AM
	bars and restaurants	11/5/2015 11:04 AM
	Post office	11/4/2015 4:32 PM
	To eat and get small groceries	11/3/2015 12:17 PM
	Pass through GG on the way to Seal Beach, Long Beach, etc. Have noted that Class 1 and 2 bikeways are very limited in your city.	11/2/2015 11:52 AM
	Don't have a bike.	10/31/2015 4:17 PM
	I would like to ride my bike when I want to without fear of traffic or having the bike stolen when I get to the destination. Include also cafes and restaurant destinations!	10/31/2015 7:48 AM
	If an off-street trail were pretty, I *might* sometimes walk there, but mostly I don't walk for pleasure.	10/30/2015 7:32 PM
	Restaurants on Main Street	10/30/2015 6:55 PM
	We need shaded parks with canopy of trees away from cars etc.	10/30/2015 11:37 AM
	None	10/30/2015 7:38 AM
	Main Street to attend the Farmer's Market and/or to eat breakfast	10/25/2015 7:04 AM
	To restaurants and stores within 3 miles from home. They have to feel safe though.	10/23/2015 10:18 AM
	Santa Ana River Bed Bike Trail	10/23/2015 10:03 AM
	everywhere	10/23/2015 9:54 AM
	Main St. activities.	10/9/2015 9:17 PM

QUESTION 14 RESULTS

Q14 If you were to prioritize improvements to walking and bicycling in Garden Grove, which would be your top three? (check up to three)

Answered: 181 Skipped: 23



Answer Choices	Responses	
New or improved sidewalks, crossings, bicycle lanes, and off-street shared-use paths	**80.66%**	146
Safer routes to schools	**30.39%**	55
Traffic calming (slower speeds)	**25.41%**	46
Better enforcement of traffic violations for people driving	**28.73%**	52
Education and promotional programs for people driving	**16.57%**	30
Education and promotional programs for people walking and bicycling	**17.68%**	32
Better connectivity to parks and recreation	**42.54%**	77
Better connectivity to religious and civic institutions	**6.08%**	11
Better connectivity to public transit	**18.23%**	33
Other (please specify)	**13.26%**	24
Total Respondents: 181		

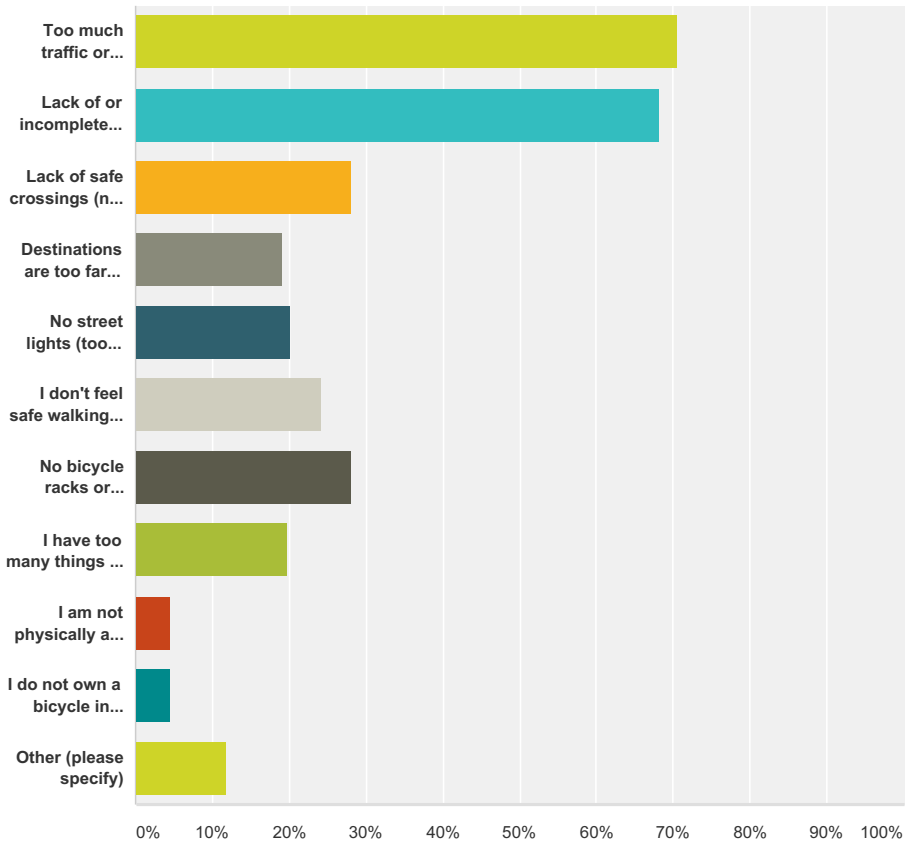
QUESTION 14 RESULTS - SAMPLE OF "OTHER" RESPONSES

	Other (please specify)	Date
	less traffic congestion (Euclid) would make me feel safer	11/21/2015 6:59 PM
	Garden Grove is the only city in OC that lacks class 1 bike lanes. Please put a bike path on the Pacific Electric Right of Way	11/19/2015 6:48 PM
	Enforcement for people walking or biking. Stop the jay walkers.	11/19/2015 2:29 PM
	If we start with the downtown area, we should add two more lights. put an intersection at McDonalds on GG Blvd and one at Costco side street/ between homed opt parking lot and main street parking.	11/19/2015 11:51 AM
	Bike rt., make sure there is enough room for both car and bike route	11/18/2015 11:05 PM
	Use the old train tracks like they do in Irvine.	11/18/2015 11:12 AM
	I want Garden Grove to live up to its name and have beautiful gardens and reflect property values and not only focus on tourism	11/17/2015 9:03 PM
	Walking paths to walk our dogs and/or walk/jog for health	11/17/2015 5:17 PM
	No Improvements please, they are a waste of money	11/17/2015 2:58 PM
	Add more restaurants, etc at convenient areas to ride, walk	11/17/2015 12:57 PM
	WIDER, WELL-PAVED AND CONTINUALLY MAINTAINED SIDEWALKS	11/17/2015 11:20 AM
	Slow Lanes for bicyles, tricycles, scooters, mopeds, GEMs, golf carts ONLY!	11/17/2015 10:36 AM
	Better connectivity to entertainment and businesses.	11/17/2015 10:01 AM
	safe enclosed bike lanes	11/5/2015 4:58 PM
	Protected Bike Lanes	11/4/2015 11:54 PM
	Often children from the schools ride on the sidewalk, it is not wide enough for them to pass walkers safely. I see the bikers riding on the side walk and the walkers moving toward the traffic onto the dirt path where the poles are. It is not safe for any of the children.	11/4/2015 6:50 PM
	Improved cycling lanes and sharrows	11/3/2015 2:43 PM
	I want to say ALL OF THE ABOVE	10/31/2015 7:48 AM
	Establish bike routes to major city hubs (main street, western GG blvd, the Block) on smaller streets that are safer to ride on, and publish a map.	10/30/2015 8:59 AM
	City Council Commitment to walking/biking issues	10/30/2015 7:45 AM
	none needed	10/28/2015 4:19 PM
	Be the first Slow Lane city, bike/trike/moped/golf cart, ONLY on pertinent boulevard slow lanes. Horses would be great, too. Kidding. Maybe.	10/23/2015 9:59 AM
	Complete Pac Electric trail and add sharrows and bike lane connections	10/23/2015 9:54 AM
	How about increasing the bike path that was started?	10/9/2015 9:17 PM

QUESTION 15 RESULTS

Q15 What prevents you from walking or riding your bicycle more often? (Check all that apply)

Answered: 177 Skipped: 27



Answer Choices	Responses	
Too much traffic or dangerous behavior by people driving (e.g., speeding, not yielding, etc.)	**70.62%**	125
Lack of or incomplete sidewalks, bicycle lanes, or off-street trails	**68.36%**	121
Lack of safe crossings (no marked crosswalks or traffic signals)	**28.25%**	50
Destinations are too far away	**19.21%**	34
No street lights (too dark)	**20.34%**	36
I don't feel safe walking or bicycling (crime, personal safety)	**24.29%**	43
No bicycle racks or insufficient bicycle parking at my destinations	**28.25%**	50
I have too many things to carry or I don't have enough time	**19.77%**	35
I am not physically able to walk or ride a bicycle	**4.52%**	8
I do not own a bicycle in working condition	**4.52%**	8
Other (please specify)	**11.86%**	21
Total Respondents: 177		

QUESTION 15 RESULTS - SAMPLE OF "OTHER" RESPONSES

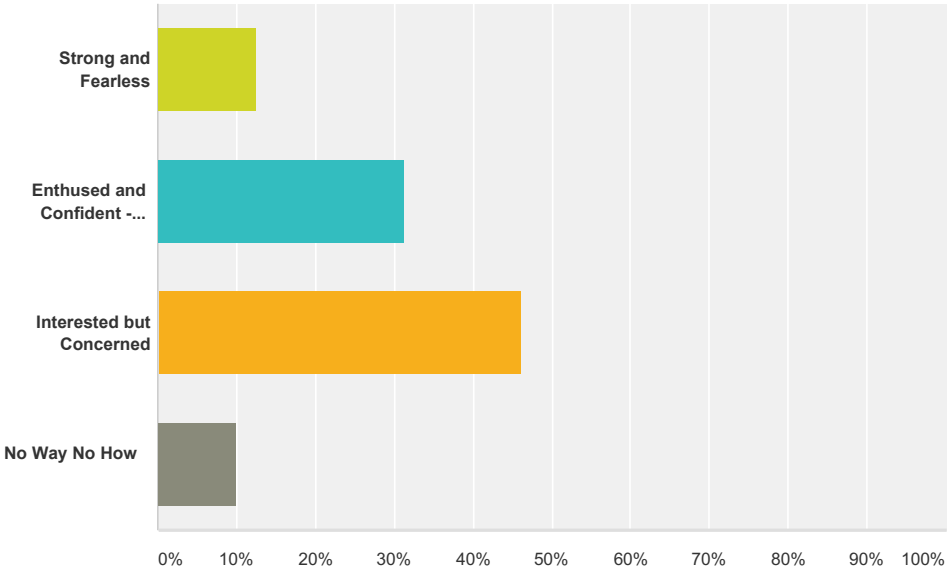
Other (please specify)	**11.86%**	21
Total Respondents: 177		

	Other (please specify)	Date
	No class 1 bike lanes in GG	11/19/2015 6:48 PM
	bike theft, I don't trust my bike anywhere..	11/19/2015 11:51 AM
	curb cuts	11/18/2015 11:05 PM
	Sidewalk conditions	11/18/2015 3:17 PM
	Main streets are not wide enough.	11/18/2015 11:12 AM
	nothing	11/17/2015 2:58 PM
	I don't know how to ride a bike and have no one to teach me	11/17/2015 11:20 AM
	work hours	11/5/2015 12:03 PM
	im lazy	11/4/2015 7:15 PM
	safety is the biggest concern I have for my children and self. I would like to see bike lanes that were separate from the cars by a physical divider. I would like to know that there is a unbroken route to ride where we can all feel safe. I would downsize to one vehicle if we could safely get around on bike.	11/4/2015 6:50 PM
	Nothing prevents me.	11/4/2015 4:04 PM
	Well defined on street bike lanes that are well signed...and barricaded where necessary on high traffic streets for added safety.	11/2/2015 11:52 AM
	I'm lazy. I used to bike a long time ago, but now I'd simply rather not. And I don't walk all that much other than to get from place to place for the same reason.	10/30/2015 7:32 PM
	Riding in the bike lanes is too dangerous. Too many have been hit.	10/30/2015 7:42 AM
	nothing	10/28/2015 4:19 PM
	If we were not cited for riding on a sidewalk, when there is no bike lane, I would ride more places. Sadly, Euclid is the most common route I would take and it is too scary to ride in the street.	10/23/2015 10:18 AM
	Nothing prevents me personally ... I love to be on a bike.	10/23/2015 9:59 AM
	Nothing prevents me now. But other riders probably would not ride streets like I do	10/23/2015 9:54 AM
	Recent Knee operation	10/10/2015 4:41 PM
	They're ok	10/10/2015 4:38 PM
	Not enough police presence at parks where transients spend their afternoons	10/10/2015 3:39 PM

QUESTION 16 RESULTS

Q16 Please tell us what type of bicycle rider you consider yourself (Please choose one. Click the button, not the photo. Clicking the photo may cause the survey to close.)

Answered: 169 Skipped: 35

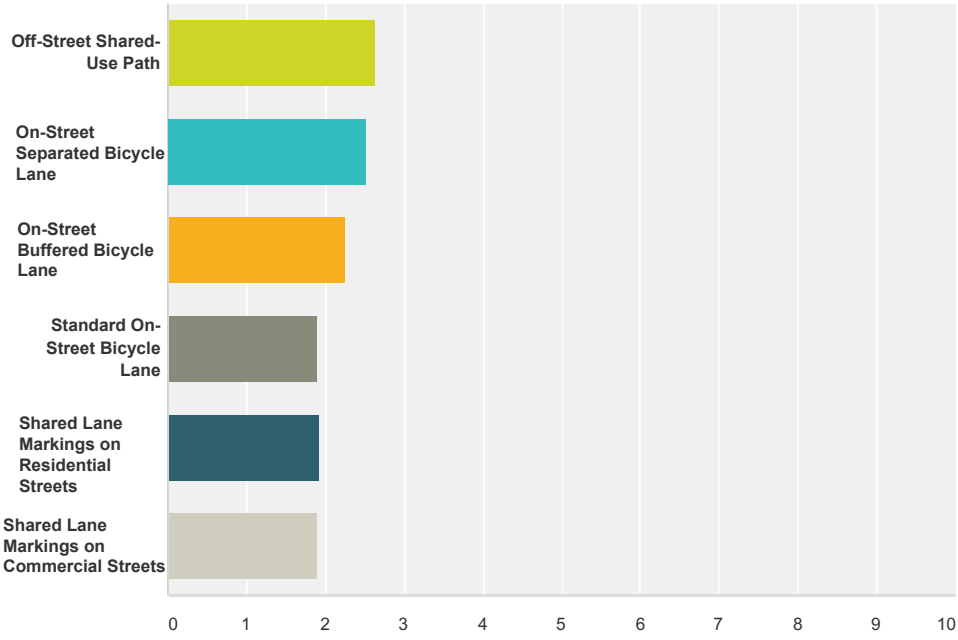


Answer Choices	Responses
	12.43% 21
Enthused and Confident - Currently rides but prefers to ride on bike paths, bike lanes, or on low speed streets. This person is moderately to somewhat comfortable in traffic.	31.36% 53
	46.15% 78
	10.06% 17
Total	169

QUESTION 17 RESULTS

Q17 Please rate the following bicycle facilities by their potential to encourage you to ride a bicycle more often.

Answered: 173 Skipped: 31

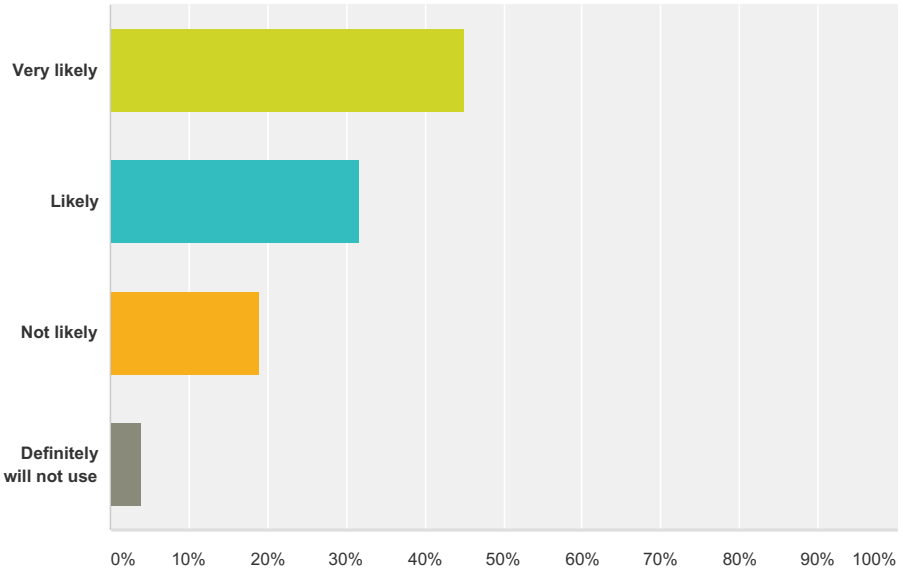


	Not interested	Small impact	Love It!	Total	Weighted Average
 Off-street share-use path	9.36% 16	18.13% 31	72.51% 124	171	2.63
 On-street separated bike lane	15.85% 26	16.46% 27	67.68% 111	164	2.52
 On-street buffered bike lane	16.46% 27	42.07% 69	41.46% 68	164	2.25
 Standard on-street bike lane	38.27% 62	34.57% 56	27.16% 44	162	1.89
 Shared-lane markings on residential streets	37.42% 61	31.90% 52	30.67% 50	163	1.93
 Shared-lane markings on commercial streets	37.80% 62	34.15% 56	28.05% 46	164	1.90

QUESTION 18 RESULTS

Q18 How likely would you be to use a future completed trail/shared-use pedestrian and bicycle path along the vacant Pacific Electric Right-of-Way? The trail currently is only one block long between Stanford and Nelson Streets/

Answered: 173 Skipped: 31



Answer Choices	Responses	
Very likely	**45.09%**	78
Likely	**31.79%**	55
Not likely	**19.08%**	33
Definitely will not use	**4.05%**	7
Total		**173**

Q19 Do you have any other comments, questions, or concerns related to the future of bicycling and walking in Garden Grove?

Answered: 71 Skipped: 133

	Responses	Date
	I live in Garden Grove, I work and go to school in Costa Mesa, and I play in Santa Ana and Long Beach. I usually drive because I am deterred by the lack of connectivity of bike lanes between cities. It's difficult to map out a safe route that will be reliable and make me feel comfortable being in traffic. I hope it will be possible in the future for Orange County residents to commute and travel between cities without worrying about drivers who do not consider the needs and safety of cyclists.	2/16/2016 11:06 AM
	need good access from the Santa Ana River Trail to Harbor. 17th street and Harbor Blvd have no bike lanes and very heavy car traffic.	2/12/2016 10:22 AM
	needs to be encouraged. fuel costs, traffic, clean air should be stressed. save the earth and your sanity.	1/9/2016 1:00 PM
	Thank you for trying to improve the situation!! We would love to take more bike riding trips with our kids.	12/7/2015 6:12 PM
	I don't feel safe riding my bike on the streets. Asian driver's need to learn how to drive before they get their licenses.	11/28/2015 11:30 PM
	THE CITY NEEDS MORE SIDEWALKS, BIKE LANES, AND TO UPDATE TRAFFIC SIGNALS.	11/20/2015 9:19 PM
	We are so frustrated where we live that busy streets don't have sidewalks (ie Gilbert, Lampson, Stanford) so it is dangerous with cars driving by at 45+ mph. I ride my bike to work and have to choose streets carefully because of the lack of bike lanes. I noticed in Anaheim on Gilbert Street they added a bike lane (not a bike route). I would ride more in the city but there is a real lack of dedicated lanes without cars parked. I am glad they are finally looking into improving the walking and biking in the city.	11/20/2015 8:47 PM
	I do not live in Garden Grove but work in the city. I would not ride a bike on the street due to many drivers being unaware of their surroundings. Many do not follow standard driving rules either; I would be afraid if I were to ride on the street in the city.	11/20/2015 7:08 PM
	There's more to garden Grove than bicycles that needs fixing.	11/20/2015 7:28 AM
	Extend the PacificElectric ROW bike path from Cypress to Santa Ana	11/19/2015 6:52 PM
	We need more small businesses to attract people and give them reasons to shop and socialize.	11/19/2015 5:08 PM
	Yay for bikes!	11/19/2015 2:06 PM
	better?safer public bike racks or easier permit process for private racks. Slower traffic, more retail in a small area not just more people in a small area.	11/19/2015 11:57 AM
	Make the red car right away a green belt with light rail and bike/walking path. If not light rail then bus way. I use a wheel chair.	11/18/2015 11:30 PM
	People are not obeying speed limits! This causes me to walk less.	11/18/2015 1:22 PM
	Let's continue to improve the community aspect of Garden Grove!	11/18/2015 11:53 AM
	Until Garden Grove Police start doing a better job	11/18/2015 2:49 AM
	The Nelson St trail is a joke and waste of resources. Short, dry, ugly, univiting location.	11/17/2015 9:06 PM
	No	11/17/2015 8:33 PM
	Need safer bike routes in the city. I walk but my husband bikes and the route we take has no bike lanes at all	11/17/2015 8:17 PM
	k	11/17/2015 7:31 PM
	I'm so excited that this is something the city of Garden Grove is looking to improve. I usually drive out of the city to go hiking on trails which usually means that afterwards I end up eating dinner at restaurants in other cities. It would be nice to buy dinner in GG since I can help provide tax dollars to the city I live in.	11/17/2015 5:22 PM
	Cars should take priority. This is a misuse of funds. Fix the pot holes in the street. Bike lanes provide false security.	11/17/2015 3:02 PM

QUESTION 19 RESULTS CONTINUED

	Many streets do not have sidewalks at all in residential areas where people frequently speed. Please add sidewalks to all communities.	11/17/2015 1:28 PM
	Lots of trash around everywhere..homeless are scary. Needs to be safer in GG to walk and ride.	11/17/2015 12:52 PM
	We have to accept that the days of cycling safely on the streets of Garden Grove are over and cycle lanes do not make it any safer. Those that want to cycle safely need to go to the river banks or beachside promenades. Those that have to cycle just need to be very careful. Better enforcement of drivers texting would help tremendously. It's sad but that's the truth.	11/17/2015 12:26 PM
	Have more law enforcement regulating car drivers.	11/17/2015 12:18 PM
	The Pacific Electric ROW should be used for its original purpose, a rail line (or BRT line to make it more affordable). Southern California NEEDS reliable and frequent public transit options to have truly "active streets" of walking and bicycling. Also, the picture you used for standard on-street bicycle lanes show why those do not work. There are tire tracks clearly intruding on the bike lane, which is evidence of the well-known fact that drivers (a group which includes myself, to be clear) do not respect the boundaries of standard bike lanes. The only way to truly increase bicycling is with physically separated bike lanes that are adjacent to streets (aka cycletracks). Lastly, all the infrastructure improvements in the world won't help if people don't know how to ride a bicycle. The city (ideally in collaboration with other stakeholders) needs to offer free comprehensive bicycle riding lessons.	11/17/2015 11:26 AM
	None. Took the survey thinking "Motorcycle" as "Bike". My bad.	11/17/2015 11:12 AM
	Routes should be more visible.	11/17/2015 11:02 AM
	Thank you for moving forward with this vital need! We must have Slow Lanes that are just for slow modes of transportation. If you build them, they will come. More people will use them when going around town. Imagine if people could use golf carts. Everyone would over cars. Tax credits would also be an incentive. When Harbor was shut down for Great Wolf stuff, people used the slow lane and traffic was amazingly slower. Informal experiment but I can tell you what I saw was that t would work. Make the slow lanes exactly that - SLOW and no cars allowed. Be the first city to do so.Be the model for others.	11/17/2015 10:42 AM
	I'm a leisure rider around my neighborhood, but a road cyclists when ever I get the chance. Getting to trails around west garden grove is hard when you don't have enough bike lanes. People want to push me off the road.	11/17/2015 10:28 AM
	Love the idea of Bike friendly city. Would also ask that water absorbent paving be used (if adopted) to rule water run-off & restore water sheds.	11/17/2015 10:05 AM
	No	11/17/2015 10:05 AM
	no	11/17/2015 9:59 AM
	street lights in neighborhoods	11/17/2015 9:58 AM
	All of orang county needs a plan so people are safe and comfortable to walk and ride. also maybe a local free trolley and or better public transportation	11/5/2015 5:02 PM
	Cars and bikes do not share the road. We need to have separate paths for safety.	11/5/2015 7:33 AM
	Please make it safe for students, I have 4 children ages 11-20 who would be riding everyday along with my husband and self if it was safer. I physical division is the best solution to protect bicyclist, however even a wider shared sidewalk near enders elementary would be great!	11/4/2015 6:56 PM
	No	11/4/2015 4:06 PM
	I hope this actually makes a difference in the future of bicycle safety and accessibility.	11/3/2015 2:26 PM
	Those damn Asian drivers...	11/3/2015 12:50 PM
	We need to be able to connect to other existing city bike paths. Having safe bicycle paths and other alternative transportation paths would help improve the quality of life in Garden Grove which is what our city lacks. Our geographic location centered around other major cities and parks makes it our responsibility to interlink with our neighbors and attractions	11/3/2015 12:27 PM
	I would use the Right of Way path as long as it felt safe. The area currently feels too hidden and abandoned. Perhaps with more activity promoting & beautification features (landscaping, stationary exercise equipment, adequate lighting, small playground spaces, drinking fountains, trees, etc.) it would feel more like a public space rather than a place where transients could be camping.	11/3/2015 11:00 AM
	Great idea. A bike lane on the P E right of way would be perfect.	11/2/2015 2:30 PM
	Have wondered why there is no apparent interest in developing the Pacific Electric...and other rail spurs into bike hike and jog paths. This seems an Ideal way for people to access schools, shoping areas, etc.	11/2/2015 12:03 PM

QUESTION 19 RESULTS CONTINUED

	I ride Garden Grove Blvd and Lampson Ave between GG Blvd and SB Blvd. They are some of the worst streets for bicyclist. High speed traffic and not enough space for bikes.	11/2/2015 10:42 AM
	NOPE	10/31/2015 4:21 PM
	You need to also bring neighboring communities into the dialogue on active streets. Bike paths can't begin and end in Garden Grove. Too many of us work in other parts of the region and would love to have better connectivity! And INCREASE buses and access to transit. For example, I'd love to ride my bike to a bus stop and then go to a transit station and lock my bike safely to go to LA when I have meetings (once a week). Today, there is not enough buses or bike infrastructure to allow me to do it safely or efficiently.	10/31/2015 7:51 AM
	I walk a lot in central GG and I have little to no difficulty with streets and traffic. One has to be sensible, watchful, and careful.	10/30/2015 7:35 PM
	I'm not a member of your main target audience, I suspect. I'm happy you are doing things for the benefit of those who are.	10/30/2015 7:34 PM
	I live at Brookhurst and Chapman, and if the paved bike lane extended all the way to Brookhurst I would definitely use it to ride or walk to Main Street	10/30/2015 7:00 PM
	Need tree lined paths away from road pollution.	10/30/2015 11:41 AM
	I live near Edgar and Westgrove parks. I would like to see walking paths in these parks, allowing space for sports activities. The paths could also be used by kids on bikes, riding toys, etc.	10/30/2015 9:47 AM
	I am glad the city is taking an interest in this issue. My wife and I just bought bicycles, and we usually strap them on the car and go to LB, HB or the riverbed to ride because there is no safe or interesting routes in GG.	10/30/2015 9:02 AM
	The only reason I do not commute to work by bike one or two days a week is because of unsafe biking conditions (no bike lanes). Garden Grove is generally unsafe for biking.	10/30/2015 7:49 AM
	We need more bike paths not in the street in West Garden Grove. It is not safe to ride in the bike lanes here.	10/30/2015 7:47 AM
	I am concerned about impacting vehicle traffic when adding bike lanes. I am also concerned about distracted drivers both on the bike and in a motor vehicle.	10/30/2015 7:18 AM
	Do not take any space from cars. There is too much traffic and not enough people will want to share the road. Cars first,	10/28/2015 4:23 PM
	My family and I will occasionally ride our bikes on the Pacific Electric Right-of-Way trail between Stanford and Nelson Streets. We love it and hope that in the future it can become longer.	10/25/2015 7:08 AM
	its just dangerous	10/24/2015 1:20 PM
	let's finish the P&E right away	10/23/2015 8:33 PM
	Our current street conditions were designed to accommodate traffic needs. What you're doing is great to encourage walking and bicycling in or city, hence more community engagement, healthier bodies, healthier environment.	10/23/2015 11:32 AM
	The proposed PE path needs to extend quite a distance to be viable. It needs to have "Destinations" along it. It needs lighting at night (solar). It needs trashcans. The city streets in general feel unsafe as we have to share narrow lanes of traffic and we have a lot of first-generation drivers. Bikes are not allowed in our parks, a shame. Really need to promote the new report vandalism / graffiti / abandoned junk app to city walkers and riders. They have the best opportunity to safely report issues that blight the city. It's safest for them as they are not driving a vehicle and can get a good photo or record the location easiest. Also, stress the no texting while in an intersection to people. We have zombies walking across streets, staring at their phones, ignoring traffic. Too many kids and adults are doing this. We need a good PSA in every GG school and perhaps on channel 3 GGTV. Perhaps a program that encourages restaurants and stores to add bike racks for customers, like a discount or free beverage for riding or walking to the destination. Main Street could benefit for sure. Another big collection of GG restaurants is at Chapman & Brookhurst in the Newberry Shopping Center. This should be a PE right of way path destination that encourages ridership.	10/23/2015 10:37 AM
	As I said before, be the first, to designate Slow Lane City, a term I coined, for bikes, trikes, seniors and their scooters, mopeds, golf carts (why are golf carts not even allowed? crazy) so people, if you build this mode, will come. I noticed that when Harbor slow lane was blocked off for the cheshire cat sidewalks, traffic slowed down and it was a mini open streets and it worked. Be the FIRST Slow Lane City!	10/23/2015 10:12 AM
	I love that the City of Garden Grove is taking an interest in creating a Bicycle Master Plan and that they are asking me what I think.	10/23/2015 10:06 AM
	Use the panic rightaway	10/10/2015 5:33 PM
	Not really	10/10/2015 4:55 PM

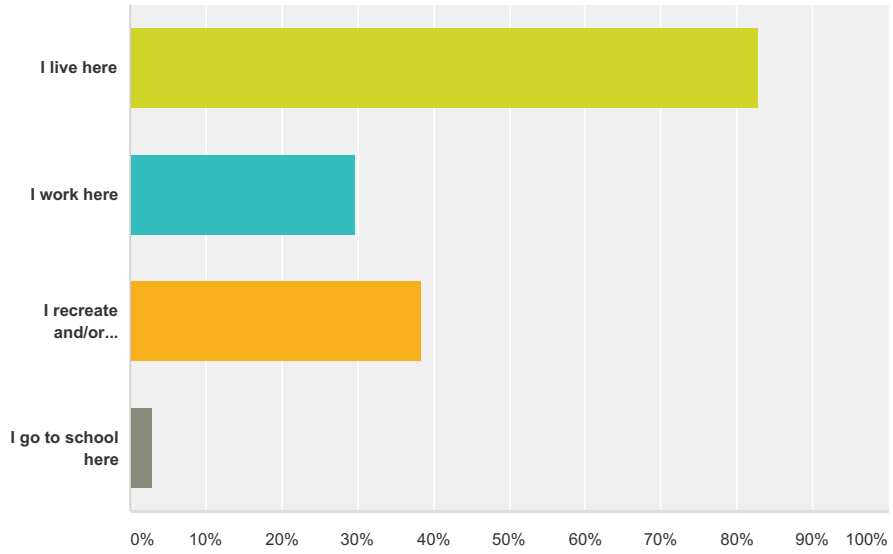
QUESTION 19 RESULTS CONTINUED

	Not really	10/10/2015 4:55 PM
	My children love to ride their bicycles and be outdoors, I am concerned for their safety whenever I take them out to ride. There is very limited accessibility to safe areas within the parks for them to ride (not on the grass) and for them to get to the park without being too close to traffic. I prefer driving over to Long Beach where they can ride safely, but I would prefer to be able to this in the city we live in.	10/10/2015 3:45 PM
	PLEASE finish the bike path (Pacific Electric)	10/9/2015 9:21 PM

QUESTION 20 RESULTS

Q20 How are you connected with Garden Grove?

Answered: 169 Skipped: 35



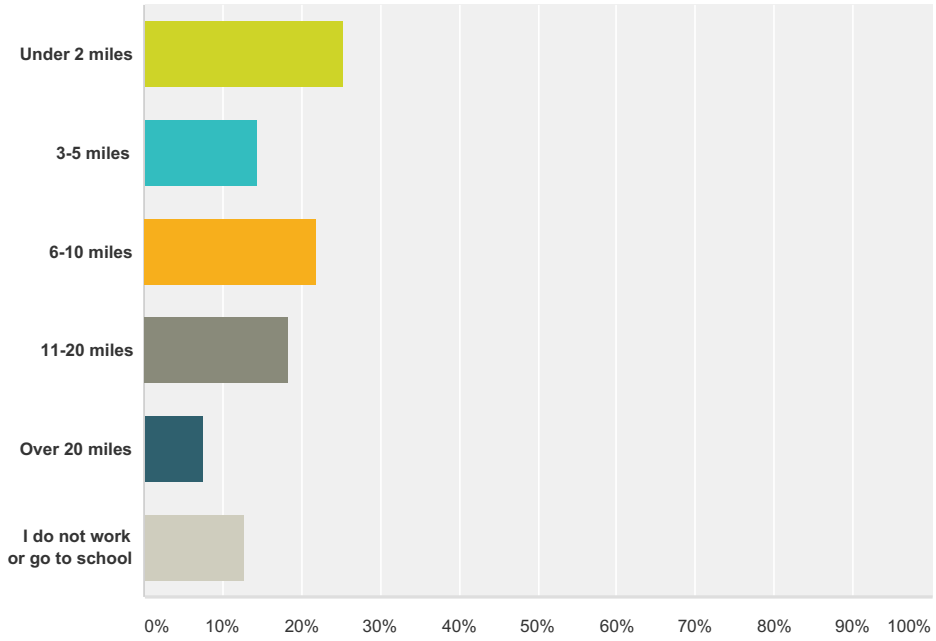
Answer Choices	Responses	
I live here	**82.84%**	140
I work here	**29.59%**	50
I recreate and/or socialize here	**38.46%**	65
I go to school here	**2.96%**	5
Total Respondents: 169		

	Other (please specify)	Date
	I grew up in Garden Grove but now live in LA. It is still near and dear to my heart.	1/5/2016 10:35 PM
	My parents live near by.	11/19/2015 2:23 PM
	I host business events here	11/17/2015 9:07 PM
	I'm a board member for the women's division of the chamber of commerce	11/17/2015 1:44 PM
	Since the 30's "out of town" in what became GG. Since Sept,1860 in Anaheim.	11/17/2015 10:49 AM
	my kids are in school here as well	11/17/2015 10:30 AM
	My kids go to school here	11/17/2015 10:14 AM
	My child will go to schoolin this community one day.	11/3/2015 9:21 PM
	I travel through GG about once a wk to connect with other friends who cycle. Used to live and attend High School in GG.	11/2/2015 12:07 PM
	I sometimes shop in GG and also ride with other bikers as a group to go to the beach.	11/2/2015 10:43 AM
	Neighborhood Improvement Commissioner	10/23/2015 10:39 AM
	Family in GG since the 30's, in Anaheim since 1870's ... long time!	10/23/2015 10:14 AM
	Grew up here	10/10/2015 5:14 PM

QUESTION 21 RESULTS

Q21 How far is your work/school from where you live or from the nearest mass transit system from where you live?

Answered: 174 Skipped: 30

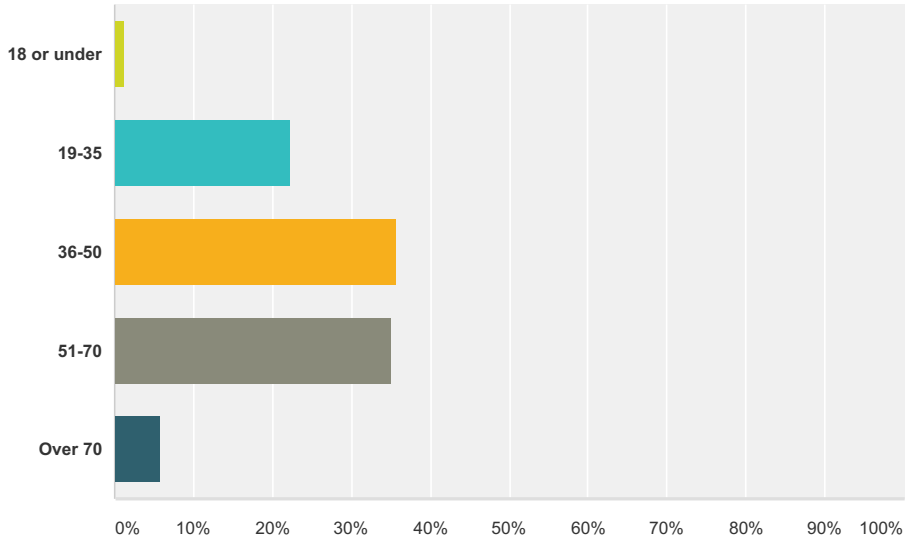


Answer Choices	Responses	
Under 2 miles	**25.29%**	44
3-5 miles	**14.37%**	25
6-10 miles	**21.84%**	38
11-20 miles	**18.39%**	32
Over 20 miles	**7.47%**	13
I do not work or go to school	**12.64%**	22
Total		**174**

QUESTION 22 RESULTS

Q22 What is your age group?

Answered: 174 Skipped: 30

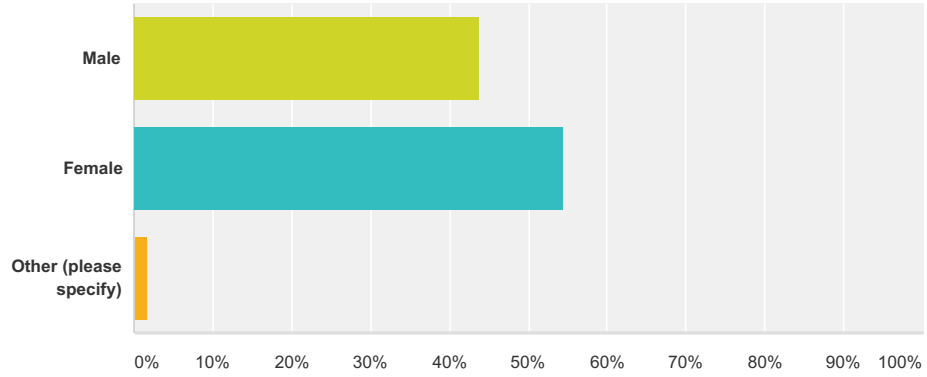


Answer Choices	Responses	
18 or under	**1.15%**	2
19-35	**22.41%**	39
36-50	**35.63%**	62
51-70	**35.06%**	61
Over 70	**5.75%**	10
Total		**174**

QUESTION 23 RESULTS

Q23 What is the gender you identify with?

Answered: 171 Skipped: 33



Answer Choices	Responses	
Male	**43.86%**	75
Female	**54.39%**	93
Other (please specify)	**1.75%**	3
Total		**171**

	Other (please specify)	Date
	fluid	11/17/2015 11:27 AM
	I'm Male and this is a lame question.	11/17/2015 11:13 AM
	na	11/5/2015 5:02 PM

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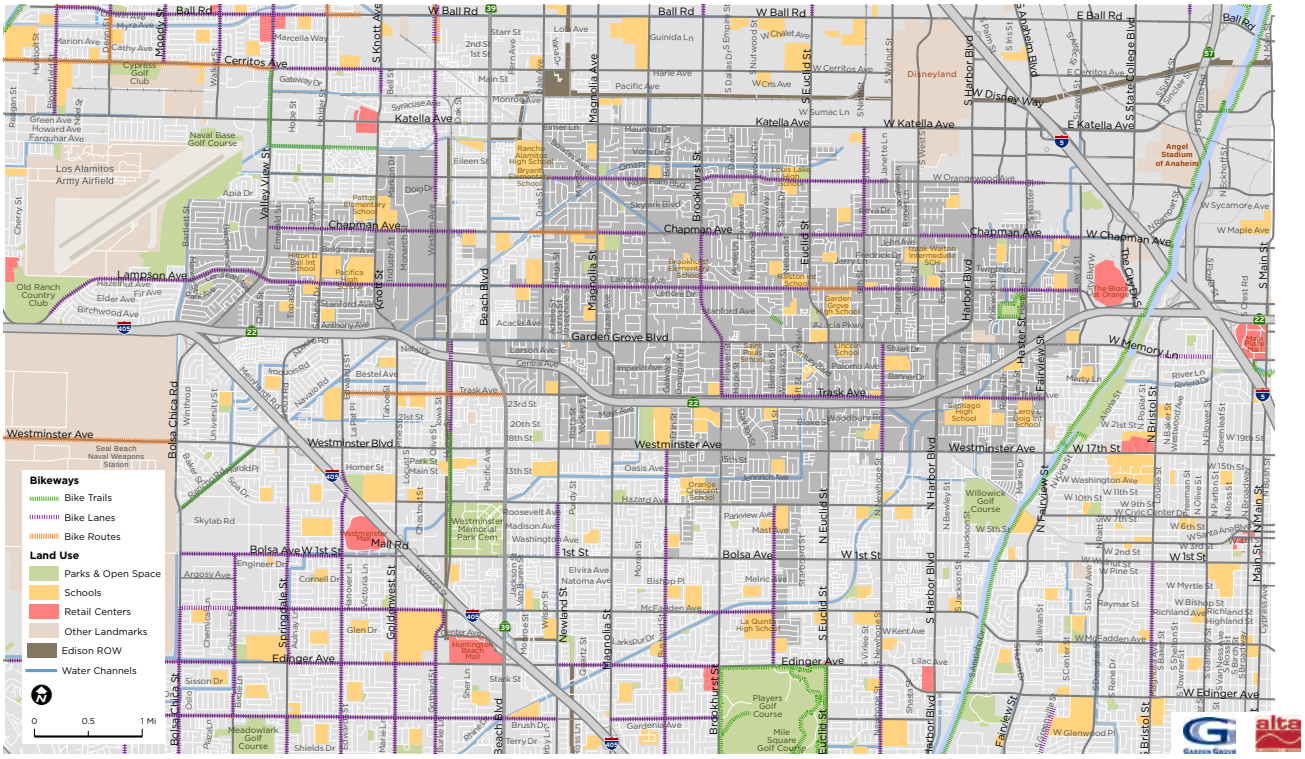
GARDEN GROVE OPEN STREETS OUTREACH BOARDS

Where do you walk and ride your bike?

TELL US YOUR MOST AND LEAST FAVORITE PLACES TO WALK & RIDE YOUR BIKE

Garden Grove ACTIVE STREETS



What motivates you to walk?

WHAT WOULD MAKE YOU WALK MORE?

Garden Grove ACTIVE STREETS

Safer Crossings

Sidewalk extensions, more visible crosswalks, crossing islands, and other improvements can make it safer to cross major streets.

Better Lighting

Highly visible street lighting along sidewalks helps make walking at night safer and more comfortable.

Slower/Less Traffic

Signs, physical roadway treatments, enforcement, and marketing campaigns can all help reduce the amount and speed of car traffic.

Improved Access To Transit

Bus stop shelters with shade and benches, as well as bus arrival information, make a transit trip more convenient.

Sidewalks & Path Improvements

Continuous sidewalks along all streets and wide paths on major routes provide safe and comfortable space for pedestrians.

Benches and Drinking Fountains & Trash Cans

Resting places along popular walking routes make trips easier for seniors and others, and trash cans help keep the city clean.

Better Destination Signs

Signs at lower heights with smaller pedestrian-friendly text help people walking to find popular destinations.

Shade Trees and Landscaping

Mature trees provide needed shade to people walking, and other landscaping such as plants and flowers contribute to a more pleasant community.

PLACE A STICKER TO VOTE FOR YOUR 3 FAVORITES!

What motivates you to bike?

WHAT WOULD MAKE YOU BICYCLE MORE?

Garden Grove ACTIVE STREETS

Off-Street Trails

Off-street Trails or shared-use pathsare paved rights-of-way for the exclusive use of people riding bikes, walking, skateboarding, rollerbladding for fitness, fun and getting around. Trails are physically separated from car traffic, and are generally constructed in corridors not served by the street network such as along river channels or abandoned rail corridors.

On-Street Separated Bikeways

Separated bikeways are set apart from vehicular traffic in the street through a variety of means, such as curbs, planted medians or bollards which provide protection from vehicles. The bikeways may even be raised or two-way. These types of bikeways are appealing to bicyclists who are skeptical of riding in the road because they are separted from cars.

Neighborhood Bikeway

Neighborhood Bikeways are local roads that have slow vehicle speeds and are comfortable for riding your bike. A neighborhood bikeway might include destinations signs, pavement markings, and traffic calming features that facilitate safe and convenient bicycle travel, slow vehicle speeds, and minimize vehicular traffic volumes.

Bicycle Safety Training & Fun Activies

Bicycle safety & skills classes can help make new or returning bicycle riders comfortable on the street. Fun activities such as group rides, bike festivals, and open street events are a great way to show how easy and enjoyable bicycle riding can be.

Slower or Less Traffic

Fast and heavy automobile traffic are often a barrier to people who would like to ride a bicycle. Physical improvements to streets, changes to traffic signals, increased enforcement of laws, and marketing campaigns can all help slow traffic and reduce the number of cars on streets where it is desired.

Better Destination Signs

Signs designed specifically for reading while riding a bicycle can be installed along popular bicycling routes and inform people about important locations such as parks, schools, shopping centers, government offices, and other nearby bikeways or parking facilities.

PLACE A STICKER TO VOTE FOR YOUR 2 FAVORITES!

GARDEN GROVE OPEN STREETS OUTREACH RESULTS

Table B-1: Garden Grove Open Streets Event Results

Reason	# of Votes	Comments / Concerns
What motivates you to bike?		
Off-Street Trails	60	Look at the trails in Eagle Mountain City, Utah
On-Street Separated Bikeways	48	Bikes should be allowed to go through drive-thrus
Neighborhood Bikeway	23	
Bicycle Safety Training & Fun Activities	29	
Slower or Less Traffic	29	
Better Destination Signs	7	
What motivates you to walk?		
Safer Crossings	56	Better signal timing; takes too long to get the "walk" signal
Better Lighting	35	
Slower/ Less Traffic	22	ADA Access
Improved Access to Transit	12	
Sidewalks & Path Improvements	56	
Benches and Drinking Fountains & Trash Cans	28	
Better Destination	11	
Shade Tress and Landscaping	62	
Where do you park your bike?		
On Street Bike Corals	1	
Secure Bike Lockers	2	
Sidewalk Bike Racks	3	
Parking & Repair Stations	10	
What amenities would you like?		
Maps & Wayfinding	9	
Gateways	9	
Lighting	13	
Furniture & Drinking Fountains	9	Restrooms
Bike Parking	5	
Playgrounds	12	Look at Saratoga Springs, Utah City Park playground
Fitness Equipment	11	
Art Installations	10	
Interpretive Signage	6	
Landscaping	21	Duck ponds

Reason	# of Votes	Comments / Concerns
How do you envision the trail?		
Gardens and Groves	13	
Historic Red Car	5	
Civic Garden Grove	1	
Active Streets Theme	4	
Vivid	12	
Natural	15	

GARDEN GROVE DIAMOND JUBILEE COMMUNITY PRIORITIZATION RESULTS

To identify priorities for the community, staff set up a table at the Garden Grove 60th Anniversary Diamond Jubilee. During the event, community members were asked to rank the recommended network projects and provide feedback on the Plan. When comparing the rankings of all participants, it is clear that Garden Grove Boulevard, Harbor Boulevard, and the Pacific Electric Right of Way Trail were highly ranked by many people. This list of community priorities can provide City staff with guidance on which projects to prioritize for immediate next steps, and shows that there is already a large demand for these projects, which could help expedite the community planning process.

Table B-2: Garden Grove Open Streets Event Results

PROJECT	NUMBER OF VOTES
Garden Grove Blvd Complete Streets Study	36
Harbor Blvd Complete Streets Study	25
PE ROW Trail	22
Lampson St Bikeway Improvements	19
Neighborhood Greenway / SRTS	15
Brookhurst St buffered bike lane	11
Anaheim Barber Channel shared-use path	7
Gilbert St bike lane / bike route	7
West St buffered bike lanes	6
PE ROW DT Connection	5
Westminster pedestrian enhancements	5
Hazard Ave separated bikeway	3

Appendix C - Funding Sources

A variety of options exist to further plan, design, and construct bicycle transportation projects, including funding from federal, state, regional, local, and private sources. This section provides information on potential funding sources to support agency efforts to find outside funding sources to implement bicycle improvements.

FEDERAL SOURCES

FIXING AMERICA'S SURFACE TRANSPORTATION ACT (FAST ACT)

The FAST Act, which replaced Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2015, provides long-term funding certainty for surface transportation projects, meaning States and local governments can move forward with critical transportation projects with the confidence that they will have a Federal partner over the long term (at least five years).

The law makes changes and reforms to many Federal transportation programs, including streamlining the approval processes for new transportation projects and providing new safety tools. It also allows local entities that are direct recipients of Federal dollars to use a design publication that is different than one used by their State DOT.

More information: *www.transportation.gov/fastact.*

MAP-21 – SURFACE TRANSPORTATION PROGRAM

A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle transportation facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities.

More information: *www.fhwa.dot.gov/map21/factsheets/stp.cfm*

MAP-21 – CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

The amount of CMAQ funds depends on the state's population share and on the degree of air pollution. Recent revisions were made to bring CMAQ in line with the new MAP-21 legislation. There is a broader emphasis on projects that are proven to reduce PM-2.5. Eligible projects include: "Constructing bicycle and pedestrian facilities (paths, bicycle racks, support facilities, etc.) that are not exclusively recreational and reduce vehicle trips; (and) non-construction outreach related to safe bicycle use." Studies that are part of the project development pipeline (e.g., preliminary engineering) are eligible for funding. "An assessment of the project's expected emission reduction benefits should be completed prior to project selection."

More information*: www.fhwa.dot.gov/environment/air_quality/cmaq/*

BUS AND BUS FACILITIES PROGRAM: STATE OF GOOD REPAIR

Can be used for projects to provide access for bicycles to public transportation facilities, to provide shelters and parking facilities for bicycles in or around public transportation facilities, or to install equipment for transporting bicycles on public transportation vehicles.

More information: *www.fta.dot.gov/grants/13094_3557.html*

SURFACE TRANSPORTATION BLOCK GRANT (STBGP)

The FAST Act expanded the existing Surface Transportation Program (STP) into the Surface Transportation Block Grant Program (STBGP) which places more decision-making power in the hands of state and local governments. The FAST Act simplifies the list of uses eligible for program funds and increases the ways that funds can be used for local roads and rural minor collectors. The Transportation Alternatives Program (TAP) is a set-aside program of this block grant. The new program requires 55 percent of program funds be distributed within each state on the basis of population, compared to 50 percent under STP.

In California, STBGP is allocated through the Regional Surface Transportation Program (RSTP). The TAP program is allocated through the Active Transportation Program (ATP).

More information: *www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm*

NEW OPPORTUNITIES FOR BICYCLE AND PEDESTRIAN INFRASTRUCTURE FINANCING ACT

A proposed bill in Congress to set aside one percent of TIFIA's $1 billion for bicycle and pedestrian infrastructure projects, such as the conversion of abandoned rail corridors for trails, bicycle signals, and path lighting. For these projects, TIFIA's minimum project cost would be $2 million. Eligible costs include: planning & feasibility studies, construction, and land acquisition. The bill reserves 25 percent of project funding for low-income communities.

More information: *www.congress.gov/bill/113th-congress/house-bill/3978*

HIGHWAY SAFETY IMPROVEMENT PROGRAM

The FAST Act eliminates the ability of states to shift funds designated for infrastructure safety programs to behavioral or educational activities, ensuring resources remain in construction-related programs. It also designates several new safety improvements eligible for funding including vehicle-to-infrastructure communication and roadway improvements that provide separation between pedestrians and motor vehicles.

With regards to unpaved roads, the FAST Act allows states to "opt out" of collecting safety inventory data for unpaved/gravel roads if certain conditions are met, as long as the states continue to collect data related to serious crashes and fatalities. It also requires that U.S. DOT to review data and report to Congress on best practices for roadway infrastructure improvements that enhance commercial motor vehicle safety.

HSIP is a data-driven funding program, and eligible projects must be identified through analysis of crash experience, crash potential, crash rate, or other similar metrics. Infrastructure and non-infrastructure projects are eligible for HSIP funds. Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for active transportation users in school zones are examples of eligible projects. All HSIP projects must be consistent with the state's Strategic Highway Safety Plan. In California, HSIP is administered by Caltrans.

More information: *dot.ca.gov/hq/LocalPrograms/hsip.html*

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

Founded in 2009, the Partnership for Sustainable Communities is a joint project of the Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT). The partnership aims to "improve access to affordable housing, provide more transportation options, and lower transportation costs while protecting the environment in communities nationwide." The Partnership is based on five Livability Principles, one of which explicitly addresses the need for bicycle and pedestrian infrastructure - "Provide more transportation choices: Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health." The Partnership is not a formal agency with a regular annual grant program. Nevertheless, it is an important effort that has already led to some new grant opportunities (including the TIGER grants). The San Gabriel Valley Council of Governments and Caltrans should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

More information: *www.epa.gov/smartgrowth/partnership/*

RIVERS, TRAILS, AND CONSERVATION ASSISTANCE PROGRAM

The Rivers, Trails and Conservation Assistance Program (RTCA) is the community assistance arm of the National Park Service. RTCA provides technical assistance to communities in order to preserve open space and develop trails. The assistance that RTCA provides is not for infrastructure, but rather building plans, engaging public participation, and identifying other sources of funding for conversation and outdoor recreation projects.

More information: *www.nps.gov/pwro/rtca/who-we-are.htm*

COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may "use Community Development Block Grant funds for activities that include (but are not limited to): acquiring real property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs." Trails and greenway projects that enhance accessibility are the best fit for this funding source.

More information*: www.hud.gov/cdbg*

COMMUNITY TRANSFORMATION GRANTS

Community Transformation Grants administered through the Centers for Disease Control (CDC) support community–level efforts to reduce chronic diseases such as heart disease, cancer, stroke, and diabetes. Active transportation infrastructure and programs that promote healthy lifestyles are a good fit for this program, particularly if such improvements benefit groups experiencing the greatest burden of chronic disease.

More information: *www.cdc.gov/communitytransformation/*

NATIONAL SCENIC BYWAYS PROGRAM

The Federal Highway Administration (FHWA), part of the USDOT manages the National Scenic Byways Grant Program, which recognizes roads having outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities by providing grants that support projects that manage and protect these roads and improve visitor facilities.

More information: *www.fhwa.dot.gov/discretionary/2012nsbp.cfm*

TRANSPORTATION INVESTMENTS GENERATING ECONOMIC RECOVERY (TIGER) PROGRAM

Can be used for innovative, multimodal and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation. These include bicycle and pedestrian projects. Project minimum is $10 million.

More information: *www.transportation.gov/tiger*

U.S. ENVIRONMENTAL PROTECTION AGENCY – BROWNFIELDS PROGRAM

Assessment grants provide funding for a grant recipient to inventory, characterize, assess, and conduct planning and community involvement related to brownfields sites. Revolving Loan Fund (RLF) grants provide funding for a grant recipient to capitalize a revolving loan fund and to provide sub-grants to carry out cleanup activities at brownfield sites.

More information: *www.epa.gov/brownfields/types-brownfields-grant-funding*

STATE SOURCES

ACTIVE TRANSPORTATION PROGRAM

With the consolidation of federal funding sources in MAP-21 and again under the FAST Act, the California State Legislature has consolidated a number of state-funded programs centered on active transportation into a single program. The resulting Active Transportation Program (ATP) consolidated the federal programs, Bicycle Transportation Account, the Safe Routes to Schools Program, and the Recreational Trails Program. The ATP's authorizing legislation (signed into law by the Governor on September 26, 2013) also includes placeholder language to allow the ATP to receive funding from the newly established Cap-and-Trade Program in the future. The Statewide Competitive ATP has $180 million available statewide for the 2014/2015 and 2015/2016 fiscal cycles. The Regional Competitive ATP will have additional funding

available for the SCAG region in the 2014/2015 and 2015/2016 fiscal cycles. The California Transportation Commission writes guidelines and allocates funds for the ATP, while the ATP will be administered by the Caltrans Division of Local Assistance. Goals of the ATP are currently defined as the following:

- Increasing the proportion of trips accomplished by biking and walking;
- Increasing safety and mobility for active transportation users;
- Advancing active transportation efforts of regional agencies to achieve the greenhouse gas reduction goals;
- Enhancing public health;
- Ensuring that disadvantaged communities fully share in the benefit of the program; and,
- Providing a broad spectrum of projects to benefit many types of active transportation users.

More information: *www.dot.ca.gov/hq/LocalPrograms/atp/index.html*

STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)

Funds new construction projects that add capacity to the transportation network. STIP consists of two components, Caltrans' Interregional Transportation Improvement Program (ITIP) and regional transportation planning agencies' Regional Transportation Improvement Program (RTIP). STIP funding is a mix of state, federal, and local taxes and fees. Bicycle and pedestrian projects may be programmed under ITIP and RTIP.

More information: *www.catc.ca.gov/programs/stip.htm*

CALTRANS PLANNING GRANTS

Caltrans also administers the Transportation Planning Grant Program that funds projects to improve mobility and lead to the planning, programming, and implementation of transportation improvement projects. Most recently, Caltrans awarded $10.0 million in grant funding to 70 applicants, in two sub-categories: Environmental Justice grants and Community Based Transportation Plan grants.

More information: *www.dot.ca.gov/hq/tpp/grants.html*

ENVIRONMENTAL JUSTICE GRANT PROGRAM

The Environmental Justice (EJ) Grant Program promotes the involvement of low-income, minority communities, and Native American tribal governments in the planning for transportation projects. EJ grants have a clear focus on transportation and community development issues to prevent or mitigate disproportionate, negative impacts while improving mobility, access, safety, and opportunities for affordable housing and economic development. Grants are available to cities, counties, transit districts, and tribal governments.

More information: *www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_ej.html*

COMMUNITY BASED TRANSPORTATION PLANNING GRANT PROGRAM

The Community Based Transportation Planning (CBTP) grant program promotes transportation and land use planning projects that encourage community involvement and partnership. These grants include community and key stakeholder input, collaboration, and consensus building through an active public engagement process. CBTP grants support livable and sustainable community concepts with a transportation or mobility objective to promote community identity and quality of life.

More information: *www.dot.ca.gov/hq/tpp/offices/ocp/completed_projects_cbtp.html*

PETROLEUM VIOLATION ESCROW ACCOUNT

In the late 1970s, a series of federal court decisions against selected United States oil companies ordered refunds to the states for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for Petroleum Violation Escrow Account (PVEA) funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In California, Caltrans Division of Local Assistance administers funds for transportation-related PVEA projects. PVEA funds do not require a match and can be used as match for additional federal funds.

More information*: www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf*

OFFICE OF TRAFFIC SAFETY (OTS) GRANTS

The Office of Traffic Safety (OTS) distributes grants statewide to establish new traffic safety programs or fund ongoing safety programs. OTS grants are supported by federal funding under the National Highway Safety Act and MAP-21. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Eligible grantees are governmental agencies, state colleges, state universities, local town and county government agencies, school districts, fire departments, and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year. There is no maximum cap to the amount requested; however, all items in the proposal must be justified to meet the objectives of the proposal.

More information: *www.ots.ca.gov/Grants/Apply/default.asp*

ENVIRONMENTAL ENHANCEMENT AND MITIGATION FUNDS

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects, or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans district must support the project. The average award amount is $250,000.

More information: *www.dot.ca.gov/hq/LocalPrograms/EEM/homepage.htm*

LAND AND WATER CONSERVATION FUND

The Land and Water Conservation Fund is a federal program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California State Parks Department. Cities, counties, and districts authorized to acquire and develop park and recreation space are eligible for grant funding. While non-profits are ineligible, they are allowed to apply in partnerships with eligible agencies. Applicants must fund the project entirely and will be reimbursed for half of the cost. Up to $2.0 million was available in California in the 2012 round of grant funding.

More Information: *www.parks.ca.gov/?Page_id=21360*

CALIFORNIA STRATEGIC GROWTH COUNCIL

The Strategic Growth Council is a state agency that manages the Sustainable Communities Planning Grant and Incentives Program, as well as the Affordable Housing and Sustainable Communities (AHSC) program. The first program provides grants for development and implementation of plans that lead to significant reductions in greenhouse gas emissions, improve air and water quality, promote public health, promote equity, increase housing affordability, increase infill and compact development, revitalize urban and community centers, protect natural resources and agricultural lands, reduce automobile usage and fuel consumption, improve infrastructure systems, promote water conservation, promote energy efficiency and conservation, and strengthen the economy. The second program provides funding for land use, housing, transportation, and land preservation projects to support infill and compact development that reduces greenhouse gas emissions.

More information: *sgc.ca.gov/m_grants.php*

REGIONAL & LOCAL SOURCES

CLEAN AIR FUND (AB 434/2766 – VEHICLE REGISTRATION FEE SURCHARGE)

Administered by SCAQMD. Local jurisdictions and transit agencies can apply. Funds can be used for projects that encourage biking, walking, and/or use of public transit. For bicycle-related projects, eligible uses include: designing, developing and/or installing bikeways or establishing new bicycle corridors; making bicycle facility enhancements/improvements by installing bicycle lockers, bus bicycle racks; providing assistance with bicycle loan programs (motorized and standard) for police officers, community members and the general public. Matching requirement: 10-15 percent.

More information at: *www.aqmd.gov/home/programs/local-government/local-government-detail?title=ab2766-motor-vehicle-subvention-program*

MEASURE R SALES TAX REVENUE LOCAL RETURN

Fifteen percent of the Measure R county sales tax is designated for use by local cities and the County of Los Angeles for transportation purposes, including bicycle-related uses such as infrastructure, signage, bicycle sharing, and education efforts.

Guidelines for the Local Return program can be found at: *ebb.metro.net/projects_studies/local_return/images/measure-r-Local-Return-Guidelines.pdf*

SCAG SUSTAINABILITY PROGRAM

SCAG provides financial and technical assistance to member agencies for integrated land use and transportation planning. The 2013-2014 Sustainability Program emphasized:

- Projects that make measurable progress toward implementation
- Assistance to communities for updating General Plans
- Inter-jurisdictional and multi-stakeholder partnerships
- Outreach and education to the community and stakeholders on sustainable development
- Past Compass Blueprint partner jurisdictions may propose work that will move their plans closer to implementation.

More information at: *sustain.scag.ca.gov/Pages/default.aspx*

BICYCLE CORRIDOR IMPROVEMENT PROGRAM CALL FOR PROJECTS (BCIP)

The Bicycle Corridor Improvement Program (BCIP) is funded using the federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) authorized under Moving Ahead for Progress in the 21st Century (MAP-21) and the Fixing America's Surface Transportation (FAST). The CMAQ program provides funding through annual appropriations to Orange County to be used for transportation-related projects that reduce congestion and improve air quality. The Orange County Transportation Authority (OCTA) is responsible for selecting regionally significant projects for Orange County and working with the California Department of Transportation (Caltrans) in administering selected projects.

The goals of the BCIP are to:

- Increase the number of biking and walking trips
- Provide regional linkages to key destinations
- Close bikeways corridor gaps
- Promote mobility options by increasing safety
- Implement projects with community support
- Improve air quality across Orange County

More information at*: www.octa.net/Projects-and-Programs/Plans-and-Studies/Funding-Programs/Call-for-Projects/BCIP-Call-For-Projects/*

ARTERIAL PAVEMENT MANAGEMENT PROGRAM (APM)

The Arterial Pavement Management (APM) Program has been developed to address pavement maintenance for the 35 cities in Orange County. Eligible projects are pavement preservation/preventative maintenance, rehabilitation, and reconstruction. These funds can be used for bike lanes (striping and signage only, must be on an adopted plan) and constrction or modification of curb ramps within the limits of the project as necessary to satisfy ADA requirements. Sidewalks mandated for ADA improvements can potentially be partially funded as well.

More information here: *www.octa.net/Projects-and-Programs/Plans-and-Studies/Funding-Programs/Call-for-Projects/APM-Call-For-Projects/*

DEVELOPER IMPACT FEES

As a condition for development approval, municipalities can require developers to provide specific infrastructure improvements, which can include bikeway projects. These projects have commonly provided Class II bicycle facilities for portions of on-street, previously-planned routes, and sidewalks. They can also be used to provide bicycle parking, shower and locker facilities, signal modifications, transit stop modifications, and stormwater modifications. The type of facility that should be required to be built by developers should reflect the greatest need for the particular project and its local area. Legal challenges to these types of fees have resulted in the requirement to illustrate a clear nexus between the particular project and the mandated improvement and cost.

ROADWAY CONSTRUCTION, REPAIR, AND UPGRADE

Planned resurfacing and road diets are one means of combining motor vehicle, transit, bicycle, and pedestrian projects into one, multimodal construction project. To ensure that planned roadway construction projects considers ways to combine multiple multimodal projects, it is important adopt a complete streets policy that includes a review all facility types during the each phase of the project. This policy and review process should follow California's 2008 Complete Streets Act and Caltrans'2014 Deputy Directive 64-R2which require that the needs of all roadway users be considered during "all phases of state highway projects, from planning to construction to maintenance and repair."

More information: *www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets.html*

UTILITY PROJECTS

By monitoring the capital improvement plans of local utility companies, it may be possible to coordinate upcoming utility projects with the installation of motor vehicle, transit, bicycle, and pedestrian infrastructure within the same area or corridor. Often times, utility companies will mobilize the same type of forces required to construct transportation projects, resulting in the potential for a significant cost savings. These types of joint projects require a great deal of coordination, a careful delineation of scope items and some type of agreement or memorandum of understanding, which may need to be approved by multiple governing bodies.

CABLE INSTALLATION PROJECTS

Cable television and telephone companies sometimes need new cable routes within public right-of-way. Recently, this has most commonly occurred during expansion of fiber optic networks. Since these projects require a significant amount of advance planning and disruption of travel lanes, it may be possible to request reimbursement for affected bicycle and pedestrian facilities to mitigate construction impacts. In cases where cable routes cross undeveloped areas, it may be possible to provide for new transportation facilities following completion of the cable trenching.

PRIVATE SOURCES

PEOPLEFORBIKES COMMUNITY GRANT PROGRAM

PeopleForBikes is a coalition of bicycle suppliers and retailers that has awarded $2.9 million in community grants and leveraged an additional $670 million since its inception in 1999. The community grant program funds bicycle paths and rail trails, as well as mountain bicycle trails, bicycle parks, BMX facilities, and large-scale bicycle advocacy initiatives. Spring 2015 grant awards ranged between $800 and $10,000 and contributed to greenway and other infrastructure projects, as well as bicycle parking and bicycle-related programming.

More information: *www.peopleforbikes.org/pages/community-grants*

THE ROBERT WOOD JOHNSON FOUNDATION

The Robert Wood Johnson Foundation was established as a national philanthropy in 1972, and today, it is the largest U.S. foundation devoted to improving the health and health care of all Americans. Grant making is concentrated in four areas:

- To assure that all Americans have access to basic health care at a reasonable cost
- To improve care and support for people with chronic health conditions
- To promote healthy communities and lifestyles
- To reduce the personal, social and economic harm caused by substance abuse: tobacco, alcohol, and illicit drugs

More information: *www.rwjf.org/applications/*

THE WAL-MART FOUNDATION

The Wal-Mart Foundation offers a Local, State, and National Giving Program. The Local Giving Program awards grants of $250 to $5,000 through local Wal-Mart and Sam's Club Stores. Application opportunities are announced annually in February with a final deadline for applications in December. The State Giving Program provides grants of $25,000 to $250,000 to 501c3 nonprofits working within one of five focus areas: Hunger Relief & Nutrition, Education, Environmental Sustainability, Women's Economic Empowerment, or Workforce Development. The program has two application cycles per year: January through March and June through August. The Wal-Mart Foundation's National Giving Program awards grants of $250,000 and more, but does not accept unsolicited applications.

More information: http://foundation.walmart.com/apply-for-grants

THE KODAK AMERICAN GREENWAYS PROGRAM

The Conservation Fund's American Greenways Program has teamed with the Eastman Kodak Corporation and the National Geographic Society to award small grants ($250 to $2,000) to stimulate the planning, design, and development of greenways. These grants can be used for activities such as mapping, conducting ecological assessments, surveying land, holding conferences, developing brochures, producing interpretive displays, incorporating land trusts, and building trails. Grants cannot be used for academic research, institutional support, lobbying, or political activities.

More information: *www.conservationfund.org*

COMMUNITY ACTION FOR A RENEWED ENVIRONMENT (CARE)

CARE is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between $90,000 and $275,000.

More information: *www.epa.gov/care/*

CORPORATE DONATIONS

Corporate donations are often received in the form of liquid investments (i.e. cash, stock, bonds) and in the form of land. Employers recognize that creating places to bicycle and walk is one way to build community and attract a quality work force. Bicycling and outdoor recreation businesses often support local projects and programs. Municipalities typically create funds to facilitate and simplify a transaction from a corporation's donation to the given municipality. Donations are mainly received when a widely supported capital improvement program is implemented. Such donations can improve capital budgets and/or projects.

THE KNIGHT CITIES CHALLENGE

From a pool of $5 million, The Knights Cities Challenge looks to award grant at the city, neighborhood, and block level that attract and keep talented employees in a city, ideas that attempt to improve economic prospects for individuals, and ideas that encourage civic involvement. The grant program is funded by the Knight Foundation and the funds are distributed over an 18 month period.

PLAN4HEALTH COALITIONS

The American Planning Association (APA) and the American Public Health Association (APHA) received funding from the Centers for Disease Control and Prevention (CDC) to build local capacity in addressing population health goals and promoting the inclusion of health in non-traditional sectors such as transportation. Each proposal must address inactivity, unhealthy diets, and/or health equity. Awards will average $150,000, and no more than two awards will be granted in a single state.

OTHER SOURCES

Volunteer programs may be developed to substantially reduce the cost of implementing some routes, particularly shared-use paths. For example, a local college design class may use such a shared-use route as a student project, working with a local landscape architectural or engineering firm. Work parties could be formed to help clear the right of way for the route. A local construction company may donate or discount services beyond what the volunteers can do. And a challenge grant program with local businesses may be a good source of local funding, in which the businesses (or residents) can "adopt" a route or segment of one to help construct and maintain it.

Appendix D - Live, Work, Play Analysis

DEMAND ANALYSIS

Demand analysis helps define citywide variation in bicycle and pedestrian demand. The analysis serves as the basis for understanding and visualizing suitability and is an integral part of the Garden Grove planning process.

DEMAND ANLAYSIS PROVIDES THE FOLLOWING BENEFITS

- Quantify factors that impact pedestrian activity, objectively identifying areas where pedestrians and bicyclists are most likely to want to be
- Provide for a geographically informed project list
- Guide community leaders and the public on one aspect of the project prioritization process

Background and Overview of PSI

Demand analysis has its basis in a technique devised by prominent landscape architect, Ian McHarg. His influential book Design With Nature (1969) accentuated the importance of considering the natural environment when introducing new development and infrastructure. McHarg was an early pioneer of GIS analysis and established innovative techniques for route planning using photographic map overlays. McHarg asserted that in order to find the most suitable route, one must determine the least social cost, meaning factors that would impact social values would have to be considered. Once identified, each factor was mapped on individual transparent sheets using three different color shades to represent the level of social cost. The sheets were overlaid into a single stack revealing the most suitable route location. McHarg's photographic map overlay analysis paved the way for the foundation of modern day GIS models.

Models serve as an effective means to understand how factors in a complex system interact by providing a simplified version of the system for study. However, by definition, models are representations of reality and are constrained by the quality of available data and the complexity of the system under consideration.

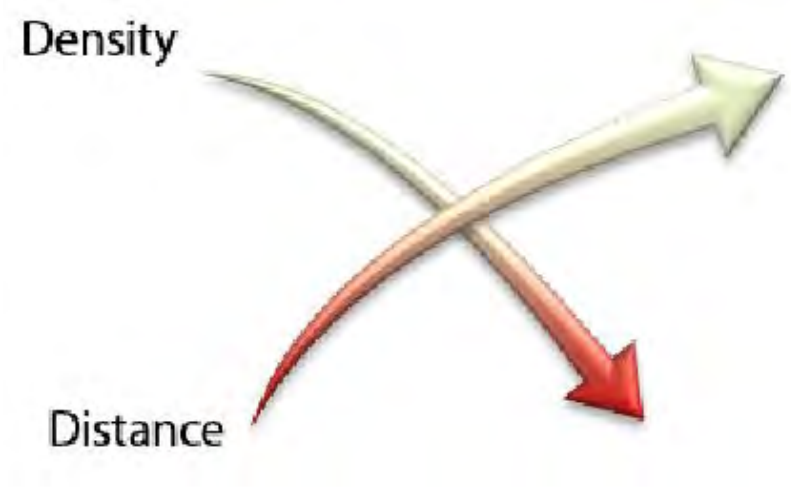
PSI provides a general understanding of expected activity in the pedestrian environment by combining categories representative of where **people live, work, play, access public transit and go to school** into a composite sketch of citywide demand.

The demand analysis relies on spatial consistency in order to generate logical distance and density patterns. It is for this reason that all scores are aggregated to a central location at the census block level, the census block corner, referred to as "PSI Point". Census block corners closely represent street corners, where foot traffic is prevalent. This method is based on the "Low-Stress Bicycling and Network Connectivity" report (Mineta Transportation Institute, May 2012). The report discusses the benefits of using a smaller geographic setting for pedestrian and bicycle demand analyses rather than using more traditional traffic model features such as traffic analysis zones (TAZs). Due to the low speed of pedestrian movement, a much smaller geographic unit of analysis is needed.

UTILIZATION OF PSI – DEMAND ANALYSIS

DEMAND ANALYSIS SCORING METHOD

Generally speaking, the scoring method is a function of density and proximity. Scores reflect relative impact on biking and walking to and from census block corners that are located adjacent to the features used in the analysis. As such, scores are represented as density patterns of census block corners within a quarter mile of each other. Subsequently, the scores are effectively a result of two complimenting forces: distance decay – the effect of distance on spatial interactions yields lower scores for features over quarter mile away from other features; and spatial density – the effect of closely clustered features yields higher scores. Scores will increase in high feature density areas and if those features are close together. Scores will decrease in low feature density areas and if features are further apart. In essence, the score is the intersection of distance and density.



Categories are scored on a scale of one to five based on density and proximity and then assigned weighted multipliers to reflect the relative influence categories have on bicycling and pedestrian activity. The feature weighting method is discussed in the following section.

Because empirical work has shown that some demographic and land use characteristics are more correlated with bicycling and pedestrian activity than others, the features are weighted for the analysis. For Garden Grove, feature weights were reviewed and adjusted based upon local knowledge. Feature weights are used in calculating both the composite demand and supply scores.

The purpose of the demand analysis is to identify areas where pedestrians are likely to be to justify improvement projects, if warranted by the relative quality of the existing conditions. The figures below illustrate and describe how the weighted features contribute to the variation in overall demand.

DEMAND – WHERE PEOPLE LIVE

Where people live includes 2010 census block level population density information. These locations represent potential trip origin locations. More trips can be made in areas with higher population density if conditions are right.

This category is a function of the number of residents per PSI Point within a 1/4 mile of each other. As for all maps, the areas shaded more deeply in blue represent higher demand areas relative to other colors on the ramp.

DEMAND – WHERE PEOPLE WORK

Where people work mainly represents trip ends, for people working in Garden Grove regardless of residency. Its basis is 2010 total employment by census block. Depending on the type of job, this category can represent both trip attractors (i.e., retail stores or cafes) and trip generators (i.e., office parks and office buildings) in terms of base employment population. It is therefore also used in the where people play category by overlaying with specific job types, such as retail.

This category accounts for the number of employees per PSI Point within a quarter mile of each other.

DEMAND – WHERE PEOPLE PLAY AND SHOP

Where people play is a represented by parks and trails. Though not exhaustive, these locations provide a clear picture of expected recreation activity. Retail employment is used as a proxy for the activity likely to arise from shopping.

This category accounts for the number of retail employees, parks and trails per PSI Point within a quarter mile of each other.

DEMAND – WHERE PEOPLE ACCESS TRANSIT

Where people access transit is a represented by stops along expected bus lines in Garden Grove. This category accounts for the number of bus stops within a quarter mile of each other.

DEMAND – WHERE PEOPLE LEARN

Where people learn is an important category in the city due to the vulnerability of school aged children. This category accounts for the number of schools within a quarter mile of each other.

DEMAND – COMPOSITE MODEL

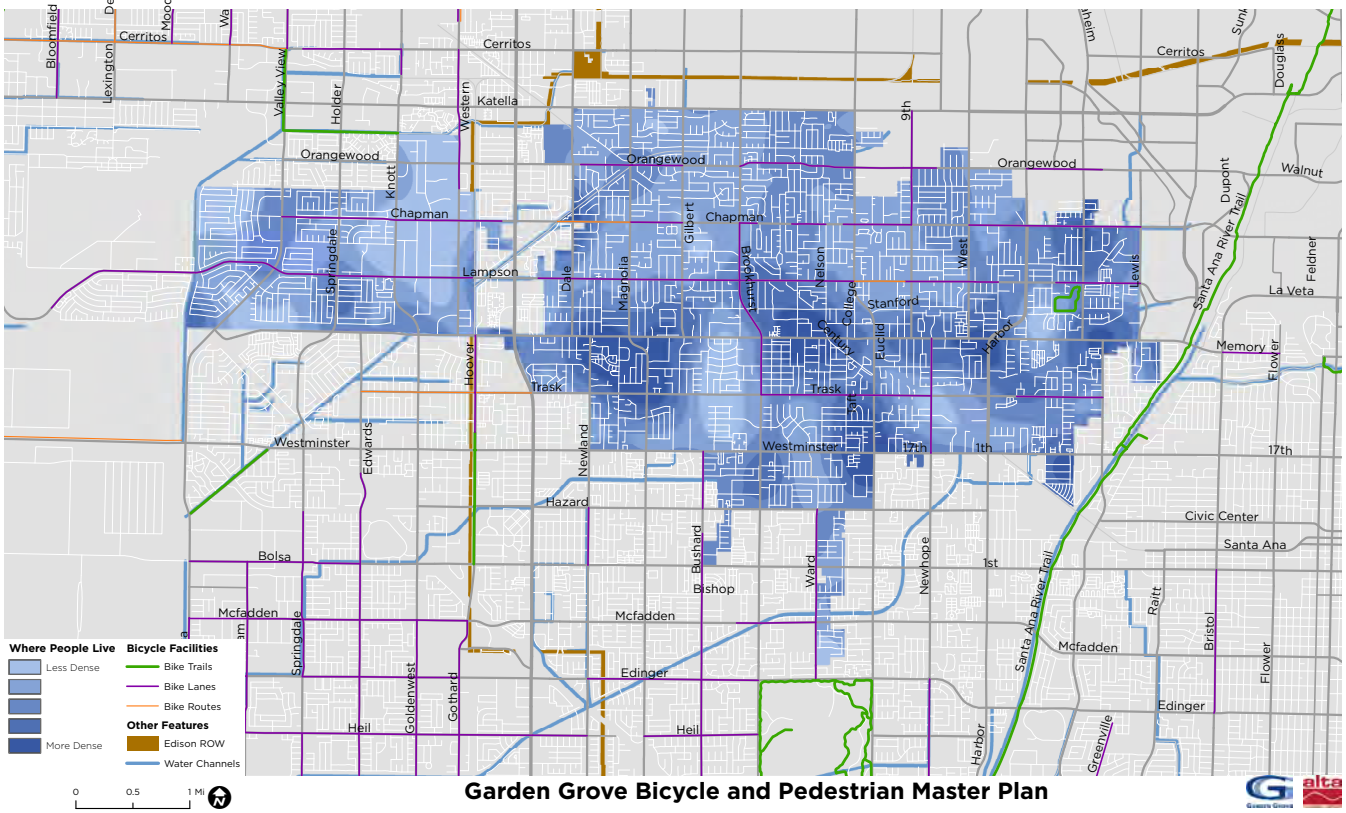
After independently processing the features, the composite model is created and grouped into four demand classes using breaks in the data values. Areas that yielded highest demand include the confluence of high employment, high bus ridership, retail land uses, Downtown, and multi-family housing. Areas largely dominated by single-family homes, in spite of representing potential trip generators, represent the lowest demand areas. Moderate demand is seen between high demand areas, representing movement between destinations in these areas.

Findings:

- The greatest demand exists in Downtown Garden Grove; this area extends further south toward Westminster Avenue and further east toward Harbor Boulevard.
- Additional areas of demand are found near Garden Grove Boulevard and Knott Street, Knott Street and Orangewood Avenue, and on the east edge of the city

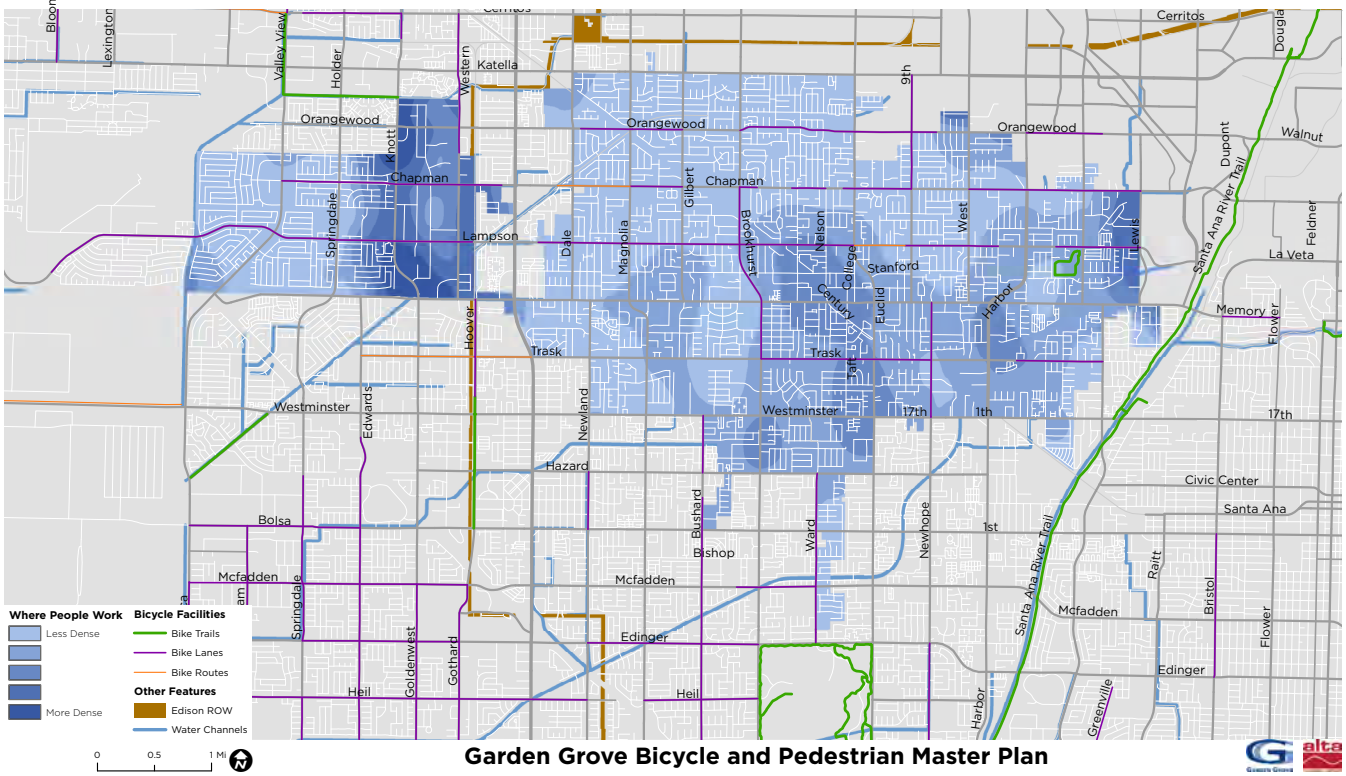
DEMAND ANALYSIS INPUT MAPS

Figure D-1: Where People Live



Garden Grove Bicycle and Pedestrian Master Plan

Figure D-2: Where People Work



Garden Grove Bicycle and Pedestrian Master Plan

Figure D-3: Where People go to School

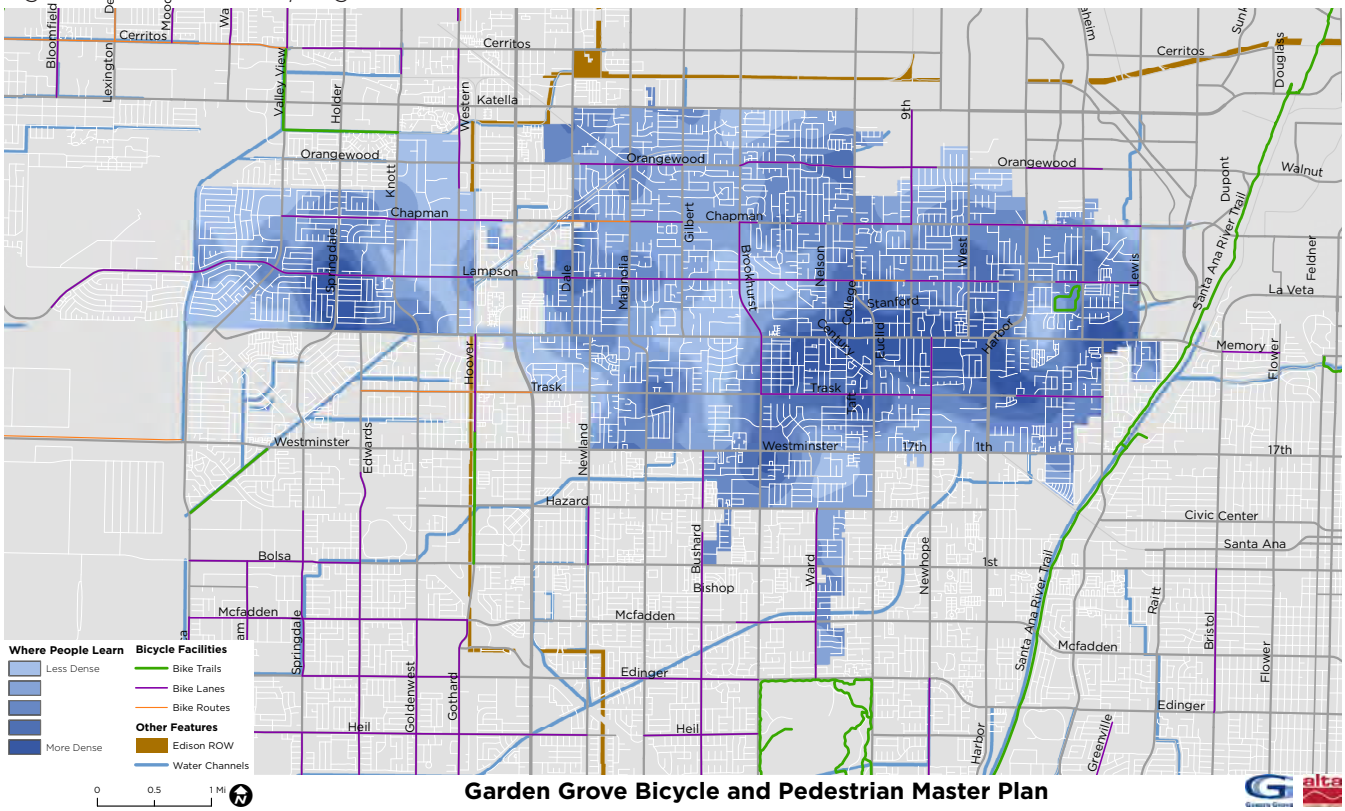


Figure D-4: Where People Access Transit

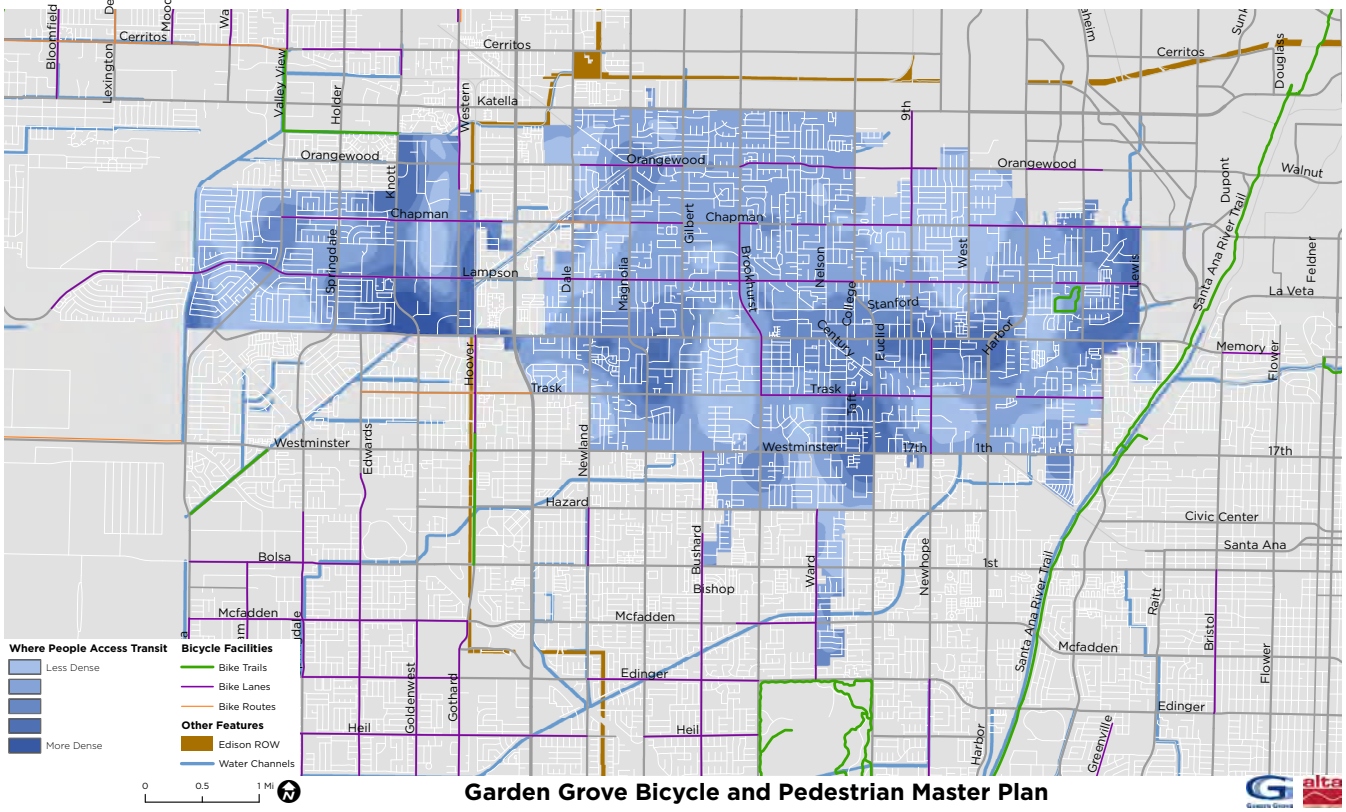


Figure D-5: Where People Play

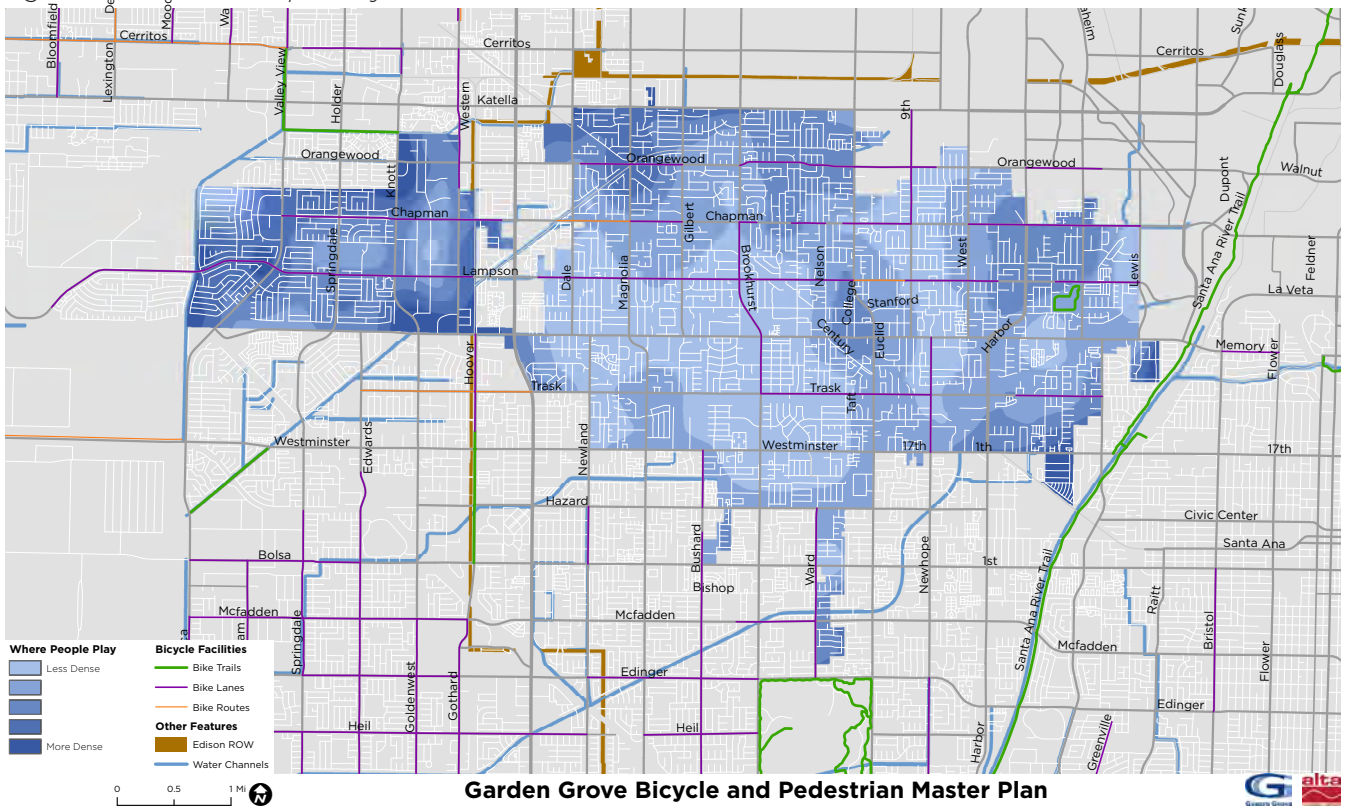
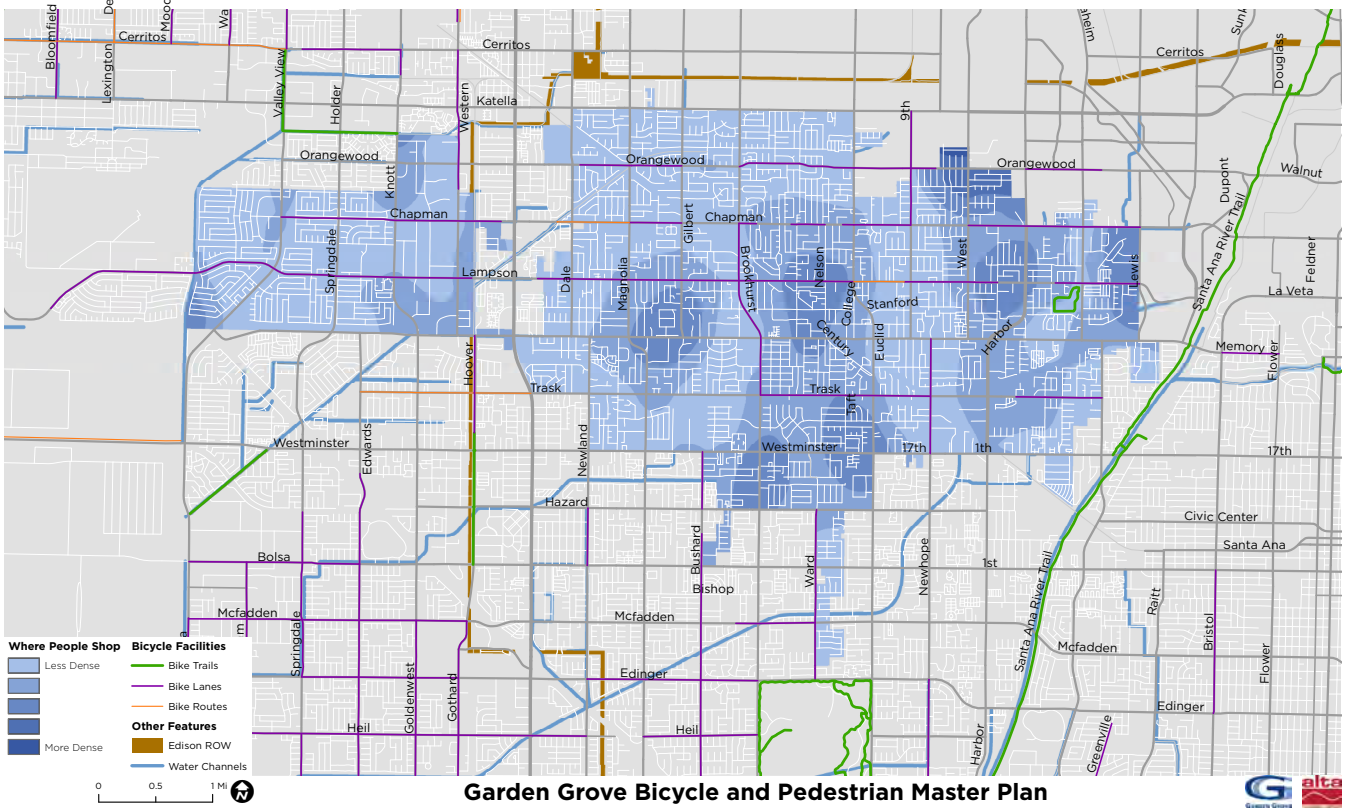


Figure D-6: Where People Shop



EQUITY ANALYSIS

This plan develops a connected bicycle and pedestrian network that serves all areas of Garden Grove, including areas that have a high density of historically underserved populations and relatively low levels of bicycle facilities. An equity analysis examined the existing distribution of bicycle facilities compared to the distribution of these populations.

For purposes of analysis, the following socio-economic indicators define underserved populations, as shown on Maps D-7 to D-10:

- Percentage of population that are people of color
- Percentage of households below 200% of poverty level (defined by the U.S. Census Bureau)
- Percentage of households within the census tract with no automobile available for daily use
- Population of people under 18 years of age
- Population of people over 64 years of age

The analysis used a threshold for each of the above indicators, so that those census tracts that had a greater value than the mean value for any given indicator was given a score of one. For example, if a census tract had an above average number of people of color and an above average number of people 65 years of age or older, the census tract was given a score of two.The high equity score has a maximum possible score of five and a low equity score has a minimum possible score of zero.

Findings:

- The greatest location of need is in the area between Westminster and Trask and between Brockhurst and Euclid; this location was greater than the city average on all indicators
- The least need is in the area between Chapman and Katella west of College. This area scored lower than the city average on all indicators
- In general, the furthest east and west extents of the city have lower levels of need than those in the central area

EQUITY ANALYSIS INPUT MAPS

Figure D-7: Percent of Population that are People of Color

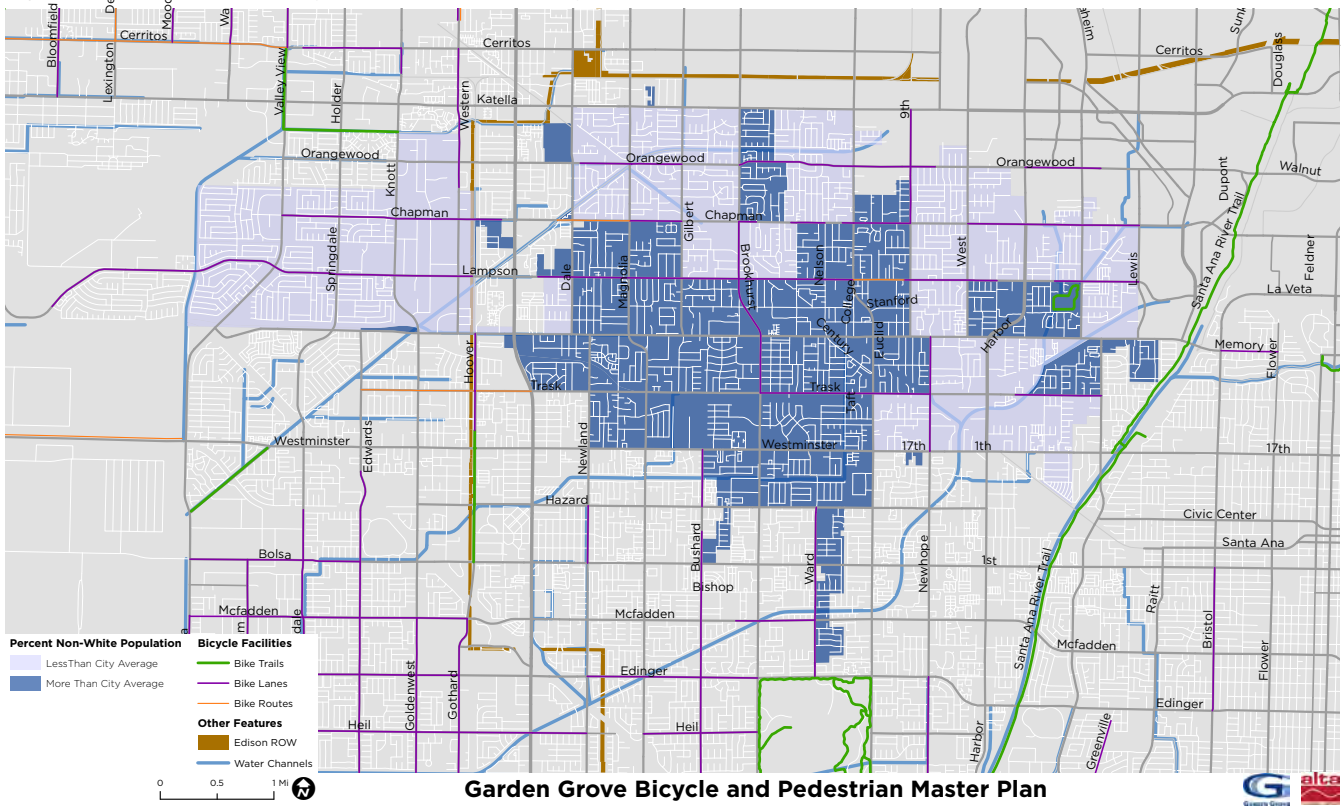


Figure D-8: Percent of Population Aged 18 and Under

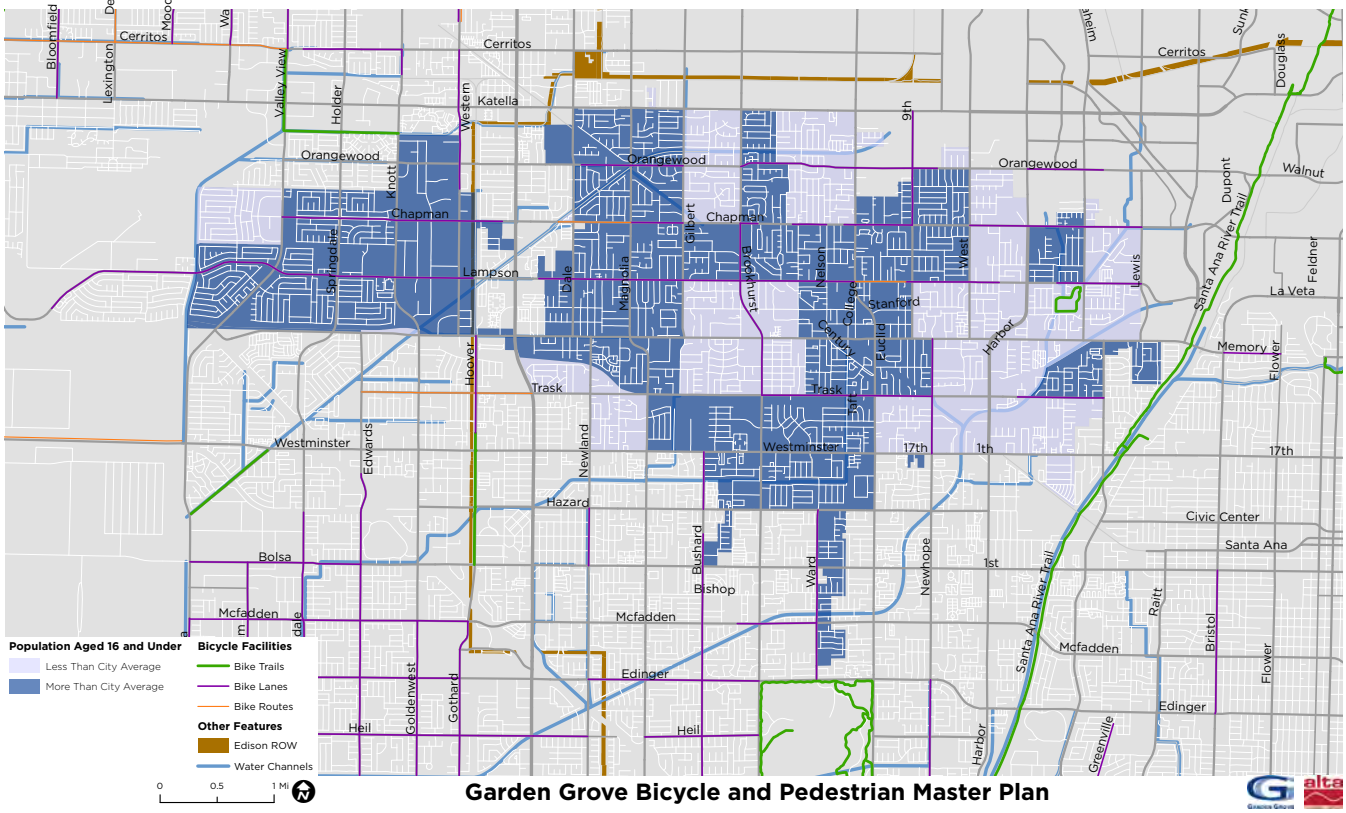


Figure D-9: Percent of Population Aged 64 and Older

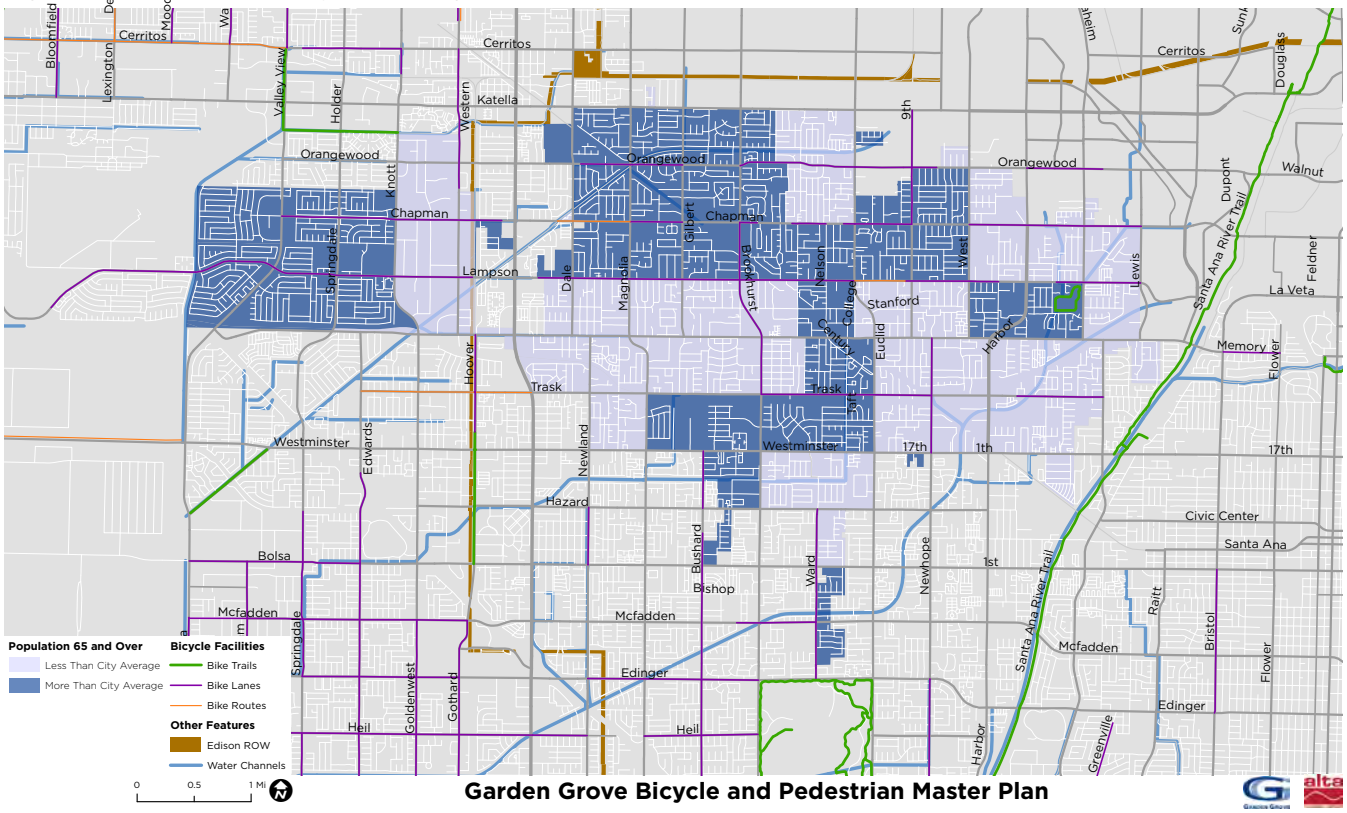


Figure D-10: Percent of Population Below Poverty Level

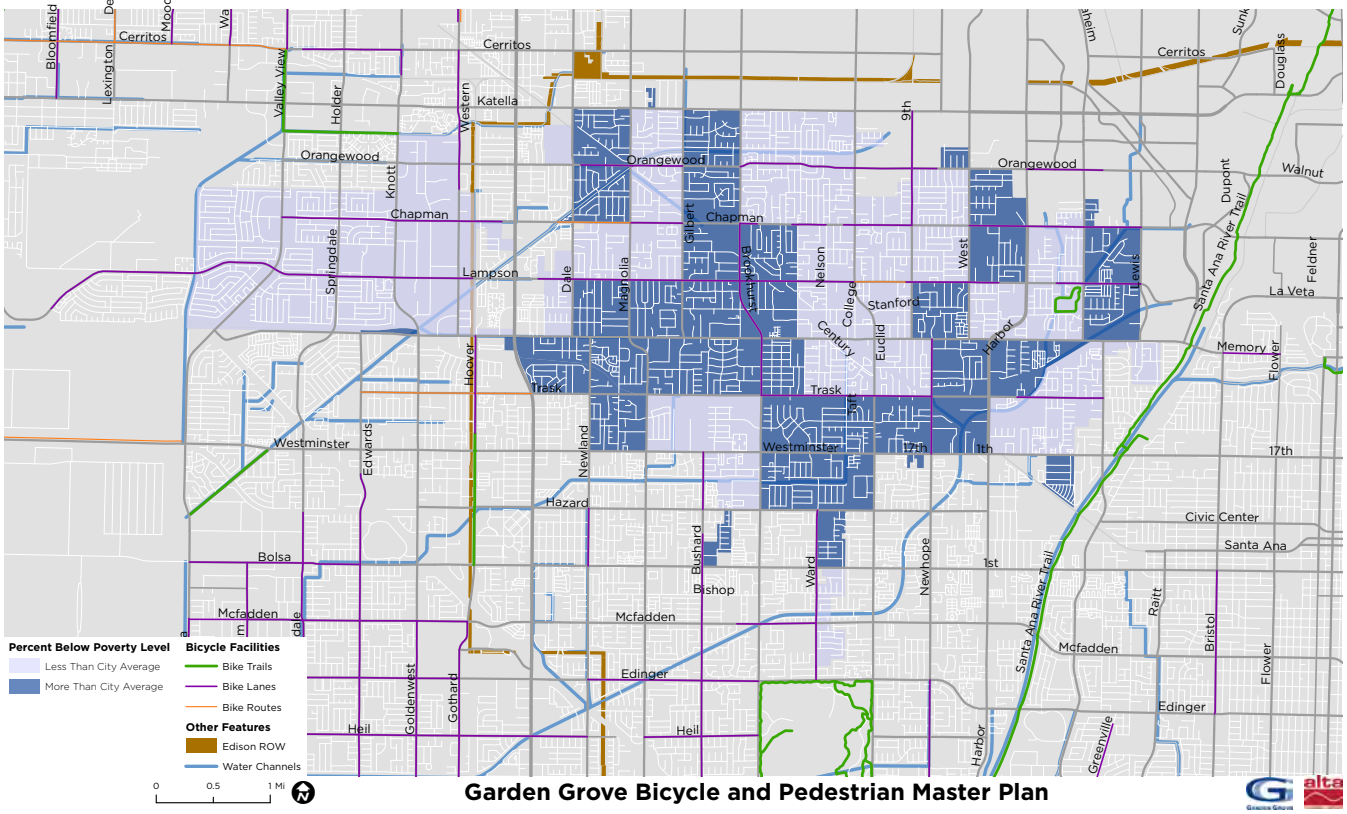
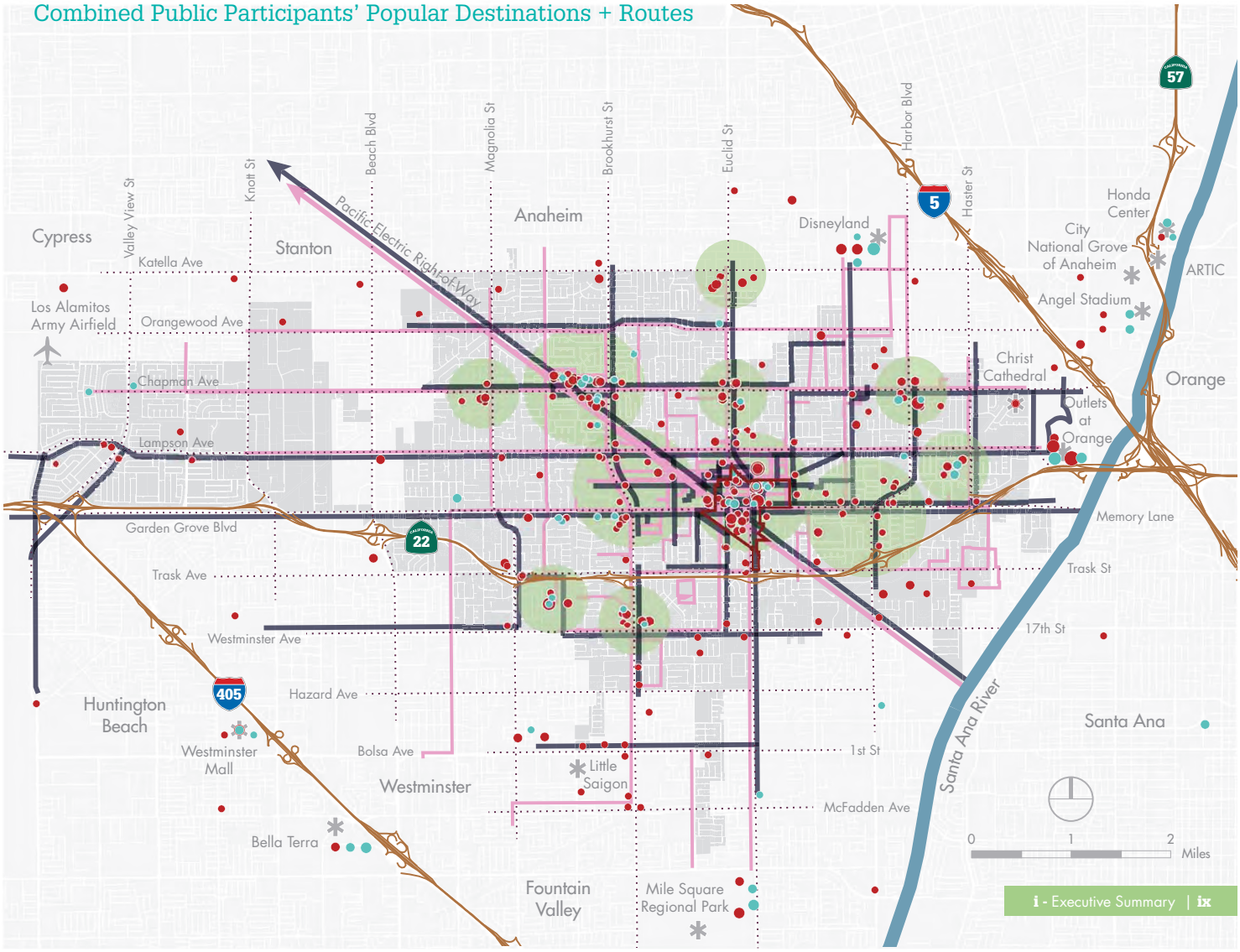


Figure D-11: LA 606 Studio Study Map - Public Participants' Popular Destinations and Routes



Appendix E - Prioritization Results

The following tables (Table E-1 to Table E-7) include projects' prioritization scores and ranking number.

Table E-1. Prioritized Ranking for Proposed New Bikeway Facilities

ID	Rank	Location	Start	End	Bike Facility	Length (miles)	Total Score	Cost
1	**1**	Anaheim – Barber City Channel (North)	Euclid St	Chapman Ave	Class I	2.8	**95**	$2,520,000
2	**1**	City of Garden Grove SO-1	Knott St	West City Limits	Class I	1.3	**95**	$1,170,000
3	**1**	Pacific Electric Right of Way 1	Nelson St	Dale St	Class I	2.8	**95**	$2,520,000
4	**2**	Deodara Dr	Trask Ave	Westminster Ave	Class III Bicycle Route	0.5	**90**	$15,000
5	**2**	Bolsa Grande HS Connector Path	Deodara Dr	Woodbury Ave	Class I	0.2	**90**	$135,000
6	**3**	Pacific Electric Right of Way 2	Westminster Ave	Euclid St	Class I	1.4	**87**	$1,260,000
7	**3**	Westminster Channel	Westminster Ave	Kerry St	Class I	1.3	**87**	$1,170,000
8	**3**	Wintersburg Channel	Garden Grove Blvd	Westminster Ave	Class I	1.4	**87**	$1,260,000
9	**4**	Dale St	PE ROW	Garden Grove Blvd	Class II	1.8	**83**	$153,000
10	**5**	McFadden Ave	Ward St	City Limit	Class II	0.2	**82**	$17,000
11	**6**	West Garden Grove Neighborhood Greenway	Chapman Ave	Knott St	Class III Neighborhood Greenway Blackmer St from Chapman to Cerulean Ave, Cerulean Ave from Blackmer to Topaz St, Stanford Ave from Topaz St to Knott Ave, Topaz St from Huntly Ave to Anthony Ave.	2.7	**80**	$486,000
12	**6**	Chapman Ave	St. Mark St`	Valley View Ave	Class III Bicycle Route	0.3	**80**	$9,000
13	**6**	Katella	Dale St	Euclid St	Class II	2.5	**80**	$210,800
14	**7**	Union Pacific Railway	City limits	Garden Grove Blvd	Class I	0.7	**77**	$630,000
15	**8**	Newland St	Garden Grove Blvd	Westminster Ave	Class II through 4 to 3 Road Rebalancing.	1.0	**75**	$200,000
16	**8**	Brookhurst St	Trask Ave	Hazard Ave	Class II	1.0	**75**	$85,000
17	**8**	Springdale St	North City Limits	Garden Grove Freeway	Class II	1.2	**75**	$102,000
18	**8**	Trask Ave	Beach Blvd	Brookhurst St	Class II	2.0	**75**	$170,000
19	**8**	Trask Ave	Newhope St	Fairview St	Class II	1.5	**75**	$127,500
20	**9**	Chapman Ave	Brookhurst St	Euclid St	Class II	1.1	**72**	$93,500
21	**9**	Orangewood Ave	Gilbert St	Brookhurst St	Class II	0.5	**72**	$42,500
22	**10**	Nelson St	Chapman Ave	Stanford Ave	Class III Bicycle Route	0.7	**67**	$21,000
23	**10**	Anaheim – Barber City Channel (South)	Union Pacific Railway	Garden Grove Blvd	Class I	2.8	**67**	$2,520,000
24	**11**	9th Street	Chapman Ave	Garden Grove Blvd	Class III Bicycle Route	1.0	**65**	$30,000
25	**11**	South Garden Grove Neighborhood Greenway	Erin St	Bushard St	Class III Neighborhood Greenway. Woodbury Ave from Erin to Brookhurst St, Traylor Way from Brookhurst to Bowen St, Bowen St from Traylor Way to Morningside Dr, Woodbury Rd from Bowen St to Taft St, Morningside Dr from Lake St to Hope St, Hope St from Morningside to 15th St, 15th St from Hope St to Brookhurst St, Brookhurst St from 15th St to Reading Ave, Reading Ave from Brookhurst St to Kerry St, Kerrry St from Reading Ave to Oasis Ave, Oasis Ave from Kerry St to Bushard St.	4.0	**65**	$720,000

Prioritized Ranking for Proposed New Bikeway Facilities continued

ID	Rank	Location	Start	End	Bike Facility	Length (miles)	Total Score	Cost
27	**13**	Chapman Ave	Dale St	Magnolia St	Class II	0.5	**63**	$42,500
28	**14**	Orangewood Ave	Knott Ave	Western Ave	Class II	0.5	**62**	$42,500
29	**14**	Chapman Ave	Gilbert St	Brookhurst St	Class II	0.5	**62**	$42,500
30	**14**	Chapman Ave	9th St	West St	Class II	0.5	**62**	$42,500
31	**15**	Chapman Ave (EB)	Magnolia St	Loraleen St	Class II	0.3	**60**	$21,250
32	**16**	Clinton – Palm Neighborhood Greenway	Harbor Blvd	Morningside Ave	Class III Neighborhood Greenway. Palm St from Harbor Blvd to Flagston Pl, Clinton St from Gloria St to Morningside Ave, Gloria St from Clinton St to Roxey Dr, School Dr from Roxey to Lilly St.	1.8	**55**	$324,000
33	**16**	Nutwood – Palmwood Neighborhood Greenway	Katella Ave	Garden Grove Blvd	Class III Neighborhood Greenway Palmwood Dr from Katella Ave to Patricia Dr,Patricia Ave from Palmwood Dr to Faye Ave, Faye Ave from Patricia Dr to Stanley Ln, Stanley Ln from Faye to Nutwood, Nutwood St from Chapman Ave to Garden Grove Blvd.	3.8	**55**	$684,000
34	**18**	Orangewood Ave	Harbor Blvd	Janette Ln	Class II	0.8	**47**	$68,000
35	**18**	9th Street (NB)	Orangewood Ave	Chapman Ave	Class II	0.5	**47**	$42,500
36	**19**	Paloma Ave	Newhope St	Euclid St	Class III Neighborhood Greenway	0.5	**45**	$90,000
37	**20**	Lewis St	Garden Grove Blvd	Marty Ln	Class III Bicycle Route	0.4	**35**	$10,500
38	**21**	Nina Pl	Garden Grove Blvd	PE ROW	Class III Neighborhood Greenway	0.4	**27**	$72,000
39	**22**	Belfast Dr	Garden Grove Blvd	Garden Grove Blvd	Class III Bicycle Route	0.4	**25**	$12,000
40	**22**	Donegal Dr	Belfast Dr	Trask Ave	Class III Neighborhood Greenway	0.4	**25**	$72,000
41	**23**	9th-West Neighborhood Greenway	9th St	West St	College St from 9th St to George St, George St from College St to Dorado Ave, Dorado Ave from George St to Morgan Ln, Morgan Ln from Dorada Ave to West St. Neighborhood Greenway	1.2	**20**	$216,000

Table E-2. Prioritized Ranking for Proposed Class I Bikeway Projects

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	Anaheim – Barber City Channel (North)	Euclid St	Chapman Ave	Multi-use Path	2.8	**95**
1	City of Garden Grove SO-1	Knott St	West City Limits	Multi-use Path	1.3	**95**
1	Pacific Electric Right of Way 1	Nelson St	Dale St	Multi-use Path	2.8	**95**
2	Bolsa Grande HS Connector Path	Deodara Dr	Woodbury Ave	Multi-use Path	0.2	**90**
3	Pacific Electric Right of Way 2	Westminster Ave	Euclid St	Multi-use Path	1.4	**87**
3	Westminster Channel	Westminster Ave	Kerry St	Multi-use Path	1.3	**87**
3	Wintersburg Channel	Garden Grove Blvd	Westminster Ave	Multi-use Path	1.4	**87**
4	Union Pacific Railway	City limits	Garden Grove Blvd	Multi-use Path	0.7	**77**
5	Anaheim – Barber City Channel (South)	Union Pacific Railway	Garden Grove Blvd	Multi-use Path	2.8	**67**

Table E-3. Prioritized Ranking for Proposed Class II Bikeway Projects

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	Dale St	PE ROW	Garden Grove Blvd	Stripe bike lane. Parking or lane removal may be needed.	1.8	**83**
2	McFadden Ave	Ward St	City Limit	Stripe bike lane.	0.2	**82**
3	Katella	Dale St	Euclid St	Stripe bike lane.	2.5	**80**
4	Newland St	Garden Grove Blvd	Westminster Ave	Stripe bike lane through 4 to 3 Road Rebalancing.	1.0	**75**
4	Brookhurst St	Trask Ave	Hazard Ave	Stripe bike lane. Parking or lane removal may be needed.	1.0	**75**
4	Springdale St	North City Limits	Garden Grove Freeway	Stripe bike lane. Parking or lane removal may be needed.	1.2	**75**
4	Trask Ave	Beach Blvd	Brookhurst St	Stripe bike lane. Parking or lane removal may be needed.	2.0	**75**
4	Trask Ave	Newhope St	Fairview St	Stripe bike lane. Parking or lane removal may be needed.	1.5	**75**
5	Orangewood Ave	Gilbert St	Brookhurst St	Stripe bike lane.	0.5	**72**
6	Western Ave	North City Limits	Garden Grove Blvd	Stripe bike lane. Parking or lane removal may be needed.	1.3	**64**
7	Orangewood Ave	Knott Ave	Western Ave	Stripe bike lane.	0.5	**62**
7	Chapman Ave	Gilbert St	Brookhurst St	Stripe bike lane. Parking or lane removal may be needed.	0.5	**62**
7	Chapman Ave	9th St	West St	Stripe bike lane. Parking or lane removal may be needed.	0.5	**62**
8	West St	Ricky Ave	Orangewood	Bike Lane Study Corridor	0.2	**54**
9	Orangewood Ave	Harbor Blvd	Janette Ln	Stripe bike lane.	0.8	**47**
9	9th Street (NB)	Orangewood Ave	Chapman Ave	Stripe NB bike lane.	0.5	**47**

Table E-4. Prioritized Ranking for Proposed Class III Bike Route Projects

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	Deodara Dr	Trask Ave	Westminster Ave	Gilbert- Deodara Bicycle Route	0.5	**90**
2	West Garden Grove Neighborhood Greenway	St. Mark St`	Valley View Ave	Chapman Ave Bike Route	0.3	**80**
3	Nelson St	Chapman Ave	Stanford Ave	Bicycle Route / Shared Street	0.7	**67**
4	9th Street	Chapman Ave	Garden Grove Blvd	Bicycle Route	1.0	**65**
5	Lewis St	Garden Grove Blvd	Marty Ln	Bicycle Route	0.4	**35**
6	Belfast Dr	Garden Grove Blvd	Garden Grove Blvd	Belfast – Donegal Bicycle Route	0.4	**25**
7	9th-West Neighborhood Greenway	9th St	West St	College St from 9th St to George St, George St from College St to Dorado Ave, Dorado Ave from George St to Morgan Ln, Morgan Ln from Dorada Ave to West St. Bicycle Route.	1.2	**20**

Table E-5. Prioritized Ranking for Proposed Class III Neighborhood Greenway Projects

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	West Garden Grove Neighborhood Greenway	Chapman Ave	Knott St	Blackmer St from Chapman to Cerulean Ave, Cerulean Ave from Blackmer to Topaz St, Stanford Ave from Topaz St to Knott Ave, Topaz St from Huntly Ave to Anthony Ave. Neighborhood greenway improvements.	2.7	**80**
2	South Garden Grove Neighborhood Greenway	Erin St	Bushard St	Woodbury Ave from Erin to Brookhurst St, Traylor Way from Brookhurst to Bowen St, Bowen St from Traylor Way to Morningside Dr, Woodbury Rd from Bowen St to Taft St, Morningside Dr from Lake St to Hope St, Hope St from Morningside to 15th St, 15th St from Hope St to Brookhurst St, Brookhurst St from 15th St to Reading Ave, Reading Ave from Brookhurst St to Kerry St, Kerrry St from Reading Ave to Oasis Ave, Oasis Ave from Kerry St to Bushard St. Neighborhood Greenway Improvements.	4.0	**65**
3	Clinton – Palm Neighborhood Greenway	Harbor Blvd	Morningside Ave	Palm St from Harbor Blvd to Flagston Pl, Clinton St from Gloria St to Morningside Ave, Gloria St from Clinton St to Roxey Dr, School Dr from Roxey to Lilly St. Neighborhood Greenway Improvements	1.8	**55**

Prioritized Ranking for Proposed Class III Neighborhood Greenway Projects continued

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
3	Nutwood – Palmwood Neighborhood Greenway	Katella Ave	Garden Grove Blvd	Palmwood Dr from Katella Ave to Patricia Dr,Patricia Ave from Palmwood Dr to Faye Ave, Faye Ave from Patricia Dr to Stanley Ln, Stanley Ln from Faye to Nutwood, Nutwood St from Chapman Ave to Garden Grove Blvd. Neighborhood Greenway Improvements.	3.8	**55**
4	Paloma Ave	Newhope St	Euclid St	Paloma Neighborhood Greenway	0.5	**45**
5	Nina Pl	Garden Grove Blvd	PE ROW		0.4	**27**
6	Donegal Dr	Belfast Dr	Trask Ave	Belfast – Donegal Neighborhood Greenway	0.4	**25**

Table E-6. Prioritized Ranking for Proposed Class IV Bikeway Projects

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	Acacia St	9th St	Nelson St	Separated Bike Lane Study	0.8	**90**
2	Hazard Ave	Euclid St	Christy St	4 to 3 Road Rebalancing Study	1.4	**75**
3	Nelson St	PE ROW	Garden Grove Blvd		0.2	**62**
4	Knott Ave	North City Limits	Garden Grove Blvd		1.8	**75**

Table E-7. Prioritized Ranking for Proposed Complete Streets Studies

Rank	Location	Start	End	Recommendation Notes	Length (miles)	Total Score
1	Euclid St	Lampson Ave	Trask Ave	Complete Street Study	1.1	**90**
1	Garden Grove Blvd	Lewis St	Valley View St	Complete Street Study	8.4	**90**
1	Westminster Ave	East City Limits	Newland St	From bike lane to Complete Street Study	4.3	**90**
2	Harbor Blvd	North City Limits	Westminster Ave	Complete Street Study	2.4	**72**

Appendix F - Garden Grove Police Department Comments

POLICE COMMENTS ON DRAFT "ACTIVE STREETS PLAN", JULY 25, 2016

OFFICERS FROM THE TRAFFIC UNIT, PAUL ASHBY AND ROYCE WIMMER

The Officers and Senior Planner, Erin Webb, had a lively discussion about bicycling in Garden Grove and their ideas for what could help. The discussion had two main topics: 1. Safety Improvements including Signage and Lighting; and 2. Education and Outreach.

SAFETY IMPROVEMENTS

Signage

- Try the green conflict striping at intersections and the on-pavement bike symbol as a "test".
- The intersection of Brookhurst and Westminster is the worst, so throw the Green paint down there and see if it helps.
- Officer Wimmer was a big fan of the Green paint with white line and bicycle on the pavement. Also thought Green at the intersections was really good.
- Signage in the street is best. Roadside signs are secondary. Both types of sign would be the ultimate best.
- It will take some time for drivers to get used to the bike lanes and bicyclists but with the street painting it will take less time.
- The color of the roadside signs is important. Not purple. The color needs to be more noticeable like red or yellow or white. These colors are more "authoritative".
- Little Saigon may be a problem for signage in English as people cannot read such signs. May need signs in more than one language.

Lighting

- Better lighting would be a big help. It is important for bicyclists to be seen.
- Officers from the traffic unit know where the street lights are needed.
- Crime would also go down if there were more streetlights.
- People need to have lights on their bicycles too, both a rear tail light and a front light.
- Daytime bicycling is very different from nighttime bicycling. Fatalities occur at night.
- 10 to 20 percent of accidents are reported. Meaning 80 to 90% of accidents are undocumented.

EDUCATION AND OUTREACH

- Education and Outreach happens on both sides: the Police side and the City side (Channel 3). Public Information includes education outreach and videos.
- Education is very important. Could use posters and other print, media messaging such as “Ride with Traffic”.
- The GGUSD (School District) hears complaints from parents etc. that are different from the complaints the Police hear. The School District hears complaints about people parked in the red zones. The Police hear more about traffic violations, people riding on the wrong side of the street, or pulling out at stop signs.
- The most complaints come from Jordan Intermediate School and Cook Elementary

Appendix G - Letters of Support

- Caltrans District 12 Letter of Suppot
- City of Anahiem Letter of Support for West Street Road Rebalancing Project

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 12
3347 MICHELSON DRIVE, SUITE 100
IRVINE, CA 92612-8894
PHONE (949) 724-2731
FAX (949) 724-2592
TTY 711
www.dot.ca.gov

Serious drought.
Help save water!

July 29, 2016

Ms. Erin Webb
City of Garden Grove
11222 Acacia Parkway
Garden Grove, CA 92840

Dear Ms. Webb:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the Draft Active Streets Master Plan for City of Garden Grove. The mission of Caltrans is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Active Streets Master Plan is an effort by the City of Garden Grove to promote walking, bicycling, transit use, and other active modes as safe and attractive transportation choices. The goal of the Plan is to promote healthy sustainable living in Garden Grove, and help residents make better connections to their daily destinations by providing safe access to local parks, schools, workplaces, shopping, and dining, as well as to destinations in other Orange County communities. Caltrans is a commenting agency at this time on this project and has the following comments:

- Caltrans is supportive of plans and policies that aim to improve active transportation options and provide increased accessibility to and from State Highway System. The goals, objectives and policies of the Draft Active Streets Master Plan, particularly those applicable to Caltrans, are integral to the continued implementation of active transportation facilities in Orange County. In particular, Caltrans supports Policy 1.B.1 of the plan, which proposes to identify opportunities to improve or add pedestrian and bicycle crossings at State Route 22, State Route 39 and major arterials. We look forward to coordinating with the City to enhance multimodal accessibility.

- In addition, Caltrans is in favor of each of the proposed bike facility improvements detailed in the plan, including the proposed connections to regional facilities. Caltrans supports the Rails-with-Trail guidelines included in the plan, which will accommodate for a Class I facility along the Pacific Electric Right of Way and for a future regional light-rail line. Caltrans would like to further discuss potential improvement opportunities when appropriate.

City of Anaheim
DEPARTMENT OF PUBLIC WORKS

200 S. Anaheim Blvd., Suite 276
Anaheim, California 92805

TEL (714) 765-5176
FAX (714) 765-5225

www.anaheim.net

November 10, 2016

Mr. Dai Vu
City of Garden Grove
Acting City Traffic Engineer
11222 Acacia Parkway
Garden Grove, CA 92840

SUBJECT: SUPPORT FOR THE PROPOSED MPAH AMENDMENT FOR WEST STREET

Dear Mr. Vu:

The City of Anaheim Department of Public Works is pleased to support the City of Garden Grove's request for approval from the Orange County Transportation Authority (OCTA) for an amendment to the Master Plan of Arterial Highways. This amendment would reclassify West Street between Garden Grove Boulevard and Orangewood Street from a Secondary Undivided (4-lane) to a Divided Collector (3-lane).

We appreciate your modification to reclassify West Street from Garden Grove Boulevard to Orangewood Avenue (originally to Ricky Avenue) based on our concerns for the portion of West Street from Orangewood Avenue to Ricky Street and maintaining clear access to the Anaheim Convention Center (ACC). The bus and truck traffic traveling to the ACC is routed to come from Katella to the north onto West Street and then turns left onto Transit Plaza, and therefore bicycle access onto Ricky must be carefully considered. West Street south of Transit Plaza serves existing residential neighborhoods in both cities. Anaheim looks forward to working with Garden Grove to find ways to serve multi-modal needs for the Convention Center and points north.

We understand that Alta Planning + Design is just finishing the first bicycle and pedestrian master plan for Garden Grove, the Garden Grove Active Streets Plan. The Active Streets Plan has developed a comprehensive pedestrian and bicycling network to provide safe and comfortable access. The proposed network includes buffered bike lanes on West Street. Our staff and OCTA has reviewed the existing and future baseline traffic volumes and determined that the reclassification of West Street to a Divided Collector (3-lane) is feasible during the event periods through our traffic models.

Appendix H - BCIP Grant Application

GARDEN GROVE

CITY OF GARDEN GROVE

May 9, 2016

Louis Zhao
Senior Transportation Funding Analysis
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92863-1584

Dear Mr. Zhao,

Garden Grove is pleased to submit this application for BCIP funds as a way to continue the City's active pursuit of bicycling and pedestrian improvements for our community. The City of Garden Grove is requesting $1,201,978 from the Bicycle Corridor Improvement Project to improve the on-street bicycle infrastructure by 75 percent and to create a more consistent network by creating 14.85 miles of comfortable bikeways.

These bikeway improvements are a major step in accomplishing the goal from the City of Garden Grove's Draft Active Streets Plan of a safe, comfortable, network of bikeways that will encourage more people to ride bikes.

The City of Garden Grove is engaged in promoting active transportation by holding "Open Streets" events in the last two years with a third planned for 2016, creating the first Draft Active Streets Plan, and working towards the development of a Class I Bike Trail on the Pacific Electric Right-of-Way. Analysis and data collection shows that Garden Grove has significant gaps in the City's bikeway network, narrow bike lanes on high speed roads, and high bicycle and pedestrian collision rates. We are anxious to complete the much needed bicycle network improvements in the Bicycle Corridor Improvement Project and are committed to providing a 12% local match to the BCIP grant funds.

The bikeway improvements were chosen as a feasible way to make a connected network for bicyclists in Garden Grove and increase regional connectivity. OCTA has provided preliminary support for the road rebalancing projects proposed in the application and we look forward to further collaboration with them. The City of Garden Grove is aiming to be a gracious community where biking and walking are easy, inviting ways for people of all ages to get around. Thank you for your consideration of our request.

Sincerely,

Erin Webb
Senior Planner
Community & Economic Development Department
City of Garden Grove
(714) 741-5313

ATTACHMENTS

11222 Acacia Parkway • P.O.Box 3070 • Garden Grove, CA 92842
www.ci.garden-grove.ca.us

CITY OF GARDEN GROVE BICYCLE CORRIDOR IMPROVEMENTS

BCIP 2016 GRANT APPLICATION

ATTACHMENT B

Bicycle Corridor Improvement Program (BCIP) Application Form

PART ONE: GENERAL PROJECT INFORMATION

Applications are due no later than May 9, 2016 at 4:00 PM

PROJECT TITLE:	City of Garden Grove, Bicycle Corridor Improvements
AGENCY:	City of Garden Grove
MAILING ADDRESS:	11222 Acacia Parkway, Garden Grove, CA 92840

Phases of work this application is applying for:

TIER 1 PROJECT COMPONENTS

- [x] Final Design
- [ ] Right-of-Way
- [x] Construction

BCIP/CMAQ FUNDS REQUESTED	$	1,113,978
LOCAL MATCH	$	151,905
TOTAL TIER 1 PROJECT COST	$	1,265,883

TIER 2 PROJECT COMPONENTS

- [x] Environmental
- [x] Preliminary Engineering

BCIP/CMAQ FUNDS REQUESTED	$	88,000
LOCAL MATCH	$	12,000
TOTAL TIER 2 PROJECT COST	$	100,000

TOTAL TIER 1 PROJECT COST	$	1,265,883
TOTAL TIER 2 PROJECT COST	$	100,000
TOTAL BCIP PROJECT COST	$	1,365,883

- [x] Project is a stand alone project.
- [ ] Project is part of a larger project.

Total Project Cost (if part of a larger project; round dollars to nearest thousands)

AGENCY CONTACT (Name, title, agency, address, phone, email)

Name / Title: Erin Webb
Agency: City of Garden Grove
Mailing Address: 11222 Acacia Parkway, Garden Grove, CA 92840
Phone: 714-741-5313
Email: erinw@ci.garden-grove.ca.us

PARTNER(S) (Name, title, agency, address, phone, email)

Name / Title:
Agency:
Address:
Phone:
Email:

PROPOSED SCHEDULE:

	Date
Draft Environmental Document	October 2016 - April 2017
Final Environmental Document	October 2016 - April 2017
Start Design / Engineering	May 2017
Complete Design / Engineering	Febuary 2018
Start Right-of-Way Acquisition	n/a
Right-of-Way Certification	n/a
Submit Request for Authorization (E-76) for Construction	Febuary 2018
Ready to Advertise	November 2018
Award Construction	December 2018
Project Completion (open for use)	June 2019
Start Close Out Phase	July 2019
End Close Out Phase	October 2019

PART ONE: GENERAL PROJECT INFORMATION (cont.)

SCOPE AND LOCATION OF PROPOSED PROJECT

Describe the project's scope, location, limits of work, size, etc. (*Do not* include the justification or benefits).

The City of Garden Gove's Bicycle Corridor Improvements Project will design and construct 6.5 miles of new bikeways and improve 8.35 miles of existing, but underutilized bikeways. Bicycle facility improvements include creating new bike lanes through road rebalancing (2.7 mi on West Street and Gilbert Street), striping buffers to existing bike lanes (5 mi on Brookhurst Street, Chapman Avenue and Lampson Avenue), striping bike lane network gaps (0.6 mi on Brookhurst Street), improving and creating bicycle routes (6.5 mi on Lampson Avnue, Gilbert Avenue, Imperial Avenue, Shapeel Street and Dodara Drive) and provide bicycle wayfinding signs along all the proposed corridors (14.85 mi). The City has selected a network of 5 high priority corridors identified in the City of Garden Grove 2016 Draft Active Streets Plan as follows and shown in Figure 1 below. Maps of the project extents and improvment types can be found in Exhibit D.

North-South Corridors

1.) Brookhurst Street between Katella Avenue and Trask Avenue

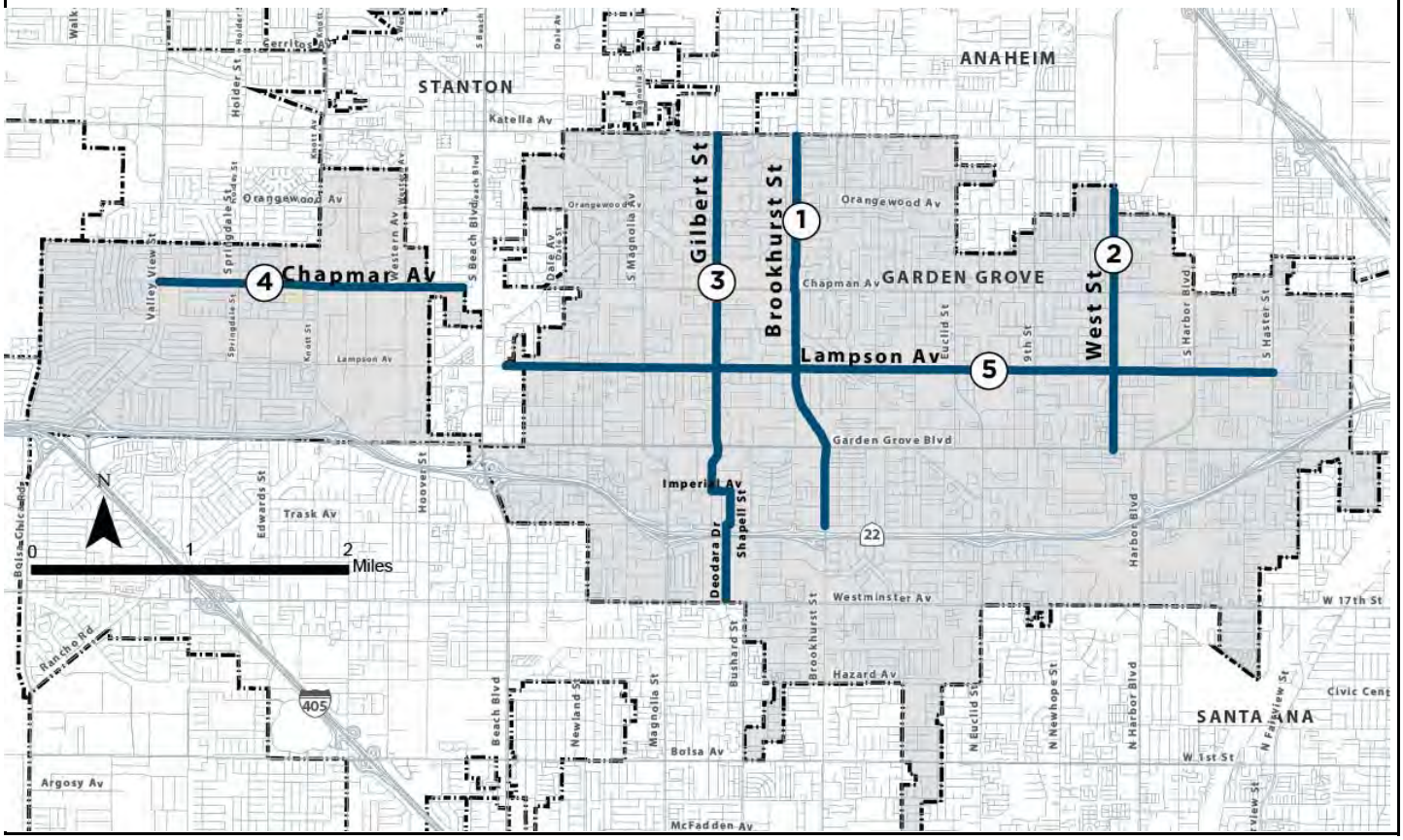
2.) West Street between City limit and Garden Grove Boulevard

3.) Gilbert Street Corridor between Katella Avenue and Westminster Avenue

East-West Corridors

4.) Chapman Avenue between Valley View and City Limit

5.) Lampson Avenue between City Limit and Haster Street



PURPOSE, NEED, BENEFITS, AND FUNDING JUSTIFICATION OF PROPOSED PROJECT
Provide the purpose, need, benefits, and funding justification for the proposed project.

Garden Grove is dedicated to improving active transportation. The City's 2016 Draft Active Streets plan has conducted a thorough analysis of existing bicycle and pedestrian conditions identifying challenges and proposed improvements. Today, Garden Grove's on-street bike network is hindered by gaps in network connectivity, narrow bike lanes along streets with high speeds and a high bicycle collision history. The purpose of this project is to expand and improve the City's on-street bike infrastructure by 75 percent creating a continuous and comfortable bike network that makes key connections to schools, parks, major activity centers and regional bikeway corridors.

There is a significant need to improve bicycle and pedestrian safety in Garden Grove. Between 2009 and 2014 twenty five pedestrians and seven bicyclists died as a result of a collision with a motor vehicle. Of the 840 injury collisions that occurred within one mile of the study area, 15 percent occurred along the corridors identified in this application. In addition to the direct injury and crash reduction benefits, providing safe and convenient bikeways for the City's residents to make biking part of their daily routine will help to increase physical fitness, reduce obesity that leads to serious health problems and provide mental heal benefits. The City is seeking funds for five corridors with a goal of improving safety on a network of streets to allow for city-wide travel by bike.

Riding a bicycle on a sidewalk is a very common and dangerous activity in Garden Grove. During bicycle counts conducted in September 2015, 95% of all bicyclists riding in the City were riding on the sidewalks. Furthermore, approximately 40% of bicyclists rode on the sidewalk in locations where a bike lane was present. This was particularly common on two streets focused on in the proposed project, Brookhurst Street and Chapman Avenue. Both Brookhurst Street and Chapman Streets have a posted speed limit of 45 mph with existing but discontinuous bike lanes. There is an opportunity to add a 3 foot buffer to the wide outside vehicle lane along both of these segments. By adding a buffer and closing gaps in the bike lane along these corridors the incidence of sidewalk-bicycle riding will be reduced creating safer, more comfortable conditions for bicyclists and pedestrians.

Creating new bike lanes on West Street and Gilbert Street will also provide a dedicated space for bicycles on the street and help to reduce collisions and sidewalk riding. These bike lanes will be a result of road rebalancing, or a road diet which has proven safety and operational benefits to all modes of transportation. It is intended to calm traffic leading to fewer and less severe collisions and a better environment for bicycling and walking.

In order to make Garden Grove a community where bicycling and walking are an inviting, safe, and attractive transportation choice for people of all ages and abilities, the barriers of bikeway gaps, narrow bike lanes on high speed roads and high collision rates must be overcome. The proposed project aims to create a more consistent and comfortable on-street bicycle network, reduce the occurrence and severity of vehicle-bicycle collisions, increase wayfinding and ease of navigation, and encourage more bicycling in the City of Garden Grove.

PROJECT IS ON PUBLIC RIGHT-OF-WAY

If yes, list corridor. If no, list corridor, property owner, and status of right-of-way agreement?

Yes Yes, the project improvements occur within the exiting curbs which is within the City road right-of-way

No (explain): _____

MAINTENANCE:

The project must be maintained in a functional and operational manner as its intended purpose for the expected life cycle for the type of project. If it is not maintained in such a manner, reimbursement of all or a portion of the BCIP funds may be required. With the exception of funds required for establishing landscaping, maintenance costs are ineligible for CMAQ funds and must be funded locally.)

Who will maintain? City of Garden Grove

What is the source of maintenance funds? Public Works operational Budget, Garden Grove General Fund

If project is within Caltrans Right-of-Way application, must be signed by Deputy District Director, Maintenance

DDD Maintenance Name: _____ Date: _____

Signature: _____

PART TWO: FUNDING - REVISED MAY 3, 2016

TIER 1 PROJECT COMPONENT COSTS

FINAL DESIGN	Fiscal Year	BCIP Request	Match (12% or more)	Total	Percent Match
Final Design	17/18	$ 115,239	$ 15,714	$ 130,953	12.0%
TOTAL FINAL DESIGN	17/18	$ 115,239	$ 15,714	$ 130,953	12.0%

RIGHT-OF-WAY PHASE (ACQUISITION):	Fiscal Year	BCIP Request	Match (12% or more)	Total	Percent Match
Capital	FY	$ -	$ -	$ -	0.0%
Support Costs	FY	$ -	$ -	$ -	0.0%
TOTAL RIGHT-OF-WAY	FY	$ -	$ -	$ -	0.0%

CONSTRUCTION PHASE:	Fiscal Year	BCIP Request	Match (12% or more)	Total	Percent Match
Construction Contract Items	17/18	$ 845,087	$ 115,239	$ 960,326	12.0%
Contingencies	17/18	$ 76,826	$ 10,476	$ 87,302	12.0%
Construction Engineering	17/18	$ 76,826	$ 10,476	$ 87,302	12.0%
TOTAL CONSTRUCTION	17/18	$ 998,739	$ 136,191	$ 1,134,930	12.0%
TOTAL		$ 1,113,978	$ 151,905	$ 1,265,883	12.0%

TIER 2 PROJECT COMPONENT COSTS

ENVIRONMENTAL	Fiscal Year	BCIP Request	Match (12% or more)	Total	Percent Match
Final Design	16/17	$ 52,800	$ 7,200	$ 60,000	12.0%
TOTAL ENVIRONMENTAL	16/17	$ 52,800	$ 7,200	$ 60,000	12.0%

PRELIMINARY ENGINEERING	Fiscal Year	BCIP Request	Match (12% or more)	Total	Percent Match
Preliminary Engineering	16/17	$ 35,200	$ 4,800	$ 40,000	12.0%
TOTAL PRELIMINARY ENGINEERING	16/17	$ 35,200	$ 4,800	$ 40,000	12.0%
TOTAL		$ 88,000	$ 12,000	$ 100,000	12.0%

TOTAL PROJECT COMPONENT COSTS

	BCIP Request	Match (12% or more)	Total	Percent Match
TOTAL	$ 1,201,978	$ 163,905	$ 1,365,883	12.0%

ELIGIBLE SOURCE(S) OF MATCH
(spell out; no acronyms)

TIER 1 ELIGIBLE SOURCE(S) OF MATCH

Final Design	AQMD Rideshare Funds
Right-of-Way	n/a
Construction	AQMD Rideshare Funds and Public Work Capital Improvement Project (CIP) Funds

TIER 2 ELIGIBLE SOURCE(S) OF MATCH

Environmental	AQMD Rideshare Funds
Preliminary Engineering	AQMD Rideshare Funds

Federal transportation funds may not be eligible source of match.

PART TWO: FUNDING (continued)

ITEM ESTIMATE - DIRECT ITEM COSTS

Item #	Description	Unit	Quantity	Unit Price		Amount
	Brookhurst Street					
1	Wayfinding Sign	EA	27	$300.00	$	8,100
2	Bike Lane (DT39)	LF	33,300	$1.00	$	33,300
3	Buffer Stripe (6" White)	LF	2,900	$1.50	$	4,350
4	Bike Symbol With Arrow	EA	70	$35.00	$	2,450
5	Intersection Striping Improvement	EA	5	$3,000.00	$	15,000
	West Street					
6	Wayfinding Sign	EA	12	$300.00	$	3,600
7	Two-Way Left (DT32) with arrows	LF	8,700	$3.50	$	30,450
8	Bike Lane (DT39)	LF	34,800	$1.00	$	34,800
9	Buffer Stripe (6" White)	LF	696	$1.50	$	1,044
10	Bike Symbol With Arrow	EA	20	$35.00	$	700
11	Intersection Video Detection	EA	4	$30,000.00	$	120,000
12	Intersection Video Detection -Reprogram Existing	EA	1	$250.00	$	250
13	Cold Mill (CM2)	SF	544,000	$0.40	$	217,600
	Gilbert Street					
14	Wayfinding Sign	EA	50	$300.00	$	15,000
15	Two-Way Left (DT32)	LF	10,600	$3.00	$	31,800
15	Bike Lane (DT39)	LF	21,200	$1.00	$	21,200
16	Buffer Stripe (6" White)	LF	424	$1.50	$	636
17	Bike Symbol With Arrow	EA	12	$35.00	$	420
18	Intersection Video Detection	EA	3	$30,000.00	$	90,000
18	Intersection Video Detection -Reprogram Existing	EA	1	$250.00	$	250
19	Cold Mill (CM2)	SF	344,500	$0.40	$	137,800
	Chapman Avenue					
20	Wayfinding Sign	EA	22	$300.00	$	6,600
21	Bike Lane (DT39)	LF	21,800	$1.00	$	21,800
22	Buffer Stripe (6" White)	LF	872	$1.50	$	1,308
23	Bike Symbol With Arrow	EA	44	$35.00	$	1,540
24	Conflict Zone Striping	EA	16	$2,000.00	$	32,000
	Lampson Avenue					
25	Wayfinding Sign	EA	60	$300.00	$	18,000
26	Share the Road Sign	EA	22	$200.00	$	4,400
27	Bike Lane (DT39)	LF	900	$1.00	$	900
28	Buffer Stripe (6" White)	LF	11,724	$1.50	$	17,586
29	Bike Symbol With Arrow	EA	4	$35.00	$	140
			Subtotal TIER 1		***$***	***873,024***
30	Mobilization & Demobilization @ 5%	LS	1		$	43,651
31	Traffic Control @ 5%	LS	1		$	43,651
32	Construction Contingency @10%	LS	1		$	87,302
33	Construction Engineering @ 10%	LS	1		$	87,302
	Final Design (PS&E)				$	130,953
			TOTAL TIER 1		***$***	***1,265,883***
33	Preliminary Design (PS&E)	LS	**1**		$	40,000
34	Traffic Study	LS	**1**		$	60,000
			TOTAL TIER 2		***$***	***100,000***
	TOTAL DIRECT COST					$1,265,883
	TOTAL INDIRECT COST					$100,000
	TOTAL PROJECT COST					**$1,365,883**

**See Eligible Expenditures under the BCIP Program Guidelines and Procedures*

PART THREE: EVALUATION CRITERIA

PASS/FAIL CRITERIA

Use a separate sheet of paper if necessary. If any of the criteria below are not met, the proposal will not be ranked or evaluated. A "no" answer to any of the following questions immediately disqualifies the proposal. A "yes" still requires supporting evidence in order for the project to be considered for funding.

1 State and Federal Compliance

a. Is the project consistent with CMAQ, federal, state, regional or local requirements, guidelines and policies? (CMAQ requirements can be found here: http://www.dot.ca.gov/hq/transprog/federal/cmaq/Official_CMAQ_Web_Page.htm)

[x] Yes [ ] No

b. Is the project, as proposed, in compliance with the Americans with Disabilities Act? What evidence is there to support this claim?

[x] Yes [ ] No [ ] Not Applicable

The project is in compliance with the Americans with Disabilities Act and will not be making any changes outside of the existing edge-of- pavement to edge-of- pavement.

c. Is this project in compliance with Buy America requirements?

[x] Yes [ ] No [ ] Not Applicable

2 Financial Viability and Technical Capacity

a. Is the project financially viable? (The local agency must have the ability to meet financial processing requirements, must have a sufficent level of funding to provide cash flow for the project, and provide adequate personnel to manage and administer the project. Please describe any evidence supporting this conclusion. The governing body is required to submit a resolution to this effect along with the application.)

[x] Yes [ ] No

The City will be budgeting $163,905 in matching fund in the FY16-17 Capital Improvement Plan (CIP). The City will provide in-kind staff time to administer and manage the project.

3 Air Quality

Does the project provide an air quality benefit? (CMAQ projects must have a measureable and quantifiable air quality improvement. Please provide the improvements to the following air quality resources using the Southern California Air Quality Resources Board's (SCAQMD) South Coast Methods software. Results must be attached as part of the application package. The SCAQMD South Coast Methods software can be found here: http://www.arb.ca.gov/planning/tsaq/eval/eval.htm.)

[x] Yes [ ] No

AIR QUALITY DATA

The following material is provided by the Southern California Air Quality Management District (SCAQMD).

Local agencies will need the following materials to complete this requirement:
1. South Coast Methods Program
2. South Coast Emissions Factors Tables

The software, instructions, and data tables can be found here: **http://www.arb.ca.gov/planning/tsaq/eval/eval.htm**.
The data tables can be found here: **http://www.arb.ca.gov/planning/tsaq/eval/evaltables.pdf**

PART THREE: EVALUATION CRITERIA (continued)

WEIGHTED CRITERIA

1 Matching Funds (15 points)

Minimum match of 12-13% (0 pts); 14-15% (1 pt); 16-17% (2 pts); 18-19% (3 pts); 20-21% (4 pts); 22-23% (5 pts); 24-25% (6 pts); 26-27% (7 pts); 28-29% (8 pts); 30-31% (9 pts); 32-33% (10 pts); 34-35% (11 pts); 36-37% (12 pts); 38-39% (13 pts); 40-41% (14 pts); 42% match or more receives 15 points.

What is the percent match being provided? 12% _____ pts

2 Coordination (15 points)

a. List the plans that include the project. (examples: OCTA Commuter Bikeways Strategic Plan (CBSP), Safe Routes to Schools Plans, Local City Plan, etc.) 1 point per plan (10 points maximum). _____ pts.

The proposed improvements included in this grant application are identified in the following plans 1.) 2009 OCTA Commuter Bikeways Strategic Plan, 2.) Districts 1 and 2 Bikeway Strategy, OCTA, 2013 (Brookhurst), 3.) City of Garden Grove General Plan 2030, 4.) Garden Grove Active Streets Plan, Draft 2016, 5.) Re:Imagine Garden Grove, 2015.

The project also supports the goals and policies in the following two regional planning documents; 6.) Outlook 2035: OCTA Long Range Transportation Plan (2014) and 7.) SCAG Regional Transportation Plan/Sustainable Communities Strategy (2012).

b. Is the project prioritized as part of a multi-jurisdictional collaborative strategy or similar effort? List below. (5 _____ pts.

Yes, the improvements for Brookhurst Street proposed in this grant application will improve the Brookhurst-Ward corridor which was identified in the Districts 1 and 2 Bikeway Strategy (OCTA, 2013) as a regionally significant bikeway. This project will create new bike lanes north of Chapman to the northern City Limit as well as improve the exiting bike lanes along Brookhurst Street by adding a 3 foot buffer.

In addition, the improvements on Brookhurst Street, Chapman Avenue, and Lampson Avenue connect to the Pacific Electric ROW corridor which was identified as the highest priority corridor in the OCTA D1 & D2 plan.

3 Connectivity, Relationships, and Priority (20 points)

For **bicycle facility** projects, item 3a will be completed by OCTA. Use the box provided in 3b to describe the direct relationship to streets, bicycle facilities, pedestrian facilities, transit systems, employment centers, and activity centers. A Geographic Information Systems (GIS) Shape File, detailed map, and exact location must be provided.

a. Bikeway Priority Index Ranking
The Bikeway Priority Index Ranking (BPIR) generates a score for each project. Points will be assigned by score. 0-99 (0 pts); 100-199 (1 pts); 200-299 (2 pts); 300-399 (3 pts); 400-499 (4 pts); 500-599 (5 pts); 600-699 (6 pts); 700-799 (7 pts); 800-899 (8 pts); 900-999 (9 pts); 1,000 + (10 pts). _____ pts.

BPIR SCORE	

(to be filled in by OCTA)

b. List the project's direct relationships to streets, bicycle facilities, pedestrian facilities, transit systems, employment centers and activity centers. Also include additional important information not noted in this application. (10 points

The corridor improvements contained in this application go beyond connecting destinations along a specific corridor because they will improve the network of bicycle access throughout Garden Grove. Within a one mile buffer, the corridor improvements will create connections to major activity centers including: more than 70 educational institutions, schools and colleges; 11 public parks; regional employment centers, including the Anaheim Resort District; and multiple employment and commercial areas.

The project also connects to regionally significant planned bikeways and existing bikeways in Garden Grove. The Brookhurst corridor is a component of an OCTA identified regional corridor, Brookhurst-Ward and three of this grant application corridors make a direct connection to the Pacific Electric ROW regional bikeway corridor. Furthermore, the improvements would be a comprehensive improvement for City's bikeway network since they will connect with 80 percent of the existing bicycling facilities. Table 3.1 lists the destinations and regional bikeways that make direct connections along the corridor improvements. See Exhibit D for a map of the Draft Active Streets Plan Proposed Bikeways as well as a map of the connections to existing activity centers.

Table 3.1. Destinations Directly Served by Improved Corridors

Destination	Description	Project Corridor
Educational Institutions		
Brookhurst Elementary School	Elementary School	Brookhurst
Sunnyside Elementary School	Elementary School	Brookhurst
Genevieve M. Crosby Elementary School	Elementary School	West
Walton Intermediate School	Intermediate School	West
Gilbert Elementary School	Elementary School	Gilbert
Bolsa Grande High School	High School	Gilbert
Wakeham Elementary School	Elementary School	Chapman
Patton Elementary School	Elementary School	Chapman
Alamitos-Lawrence Intermediate School	Intermediate School	Lampson
Ernest O. Lawrence Elementary School	Elementary School	Lampson
Dr. Walter C. Ralston Intermediate School	Intermediate School	Lampson
Garden Grove High School	High School	Lampson
Violette Elementary School	Elementary School	Lampson
Employment Centers		
Anaheim Resort District	Regional Employment Center	West
Garden Grove Industrial Complex	Regional Employment Center	Chapman
Office Max	Local Employment Center	Chapman
The Home Depot	Local Employment Center	Chapman
Garden Grove Unified School District	Local Employment Center	Lampson
Parks and Open Spaces		
Garden Grove Park	City Park	Gilbert
Westhaven Park	City Park	West
Twin Lakes Recreation Park	City Park	Lampson
Commercial Areas		
Garden Grove Promenade Shopping Center	Shopping Center	Brookhurst / Gilbert
Pavilion Plaza Shopping Center	Shopping Center	Brookhurst / Gilbert
Eastgate Plaza Shopping Center	Shopping Center	Chapman
Regional Bikeways		
Pacific Electric ROW Corridor	OCTA Regional Bikeway	Brookhurst / Gilbert /Lampson
Brookhurst-Ward Corridor	OCTA Regional Bikeway	Brookhurst / Lampson

4 Project Readiness (20 points total)

If item is not complete, mark "N/A" under Document Type and Date Approved/Completed.

	Document Type	Date Approved/Completed	
a. Is preliminary engineering complete*? (5)	n/a	n/a	____ pts.
b. Is the signed CEQA documentation complete? (5)	n/a	n/a	____ pts.
c. Is the signed NEPA documentation complete? (5)	n/a	n/a	____ pts.
d. Is ROW possession complete? (5)	City right-of-way	Completed	____ pts.

* Complete PE = 30% or more engineering drawings

5 Cost-benefit (10 points total)

Fill out the cost-benefit from the Caltrans Active Transportation Program Benefit Cost Tool. Back-up must be provided as part of the applicatoin. Scoring will be ranked once all project applications have been received. A link to the tool can be found here: http://www.dot.ca.gov/hq/tpp/offices/eab/atp.html

Projects will be ranked by tiers. Tier 1 (10 points). Tier 2 (8 points). Tier 3 (6 points). Tier 4 (4 points), Tier 5 (2 points), Tier 6 (0 points)

COST	972.5

____

Total Points Page 6 ____ pts.

Page 9

PART THREE: EVALUATION CRITERIA (continued)

WEIGHTED CRITERIA (CONTINUED)

6 Safety Enhancements (15 points maximum)

a. Provide the number of pedestrian and bicycle injuries and fatalities within one mile of the proposed project area in the last five years. Map and details of accidents are required. Transportation Mapping Injury and Mapping System (TIMS), Statewide Integrated Traffic Record System (SWITRS), and/or local law enforcement reports are acceptable databases for supporting documentation. (5 points maximum)

_____ ____ pts.

According to the Transportation Mapping Injury and Mapping System (TIMS), from 2009 to 2013 there were 840 bicycle and pedestrian injuries within one mile of the proposed project area, which includes almost entirely the city of Garden Grove. Of the 840 injury collisions, roughly 15 percent (122 collisions) occurred on the corridors proposed for bicycle infrastructure improvements. Table 6.1 lists the total number of bicyclist or pedestrian-involved collisions per project corridor and only accounts for collisions where the corridor to improve was registered as the Primary Road of collision in TIMS.

Table 6.1. Bicycle and Pedestrian Related Collisions per Corridor

Corridor	Collisions
Brookhurst Street	54
Chapman Avenue	12
Gilbert Street	10
Lampson Avenue	35
West Street	11
Total	**122**

Twenty five pedestrians and seven bicyclists died as a result of the collisions (4 percent of the bicyclist or pedestrian-involved collisions). Table 6.2 summarizes the collisions by severity. Maps of the locations of bicycle and pedestrian collisions occurring between 2009 and 2013 can be found in Exhibit I.

Table 6.2. Distribution of Bicycle and Pedestrian Related Collisions per Severity

Collision Severity	Bicycle Rider	Pedestrian	Total	Total (%)
Fatal	7	28	35	4
Severe Injury	21	45	66	8
Visible Injury	228	159	387	46
Complaint of Pain	209	143	352	42
Total	**465**	**375**	**840**	**100**

Finally, according to the Orange County Transportation Authority Districts 1 and 2 Bikeways Strategy, from 2007 to 2011 the Brookhurst-Ward Corridor had the second highest number of bicycle collisions per mile in Orange County's Districts 1 and 2, averaging 0.7 collisions per month and 6.3 collisions per mile. Further evaluation of Brookhurst Street for the Active Streets Plan indicates that from 2012 to 2013 the average number of collisions per month increased from 0.7 collions to almost one collision per month.

b. Does the project also service pedestrians? Examples include multi-use facilities or Class I Bikeways facilities. If yes, please describe. (5 points maximum)

____ pts.

All improvements included in the proposed project will service pedestrians. In a bicycle count conducted in Garden Grove in September 2015, 94% of bicyclists were traveling on sidewalks, which endangers pedestrians on these same sidewalks. Improved and new bicycle infrastructure, such as bike lanes and buffered bike lanes, will encourage bicyclists to ride on the street rather than the sidewalk, making walking safer and more comfortable for pedestrians. Additionally, road rebalancing will calm traffic speeds, making conditions safer for both cyclists and pedestrians. The addition of a center turn lane will provide a center refuge for pedestrians crossing the street and the addition of a bike lane will increase the buffer between pedestrians and moving vehicles.

c. List and describe the improvements that will be made to increase bicycle safety and reduce bicycle related accidents at and around the project area. Eligible improvements include but are not limited to: bicycle boxes, bicycle parking, bicycle detection at signals. (1 point for each safety improvement and amenity - 5 points maximum)

1 **Class II Bike Lanes**- Bicycle lanes provide a dedicated space on the road for bicyclists to ride. Bicycle lanes help bicyclists practice legal behavior by riding safely and predictably reducing behaviors that lead to collisions.

____ pts.

2 **Class II Buffered Bike Lanes**- Buffered bike lanes provide greater shy distance between vehicles and bicyclists and provide space for bicyclists to pass another bicyclist without encroaching into the adjacent motor vehicle lane increasing safety and comfort. They encourage bicycling by contributing to the perception of safety and appeal to a wider cross-section of bicycle-users (NACTO Urban Bikeway Design Guide, 2014). Furthermore, narrowing wide outside travel lanes will reduce vehicle speeds reducing crash severity.

____ pts.

Class II Bike Route Signs and Striping- Signage and striping makes cyclists and drivers aware of a designated bike route, leading to increased visibility of people riding bikes, ease of navigation for cyclists and increased caution for drivers.

3 ____ pts.

Through bike lanes at intersections-Through bike lanes in intersections are intended to reduce the risk of crashes and increase bicyclist comfort. They enable bicyclists to correctly position themselves to the left of right turn lanes, reducing conflicts between turning drivers and bicycle through traffic.

4 ____ pts.

Four-to-three Road Rebalancing (Road Diet)- Road rebalancing has proven safety benefits including a 19 to 47 percent reduction in overall crashes on previously four-lane undivided roadways (FHWA, Road Diet Informational Guide, 2014). Road rebalancing will provide dedicated bike lanes, improving bicycle safety and a center turn lane which provides the opportunity for a pedestrian refuge island for crossings.

5 ____ pts.

7 Public Participation and Agency Support (5 points maximum)

a. Describe the public participation process and dates of public meetings. How did the agency consider comments and responses from meetings when designing the project? (2 points maximum)

The bicycle corridors selected for improvement for this application are the outcome of extensive outreach effort by the City during the development of the Draft Garden Grove Active Streets Master Plan. The public outreach included comprehensive gathering of community input through six major components:

- Interactive Online Map (September 28th - November 18th, 2015)
- Online Survey (October, 2015 – January, 2016)
- Public Workshop at the 2015 Open Street Event
- Project Website and Social Media Presence (September 28th - November 18th, 2015)
- Stakeholder Meetings (November 2015, March 2016)
- Re:Imagine Garden Grove Mind Mixer and numbers small group meetings (2014-2015)

In general, the major themes and community priorities identified through these outreach processes include:

- Improve safety for pedestrians and bicyclists
- Improve existing bikeways, the majority of community members identified thier reason for not biking was the feeling of unsafe road conditions.
- Provide sustainable, alternative transportation options for the City and region

Taking into consideration these priorities, the City identified corridors with existing but not continuous bikeways as well as new north-south corridor to key destinations. The proposed infrastructure improvements in these corridors will increase connectivity and allow for safety and comfortable travel by bicycle and on foot throughout Garden Grove and the surrounding region.

More specifically, the online interactive map invited community members to suggest specific improvements for Garden Grove's bicycle and trail network using an online interactive mapping tool. Over 220 citywide suggestions were mapped by residents, commuters, and visitors, and 15 percent of the suggestions, were identified on the five corridors in this grant application. Each corridor received between 3 and 10 comments for public support.

Finally, during the Re:Imagine Garden Grove planning process, which involved using various public outreach methods to gather input on active transportation needs, the community identified Brookhurst Street, Chapman Avenue and Lampson Avenue as local streets that need improvements or completed bikeways to serve the needs of all users.

b. Provide a list of organizations and agencies that have or will provide letters of support for the project. Letters should be attached to the application or may be sent directly to OCTA. (1 point for each public organization or agency letter - 3 points maximum)

	List of Supporting Organizations and Agencies	
1	Garden Grove City Council	____ pts.
2	Garden Grove Unified School District	____ pts.
3	Alliance for a Healthy Orange County	____ pts.
4	Orange County Supervisor Andrew Do, First District	____ pts.
5		____ pts.

Total Points Page 6 ___ - pts.
Total Points Page 7 ____ pts.
Total Points: ____ **pts.**

PART FOUR: BCIP AGENCY RESOLUTION

SAMPLE AGENCY RESOLUTION REQUESTING FUNDS FOR APPROVED PROJECT
RESOLUTION MUST BE RECEIVED BY OCTA NO LATER THAN THE JUNE 30, 2016.

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL/BOARD OF DIRECTORS OF THE CITY/COUNTY OF _____ AUTHORIZING APPLICATION FOR FUNDS FOR THE BICYCLE CORRIDOR IMPROVEMENT PROGRAM FUNDED WITH CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM FUNDING UNDER THE MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY AND FIXING AMERICAS SURFACE TRANSPORTATION FEDERAL TRANSPORTATION ACT FOR *(NAME OF PROPOSAL*) PROJECT.

WHEREAS, the United State Congress enacted the Moving Ahead for Progress in the 21st Century (MAP-21) Federal Transportation Act on July 6, 2012 and Fixing America's Surface Transportation (FAST) Federal Transportation Act on December 4, 2015, which makes Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds available to the Orange County Transportation Authority (OCTA); and

WHEREAS, OCTA has established the procedures and criteria for reviewing proposals; and

WHEREAS, *(ADMINISTERING AGENCY*) possesses authority to nominate bicycle projects funded using Congestion Mitigation and Air Quality Improvement Program funding and to finance, acquire, and construct the proposed project; and

WHEREAS, by formal action the (*GOVERNING BODY*) authorizes the nomination of (*NAME OF PROPOSAL*), including all understanding and assurances contained therein, and authorizes the person identified as the official representative of the (*ADMINISTERING AGENCY*) to act in connection with the nomination and to provide such additional information as may be required; and

WHEREAS, the (*ADMINISTERING AGENCY*) will maintain and operate the property acquired, developed, rehabilitated, or restored for the life of the resultant facility(ies) or activity; and

WHEREAS, with the approval of the California Department of Transportation (Caltrans) and/or OCTA, the (*ADMINISTERING AGENCY*) or its successors in interest in the property may transfer the responsibility to maintain and operate the property; and

WHEREAS, the (*ADMINISTERING AGENCY*) will give Caltrans and/or OCTA's representatives access to and the right to examine all records, books, papers or documents related to the bicycle project; and

WHEREAS, the (*ADMINISTERING AGENCY*) will cause project work to commence within six months following notification from the State or OCTA that funds have been authorized to proceed by the Federal Highway Administration or Federal Transit Administration and that the project will be carried to completion with reasonable diligence; and

WHEREAS, the (*ADMINISTERING AGENCY*) commits *(MATCH DOLLAR VALUE*) of *(MATCHING FUND SOURCE)* and will provide *(PERCENT LOCAL AGENCY MATCH)* of the total project cost as match to the requested *(REQUESTED CMAQ DOLLAR VALUE)* in OCTA CMAQ funds for a total project cost estimated to be *(TOTAL PROJECT COST)* .

WHEREAS, the (*ADMINISTERING AGENCY*) will comply where applicable with provisions of the California Environmental Quality Act, the National Environmental Policy Act, the American with Disabilities Act, Federal Title VI, Buy America provision, and any other federal, state, and/or local laws, rules and/or regulations; and

WHEREAS, the *(ADMINISTERING AGENCY)*'s *(GOVERNING BODY)* authorize the execution of any necessary cooperative agreements between the *(ADMINISTERING AGENCY)* and OCTA to facilitate the delivery of the project; and

PART FOUR: BCIP AGENCY RESOLUTION (continued)

SAMPLE AGENCY RESOLUTION REQUESTING FUNDS FOR APPROVED PROJECT

WHEREAS, (*ADMINISTERING AGENCY*) will amend the agency Capital Improvement Program (CIP) to include the project if selected for funding; and

NOW, THEREFORE, BE IT RESOLVED that the City/County of _____, hereby authorizes **(*NAME OF AGENCY REPRESENTATIVE*)** as the official representative of the (*ADMINISTERING AGENCY*) to apply for the Congestion Mitigation and Air Quality funding under the Moving Ahead for Progress in the 21st Century Federal Transportation Act and Fixing Americas Surface Transportation Act for (*NAME OF PROPOSAL*).

BE IT FURTHER RESOLVED, that the City/County of _____ agrees to fund its share of the project costs and any additional costs over the identified programmed amount.

Signed _____ Date _____
Mayor

Printed (Name and Title) _____

Signed _____ Date _____
Clerk Recorder

Printed (Name and Title) _____

PART FIVE: ASSURANCES

This page must be signed in order for the project to be considered for funding.

(APPLICANT AGENCY) possesses legal authority to nominate this bicycle project and to finance, acquire, and construct the proposed project; and by formal action (e.g., a resolution) the Implementing Agency's governing body authorizes the nomination of the bicycle project, including all understanding and assurances contained therein, and authorizes the person identified as the official representative of the Implementing Agency to act in connection with the nomination and to provide such additional information as may be required.

(APPLICANT AGENCY) will maintain and operate the property acquired, developed, rehabilitated, or restored for the life of the resultant facility(ies) or activity. With the approval of the OCTA, California Department of Transportation, the Implementing Agency or its successors in interest in the property may transfer the responsibility to maintain and operate the property.

(APPLICANT AGENCY) will give the OCTA or California Department of Transportation's representative access to and the right to examine all records, books, papers, or documents related to the transportation enhancement activity.

(APPLICANT AGENCY) will comply where applicable with provisions of the California Environmental Quality Act, the National Environmental Policy Act, the Americans with Disabilities Act, Buy America provision, the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, CTC Guidelines, if applicable, FHWA Congestion Mitigation and Air Quality Guidance, Caltrans Local Assistance Procedures Manual, if applicable, any other federal, state, and/or local laws, rules and/or regulations.

If Congestion Mitigation and Air Quality funds or projects are used for other than the intended purposes as defined by federal or state guidelines, the implementing agency may be required to remit all state and federal funds back to the OCTA.

I certify that the information contained in this Bicycle Corridor Improvement Program application, including required attachments, is accurate and that I have read and understand the important information and agree to the assurances on this form.

Signed _____ Date 5/5/16
(Administering Agency Representative)

Printed (Name and Title) Scott C. Stiles, City Manager

Administering Agency City of Garden Grove

Page 15

PART SIX: COOPERATIVE AGREEMENT CONCURRENCE

This page must be signed in order for the project to be considered for funding.

Project Implementing Agency has reviewed the attached draft Bicycle Corridor Improvement Program cooperative agreement template and has deteremined that the cooperative agreement is:

[x] Sufficient and meets the expectations of the Project Implementing Agency. No further changes necessary.

[ ] Sufficient, with the suggested modifications:

Please list and explain:

Bicycle Corridor Improvement Program cooperative agreement will be finalized and executed between Project Implementing Agency and OCTA if the project is selected for funding.

I certify that the information contained in this Bicycle Corridor Improvement Program application, including required attachments, is accurate and that I have read and understood the important information and agree to the assurances on this form.

Signed Scott C. Stiles Date 5/5/16
(Administering Agency Representative)

Printed (Name and Title) Scott C. Stiles, City Mgr.

Administering Agency City of Garden Grove

CHECK LIST AND EVALUATION CRITERIA

Check list of Application Items (check all items included in this package)

- [x] Application (Part 1 - 3)
  - [x] Cover Letter
  - [x] Table of Contents
  - [x] Unbound, original single sided copy
  - [x] 5 Copies
  - [x] PART 1 - General Project Information
  - [x] PART 2 - Funding
  - [x] PART 3 - Evaluation Criteria
- [x] Draft Resolution (PART 4)
- [x] Signed Final Resolution (when available)
- [x] Assurances (PART 5)
- [x] Cooperative Agreement Concurrence (PART 6)
- [ ] Environmental Documentation
- [x] Project Site Photos
- [x] Design / Concept Drawing
- [x] Project Maps
  - [x] GIS Map and Shape File
  - [x] Project Site Maps
- [x] Right of Way
  - [x] Right of Way Map
  - [ ] Right of Way Certification (if applicable)
- [x] Caltrans Active Transportation Program Cost Benefit Analysis Tool
- [x] TIMS, SWITRS, or Other Injury/Fatalities Map and Data
- [x] Air Quality Calculations

Evaluation Criteria and Point Distribution

Weighted Criteria	Points	Percentage
Matching Funds	15	15%
Coordination	15	15%
Connectivity, Relationships and Priority	20	20%
Project Readiness	20	20%
Cost Benefit	10	10%
Safety Enhancements	15	15%
Public Participation and Agency Support	5	5%
Total	***100***	***100%***

Pass/Fail Criteria

State and Federal Compliance

Financial Viability

Air Quality

Page 17

EXHIBIT A: ENVIRONMENTAL DOCUMENTATION

- OCTA has provided preliminary support for the road rebalancing projects on West Street and Gilbert Street
- Traffic studies will be accomplished through project grant

EXHIBIT B: PHOTOS OF PROJECT SITE

1.) BROOKHURST STREET

Stripe Bicycle Lanes. Brookhurst Street looking north from Chapman Avenue.

Add Buffer to Existing Bicycle Lanes. A typical photo of the existing narrow bike lanes on Brookhurst, south of Chapman.

2.) WEST STREET

Road Rebalancing. West Street, looking north along Westhaven Park just north of Lampson Avenue.

Road Rebalancing. West Street, looking south along residential neighborhood, north of Chapman Avenue.

3.) GILBERT STREET

Road Rebalancing. Gilbert Street looking north from Shannon Avenue.

Bike Route. Gilbert Street looking north from Imperial Avenue.

Bike Route. Imperial Avenue looking east toward Shapell Street.

Bike Route. Shapnell Street looking south toward Trask Avenue.

Bike Route. Crosswalk to existing SR-22 pedestrian under-crossing (on left).

Bike Route. Deodara Drive looking south along Bolsa Grand High School (left) and Garden Grove Park (right).

4.) CHAPMAN AVENUE

Add Buffer to Existing Bicycle Lanes. Wide outside travel lane at Chapman Avenue near Springdale Avenue can be narrowed to create buffered bicycle lanes.

Add Buffer to Existing Bicycle Lanes. Looking west along Chapman at Chapman Sports Park.

5.) LAMPSON AVENUE

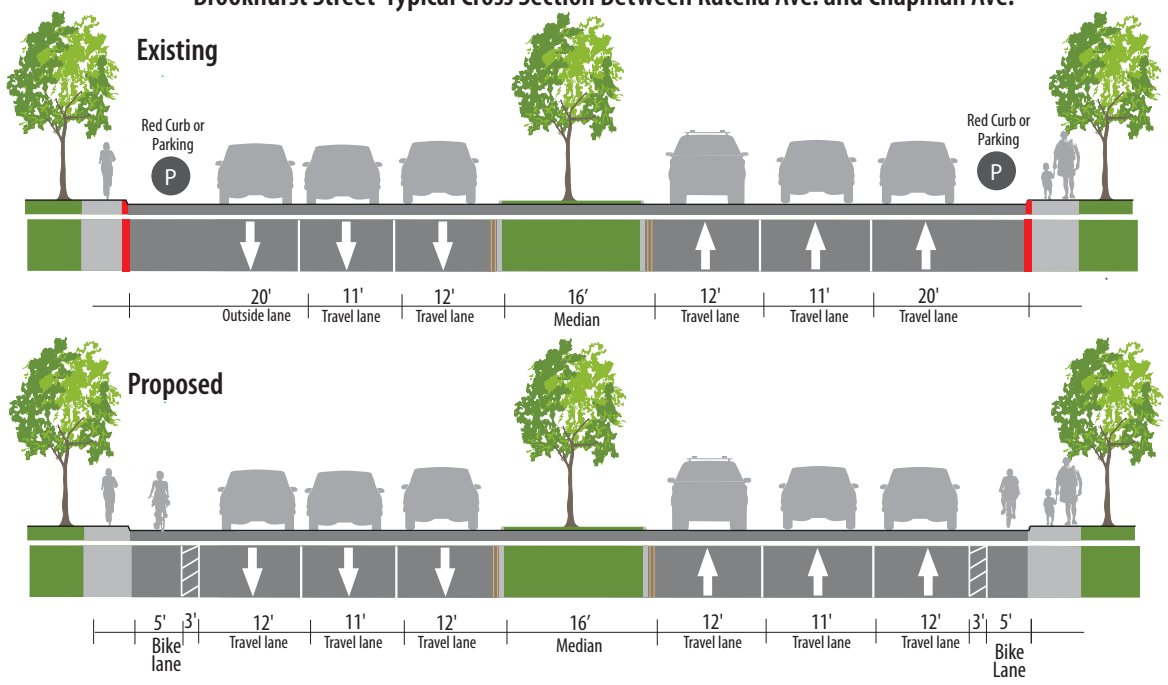
Narrow Travel Lanes. The crossing at Lampson and Nelson is an example of where the right-of-way is wide and there is an opportunity to narrow the travel lanes with striping to calm traffic and improve the bicycle route.

EXHIBIT C: PROJECT CONCEPT DESIGN

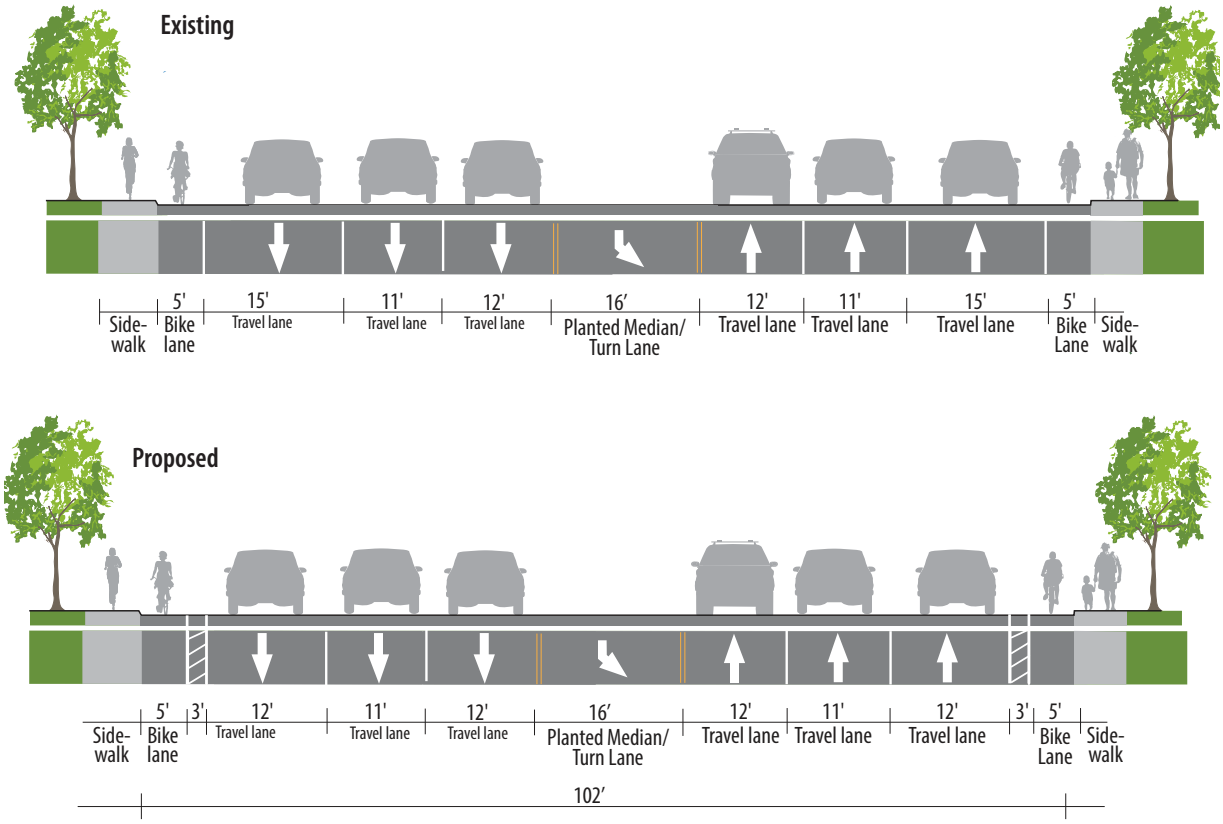
1.) BROOKHURST STREET

Location	Start	End	Existing	Proposed	Length (mi)	Notes
Brookhust Street: Create a continuous north-south bikeway by improving existing bike lanes with buffers, striping new bike lanes to fill gaps, improving bikeway striping at intersections and providing wayfinding signs.						
Brookhurst St	Katella Ave	Aldgate Ave	n/a	Bike Lane	0.14	Narrow travel lanes to 11′ add 5′ bike lane
Brookhurst St (SB)	Aldgate Ave	Orangewood Ave	n/a	Buffered Bike Lane	0.35	Change parking restriction and add buffered bike lane
Brookhurst St (NB)	Aldgate Ave	Orangewood Ave	n/a	Bike Lane	0.35	Narrow lanes, add bike lane
Brookhurst St (SB)	Orangewood Ave	Melody Park Dr.	n/a	Buffered Bike Lane	0.35	Change parking restriction and add buffered bike lane
Brookhurst St (NB)	Orangewood Ave	Melody Park Dr.	Bike Lane	Buffered Bike Lane	0.35	Narrow outside travel lane and stripe 3′ buffer to existing bike lane
Brookhurst St	Melody Park Dr.	Chapman Ave	n/a	Bike Lane	0.15	Narrow travel lanes to 11′ add 5′ bike lane
Brookhurst St	Chapman Ave	Trask Ave	Bike lane	Buffered Bike Lane	1.55	Narrow travel lanes and stripe 3′ buffer to existing bike lane

Brookhurst Street Typical Cross Section Between Katella Ave. and Chapman Ave.



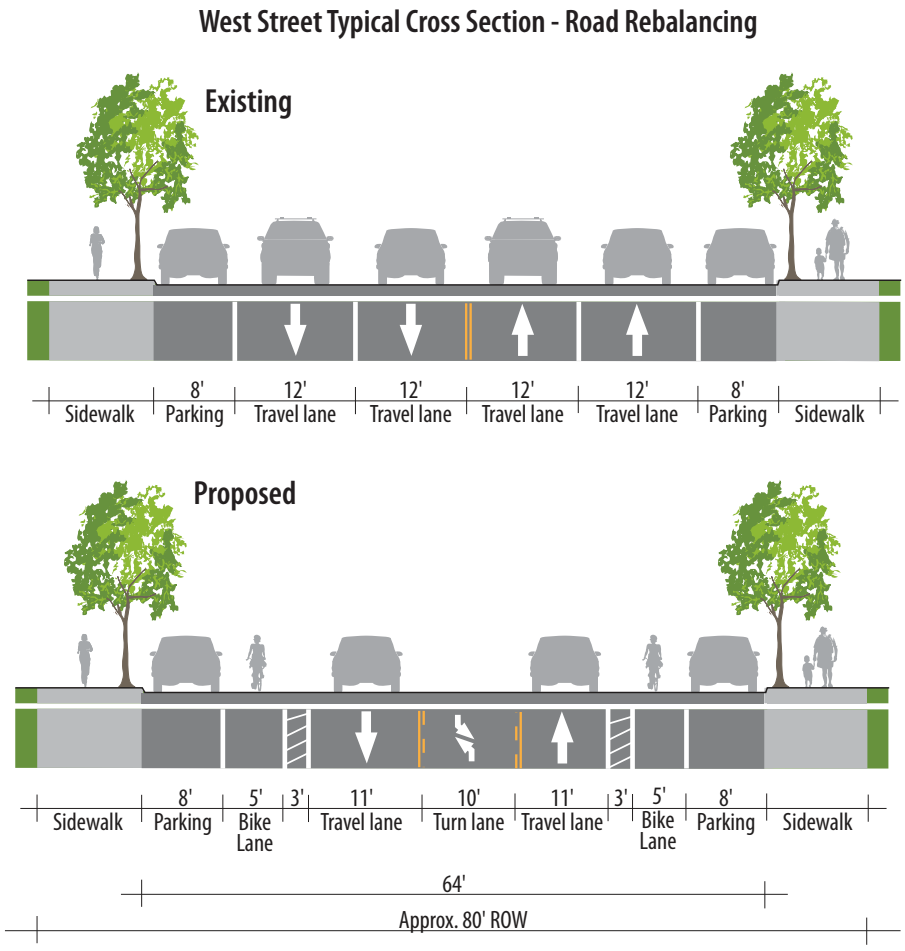
Brookhurst Street Typical Cross Section Between Chapman Ave. and Trask Ave.



Example photo of proposed buffered bike lane

2.) WEST STREET

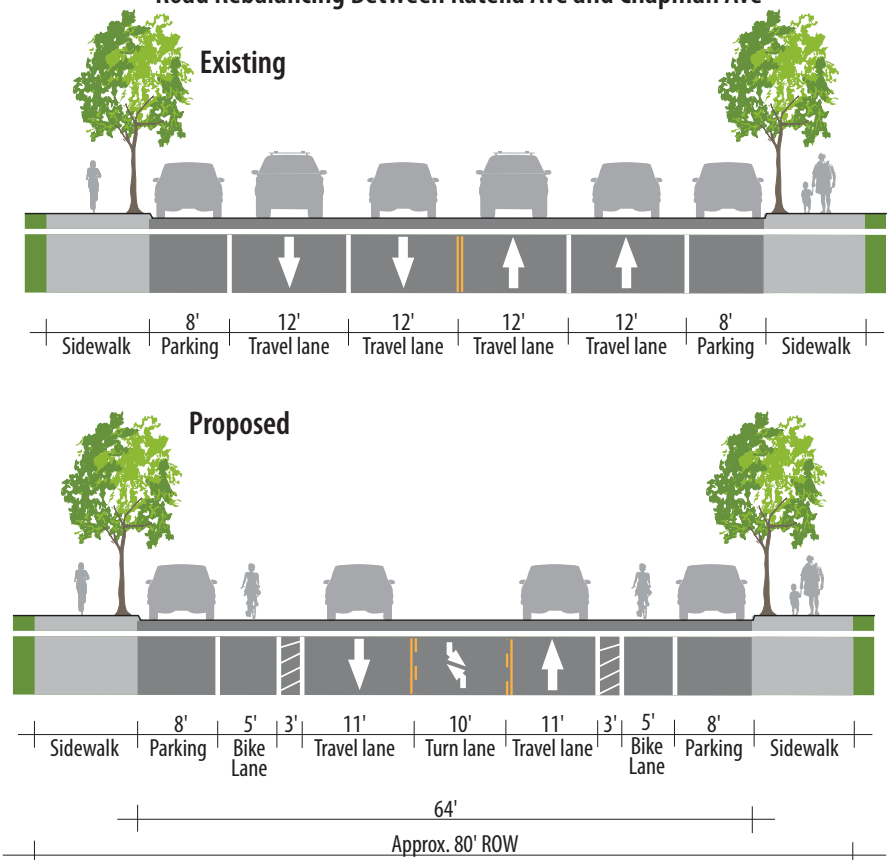
Location	Start	End	Existing	Proposed	Length (miles)	Notes
West Street: Add bike lanes though 3 to 4 lane road rebalancing. Install bicycle wayfinding signs.						
West St	W. Convention Way	Garden Grove Blvd	n/a	Buffered Bike Lanes	1.7	4 to 3 road rebalancing



3.) GILBERT STREET

Location	Start	End	Existing	Proposed	Length (miles)	Notes
Gilbert Street: Add bike lane though 3 to 4 lane road rebalancing between Katella and Chapman Avenue. Signed bike route from Chapman to Westminster via neighborhood streets. Install bicycle wayfinding signs.						
Gilbert St	Katella Ave	Chapman Ave	n/a	Buffered Bike Lanes	1.0	4 to 3 road rebalancing
Gilbert St	Chapman Ave	Imperial Ave	n/a	Bike Route	1.3	Share the road signs and bicycle wayfinding
Imperial Ave	Gilbert St	Shapell St	n/a	Bike Route	0.12	Share the road signs and bicycle wayfinding
Shapell St	Imperial	SR-22 Pedestrian Undercrossing	n/a	Bike Route	0.28	Share the road signs and bicycle wayfinding
Deodara Dr	SR-22 Pedestrian Undercrossing	Westminster Blvd	n/a	Bike Route	0.40	Share the road signs and bicycle wayfinding

Gilbert Street Typical Cross Section
Road Rebalancing Between Katella Ave and Chapman Ave

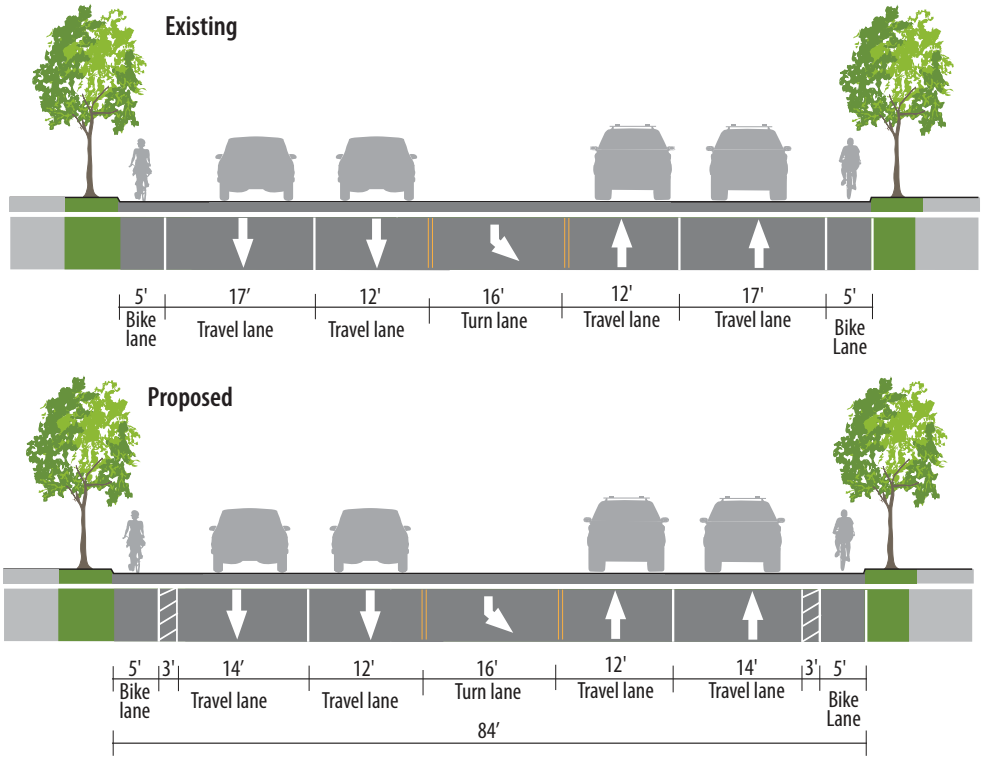


City of Garden Grove Bicycle Corridor Improvements\\ 28

4.) CHAPMAN AVENUE

Location	Start	End	Existing	Proposed	Length (mi)	Notes
Chapman Avenue: Improve existing bike lanes with buffers and wayfinding signs.						
Chapman Ave	Valley View St	Beach Blvd	Bike Lane	Buffered Bike Lane	2	Narrow lanes and stripe 3′ buffer

Chapman Avenue Typical Cross Section Between Valley View and City Limit.



Example photo of proposed buffered bike lane

City of Garden Grove Bicycle Corridor Improvements\\ 29

5.) LAMPSON AVENUE

Location	Start	End	Existing	Proposed	Length (miles)	Notes
Lampson Avenue: Lampson is the only continuous east-west corridor centrally located in Garden Grove that is not a truck route, making it a great candidate for additional bikeway improvements. The right-of-way (ROW) through the corridor varies widely and has intermittent bike lanes. Where the ROW widens, narrowing travel lanes through striping will help slow speeding vehicles. Additional improvements can be achieved through improving existing bike lanes with buffers, improving bikeway striping at intersections, and providing wayfinding signs.						
Lampson Avenue	Westcliff Dr	Magnolia St	Bike Lane	Buffer Bike Lane	0.87	Narrow outside lane, stripe buffer
Lampson Avenue	Magnolia St	Nelson St	Bike Route	Lane narrowing with striped buffer	1.7	Narrow vehicle travel lane for traffic calming
Lampson Avenue	Nelson St	Euclid St	Bike Lane	Wayfinding	0.3	New wayfinding signs
Lampson Avenue	Euclid St	9th St	Bike Route	Lane narrowing with striped buffer	0.5	Narrow vehicle travel lane for traffic calming
Lampson Avenue	9th St	Glen St	Bike Lane	Buffered bike lane	0.22	Add buffer to existing lane
Lampson Avenue	Glen St	Buaro St	Bike Lane	Bike lane	0.53	Intersection improvements
Lampson Avenue	Buaro St	Oertly Dr	Bike Route	Wayfinding	0.53	New wayfinding signs
Lampson Avenue	Oertly Dr	Haster	Bike lane	Buffered bike lane	0.23	Narrow outside travel lane and stripe 3′ buffer

Examples of lane narrowing through painted shoulder markings (left) or painted center median (right) http://www.fhwa.dot.gov/publications/research/safety/08067/

BICYCLE WAYFINDING

Examples of bicycle wayfinding signs which are proposed to be installed along all five project corridors.

INTERSECTION AND CONFLICT ZONE IMPROVEMENTS

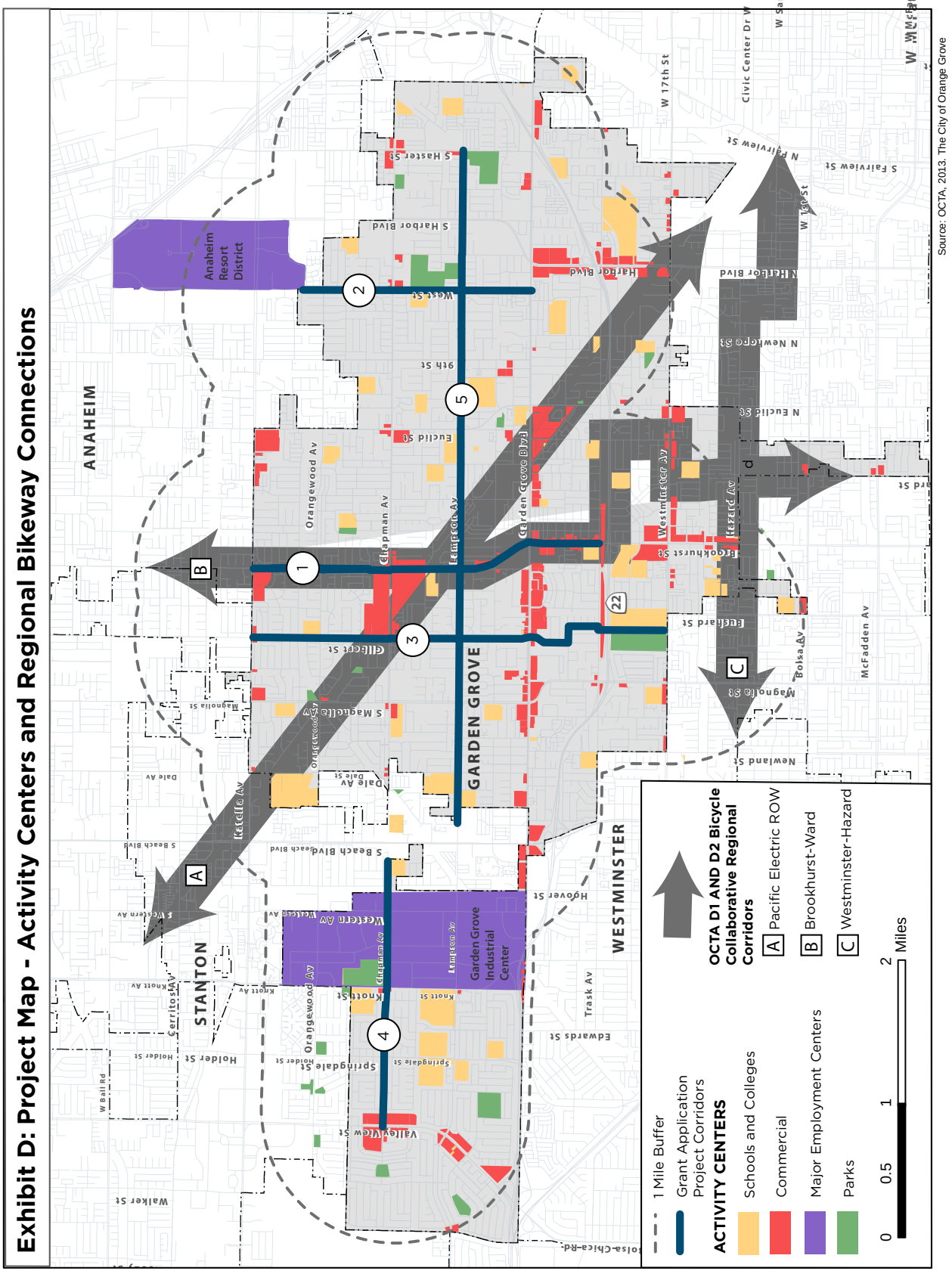
Through bicycle lane striping is proposed to improve intersections.

Conflict striping is proposed.

City of Garden Grove Bicycle Corridor Improvements\\ 31

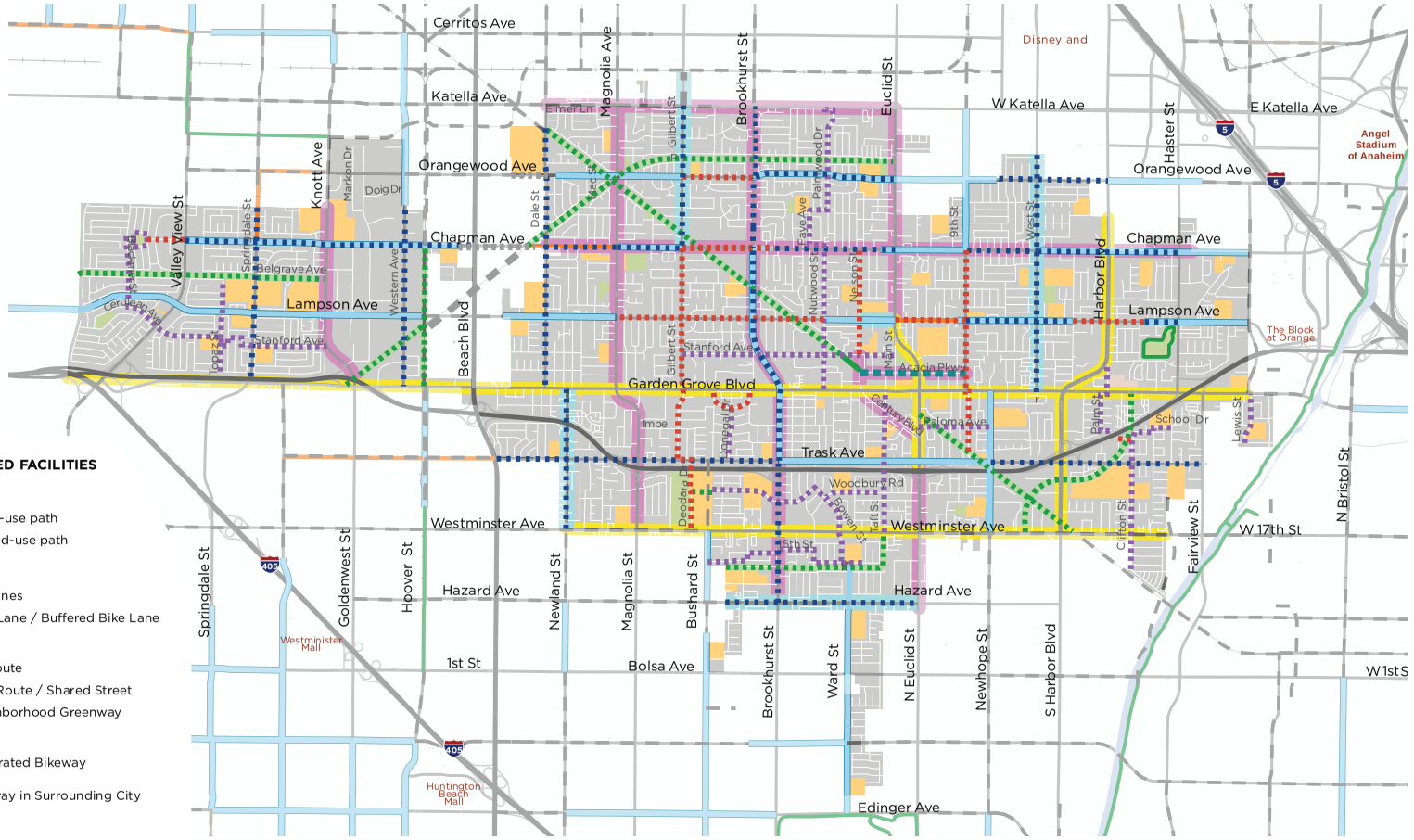
EXHIBIT D: PROJECT MAPS

- Garden Grove Activity Centers and Regional Bike Corridors
- 2016 Draft Garden Grove Active Streets Plan Proposed Bike Facility Improvements
- Project Extents and Improvement Types
- 1. Brookhurst Street
- 3. Gilbert Street
- 2. West Street
- 4. Chapman Avenue
- 5. Lampson Avenue



City of Garden Grove Bicycle Corridor Improvements\\ 33

Exhibit D: Project Map - Draft Garden Grove Active Streets Proposed Bikeways Map



EXISTING & PROPOSED FACILITIES

Class I
- Existing Shared-use path
- Proposed Shared-use path

Class II
- Existing Bike Lanes
- Proposed Bike Lane / Buffered Bike Lane

Class III
- Existing Bike Route
- Proposed Bike Route / Shared Street
- Proposed Neighborhood Greenway

Class IV
- Proposed Separated Bikeway
- Proposed Bikeway in Surrounding City

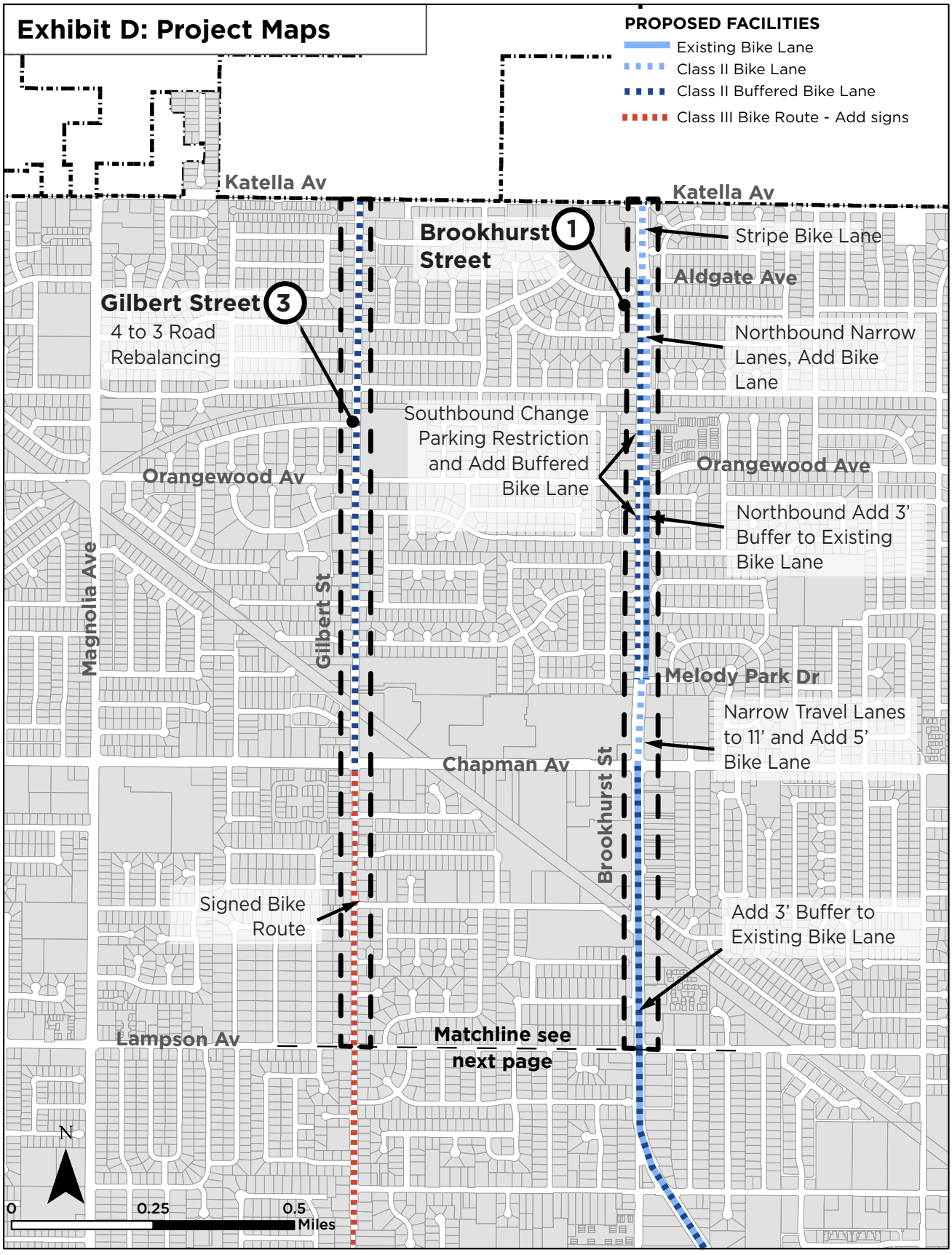
STUDY CORRIDORS
- Road Rebalancing Study Corridor
- Complete Street Study Corridor
- Class IV Separated Bikeway Study Corridor
- Shared-use Trail Corridor

LAND USE
- Schools

DRAFT- PROPOSED BIKE FACILITY IMPROVEMENTS

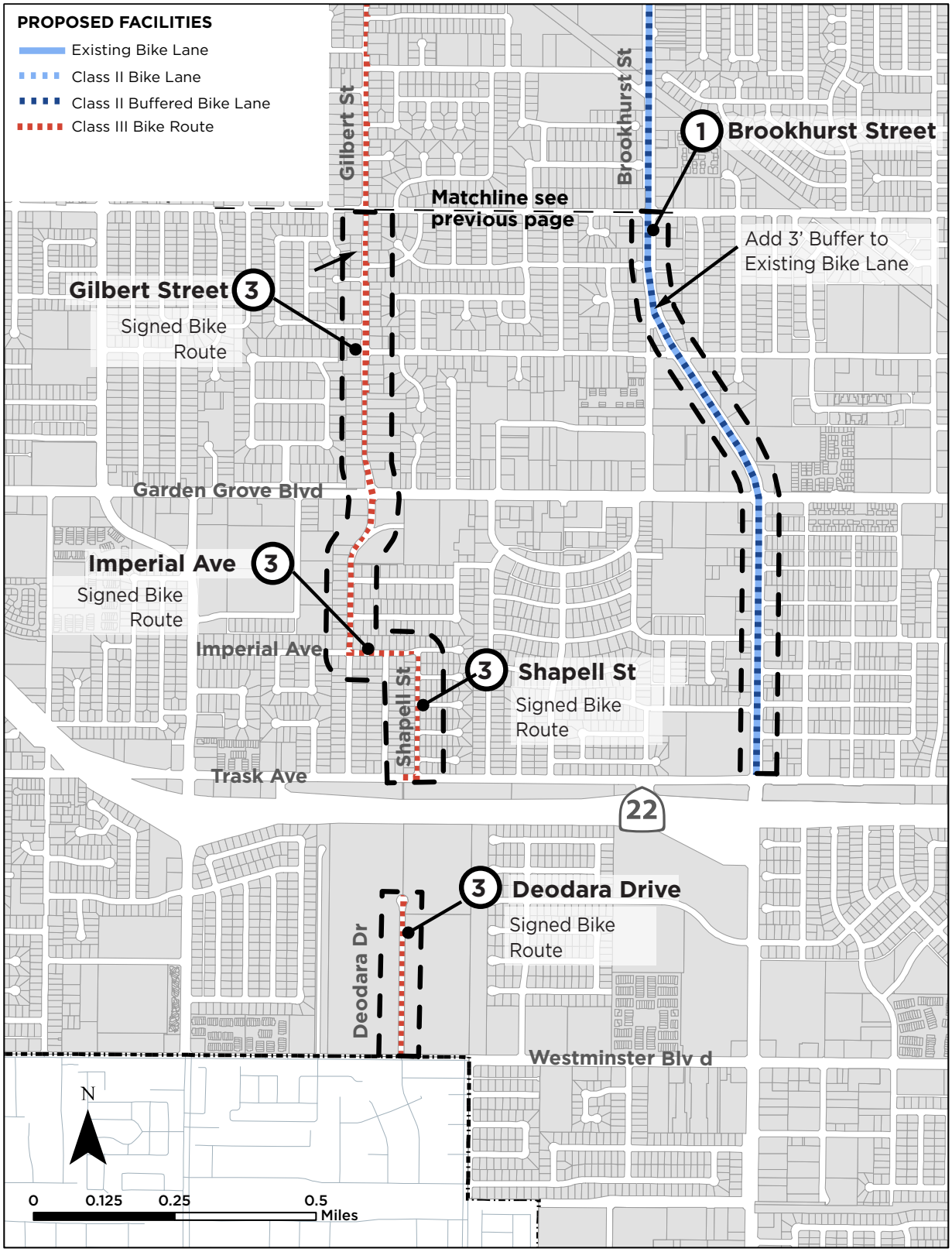
Garden Grove Active Streets Master Plan

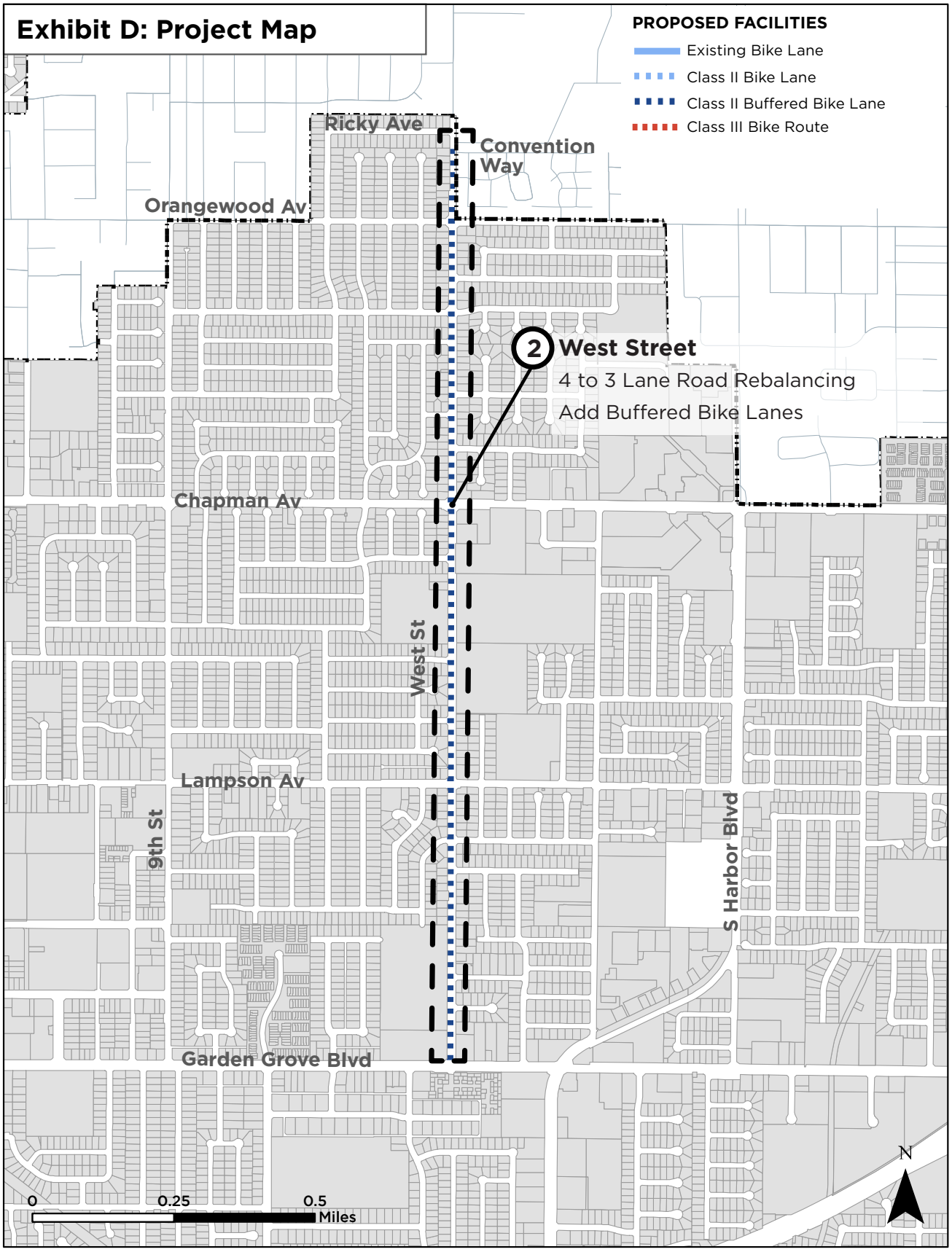
FOR REVIEW ONLY - APRIL 2016



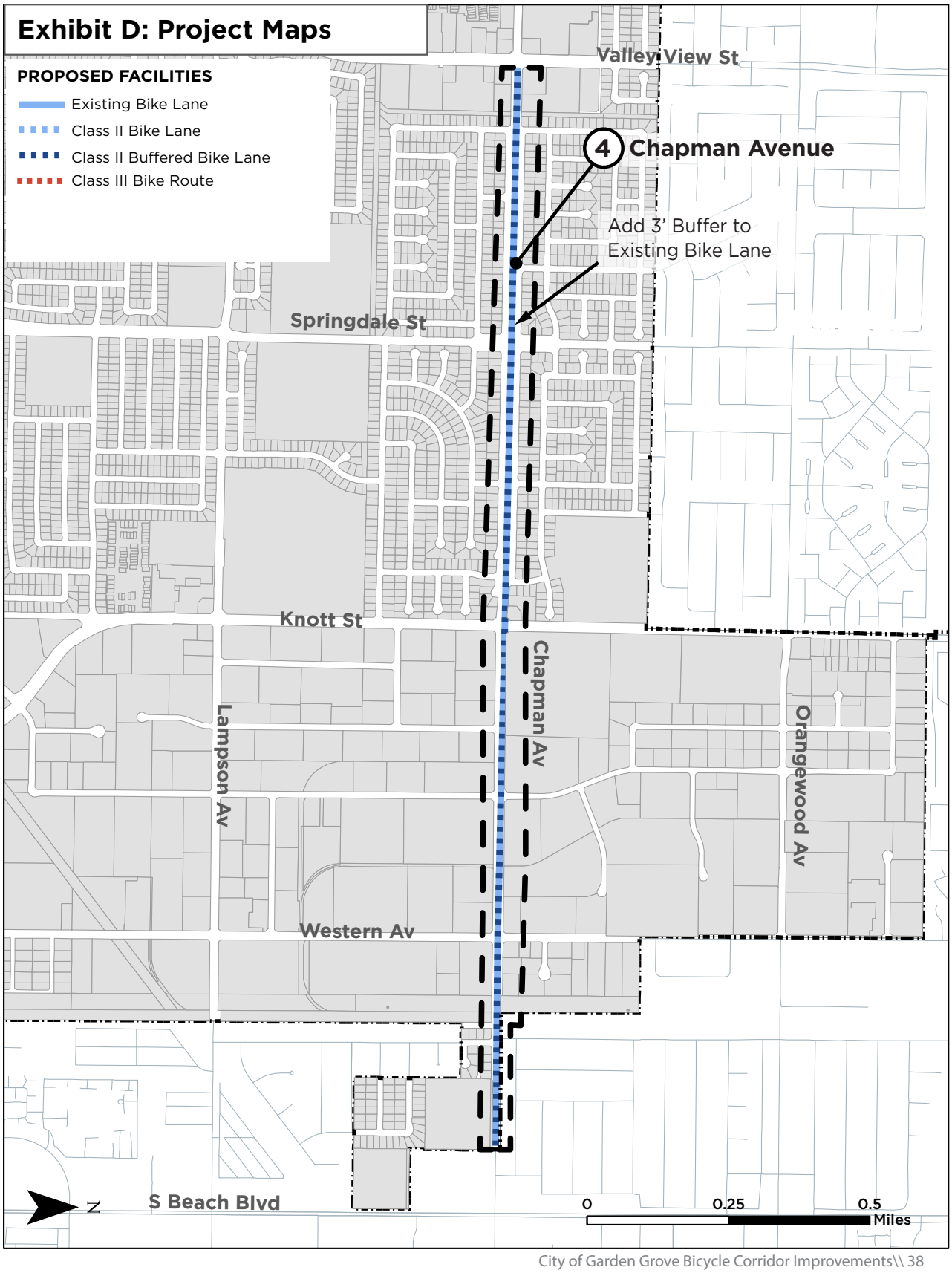
City of Garden Grove Bicycle Corridor Improvements\\ 35

Exhibit D: Project Maps

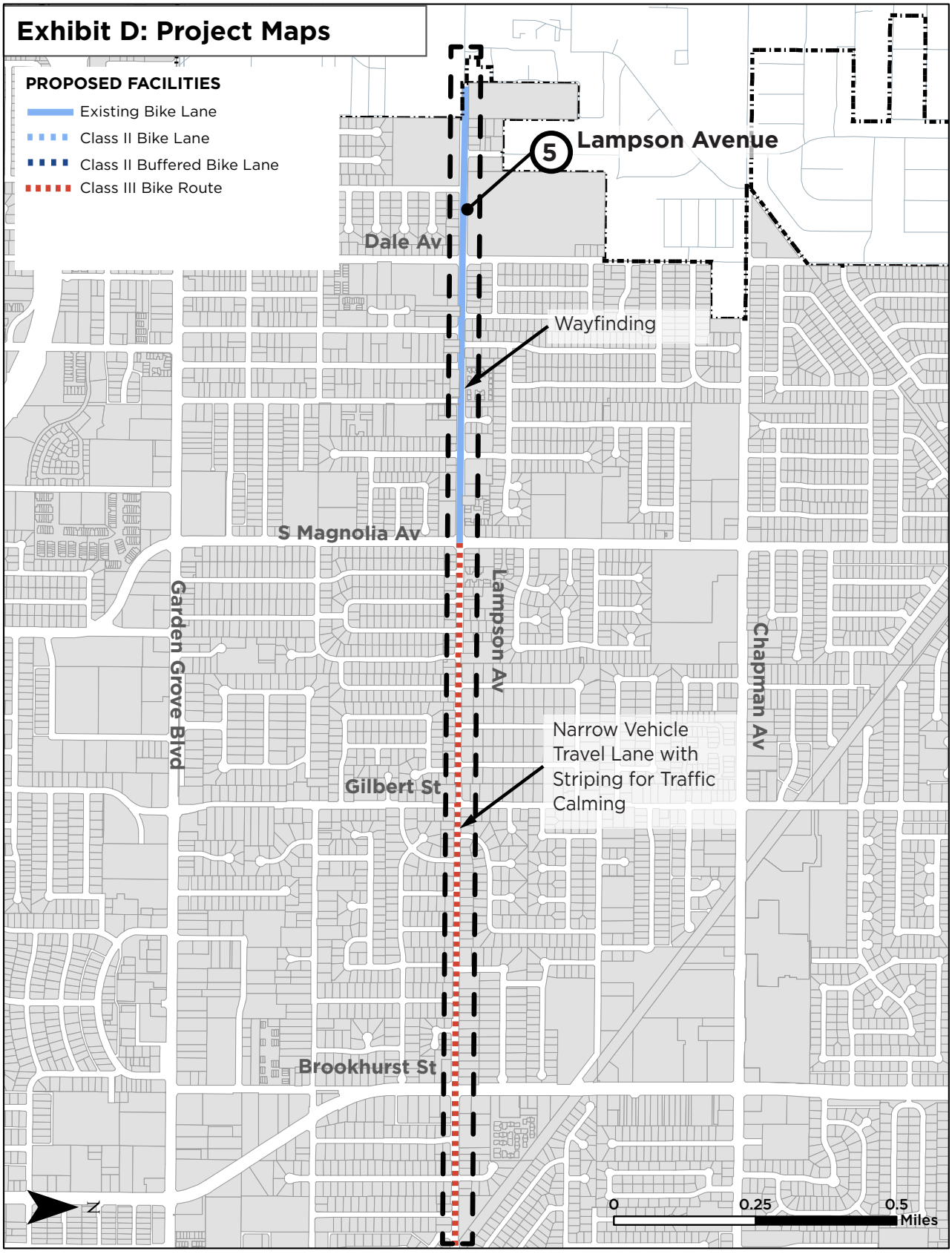




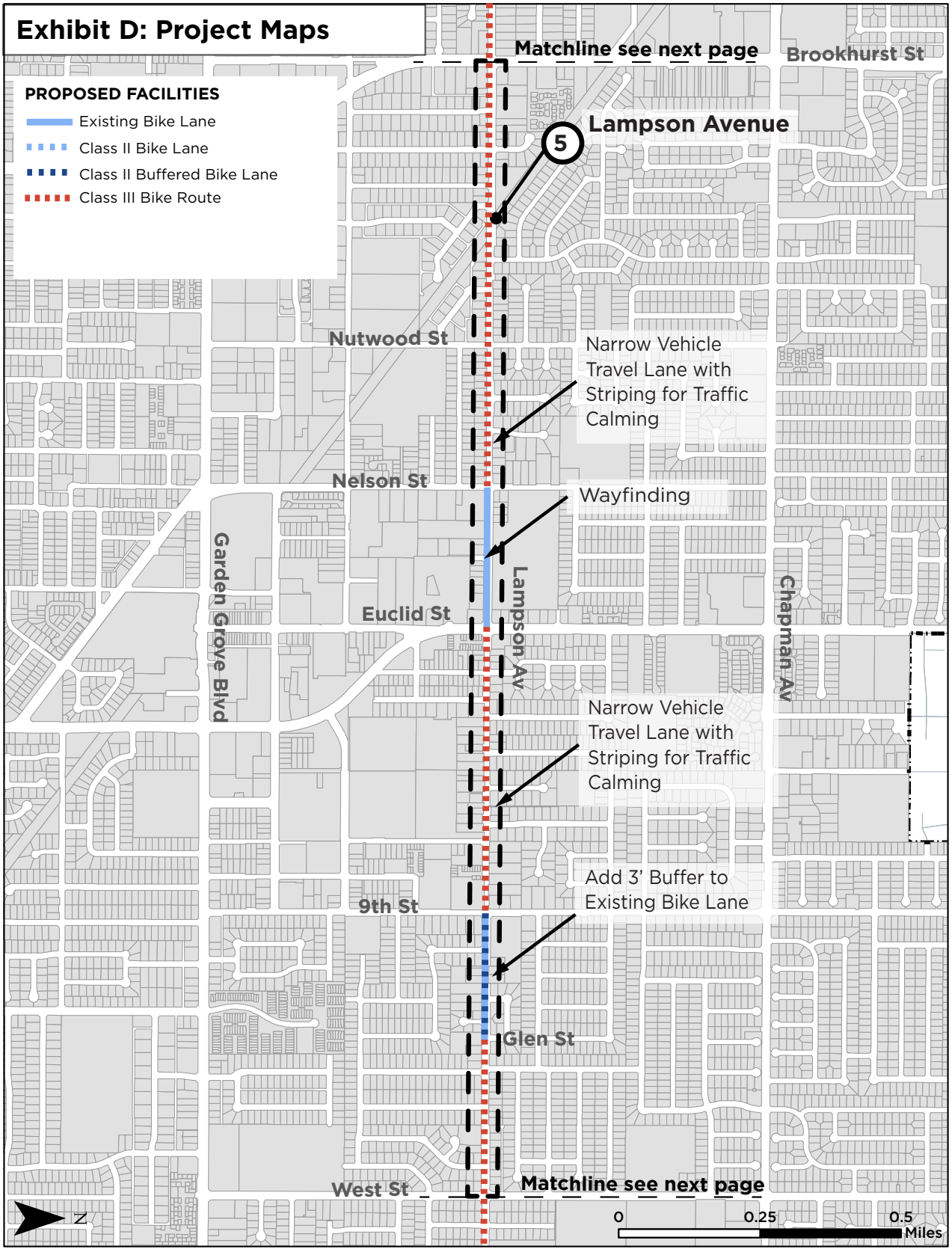
City of Garden Grove Bicycle Corridor Improvements\\ 37



City of Garden Grove Bicycle Corridor Improvements\\ 38



City of Garden Grove Bicycle Corridor Improvements\\ 39



City of Garden Grove Bicycle Corridor Improvements\\ 40

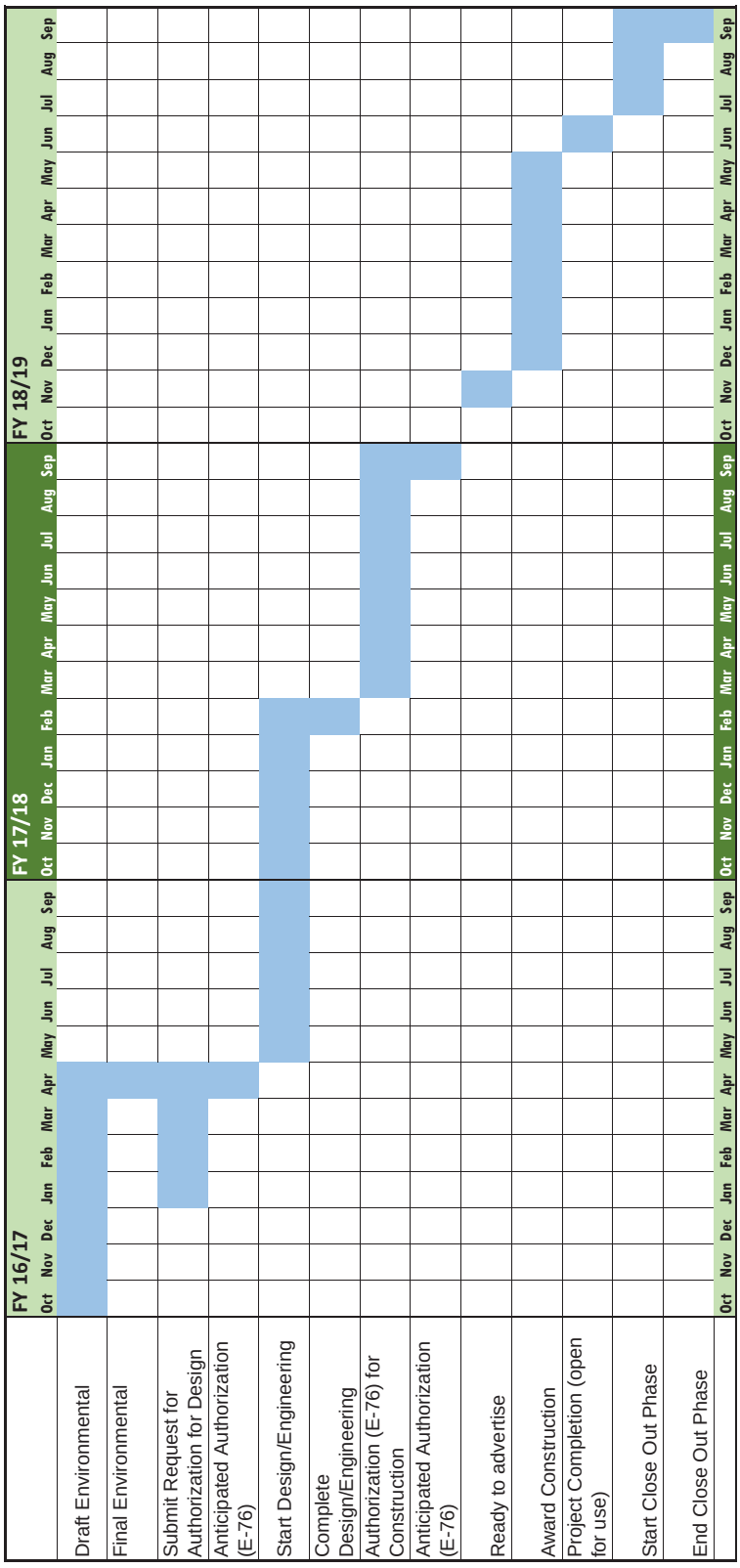
Exhibit D: Project Maps

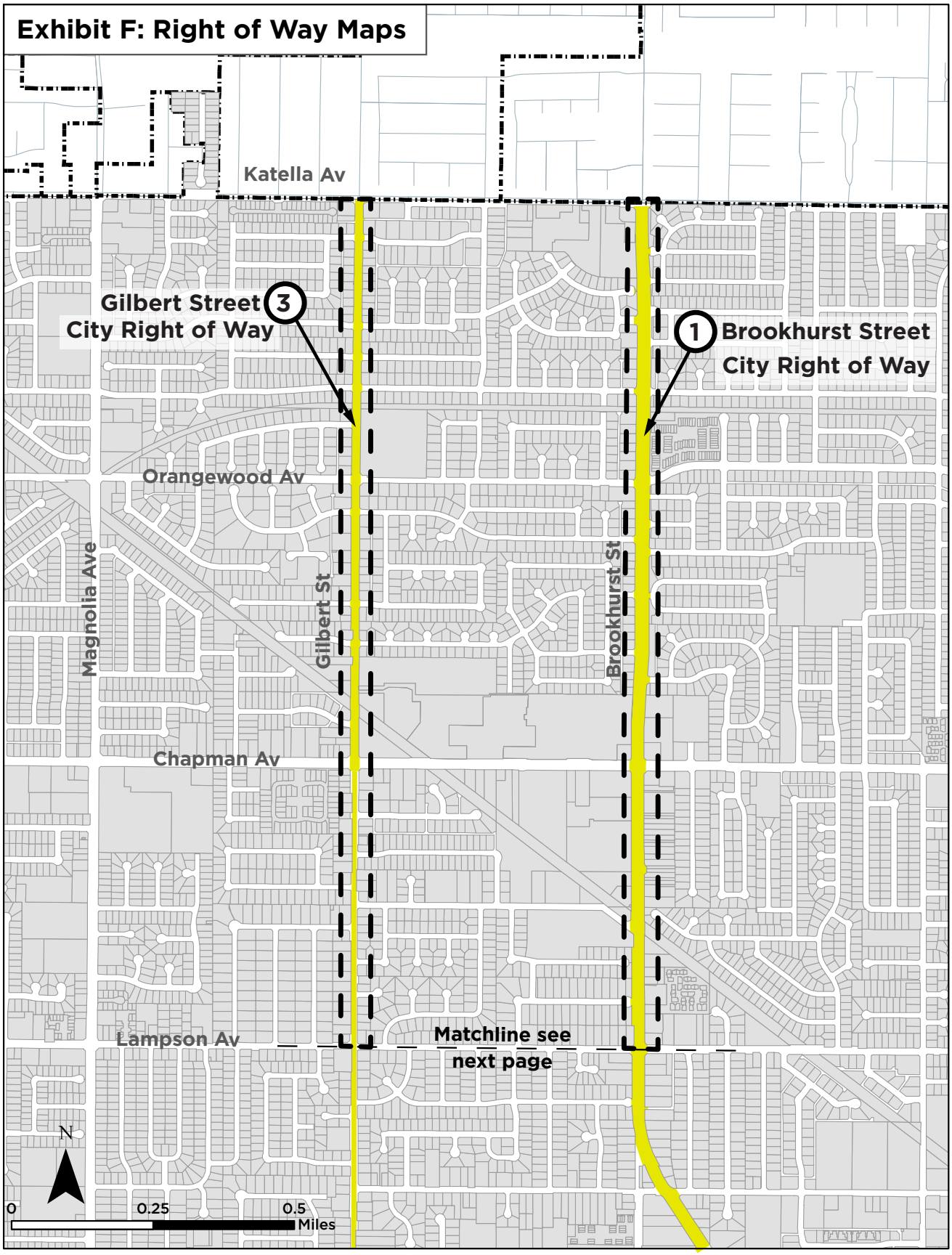
PROPOSED FACILITIES

- Existing Bike Lane add Wayfinding
- Class II Bike Lane
- Class II Buffered Bike Lane
- Class III Bike Route

City of Garden Grove Bicycle Corridor Improvements\\ 41

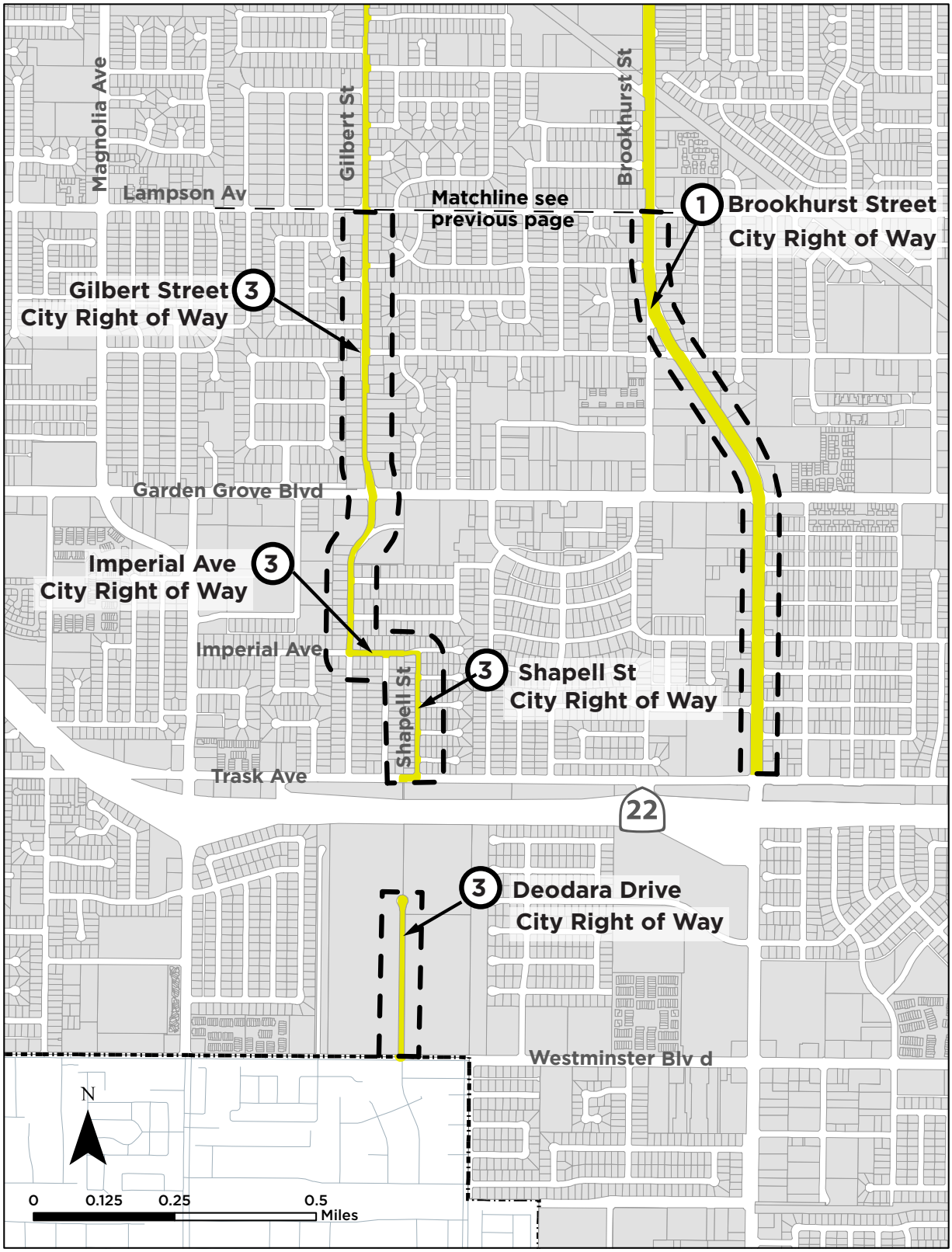
EXHIBIT E: PROJECT COMPLETION SCHEDULE

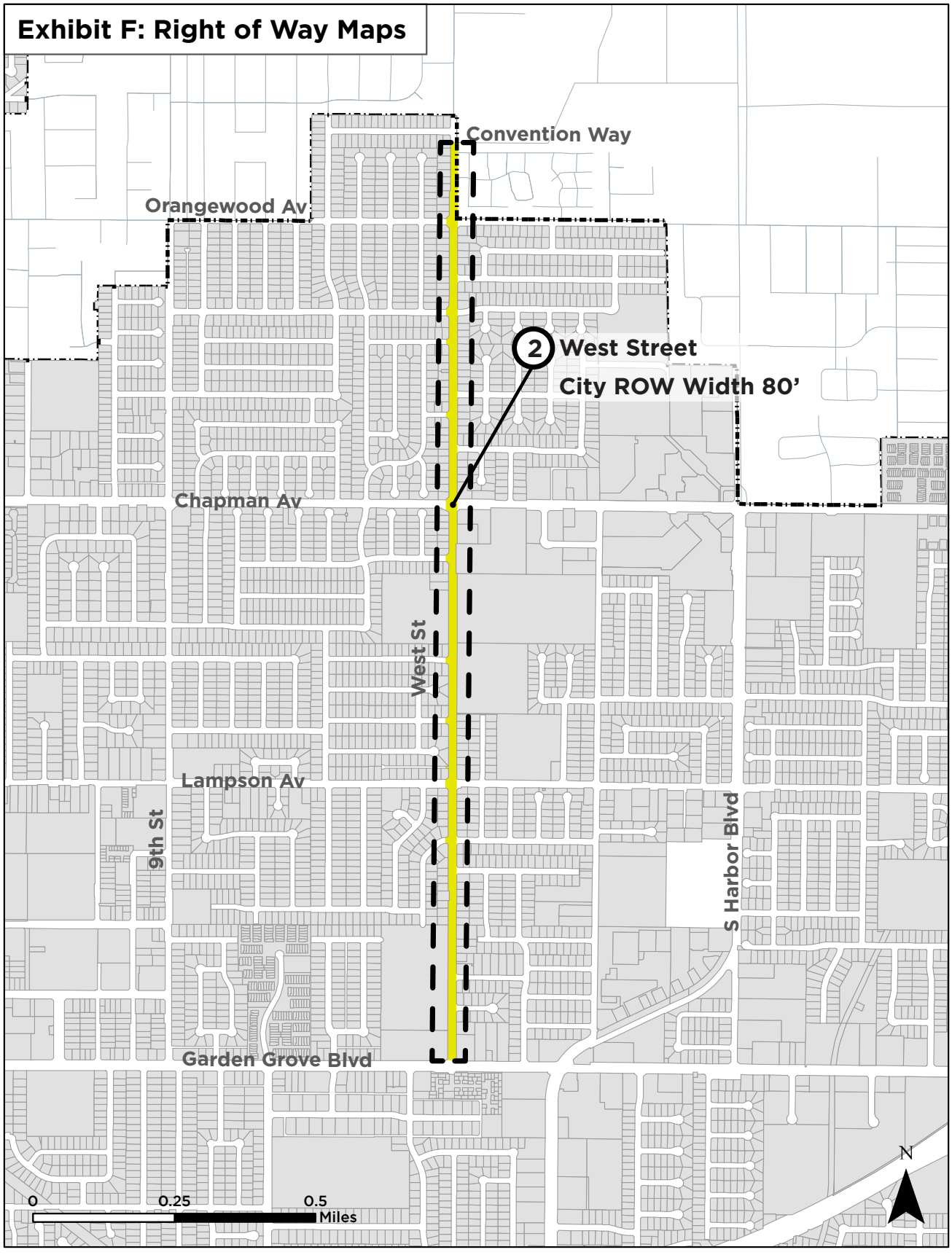




City of Garden Grove Bicycle Corridor Improvements\\ 43

Exhibit F: Right of Way Maps





City of Garden Grove Bicycle Corridor Improvements\\ 45

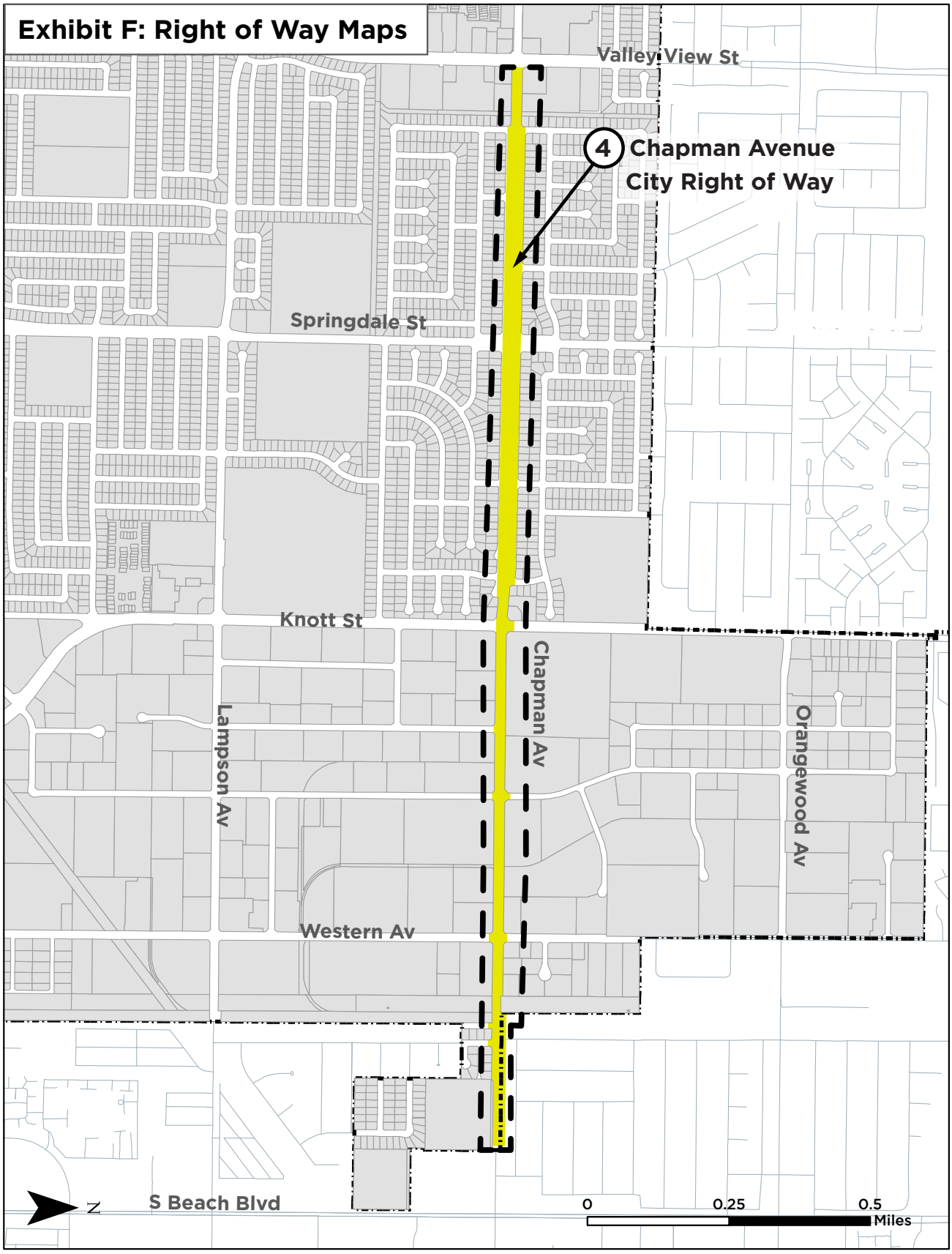


Exhibit F: Right of Way Maps
Valley View St
4
Chapman Avenue
City Right of Way
Springdale St
Knott St
Chapman Av
Lampson Av
Orangewood Av
Western Av
S Beach Blvd
N
0
0.25
0.5
Miles

City of Garden Grove Bicycle Corridor Improvements\\ 47

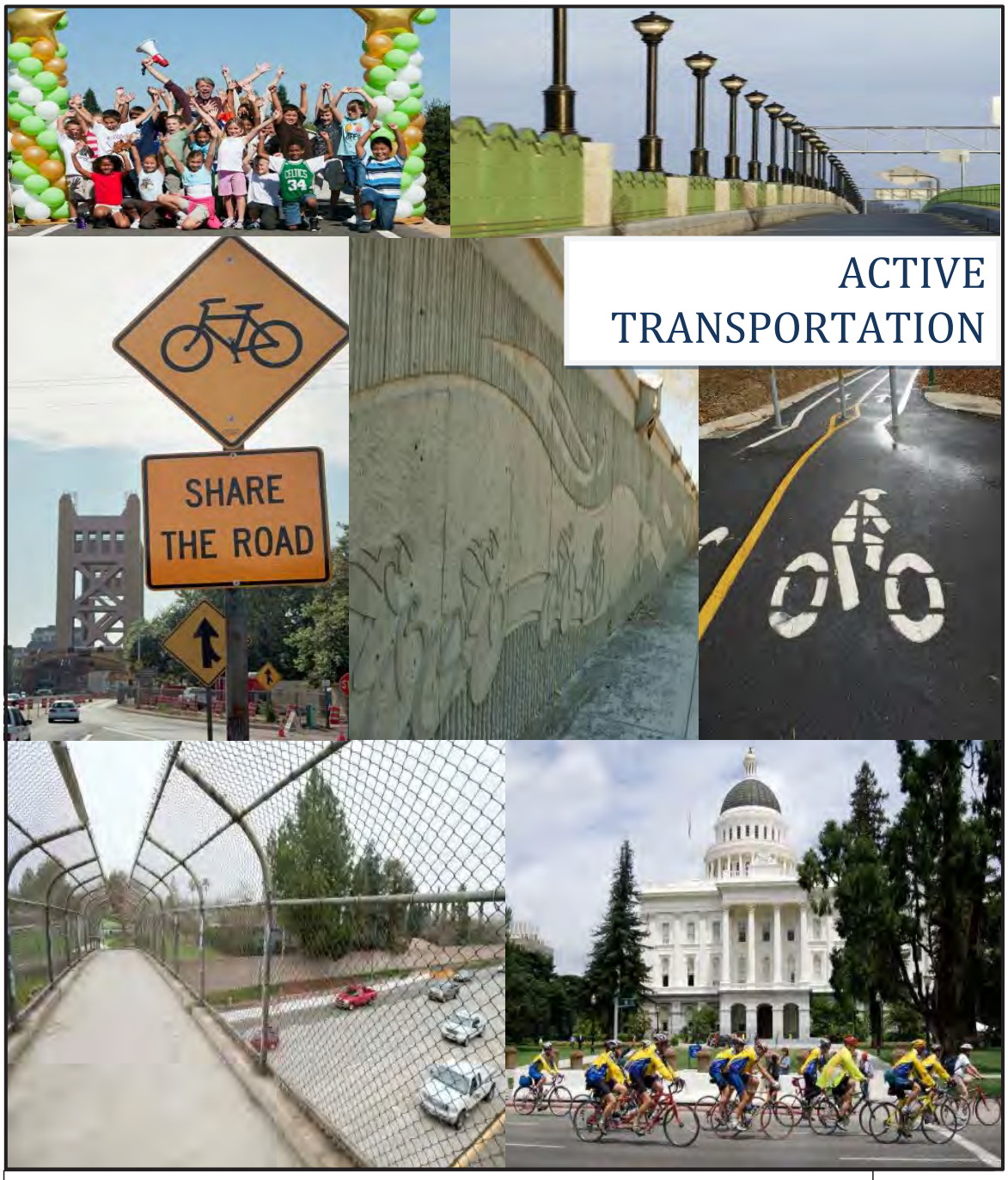
City of Garden Grove Bicycle Corridor Improvements\\ 48

Exhibit F: Right of Way Maps

City of Garden Grove Bicycle Corridor Improvements\\ 49

ROW LEASE AGREEMENT: N/A

- Not applicable, project improvements occur within City owned right-of-way



BENEFIT-COST ANALYSIS TOOL **Version 1.0**

City of Garden Grove Bicycle Corridor Improvements\\ 51

Project Name: City of Garden Grove Bicycle Corridor Improvement Project

Project Location: Garden Grove, California

INFRASTRUCTURE

Bike Projects (Daily Person Trips for All Users) (Box1A)	Without Project	With Project
Existing	24,400	
Forecast (1 Yr after completion)	24,400	44,300
	Commuters	Recreational Users
Existing Trips	6,600	15,800
New Daily Trips (estimate)	2700	12900
(1 YR aftercompletion) (actual)	2,700	12,900

Project Information- Non SR2S Infrastructure	
Bike Class Type	Bike Class II
Average Annual Daily Traffic (AADT)	90,271

Pedestrian Projects (Daily Person Trips for All Users) (Box 1B)	Without Project	With Project
Existing	8,700	
Forecast (1 YR after project completion)	8,700	12,400
	Without Project	With Project
Existing step counts (600 steps=0.3mi=1 trip)		
Existing miles walked		

Safe Routes to School (SR2S) (Box 1C)	Total
Number of student enrollment	
Approximate no. of students living along school route proposed for improvement	
Percentage of students that currently walk or bike to school	
Projected percentage of students that will walk or bike to school after the project	

Project Costs (Box 1D)	
Non-SR2S Infrastructure Project Cost	$1,365,883
SR2S Infrastructure Project Cost	

ATP Requested Funds (Box 1E)	
Non-SR2S Infrastructure	$1,201,978
SR2S Infrastructure	

CRASH DATA (Box 1F)	Last 5 Yrs	Annual Average
Fatal Crashes	35	7
Injury Crashes	805	161
PDO		0

SAFETY COUNTERMEASURES (improvements) (Box 1G)		**Y or N** (Capitalized)
Signalized Intersection	Pedestrian countdown signal heads	N
	Pedestrian crossing	N
	Advance stop bar before crosswalk	N
	Install overpass/underpass	N
Unsignalized Intersection	Raised medians/refuge islands	N
	Pedestrian crossing (new signs and markings only)	N
	Pedestrian crossing (safety features/curb extensions)	N
	Pedestrian signals	N
Roadways	Bike lanes	Y
	Sidewalk/pathway (to avoid walking along roadway)	N
	Pedestrian crossing (with enhanced safety features)	N
	Pedestrian crossing	N
	Other reduction factor countermeasures	Y

Project Name:
Project Location:

NON-INFRASTRUCTURE

Outreach (SR2S)- (Box 2A)	
Participants (School Enrollment)	
Current Active Trans Walker/Bicyclist Users	0
Percentage of Current Active Trans Walkers/Bicyclists	
Project Cost	
ATP Requested Funds	
Duration of Outreach (months)	
Outreach to new users	0

Outreach (Non SR2S)- (Box 2B)	
Participants	
Current Active Trans Walker/Bicyclist Users	0
Percentage of Current Active Trans Walkers/Bicyclists	
Project Cost	
ATP Requested Funds	
Duration of Outreach (months)	
Outreach to new users	0

Perception (must be marked with an "x")- (Box 2C)	
Outreach is Hands-on (self-efficacy)	
Overcome Barriers (e.g., dist, time, etc.)	
Eliminates Hazards/Threats (speed, crime, etc.)	
Connected or Addresses Connectivity Challenges	
Creating Value in Using Active Transportation	

Promotional Effort *(must be marked with an "x")*- (Box 2D)	
Effort Targets 5 E's or 5 P's	
Knowledgable Staff/Educator	
Partnership/Volunteers	
Creates Community Ownership/Relationship	
Part of Bigger Effort (e.g., political support)	

Age *(must be marked with an "x")*- (Box 2E)	
Younger than 10	
10-12	
13-24	
25-55	
55+	

Duration *(must be marked with an "x")*- (Box 2F)	
One Day	
One Month	
One Year	
Multiple Years	
Continuous Effort	

Projected New Active Trans Riders	
Longitudinal New Users	0

Projected New Active Trans Riders	
Longitudinal New Users	0

CRASH DATA - (Box 2G)	Last 5 Yrs	Annual
Fatal Crashes		0
Injury Crashes		0
PDO		0

Assumption:
Benefits only accrue for five years, unless the project is ongoing.

H: ATP COST-BENEFIT RESULTS

Non Infrastructure- All

Projected New ATP Users	0	
Annual Mobility Benefits	$0	**Did not quantify mobility benefits.**
Annual Health Benefits	$0	
Annual Recreational Benefits	$0	**Did not quantify recreational benefits.**
Annual Safety Benefits	$0	**Safety benefits are assumed to be a reduction in Other Reduction Factor Countermeasures.**

Fuel saved	$0
Emissions Saved	$0
Fuel and Emissions Saved	$0

Underlying assumptions for calculations:

1) 1 mile driven is ~ 0.05 gal ~ 1 lb of CO2 based on US average 20mpg.
Source: Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking. Rails to Trails Conservancy, page 22.
http://www.railstotrails.org/resourcehandler.ashx?id=2948
2) Assume users divert 1040 miles (4 miles (bike 3 mi, walk .6 mi) * 5days *52 weeks)
3) Gasoline price per gallon is $3.41 (incl. tax)
4) Carbon price is $25 per ton (updated $2014 value)
5) 2,000 lbs = 1 ton

ESTIMATED SAFETY BENEFITS FROM POTENTIAL CRASH REDUCTION

Countermeasures			OTHER REDUCTION FACTOR
Crash Reduction Factors (CRFs)			10%
Service Life			5
	1st year		$0

	Fatal	Injury	PDO	Total
Frequency	0	0	0	0
Cost/crash	$3,750,837	$80,000	$6,924	

H: ATP COST-BENEFIT RESULTS

SAFE ROUTES TO SCHOOL

Infrastructure

Before Project

No. of students enrollment	0
Approximate no. of students living along school route proposed for improvement	0
Percent that currently walks/bikes to school	0%
Number of students that walk/bike to school	0

After Project

No. of students enrollment	0
Approximate no. of students living along school route proposed for improvement	0
Projected percentage of students that will walk or bike because of the project	0%
Number of students that will walk/bike to school after the project	0

ATP Shift	0
Fuels Saved	$0.00
Emissions Saved	$0.00

Annual Mobility Benefits	$0
Annual Health Benefits	$0
Annual Safety Benefits	$6,302,511
Fuel and Emissions Saved	$0
Recreational Benefits	$0

Assumptions:

1) 180 school days
2) 2 miles distance to school = 1 hour walk
3) Takes 1 hour back and forth to school grounds, used distance of 1 mile (composite for bike and walk)
4) Approximate no. of students living along school route proposed for improvement- we used this number for before and after to get an actual increase number of ATP users or corresponding percentage.
5) We used the value of time for adults for SR2S since we did not quantify parents' time, and the community in general. Value of time for adults $13.03 vs. $5.42 for kids.
6) Safety benefits are assumed to be the same as non-SRTS infrastructure projects.

Did not quantify recreational benefits for SR2S Infrastructure projects.

20 Year Invest Summary Analysis	
Total Costs	$1,365,883.00
Net Present Cost	$1,313,349.04
Total Benefits	$1,697,108,813.07
Net Present Benefit	$1,123,960,401.66
Benefit-Cost Ratio	855.80

20 Year Itemized Savings	
Mobility	$461,244,175.06
Health	$41,960,980.73
Recreational	$875,994,591.95
Gas & Emissions	$11,640,168.28
Safety	$306,268,897.06

Funds Requested	$1,201,978.00
Net Present Cost of Funds Requested	$1,155,748.08
Benefit Cost Ratio	972.5

ESTIMATED DAILY MOBILITY BENEFITS FROM THE PROJECT

Current Walk Counts	
Total miles walked	0.00
Total person Trips walked	8,700.00
Total Steps walked	0.00

After the Project is Completed	
Total miles walked	0.00
Total person trips walked	12,400.00
Total Steps walked	0.00

Converted miles walked to trips	0
Difference of person trips walked	3,700
Converted steps walked to trips	0

Current Bike Counts	
Existing Commuters	6,600
New Commuters	2700

Benefits, 2014 values	
Annual Mobility Benefit (Walking)	$786,250
Annual Mobility Benefit (Biking)	$18,197,046.50

Total Annual Mobility Benefits	$18,983,297

Project Types

For M values:

20.38	min/trip	OFF STREET	Bike Class I
18.02	min/trip	ON STREET w/o parking benefit	Bike Class II
15.83	min/trip	ON STREET w/ parking benefit	Bike Class III

$13.03 Value of Time

600 steps=0.3mi=1 trip

$1 Value of Total Pedestrian Environmental Impacts per trip

Sources:
NCHRP 552 Methodology (Biking)
Heuman (2006) as reported by UK Dept of Transport and Guidance (walking)

YEARLY ESTIMATED HEALTH BENEFITS FROM THE PROJECT

INFRASTRUCTURE

Cycling:

New Cyclists	9950
Value of Health (ave.annual)	$146
Annual Health Benefits	$1,456,222

GDP Deflator

2006	0.9429
2014	1.0781

Walking:

New Walkers	1850
Value of Health	$146
Annual Health Benefits	$270,755

Total Annual Health Benefits	$1,726,976

Source: NCHRP 552- Guidelines for Analysis of Investments in Bicycle Facilities, Appendix G.
(Estimated annual per capita cost savings of direct and/indirect) of physical activity)

YEARLY ESTIMATED GAS AND EMISSION SAVINGS FROM THE PROJECT

INFRASTRUCTURE

New Pedestrians	1,850
New Bicyclists	9,950
Avoided VMT due to Walking	117,938
Avoided VMT due to Biking	2,499,938
Fuel Saved	$446,348
Emissions Saved	$32,723
Fuel and Emissions saved	$479,071

Underlying assumptions for calculations:

1) Bike miles traveled= 1.5 mi, walk miles traveled= .3 (CHTS)
2) Assume 50% of new walkers and cyclists choose not to drive their cars
3) 1 mile driven is ~ 0.05 gal ~ 1 lb of CO_2 based on US average 20mpg.
Source: Active Transportation for America: The Case for Increased Federal Investment in Bicycling and Walking. Rails to Trails Conservancy, page 22.
http://www.railstotrails.org/resourcehandler.ashx?id=2948
4) Gasoline price per gallon is $3.41 (incl. tax)
5) Carbon price is $25 per ton
6) 250 working days
7) 2,000 lbs = 1 ton

YEARLY ESTIMATED RECREATIONAL BENEFITS FROM THE PROJECT

Biking		
New Recreational Users	12,900	$10 per trip
New Commuters	2,700	
ExistingRecreational Users	15,800	$4 per trip
Value of Spending Recreational Time for New Recreational Users	#########	
Valueof Spending Recreational Time for Existing Recreational Users	$7,836,800	
Potential number of recreational time outdoors	124	
Annual Biking Recreational Benefits	#########	

Sources: NCHRP 552 for New Users and Commuters,
TAG (January 2010 UK's Department of Transport Guidance on the Appraisal of Walking and Cycling Schemes) for Existing Users,
World Health Organization's HEAT for cycling (124 days- the observed number of days cycled in Stockholm)

Walking		
Total Recreational pedestrians	555	15%- See Misc. Tab
Value of Spending Recreational timefor all pedestrians	$202,575	$1 per trip
Potential number of recreational time outdoors	365	
AnnualWalking Recreational Benefits	$202,575	

Sources: Pedestrian and Bicycle Information Center.
TAG (January 2010 UK's Department of Transport Guidance on the Appraisal of Walking and Cycling Schemes) for Existing Users.

Total Annual Recreational Benefits	#########

ESTIMATED SAFETY BENEFITS FROM POTENTIAL CRASH REDUCTION

	SIGNALIZED INTERSECTION COUNTERMEASURES				UNSIGNALIZED INTERESECTION COUNTERMEASURES				ROADWAY COUNTERMEASURES						
Countermeasures	Install pedestrian countdown signal heads	Install pedestrian crossing	Install advance stop bar before crosswalk (bicycle box)	Install pedestrian overpass/ underpass	Install raised medians/ refuge islands	Install pedestrian crossings (new signs and markings only	Install pedestrian crossing (with enhanced safety measures/ curb extensions	Install pedestrian signal	Install bike lanes	Install sidewalk/ pathway (to avoid walking along roadways	Install pedestrian crossing(with enhanced safety measures	Install Pedestrian crossing	OTHER REDUCTION FACTOR	Average of 3 highest countermeasures	Annual Benefits
Applicable Countermeasures	N	N	N	N	N	N	N	N	Y	N	N	N	Y		
Crash Reduction Factors (CRFs)	25%	25%	15%	75%	45%	25%	35%	55%	35%	80%	30%	35%	10%		
Service Life	20	20	10	20	20	10	20	20	20	20	10	10	20		
1st year	$0	$0	$0	$0	$0	$0	$0	$0	########	$0	$0	$0	$4,201,674	$6,302,511	$6,302,511

	Fatal	Injury	PDO	Total
Frequency	7	161	0	168
Cost/crash	$4,130,347	$81,393	$7,624	

Assumption:
For Other Reduction Factor countermeasure, EAB assumes 20 years service life.

SUMMARY OF QUANTIFIABLE BENEFITS AND COSTS

Year	Mobility Benefits	Health Benefits	Recreational Benefits	Safety Benefits	Gas & Emission Benefits	Total Benefits	Present Value Benefit	Total Project Cost	Present Value Cost	Discount Rate	Net Present Value	BCA Ratio	Funds Requested	PV of Funds Requested
PROJECT OPEN										4.00%	$1,122,647,052.62	855.80		
1	$18,983,297	$1,726,976	$36,053,063	$12,605,023	$479,071	$69,847,429	$67,160,989	$1,365,883	$1,313,349				1,201,978	1,155,748
2	$19,362,962	$1,761,516	$36,774,124	$12,857,123	$488,653	$71,244,378	$65,869,432		$0					
3	$19,750,222	$1,796,746	$37,509,606	$13,114,266	$498,426	$72,669,265	$64,602,712		$0					
4	$20,145,226	$1,832,681	$38,259,798	$13,376,551	$508,394	$74,122,650	$63,360,352		$0					
5	$20,548,131	$1,869,335	$39,024,994	$13,644,082	$518,562	$75,605,103	$62,141,884		$0					
6	$20,959,093	$1,906,721	$39,805,494	$13,916,964	$528,933	$77,117,206	$60,946,848		$0					
7	$21,378,275	$1,944,856	$40,601,604	$14,195,303	$539,512	$78,659,550	$59,774,793		$0					
8	$21,805,841	$1,983,753	$41,413,636	$14,479,209	$550,302	$80,232,741	$58,625,278		$0					
9	$22,241,957	$2,023,428	$42,241,909	$14,768,793	$561,308	$81,837,395	$57,497,869		$0					
10	$22,686,797	$2,063,896	$43,086,747	$15,064,169	$572,534	$83,474,143	$56,392,140		$0					
11	$23,140,533	$2,105,174	$43,948,482	$15,365,452	$583,985	$85,143,626	$55,307,676		$0					
12	$23,603,343	$2,147,278	$44,827,452	$15,672,761	$595,665	$86,846,499	$54,244,067		$0					
13	$24,075,410	$2,190,223	$45,724,001	$15,986,217	$607,578	$88,583,429	$53,200,912		$0					
14	$24,556,918	$2,234,028	$46,638,481	$16,305,941	$619,730	$90,355,097	$52,177,817		$0					
15	$25,048,057	$2,278,708	$47,571,250	$16,632,060	$632,124	$92,162,199	$51,174,398		$0					
16	$25,549,018	$2,324,283	$48,522,675	$16,964,701	$644,767	$94,005,443	$50,190,275		$0					
17	$26,059,998	$2,370,768	$49,493,129	$17,303,995	$657,662	$95,885,552	$49,225,077		$0					
18	$26,581,198	$2,418,184	$50,482,991	$17,650,075	$670,815	$97,803,263	$48,278,441		$0					
19	$27,112,822	$2,466,547	$51,492,651	$18,003,076	$684,232	$99,759,328	$47,350,009		$0					
20	$27,655,078	$2,515,878	$52,522,504	$18,363,138	$697,916	$101,754,515	$46,439,432		$0					
	Total Mobility Benefits	Health Benefits	Recreational Benefits	Safety Benefits	Gas & Emission Benefits	Sum Total Benefits	Sum Present Value Benefit	Sum Total Project Cost	Sum Present Value Cost				Sum Funds Requested	Sum PV Funds Requested
	$461,244,175	$41,960,981	$875,994,592	$306,268,897	$11,640,168	$1,697,108,813	$1,123,960,402	$1,365,883	$1,313,349				$1,201,978	$1,155,748

PARAMETERS

Mobility Parameters		
CA Statewide Houly Wage (2014)	$26.07	
Value of Time (VOT)- adult	$13.03	
Value of Time (VOT)- child	$5.42	
Bike Path (Class I)	20.38	min/trip
Bike Lane (Class II)	18.02	min/trip
Bike Route (Class III)	15.83	min/trip

Health Parameters		
Cycling	$146	annual$/person
Walking	$146	annual$/person

Accident Cost Parameters		
Cost of a Fatality (K)	$4,130,347	$/crash
Cost of an Injury	$81,393	$/crash
Costy of Property Damage (PDO)	$7,624	$/crash

Source: Appendix D, Local Roadway Safety: A manual for CA's Local Road Owners Caltrans. April 2013.

Recreational Values Parameters		
Biking		
New Users	$10	per trip
Existing Users	$4	per trip
Walking		
All Users	$1	per trip

VMT Reduction		
Price of gasoline (per gallon incl. tax)	$3.41	Average fuel price (November 2013-November 2014) based on EIA's Table 9.4: Retail Motor Gasoline and On_Highway Diesel Fuel Prices http://www.eia.gov/totalenergy/data/monthly/pdf/sec9_6.pdf
Price of CO2 (per ton)-adj to 2014$	$25	Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, February 2010.
Price of Co2 (per lb)	$0.01	
Working days	250	

2%	Average CA Annual Growth of Population (1955-2011)
4%	Discount Rate used (same as Cal B/C Model)

Reasons for Bicycling	Percent
Recreation	33
Exercise or health	28
Personal errands	17
Vist a friend or relative	8
Commuting to/from work	7
Commuting to/from school	4

Reasons for Walking	Percent
Exercise or health	39
Personal errands	17
Recreation	15
Walk the dog	7
Visit a friend or relative	7
Commuting to/from work	5
Commuting to/from school	3
Required for my job	2

Source: The 2012 National Survey of Pedestrian and Bicyclist Attitudes and Behaviors, Highlights Report. Pedestrian & Bicycle Information Center.

Estimated Annual Per Capita Cost Savings (direct and/or indirect of physical activity)

Study/Agency	Per Capita Cost Savings ($)
Washington DOH	19
Garrett et al.	57
South Carolina DOH	78
Georgia Department of Human Resources	79
Colditz	91
Minnesota DOH	>100
Goetz et al.	172
Pronk et al.	176
Pratt	330
Michigan Fitness Foundation	1175

Source: NCHRP 552, Guidelines for Analysis of Investments in Bicycle Facilities, Appendix G.

Note: An annual per-capita cost savings from physical activity of $128 was determined by taking the median value of ten noted studies above for year 2006$. The updated 2014$ value is $13.03.

Gross Domestic Product (GDP Deflator)

Fiscal Year	Chained GDP Price Index
2006	0.9429
2007	0.9684
2008	0.9884
2009	1.0000
2010	1.0087
2011	1.0284
2012	1.0464
2013	1.0622
2014 (est.)	1.0781
2015 (est.)	1.0966
2016 (est.)	1.1170
2017 (est.)	1.1391
2018 (est.)	1.1619
2019 (est.)	1.1852

Source: Office of Management Budget, Budget of the United States Government, Fiscal Year 2015 Table 10.1- Gross Domestic Product and Deflators in the Historical Tables: 1940-2019. http://www.whitehouse.gov/sites/default/files/omb/budget/fy2015/assets/hist.pdf page 217-218.

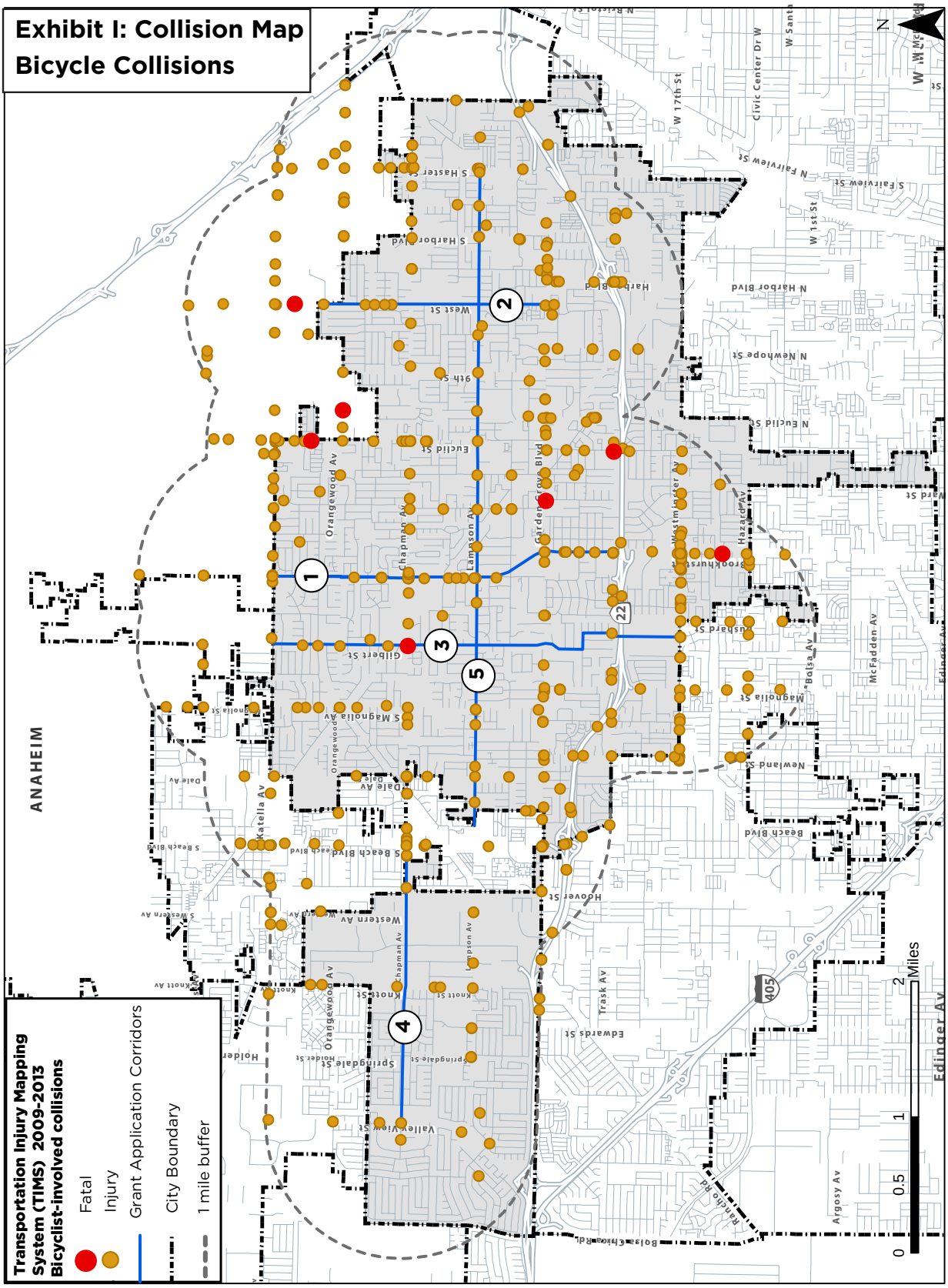


Exhibit I: Collision Map
Bicycle Collisions
Transportation Injury Mapping System (TIMS) 2009-2013
Bicyclist-involved collisions
Fatal
Injury
Grant Application Corridors
City Boundary
1 mile buffer
ANAHEIM
N
0
0.5
1
2
Miles
West St
9th St
Euclid St
Orangewood Av
Chapman Av
Lampson Av
Gilbert St
S Magnolia Av
Dale Av
Katella Av
S Beach Blvd
Western Av
Knott St
Springdale St
Valley View St
Hoover St
Edwards St
Trask Av
Garden Grove Blvd
Westminster Av
Brookhurst St
Hazard Av
Ward St
Chapman Av
Lampson Av
Bolsa Av
McFadden Av
Magnolia St
Newland St
Beach Blvd
Edinger Av
Harbor Blvd
N Newhope St
N Euclid St
S Harbor Blvd
N Fairview St
S Fairview St
W 1st St
W 17th St
Civic Center Dr W
W Santa Ana Blvd
Bolsa Chica Rd
Rancho Rd
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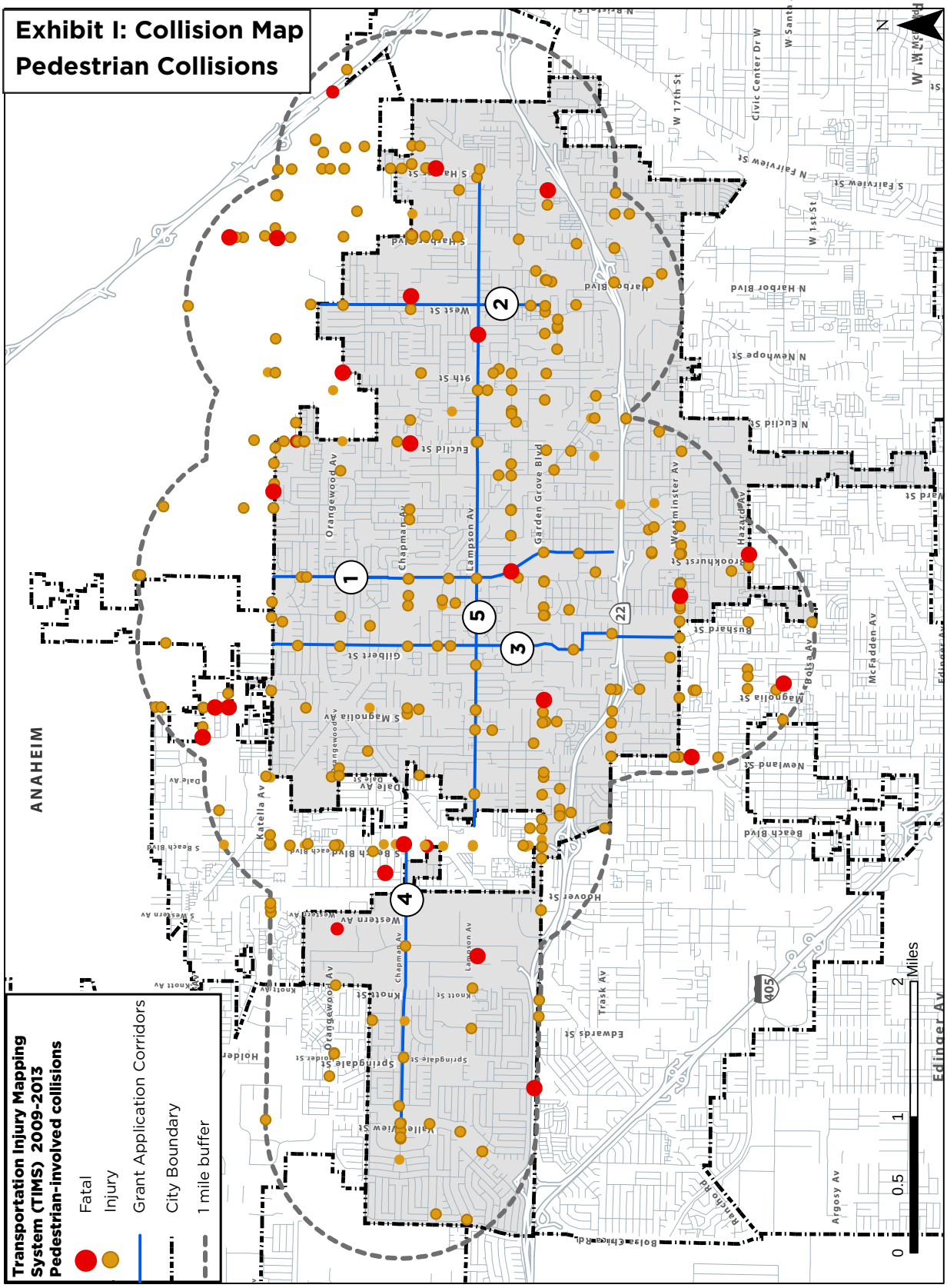

City of Garden Grove Bicycle Corridor Improvements\\ 67

BICYCLE FACILITIES

County: Orange County
Federal Number:
Approval Date: 05/05/16
Caltrans DIST-EA: District 12
Short Description: Citywide Bicycle Infrastructure Improvements

Project Scope: Class II; 3.2 miles

Project Sponsor: City of Garden Grove **Private Agency:** Yes

CMAQ Funding:	$1,201,978	**Annual Auto Trips Reduced:**	146,730
Local Match:	$163,905	**Annual Auto VMT Reduced:**	308,133
Capital Recovery Factor:	0.08		
Project Analysis Period:	15 **years**		
Days (D):	365 **days of use/year**		
Average Daily Traffic (ADT):	30,000 **trips per day**		
Adjustment (A) on ADT:	0.0104		
Credit (C) for Activity Centers near project:	0.0030		

EMISSION FACTORS:	**Auto Trip End Factor**	**Auto VMT Factor**
ROG :	0.738 ***grams per trip***	0.200 ***grams per mile***
NOx :	0.315	0.220
PM10 :	0.017	0.221

EMISSION REDUCTIONS:	**Pounds per Year**	**Kilograms per Day**
ROG:	374	0
NOx:	251	0
PM10:	155	0
Total:	***781***	***1***

COST-EFFECTIVENESS OF:

CMAQ Funds:	$128.94	**per pound**	$257,881	**per ton**
All Funding Sources:	$146.52	**per pound**	$293,046	**per ton**

1

LETTERS OF SUPPORT

- 1. Garden Grove City Council member Steve Jones
- 2. Garden Grove Unified School District
- 3. Alliance for a Healthy Orange County
- 4. Orange County Supervisor Andrew Do, First District

City of Garden Grove Bicycle Corridor Improvements\\ 69

GARDEN GROVE

CITY OF GARDEN GROVE

Bao Nguyen
Steven R. Jones
Christopher V. Phan
Phat Bui
Kris Beard

May 6, 2016

Louis Zhao
Senior Transportation Funding Analysis
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92863-1584

RE: Letter of Support for City of Garden Grove Bicycle Corridor Improvement Project

Dear BCIP Grant Review Committee

On behalf of the City of Garden Grove, I am pleased to support the Bicycle Corridor Improvement Program (BCIP) funding request for the City of Garden Grove's Bicycle Corridor Improvement Project. The City Council has made a priority of improving Garden Grove to be a more walkable and more bike-friendly community.

The City of Garden Gove's Bicycle Corridor Improvement Project will improve the on-street bicycle infrastructure by 75 percent and create a more consistent and comfortable on-street bicycle network by improving 14.85 miles of bikeways.

The project will help to solve some of the greatest challenges to biking in the City today including; gaps in network connectivity (where there are no on-street bike facilities), narrow bike lanes along streets with high speeds and a high bicycle collision history. Adding buffers to existing bike lanes, striping new bike lanes through rebalancing roadways, improving bike routes and adding bicycle wayfinding signs will help to overcome these challenges and encourage more people to ride bikes in Garden Grove.

We believe the project will greatly improve local and regional bikeway connectivity and provide increased safety, mobility, and transportation options for a wide range of cyclists.

I appreciate the opportunity to express my support for this project, and look forward to seeing the completion of a much needed bicycle network improvements that will help fulfill both the *City of Garden Grove's Draft Active Streets Plan* and *the OCTA Commuter Bikeways Strategic Plan*. I fully support Garden Grove's efforts towards increased regional connectivity, and respectfully request a favorable consideration of the Garden Grove's Bicycle Corridor Improvement Project for a BCIP grant.

Sincerely,

Steve Jones

Steve Jones
Council Member

11222 Acacia Parkway P.O.Box 3070 Garden Grove, CA 92842
www.ci.garden-grove.ca.us

GARDEN GROVE UNIFIED SCHOOL DISTRICT

10331 Stanford Avenue · Garden Grove, California 92840-6353
Phone: (714) 663-6000 · Fax: (714) 663-6100

May 4, 2016

Louis Zhao
Senior Transportation Funding Analysis
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92863-1584

RE: Letter of Support for City of Garden Grove Bicycle Corridor Improvement Project

Dear BCIP Grant Review Committee:

Garden Grove Unified School District is pleased to support the Bicycle Corridor Improvement Program (BCIP) funding request for the City of Garden Grove's Bicycle Corridor Improvement Project. We strongly support this grant application because Garden Grove Unified School District recognizes the importance and benefits of enhancing safety and access for pedestrians and cyclists.

The City of Garden Grove's Bicycle Corridor Improvement Project will improve the on-street bicycle infrastructure by 75 percent and create a more consistent and comfortable on-street bicycle network by improving 14.85 miles of bikeways.

The project will help to solve some of the greatest challenges to biking in the City today including; gaps in network connectivity (where there are no on-street bike facilities), narrow bike lanes along streets with high speeds and a high bicycle collision history. Adding buffers to existing bike lanes, striping new bike lanes through rebalancing roadways, improving bike routes and adding bicycle way finding signs will help to overcome these challenges and encourage more people to ride bikes in Garden Grove. We believe the project will greatly improve local and regional bikeway connectivity and provide increased safety, mobility, and transportation options for a wide range of cyclists.

I appreciate the opportunity to express my support for this project, and look forward to seeing the completion of a much needed bicycle network improvements that will help fulfill both the *City of Garden Groves Draft Active Streets Plan* and the *OCTA Commuter Bikeways Strategic Plan*. I fully support Garden Grove's efforts towards increased regional connectivity, and respectfully request a favorable consideration of the Garden Grove's Bicycle Corridor Improvement Project for a BCIP grant.

Sincerely,

Rick Nakano
Assistant Superintendent, Business Services

May 03, 2016

Louis Zhao
Senior Transportation Funding Analysis
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92863-1584

RE: Letter of Support for City of Garden Grove Bicycle Corridor Improvement Project

Dear BCIP Grant Review Committee,

The Alliance for a Healthy Orange County is pleased to support the Bicycle Corridor improvement Program (BCIP) funding request for the City of Garden Grove's Bicycle Corridor Improvement Project.

The Alliance is a countywide collaborative of cities, healthcare organizations, community-based organizations, and universities dedicated to enhancing health outcomes and reducing health disparities in Orange County. Achieving that goal requires cross-generational community engagement with a broad spectrum of specialists in physical safety, nutrition, education, spirituality, and physical activity. The importance and benefits of enhancing safety and access for pedestrians and cyclists is consistent with our mission.

The City of Garden Gove's Bicycle Corridor Improvement Project will improve the on-street bicycle infrastructure by 75 percent and create a more consistent and comfortable on-street bicycle network by improving 14.85 miles of bikeways. The project will help to solve some of the greatest challenges to biking in the City today including gaps in network connectivity (where there are no on-street bike facilities), narrow bike lanes along streets with high vehicle speeds, and a high bicycle collision history. Adding buffers to existing bike lanes, striping new bike lanes through rebalancing roadways, improving bike routes and adding bicycle wayfinding signs will help to overcome these challenges and encourage more people of all ages to lead active lifestyles in Garden Grove. We believe the project will greatly improve local and regional bikeway connectivity and provide increased safety, mobility, and transportation options for a wide range of cyclists.

The Alliance fully supports this project and looks forward to implementation of both the *City of Garden Grove's Draft Active Streets Plan* and *OCTA Commuter Bikeways Strategic Plan*. We respectfully request funding of this important project.

Sincerely,

Barry Ross, Chair
Alliance for a Healthy Orange County

ANDREW DO
SUPERVISOR, FIRST DISTRICT

ORANGE COUNTY BOARD OF SUPERVISORS
333 W. SANTA ANA BLVD., P.O. BOX 687, SANTA ANA, CALIFORNIA 92702-0687
PHONE (714) 834-3110 FAX (714) 834-5754 andrew.do@ocgov.com

May 5, 2016

Louis Zhao
Senior Transportation Funding Analysis
Orange County Transportation Authority
550 S. Main Street
Orange, CA 92863-1584

RE: Letter of Support for City of Garden Grove Bicycle Corridor Improvement Project

Dear BCIP Grant Review Committee:

As Garden Grove's representative on the Orange County Board of Supervisors, I am writing to offer my support for the City of Garden Grove's request for funding under the Bicycle Corridor Improvement Program.

Pedestrians and cyclists in Garden Grove will benefit from the proposed improvements designed to enhance safety and reduce congestion.

Under the city's proposal, Garden Grove promises to improve the on-street bicycle infrastructure by 75 percent and create a more consistent and comfortable on-street bicycle network by improving 14.85 miles of bikeways.

If awarded funding, the City of Garden Grove has committed to solving gaps in network connectivity and, widening narrow bike lanes on streets with a high rate of bicycle collisions. Additionally, the City of Garden Grove intends to expand buffers to existing bike lanes, improve bike routes and enhance bicycle wayfinding signs.

The project, as proposed, stands to greatly improve local and regional bikeway connectivity and enhance safety for pedestrians and cyclists in the City of Garden Grove.

If you have any questions regarding this matter, please do not hesitate to contact my office at 714-834-3110.

Sincerely,

ANDREW DO
Orange County Supervisor, First District

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