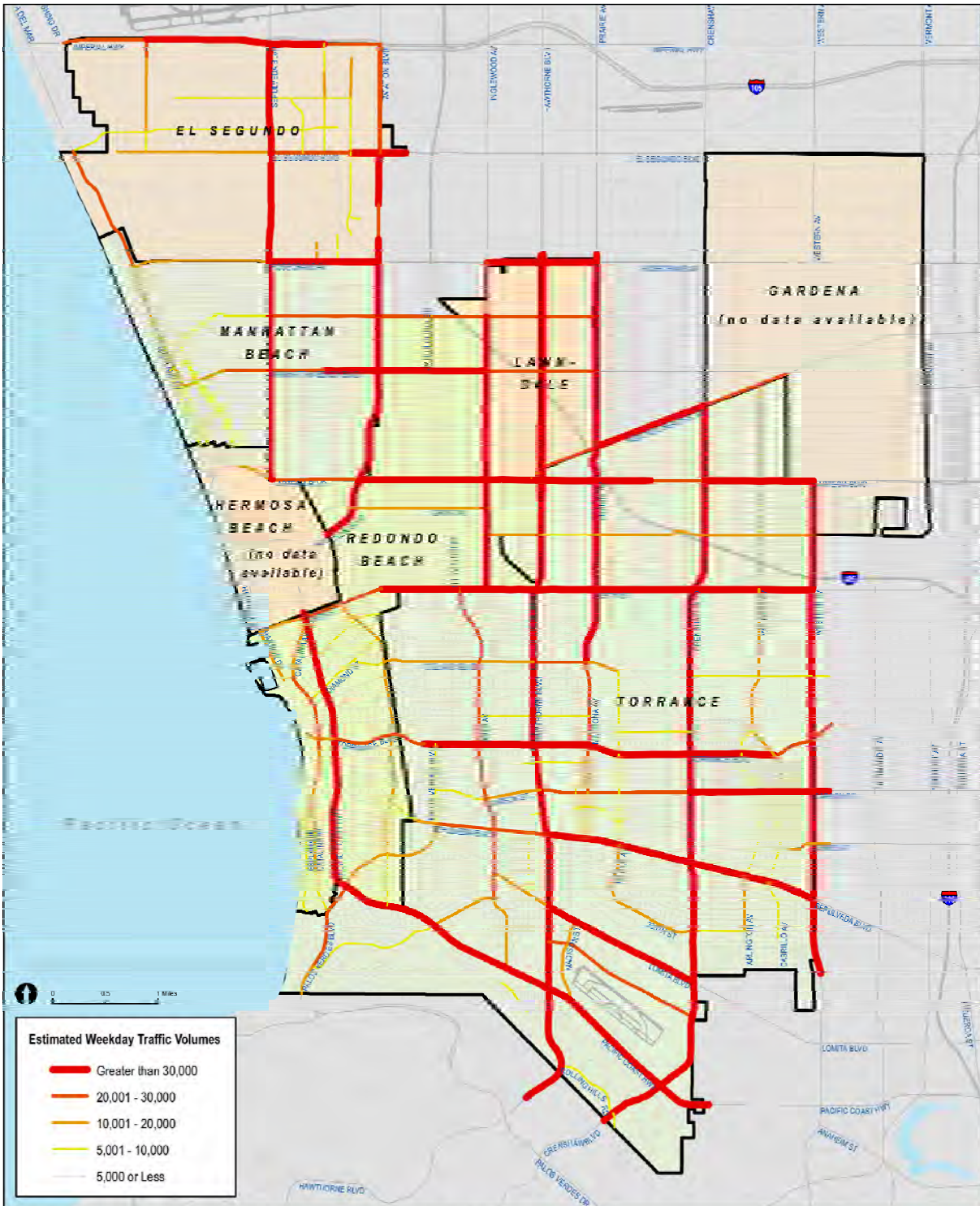


## **Appendices**

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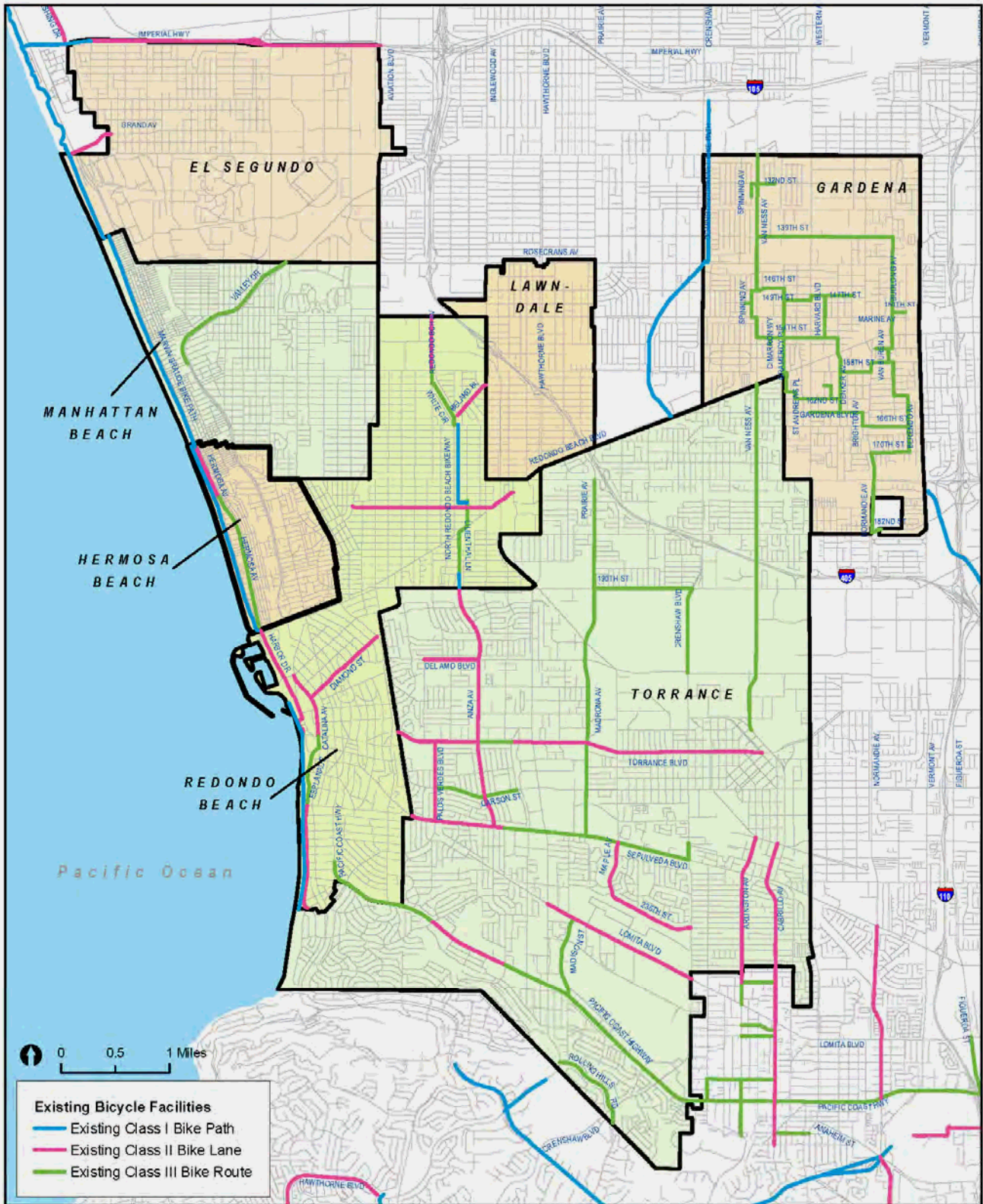
## **Appendix A: Large Scale Maps**



**Appendix A-1: South Bay Region Estimated Weekday Traffic Volumes**

**South Bay Bicycle Master Plan**

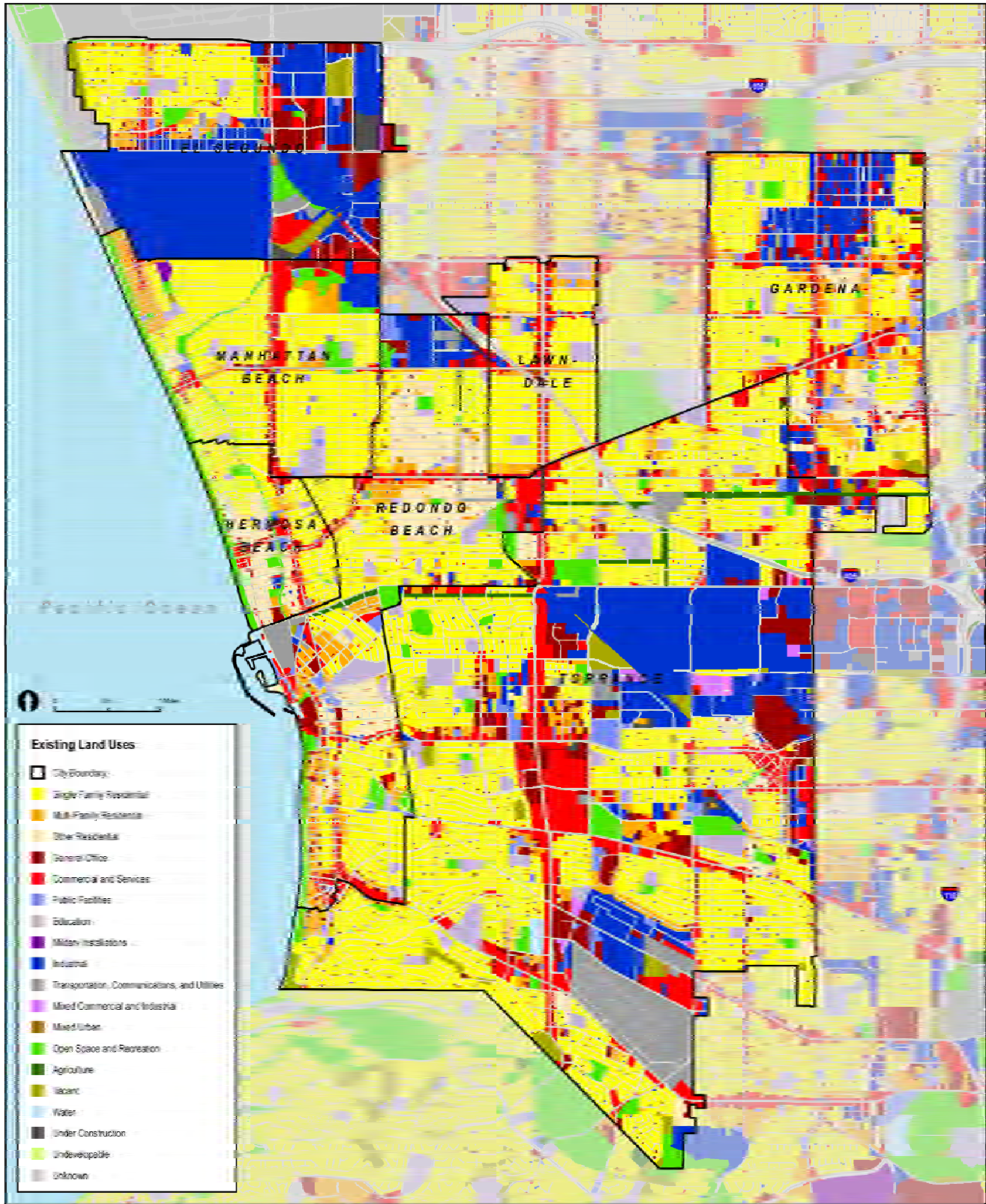
El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: Census Plan Classification Elements for the Cities of El Segundo, Lawndale, Manhattan Beach, Redondo Beach and Torrance; Date: 1/1/2011



**Appendix A-2: South Bay Region Existing Bicycle Facilities**

South Bay Bicycle Master Plan

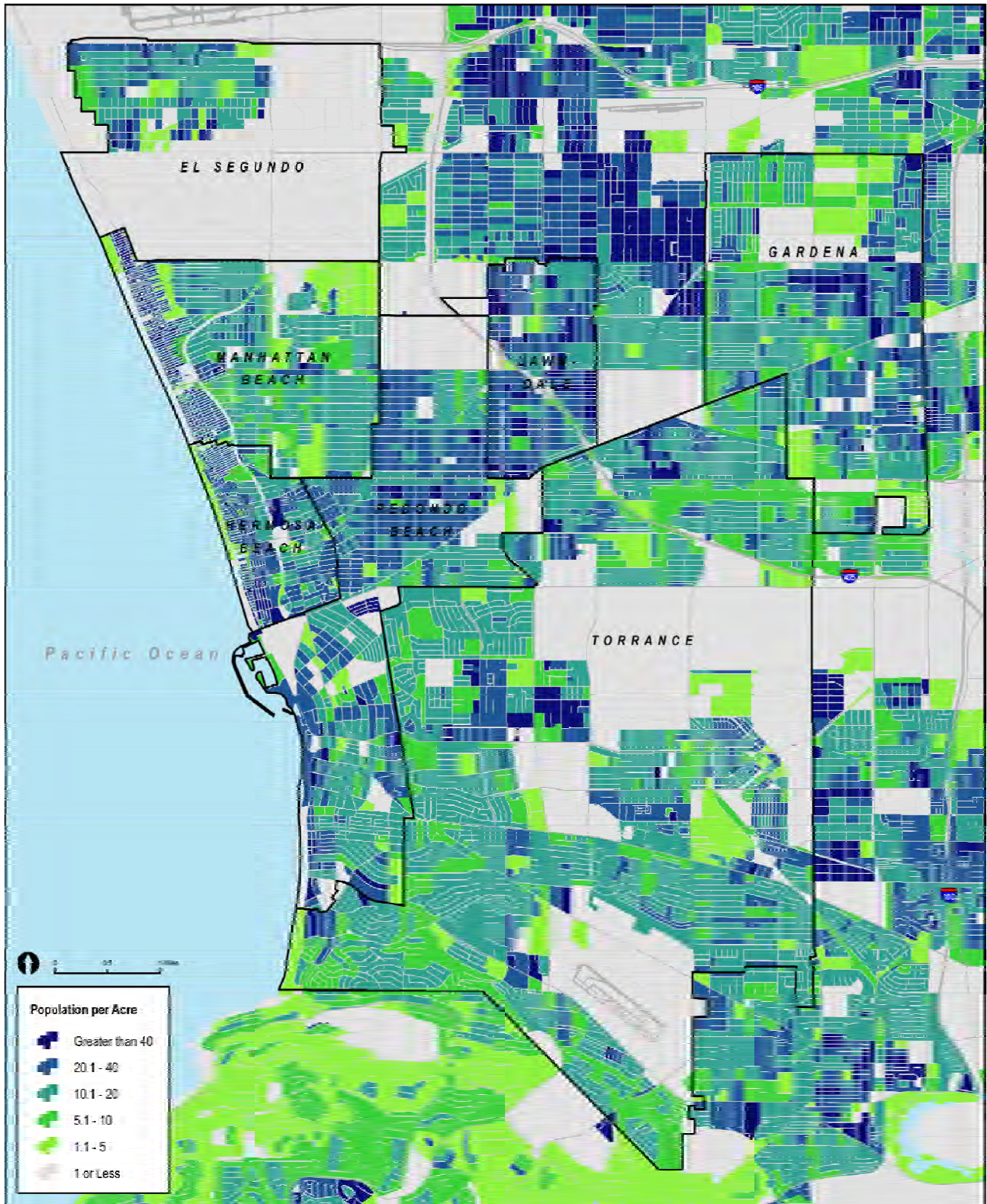
© El Segundo • Gardena • Hermosa Beach • Lawndale • Manhattan Beach • Redondo Beach • Torrance



**Appendix A-3: South Bay Region Existing Land Uses**

**South Bay Bicycle Master Plan**

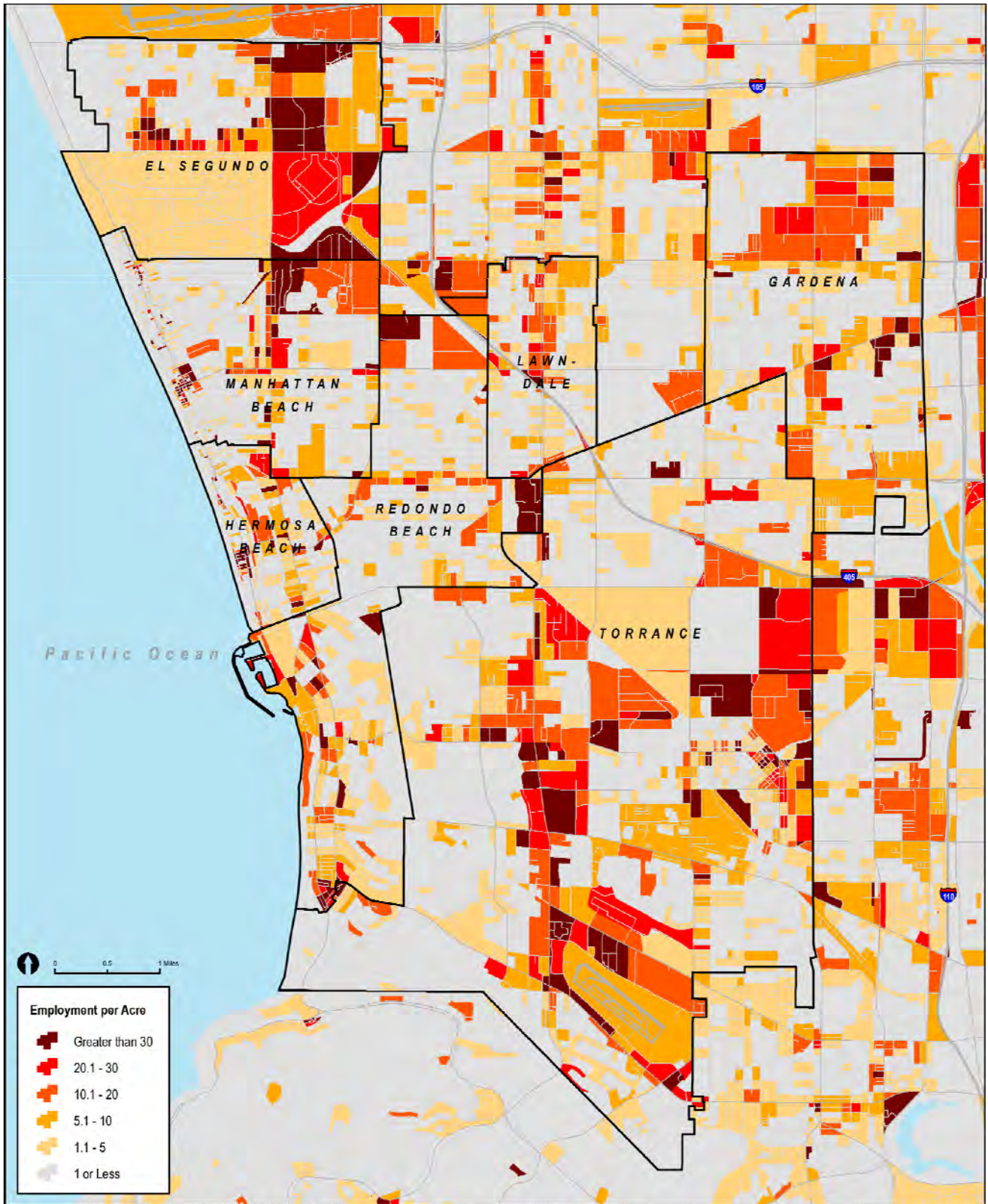
El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: SCAG (2009); Date: 1/1/2011



**Appendix A-4: South Bay Region Population Density by 2000 Census Block**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: US Census (2000), Date: 1/1/2011

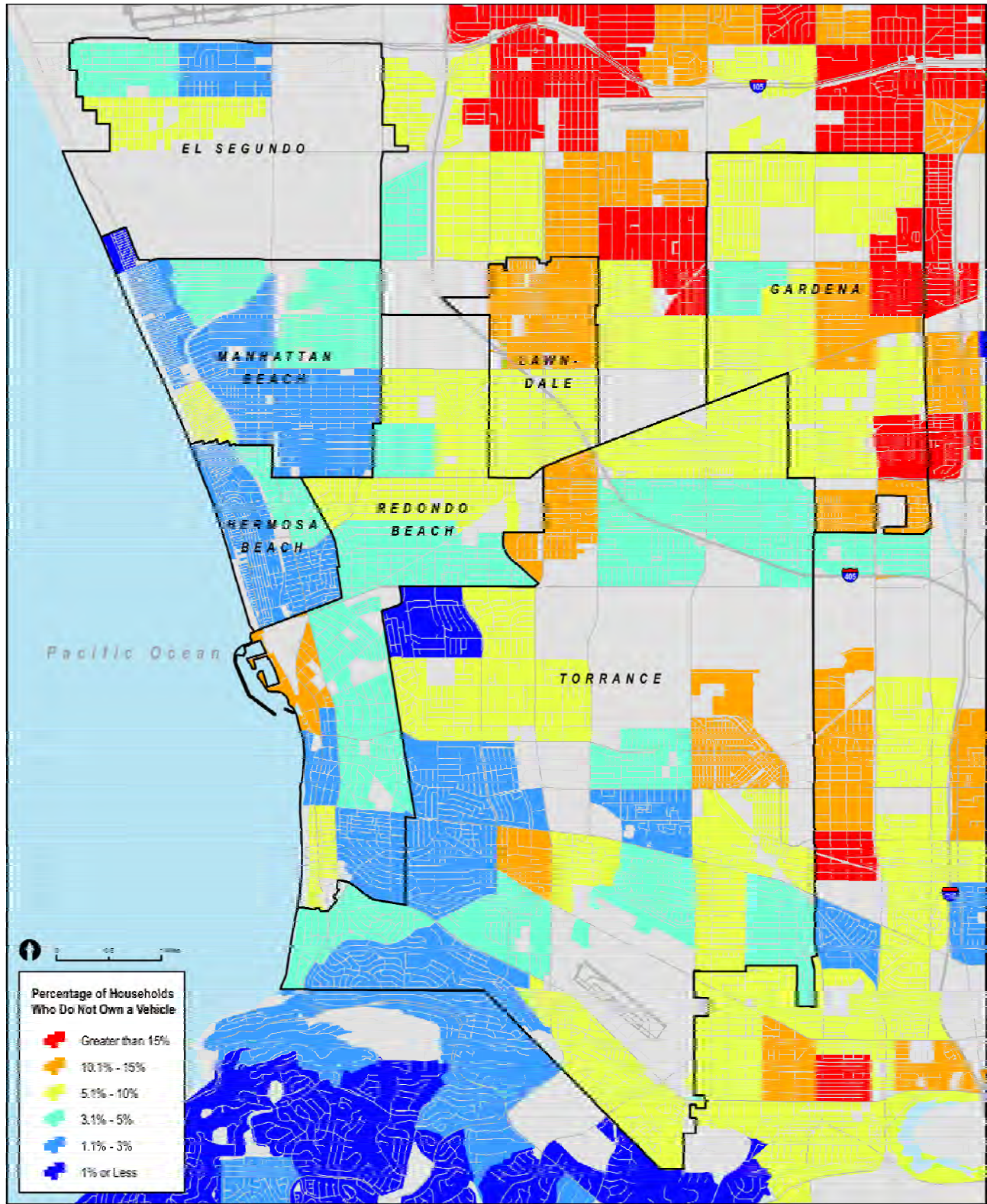


**Appendix A-5: South Bay Region Employment Density by Census Block (2008)**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: US Census (2008); Date: 1/1/2011

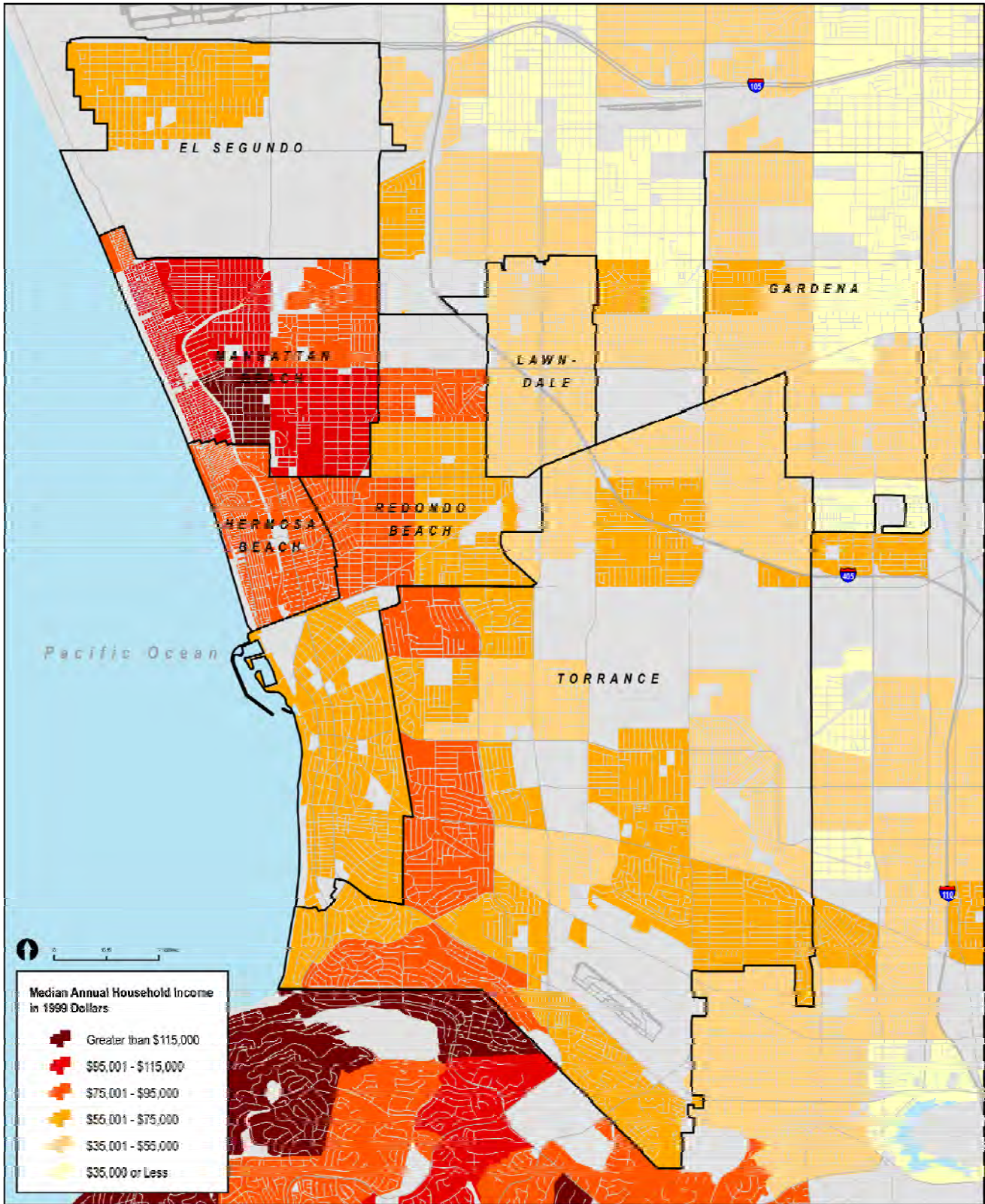




**Appendix A-6: 2000 South Bay Region Households Who Do Not Own a Vehicle by Census Tract**

**South Bay Bicycle Master Plan**

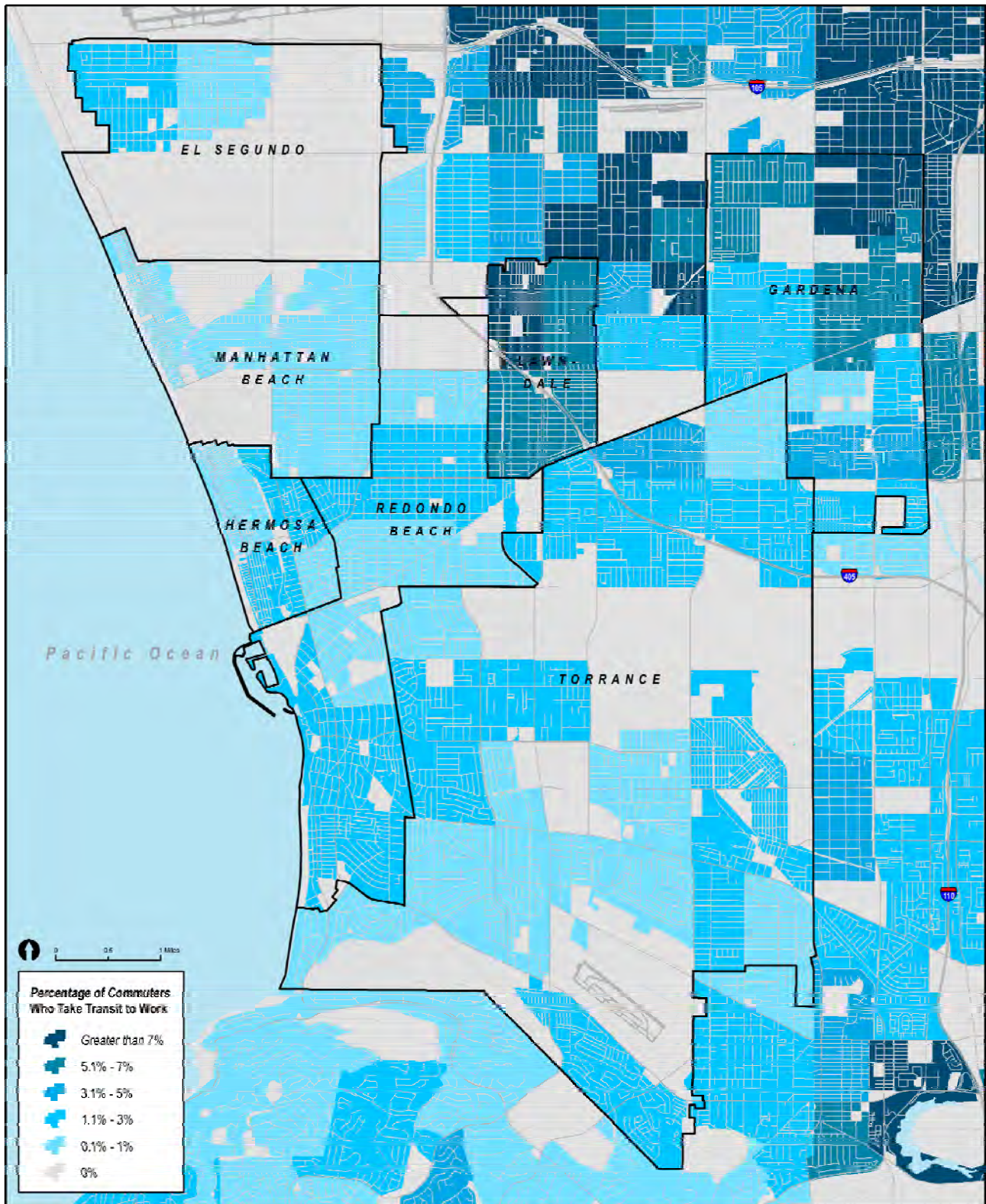
El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: US Census (2000); Date: 1/1/2011



**Appendix A-7: 2000 South Bay Region Median Annual Household Income by Census Tract (1999 Dollars)**

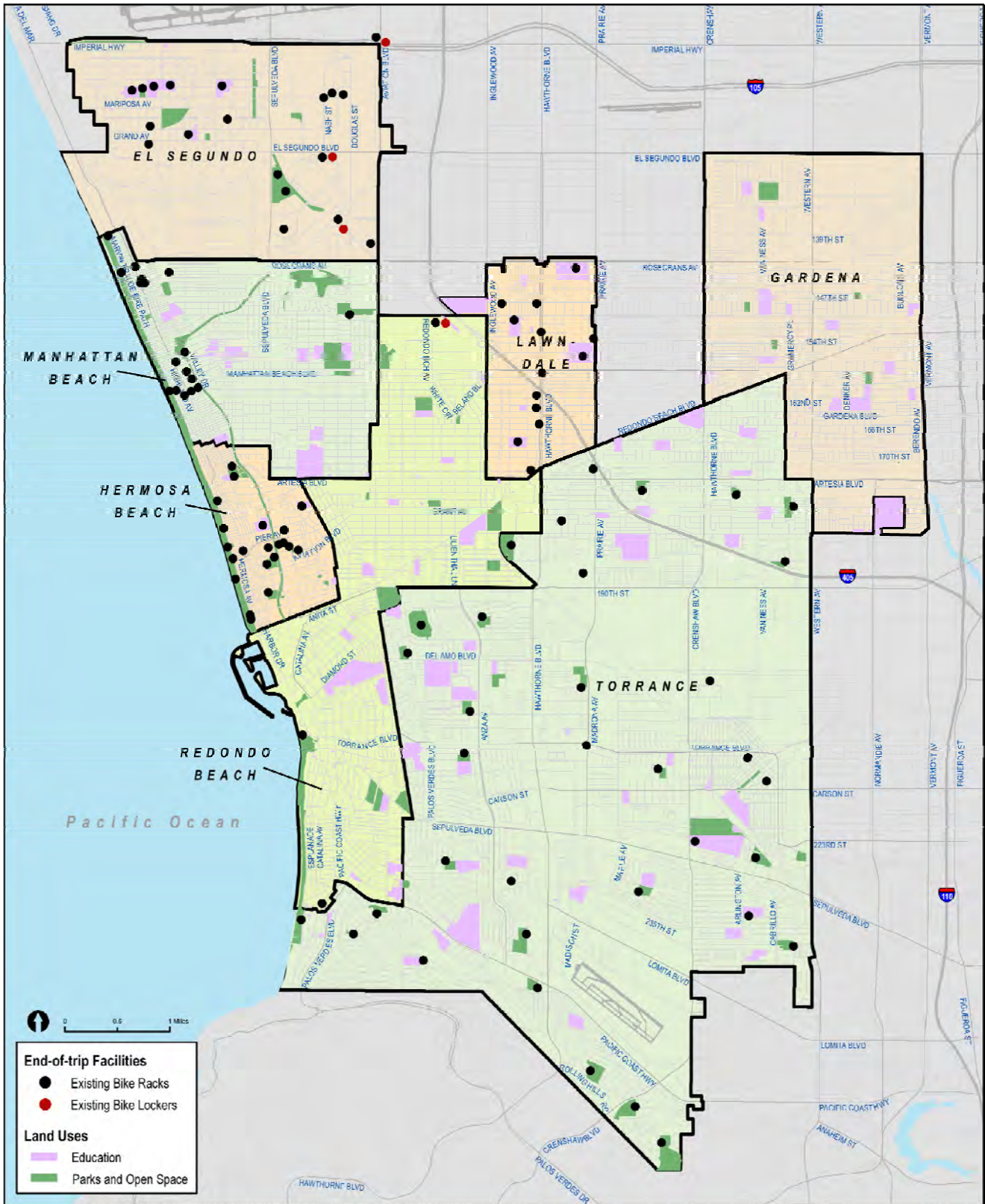
**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Miramar Beach - Redondo Beach - Torrance  
Source: US Census (2000); Date: 1/12/2011



**Appendix A-8: South Bay Region Commuters Who Take Transit to Work by Census Tract**

**South Bay Bicycle Master Plan**  
El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: US Census (2008), Date: 11/2011

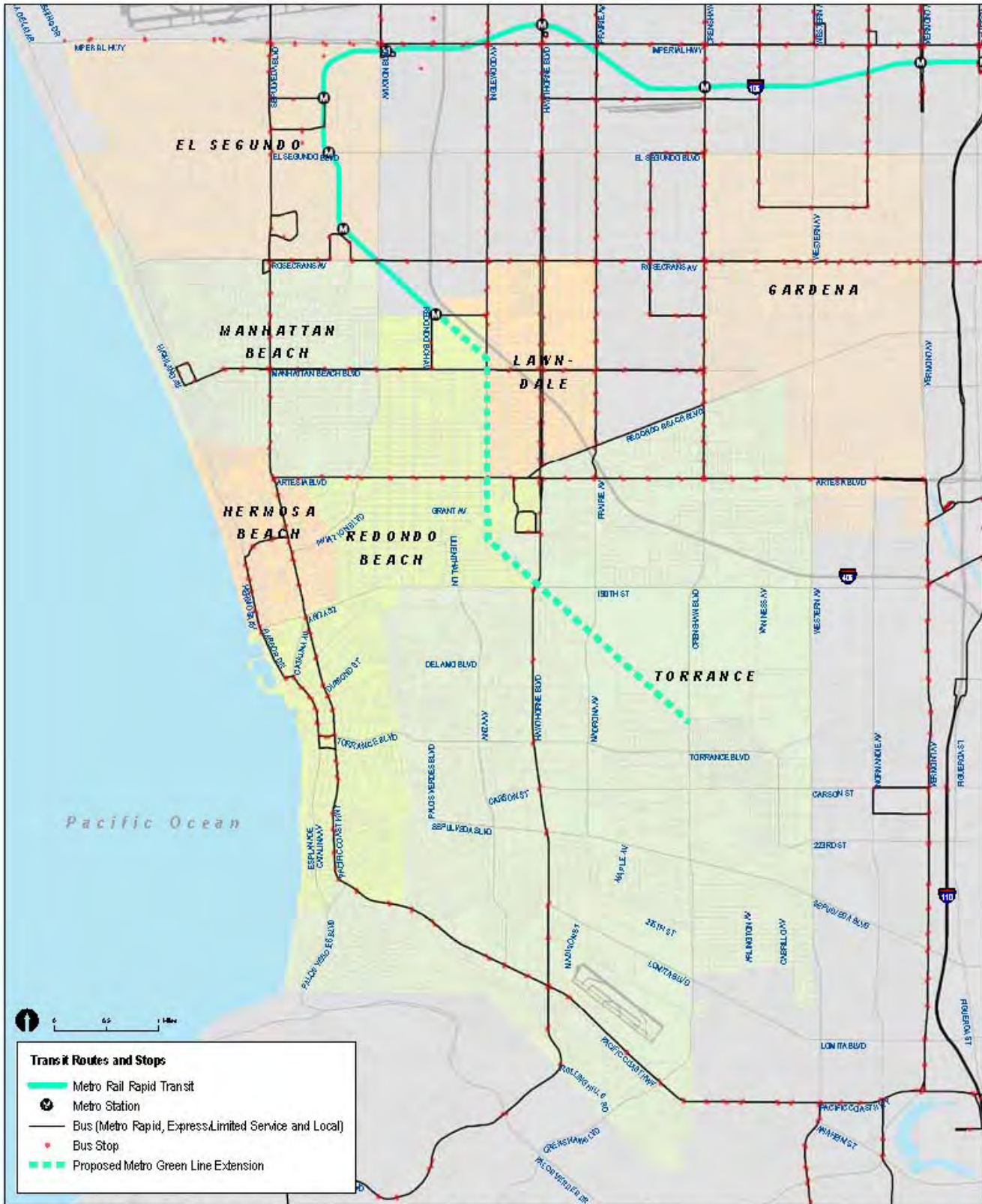


**Appendix A-9: South Bay Region Existing End-of-Trip Facilities**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance

Sources: City of El Segundo (2011); City of Hermosa Beach (2011); City of Lawndale (2011); City of Manhattan Beach (2011); City of Redondo Beach (2011); City of Torrance (2011)



**Appendix A-10: South Bay Region Existing Metro-Operated Transit Routes and Stops**

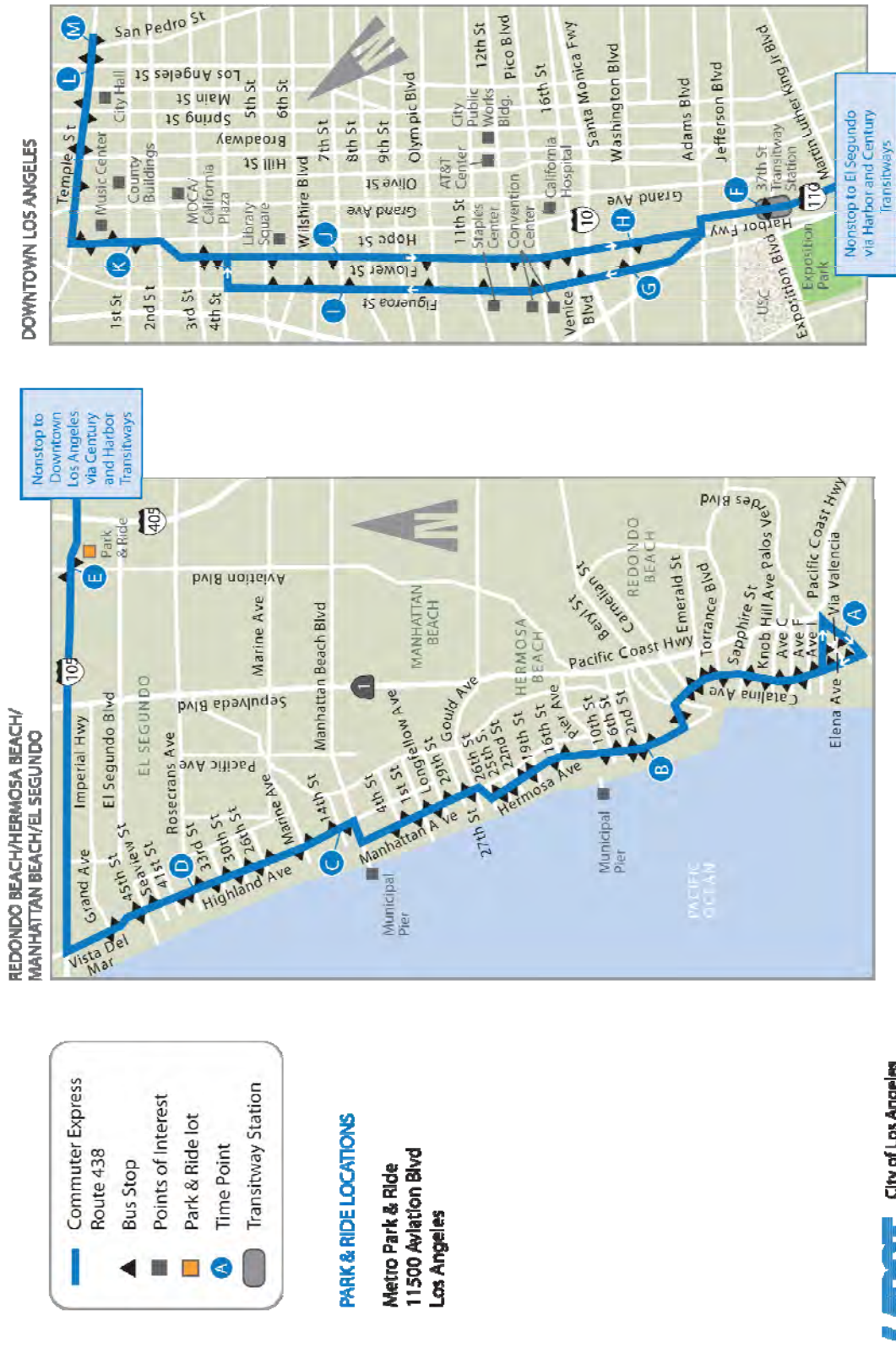
**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance

Source: Metro (2010); Date: 1/12/2011

# COMMUTER EXPRESS 438

EFFECTIVE AUGUST 1, 2010  
EFFECTIVO 1 AGOSTO, 2010



**LADOT**

City of Los Angeles  
Department of Transportation

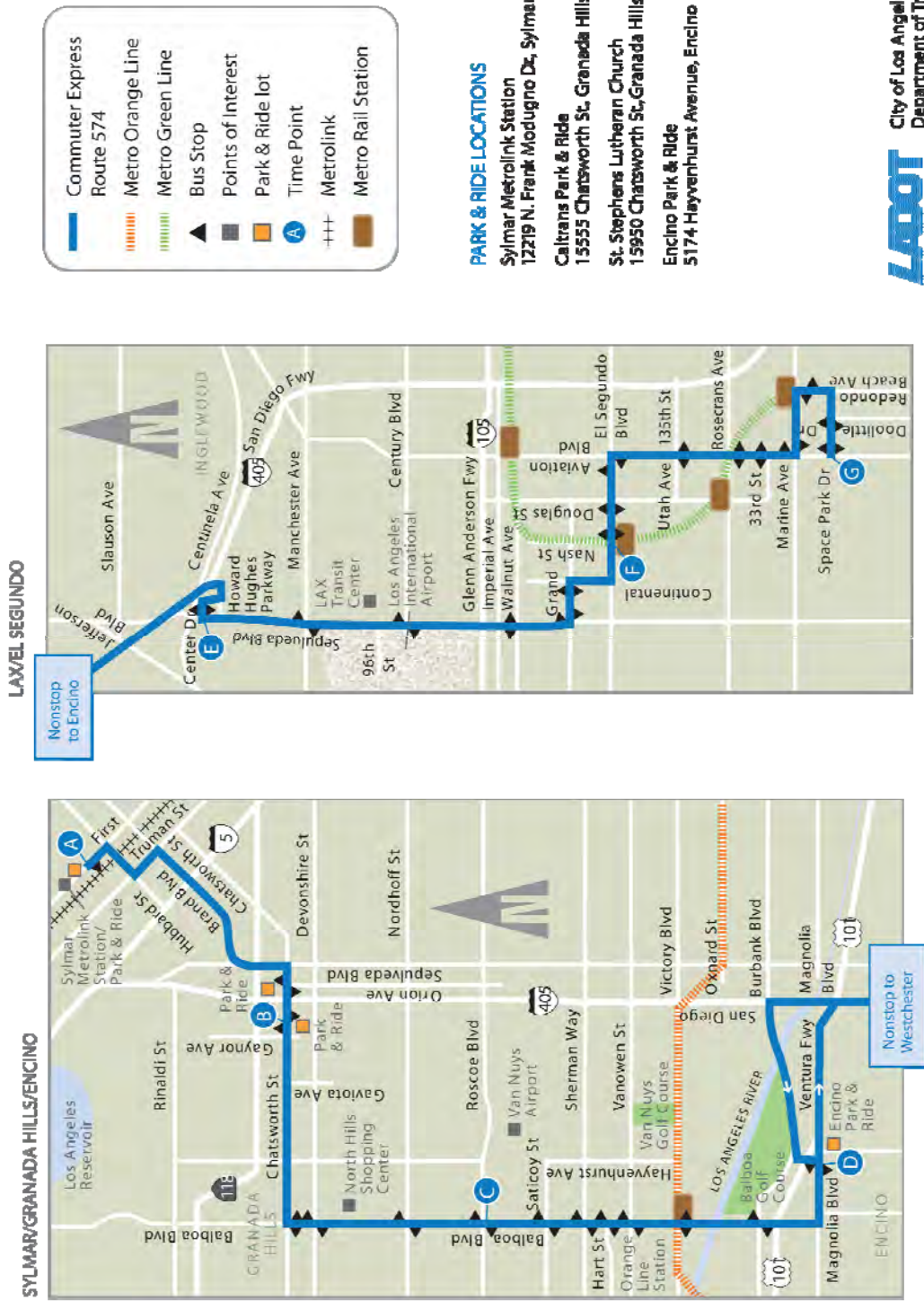
(213) 310-3233 or /o (616) 806-2273  
www.ladotransit.com

## Appendix A-11: Commuter Express Line 438 Route

**South Bay Bicycle Master Plan**  
El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: Los Angeles Department of Transportation (2011)

# COMPUTER EXPRESS 574

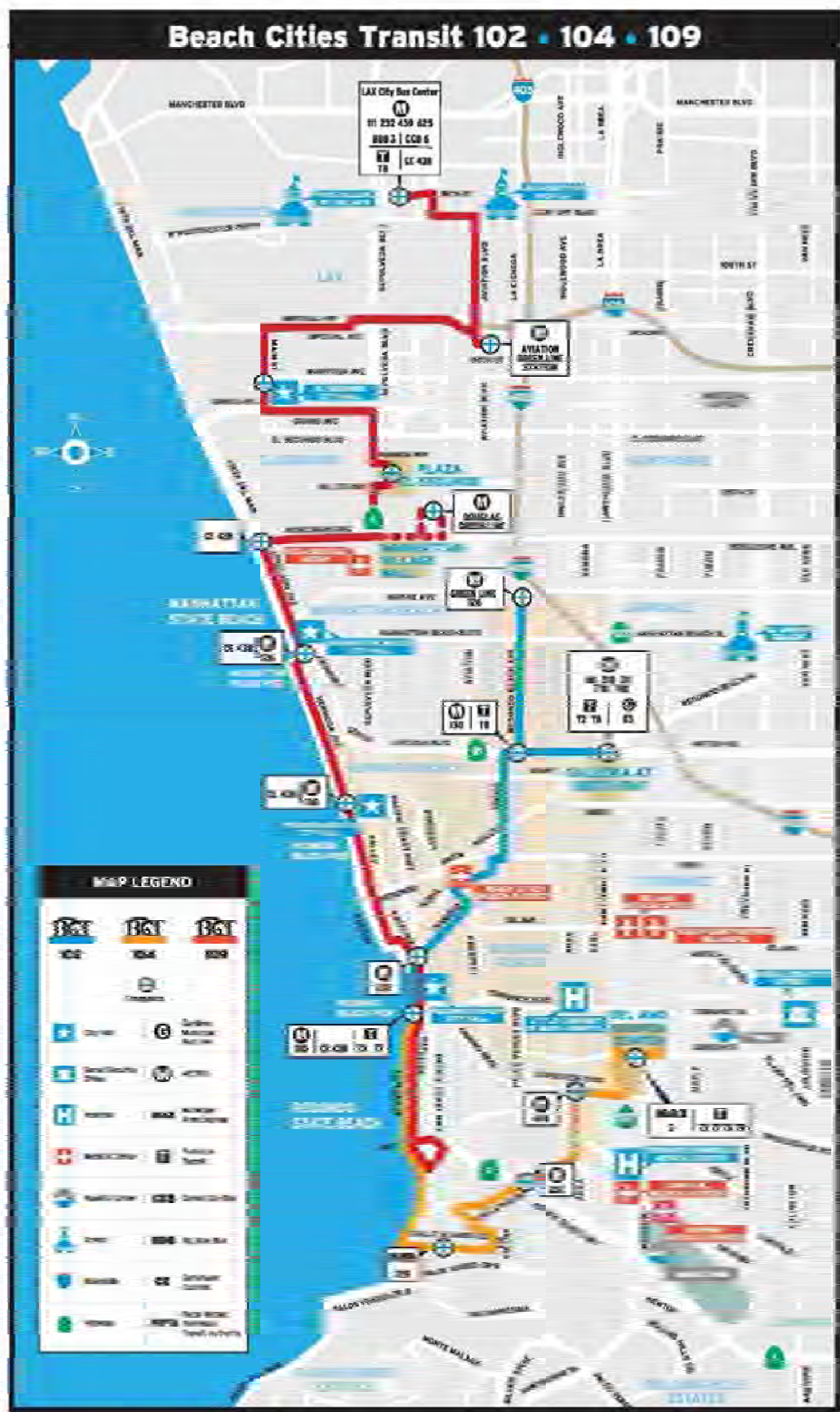
EFFECTIVE AUGUST 1, 2010  
 EFECTIVO 1 AGOSTO, 2010



## Appendix A-12: Commuter Express Line 574 Route

### South Bay Bicycle Master Plan

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: Los Angeles Department of Transportation (2011)



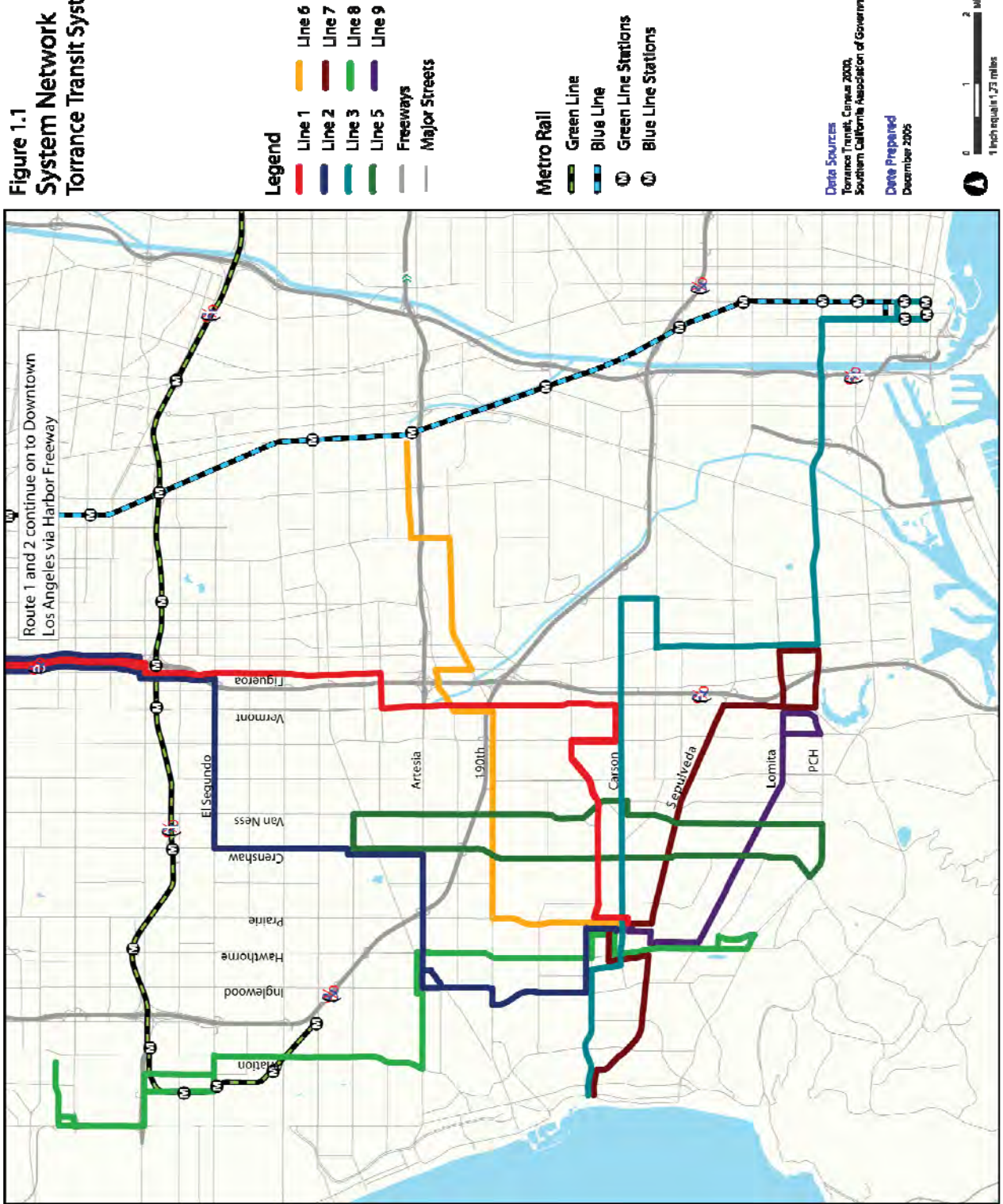
**Appendix A-13: Beach Cities Transit System Map**

**South Bay Bicycle Master Plan**

El Segundo • Gardena • Hermosa Beach • Lawndale • Miramar • Redondo Beach • Torrance  
 Source: City of Redondo Beach (2010)



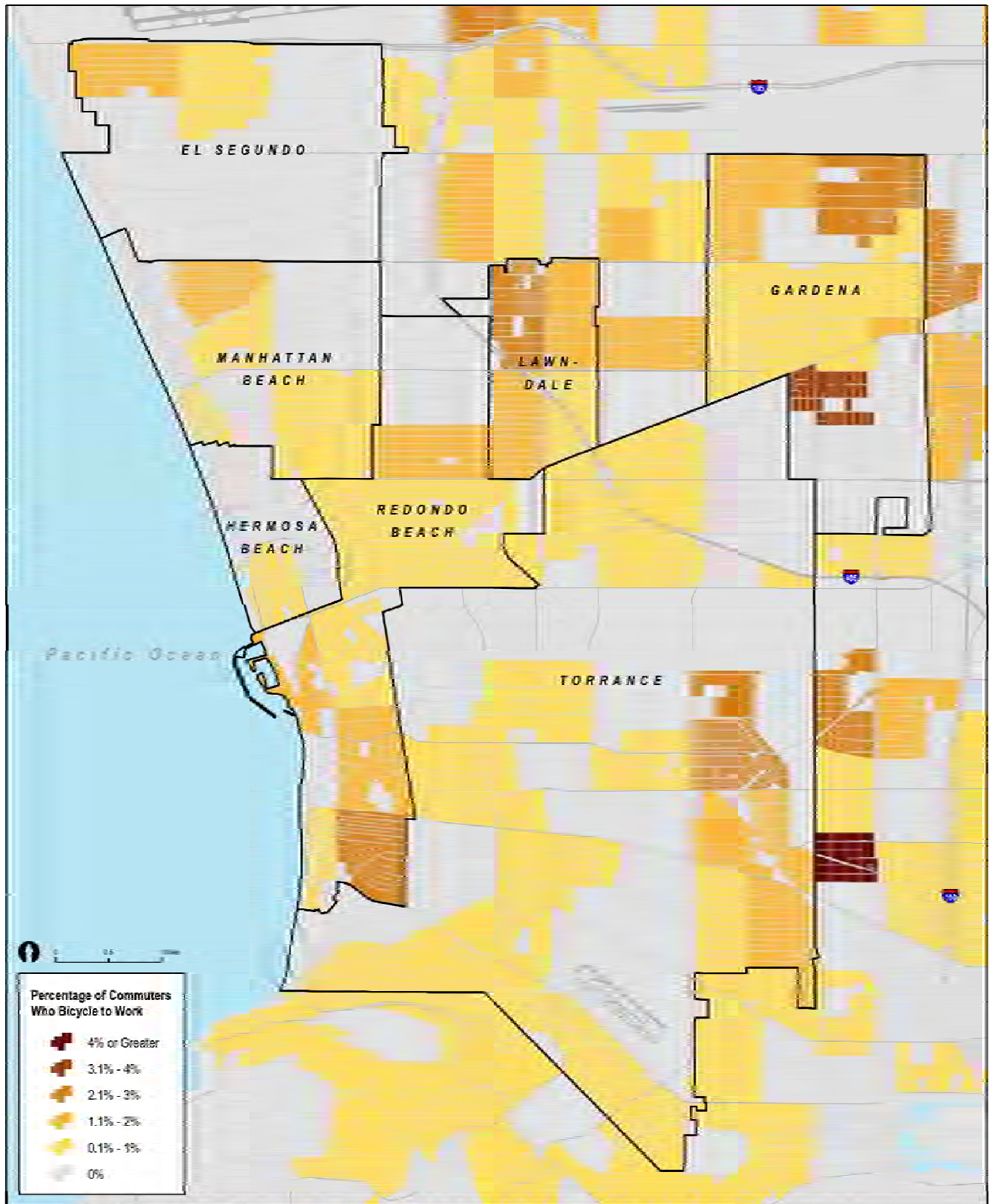
Figure 1.1  
 System Network  
 Torrance Transit System



**Appendix A-14: Torrance Transit System Map**

**South Bay Bicycle Master Plan**

El Segundo - Carson - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: City of Torrance (2010)

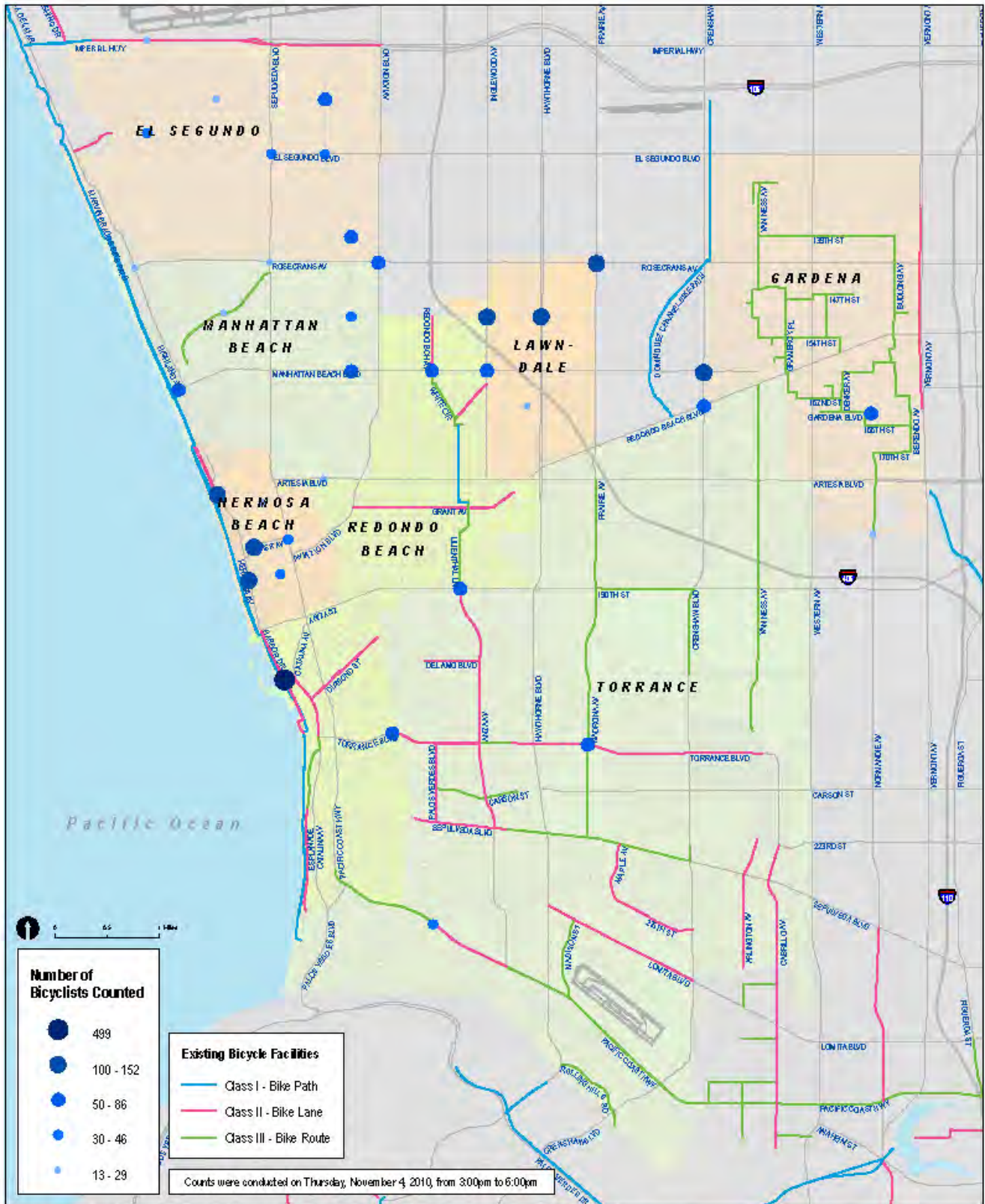


**Appendix A-15: 2008 South Bay Region Commuters Who Bicycle to Work by Census Tract**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: US Census (2008); Date: 1/1/2011

Los Angeles County Bicycle Coalition and South Bay Bicycle Coalition  
 South Bay Bicycle Master Plan

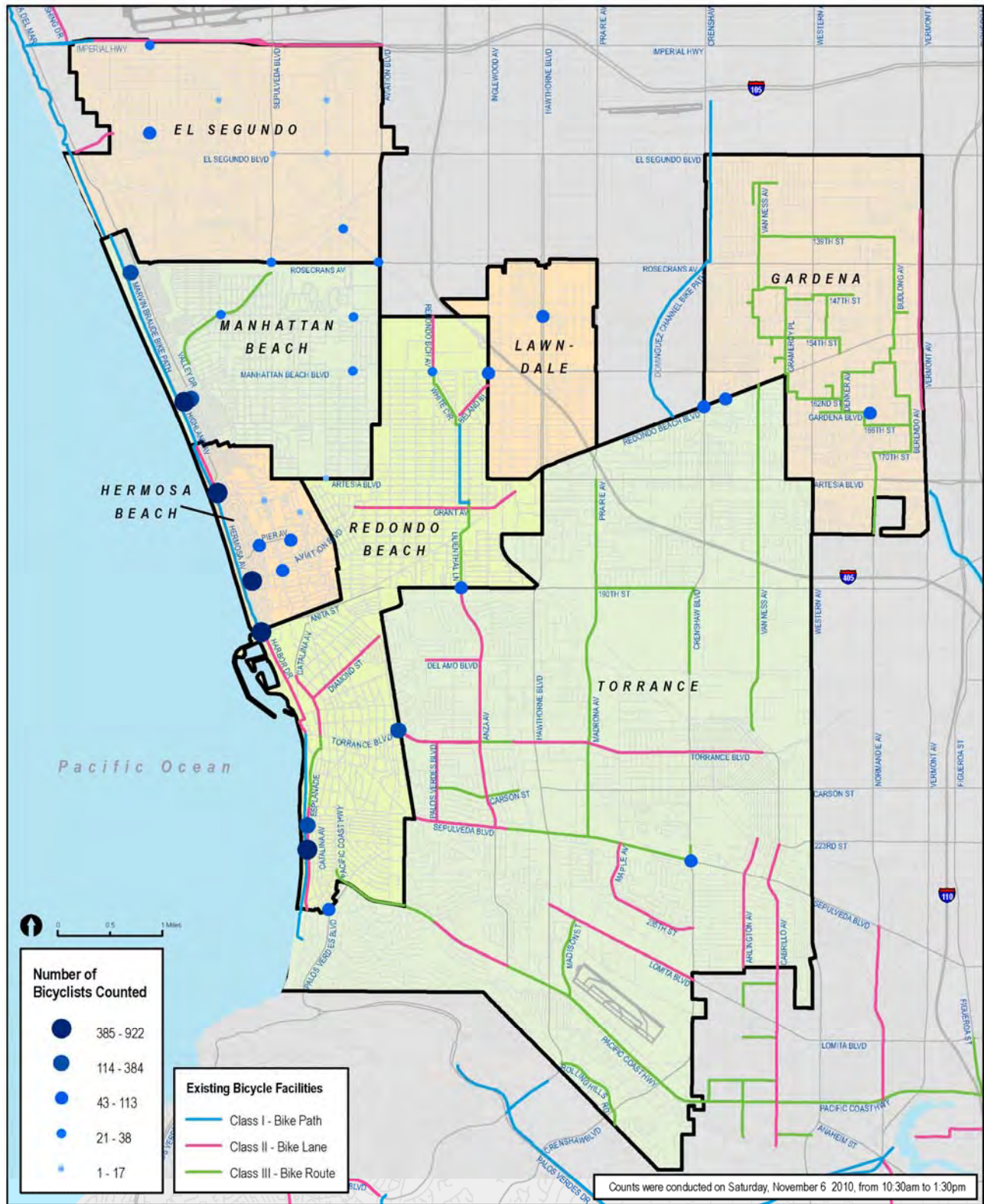


**Appendix A-16: South Bay Region Weekday PM Peak Period Count of Bicyclists**

South Bay Bicycle Master Plan

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance

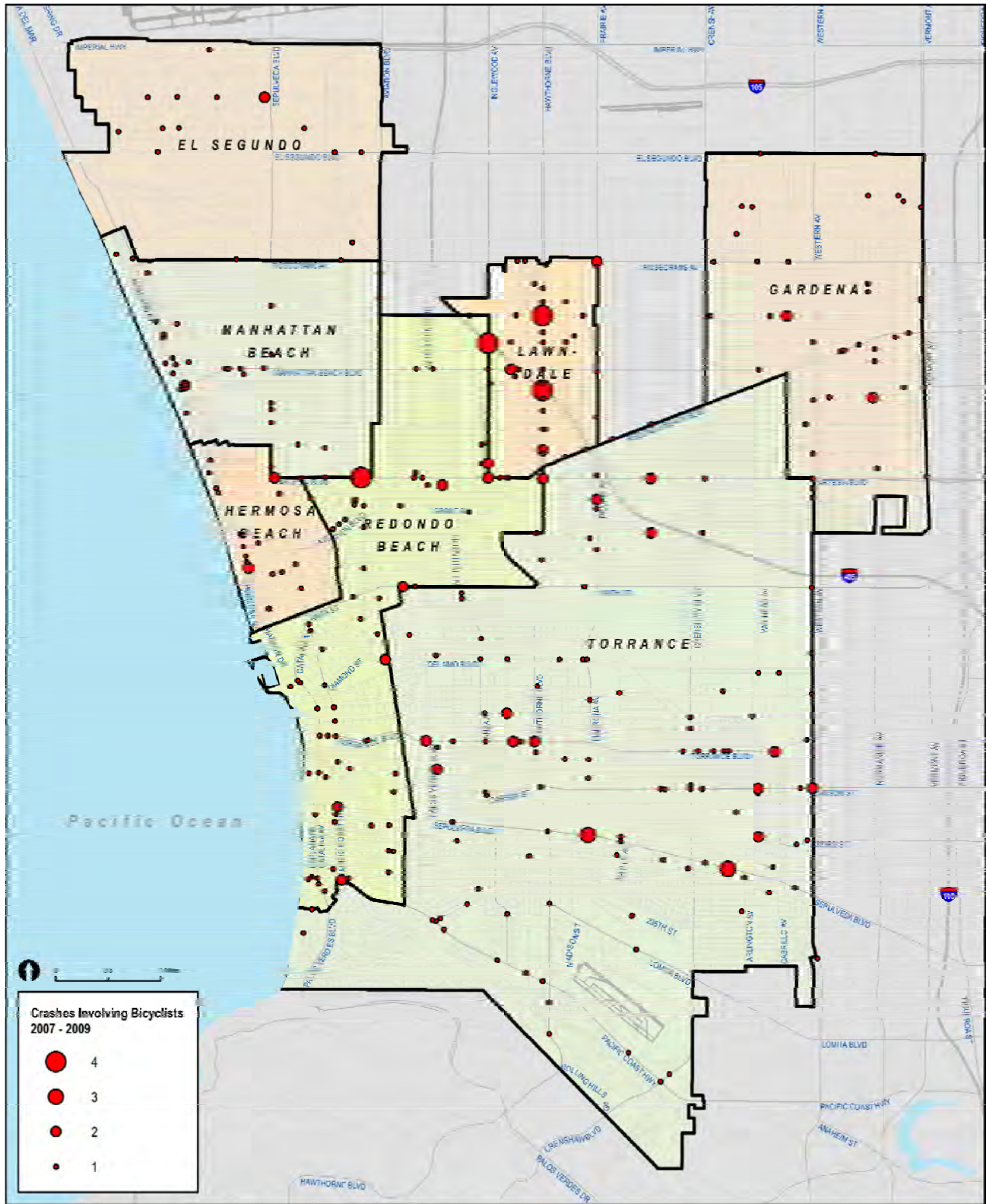
Date: 1/12/2011



**Appendix A-17: South Bay Region Weekend AM Peak Period Count of Bicyclists**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: Metro (2010); Date: 1/1/2011

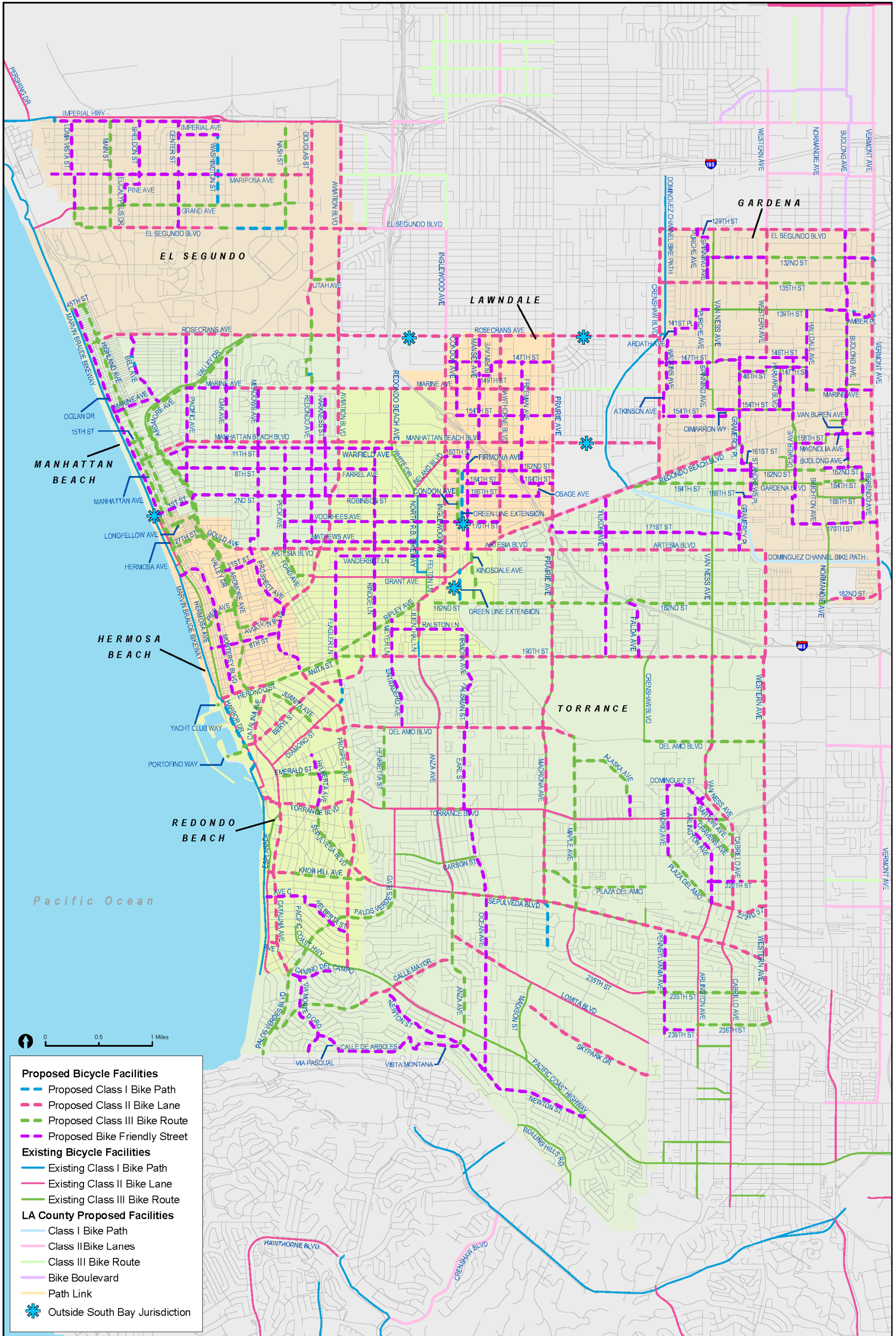


**Appendix A-18: South Bay Region Bicycle Crashes (2007-2009)**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: BARTRB (2010); Date: 1/12/2011





**Appendix A-19: South Bay Region Proposed Bicycle Facilities**

South Bay Bicycle Master Plan

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance

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**Appendix A-20: Lawndale Beat System Map**

**South Bay Bicycle Master Plan**

El Segundo • Gardena • Hermosa Beach • Lawndale • Miramonte Beach • Redondo Beach • Torrance  
Source: City of Lawndale (2011)

# COMMUTER EXPRESS 448

EFFECTIVE AUGUST 1, 2010  
EFFECTIVO 1 AGOSTO, 2010

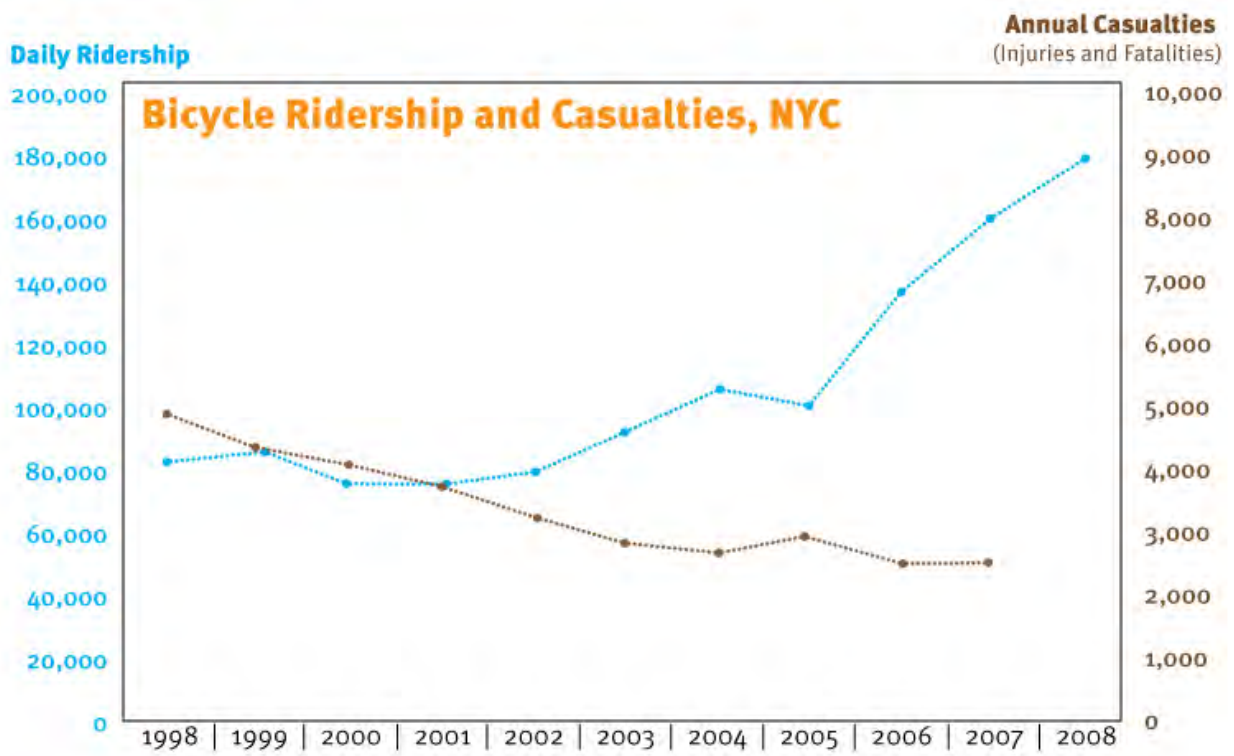


## Appendix A-21: Commuter Express Line 448 Route

South Bay Bicycle Master Plan  
 El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: Los Angeles Department of Transportation (2011)

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## Appendix B: New York City Bicycle Collision vs Ridership Data



Source: City of New York Department of Transportation

## Appendix C: Bicycle Facility Standards

The following table presents the minimum bicycle facility standard widths recommended by the California Highway Design Manual (CA HDM), the American Association of State Highway and Transportation Officials (AASHTO), the National Association of City Transportation Officials, as compared to the standards recommended as part of the South Bay Bicycle Master Plan.

Bicycle Facility Type	Organization Standards			
	CA HDM <sup>35</sup>	AASHTO <sup>36</sup>	NACTO <sup>37</sup>	South Bay
Class I Bike Path	2.4 meters (8 feet)	10 feet	N/A	8-10 feet
Class II Bike Lane	1.5 meters (5 feet)	5 feet	6 feet	6 feet (5 feet plus 1 foot buffer)

Class III Bicycle Routes are not included in this table as the minimum width is dependent on a variety of roadway conditions. The Manual on Uniform Traffic Control Devices provides guidance on the placement of shared lane markings on Class III Bike Routes in section 9C.07. The South Bay Bicycle Master Plan recommends that the South Bay participating cities follow MUTCD standards, which is at least 11 feet from the face of the curb.

The table below presents minimum standards for vehicular travel lanes and parallel parking lanes as compared to South Bay recommended minimum widths. The participating cities may use wider travel lanes where appropriate and feasible. In most cases, recommendations for facilities in this Plan will comply with AASHTO standards. In few constrained cases, facilities may require travel and parking lanes to drop slightly below AASHTO standards.

Lane Width Type	AASHTO <sup>38</sup>	South Bay
Vehicular Travel Lane	10 feet	9.5 feet
Parking Lane	8 feet	7.5 feet

<sup>35</sup> Source: CA HDM Section 1003

<sup>36</sup> Source: AASHTO Guide for the Development of Bicycle Facilities 4.6.4

<sup>37</sup> Source: NACTO Urban Bikeway Design Guide

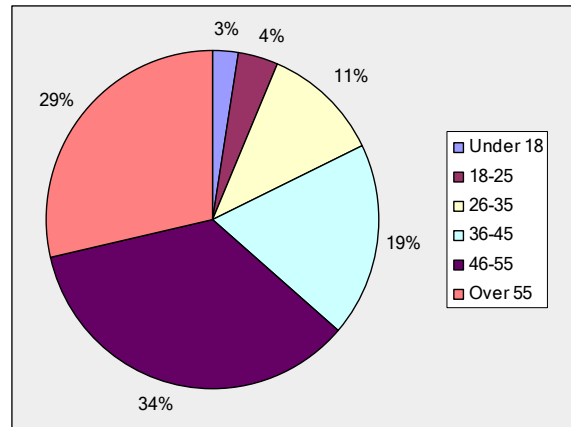
<sup>38</sup> Source: AASHTO A Policy on Geometric Design of Highways and Streets

## Appendix D: Online Survey Analysis

### Respondent Demographics

Most of the survey respondents live in one of the seven participating South Bay cities. Respondents who do not live in one of the participating cities live in other cities and communities nearby. Almost two-thirds of survey respondents also work in one of the participating South Bay cities.

Over half of the respondents are over 46 years old, about one-fourth of which are over 55 years old. Relatively few young adults and youth responded to the survey (only three percent and four percent respectively) and many respondents stated in later questions that they are retired. This suggests that the survey was either distributed predominantly to older populations or the bicycling populations in the South Bay participating cities are generally older.

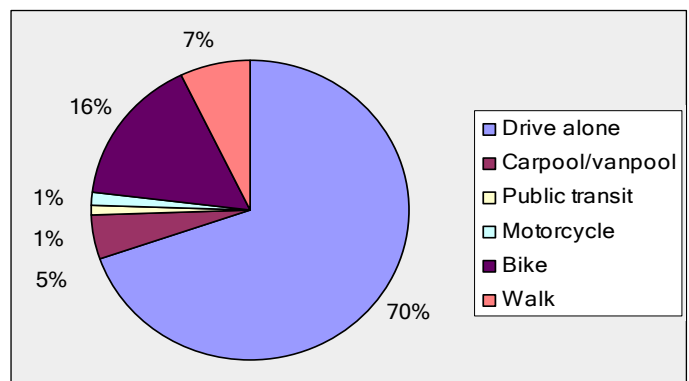


Survey Respondent Age Distribution

### Respondent Bicycle Mode Characteristics

Almost three-quarters of survey respondents commute predominantly by driving alone, which is below the national average and above the averages for the State of California and the County of Los Angeles<sup>39</sup>. 16 percent of respondents commute primarily by bicycle and seven percent commute predominantly by walking, which means that a total of 23 percent of respondents get to work using active, non-motorized modes. This is a disproportionately high percentage as compared to the national averages of walking and bicycling to work, which is probably because people who ride a bicycle regularly are naturally more interested in participating in a survey about bicycling.

As further evidence that survey respondents are disproportionately bicyclists, nearly half of respondents said they commute by bicycle some of the time, just over one-third commute by bicycle at least once a month, and just under one-third commute by bicycle at least once a week. Also, 88 percent of respondents said they were comfortable riding in some traffic situations.



Survey Respondent Primary Commute Mode

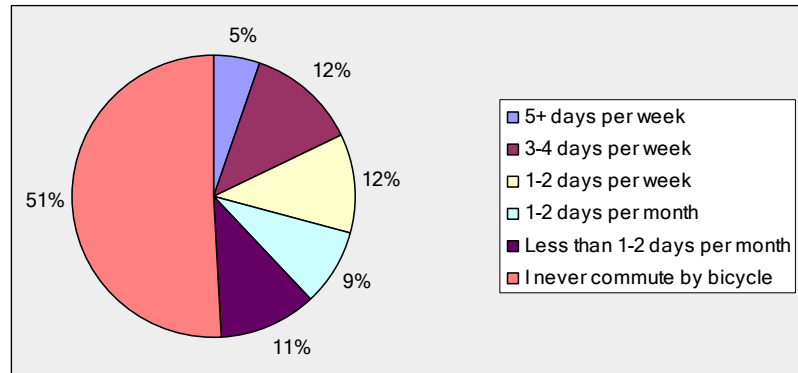
<sup>39</sup> See individual City chapters for detailed commute to work data.

## Appendices

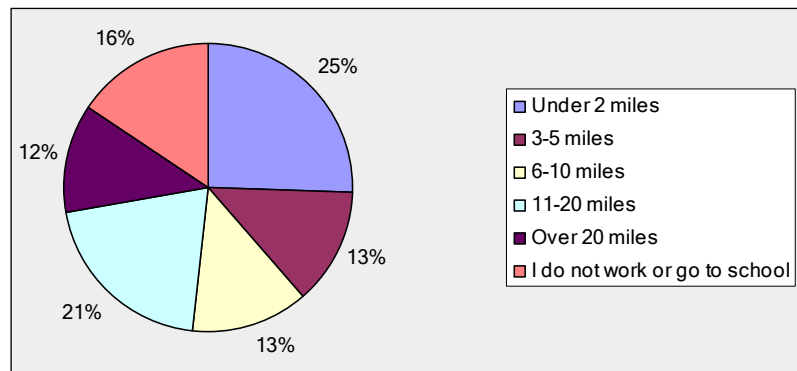
38 percent of respondents live less than five miles from work. It is likely that the short commute distance contributes to the disproportionate number of bike and walk commuters seen in the survey. Similarly, a relatively large proportion of respondents do not work or go to school (16 percent), which matches the relatively large proportion of respondents who are over 55, some of whom explicitly stated that they were retired.

The survey asked respondents to estimate bicycle trips that were not commute trips, such as bicycle rides for exercise or to run errands. The frequency of bicycle trips was significantly higher for trips made by bicycle that were not to work or school. While over half of respondents said that they never ride to work, only three percent replied that they never ride for any purpose. Similarly, while almost thirty percent of respondents commute by bike at least once a week, almost three-quarters ride their bicycles at least once a week for trips other than for commuting.

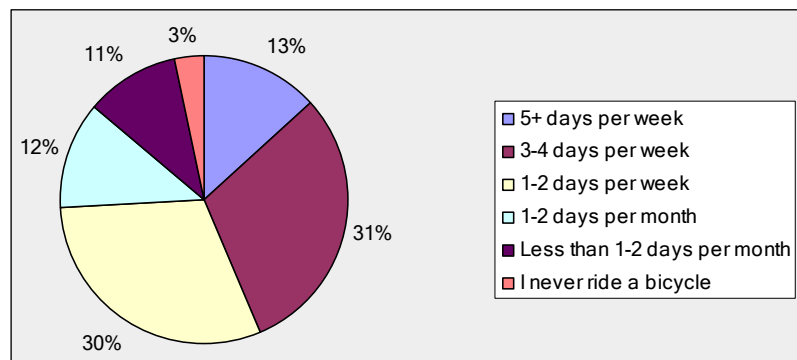
Of the optional responses, the top reason survey respondents selected as why they bicycle was for exercise. Almost all of the survey respondents selected this as a reason. After exercise, the next most common response was bicycling to shop, run errands, or eat out, which 38 percent of respondents listed as a reason that they bicycle. The percentage of respondents bicycling for these utilitarian trips exceeds the percentage who reported that they bike to get to work or school (31%). This suggests that interventions that aim to increase bicycling, whether they are programs, infrastructure, or education, should target many destinations, not just job centers and schools, as well as many travel times, not just the peak commuting hours.



Survey Respondent Days per Week Commuting by Bicycle



Survey Respondent Commute Distance



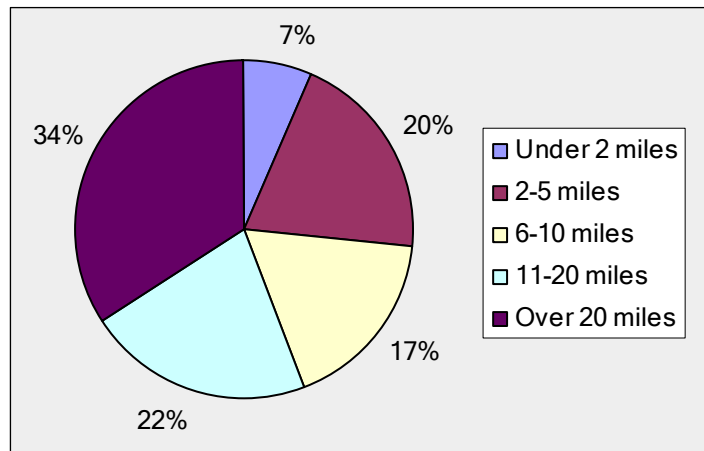
Survey Respondent Days per Week Riding a Bicycle (other than for commuting)

About one-third of survey respondents said that the average length of their bicycle trips is over 20 miles, while only seven percent responded that their bicycle trips average less than two miles. It is possible that since so many respondents ride for exercise, many of their bicycle rides are long.

### Barriers to Bicycling

The survey asked respondents to note what prevents them from bicycling to work and from bicycling in general. It also asked respondents to rate the degree to which a number of conditions influence their decisions to bicycle.

A number of common themes emerged from the responses. Survey respondents highly value bicycle lanes. They cited lack of bicycle lanes as the biggest barrier that prevents them from biking to work. On a scale from 1 to 5, with 1 being the most important, respondents gave the presence of bicycle lanes a weighted average score of 1.7. Similarly, respondents commonly cited lack of bicycle paths and routes as barriers to riding and rated these as very important factors in their decision to ride, as well.



Survey Respondent Average Bicycle Trip Length

A second common theme is the behavior of motorists, which scored highly on respondents' ranking of conditions that influenced their decision to bicycle. Motorist behavior was specifically one of the most common reasons that participants chose not to bike. Similarly, respondents also considered vehicle volumes and speeds important factors in determining their decisions to ride.

Some of the conditions that respondents considered less important influences in their decisions to bicycle relative to the other options were integration with transit (only 36% think it is important) and behavior of other bicyclists (only 36% think it is important).

Table D-1, Table D 2, and Table D-3 display the full responses regarding barriers to riding.

**Table D-1: Barriers to Commuting by Bicycle**

If you ride for exercise/recreation, what prevents you from commuting by bike?		
Answer Options	Response Percent	Response Count
Lack of off-street bike paths	31.7%	57
Lack of on-street bike lanes	46.1%	83
Lack of bike routes	35.6%	64
Lack of bike parking or storage	22.2%	40
My work/school does not have showers	22.2%	40
I do not have enough time	25.6%	46
I live too far away	22.8%	41
I have too much stuff to carry	33.3%	60
I have to transport children	10.0%	18
Other (please specify)		78
	<i>answered question</i>	<b>180</b>
	<i>skipped question</i>	<b>97</b>

**Table D-2: Barriers to Riding in the South Bay**

What keeps you from riding more often in the South Bay? Check all that apply.		
Answer Options	Response Percent	Response Count
Lack of bike paths	41.2%	107
Lack of bike lanes	52.7%	137
Lack of bike routes	40.8%	106
Insufficient bike parking or storage	25.4%	66
Insufficient lighting	11.2%	29
Vehicle volumes/speeds	41.2%	107
Behavior of motorists	46.5%	121
Behavior of other cyclists	7.3%	19
I do not feel safe	18.8%	49
I travel with small children	11.2%	29
I don't have enough time	24.6%	64
My destinations are too far away	15.0%	39
Health issues/concerns	1.9%	5
Weather	16.2%	42
	<i>answered question</i>	<b>260</b>
	<i>skipped question</i>	<b>17</b>



**Table D-3: Factors that Influence Decisions to Ride a Bicycle**

Please rank to what degree the following conditions affect your decision to ride a bicycle:						
Answer Options	(1) Very Important	(2) Somewhat important	(3) Neutral	(4) Somewhat unimportant	(5) Not Important	Weighted Score
Presence of off-street bike paths	95	84	41	19	19	2.2
Presence of on-street bike lanes	143	80	16	7	12	1.7
Presence of bike routes	96	89	48	9	16	2.1
Condition of bikeway/roadway (i.e. pavement quality)	119	88	36	3	12	1.8
Traffic volumes/speeds	128	95	23	5	7	1.7
Behavior of motorists	140	77	30	3	8	1.7
Behavior of other cyclists	36	58	94	28	42	2.9
Amount of street lighting	33	76	80	40	29	2.8
Access to bike parking and storage	43	91	66	34	24	2.6
Ability to combine bicycle trips with transit trips	30	64	79	35	50	3.0
Travel time	55	92	68	17	26	2.5
Available information/knowledge of bike routes	41	91	77	22	27	2.6
Weather	73	86	55	25	19	2.3
<i>answered question</i>						<b>258</b>
<i>skipped question</i>						<b>19</b>

## Bicycle Infrastructure and Programs

The survey invited participants to indicate where they would like to see new bicycle facilities and asked them to rank their interest in a number of bicycle programs. 186 of the 279 respondents gave specific feedback on where they would like to see bicycle facilities. The most popular programs were public awareness campaigns, maps and guides, and bicycle information websites. Table D-4 displays the full responses on bicycle programs.

**Table D-4: Bicycle Program Interest**

Please rate your interest in the following bicycle programs:				
Answer Options	(1) Not interested	(2) Somewhat interested	(3) Very interested	Weighted Score
Riding skills and safety courses for adults	123	89	46	1.7
Riding skills and safety courses for children	102	69	87	1.9
Safe Routes to School programs for children	75	68	115	2.2
Public awareness campaigns	34	81	143	2.4
Special events	61	130	67	2.0
Maps and guides	42	102	114	2.3
Bicycle information websites	29	114	115	2.3
Commuter incentive programs	61	82	115	2.2
Information and maps delivered to my home	97	107	54	1.8
Booths at public events	81	138	39	1.8
<i>answered question</i>				<b>258</b>
<i>skipped question</i>				<b>19</b>

## Appendix E: BTA Compliance Tables

**Table E-1: El Segundo BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	49-54	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	41-42	
	c) A map and description of existing and proposed bikeways.	46-47, 58-61	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	47-48, 63-65	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	47-48, 63-65	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	47-48, 63-65	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	48-49, 56-58, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	49, 14-16, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 44-45	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	66-67	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	49, 66	

**Table E-2: Gardena BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	83-89	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	77-79	
	c) A map and description of existing and proposed bikeways.	80-82, 92-95	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	82, 96-98	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	82, 96-98	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	82, 96-98	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	83, 90-91, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 83, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 80	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	100-103	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	83, 99-100	

**Table E-3: Hermosa Beach BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	121-127	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	113-115	
	c) A map and description of existing and proposed bikeways.	118-119, 10-134	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	119-120, 134-136	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	119-120, 134-136	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	119-120, 134-136	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	120, 128-129, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 121, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 116-117	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	138-140	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	120, 137-138	



**Table E-4: Lawndale BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	155-161	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	149-151	
	c) A map and description of existing and proposed bikeways.	153-154, 164-167	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	153-155, 168-170	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	153-155, 168-170	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	153-155, 168-170	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	155, 162-164, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 155, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 152	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	171-173	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	155, 170-171	

**Table E-5: Manhattan Beach BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	189-195	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	181-183	
	c) A map and description of existing and proposed bikeways.	185-186, 198-201	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	185-187, 202-204	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	185-187, 202-204	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	185-187, 202-204	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	187-188, 196-198, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 188-189, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 184-185	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	206-209	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	188, 205-206	

**Table E-6: Redondo Beach BTA Requirement Check List**

Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	229-235	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	219-220	
	c) A map and description of existing and proposed bikeways.	224-226, 238-243	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	226-227, 244-247	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	226-227, 244-247	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	266-227, 244-247	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	227-228, 236-238, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 229, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 221-223	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	248-251	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	228, 245- 248	

**Table E-7: Torrance BTA Requirement Check List**

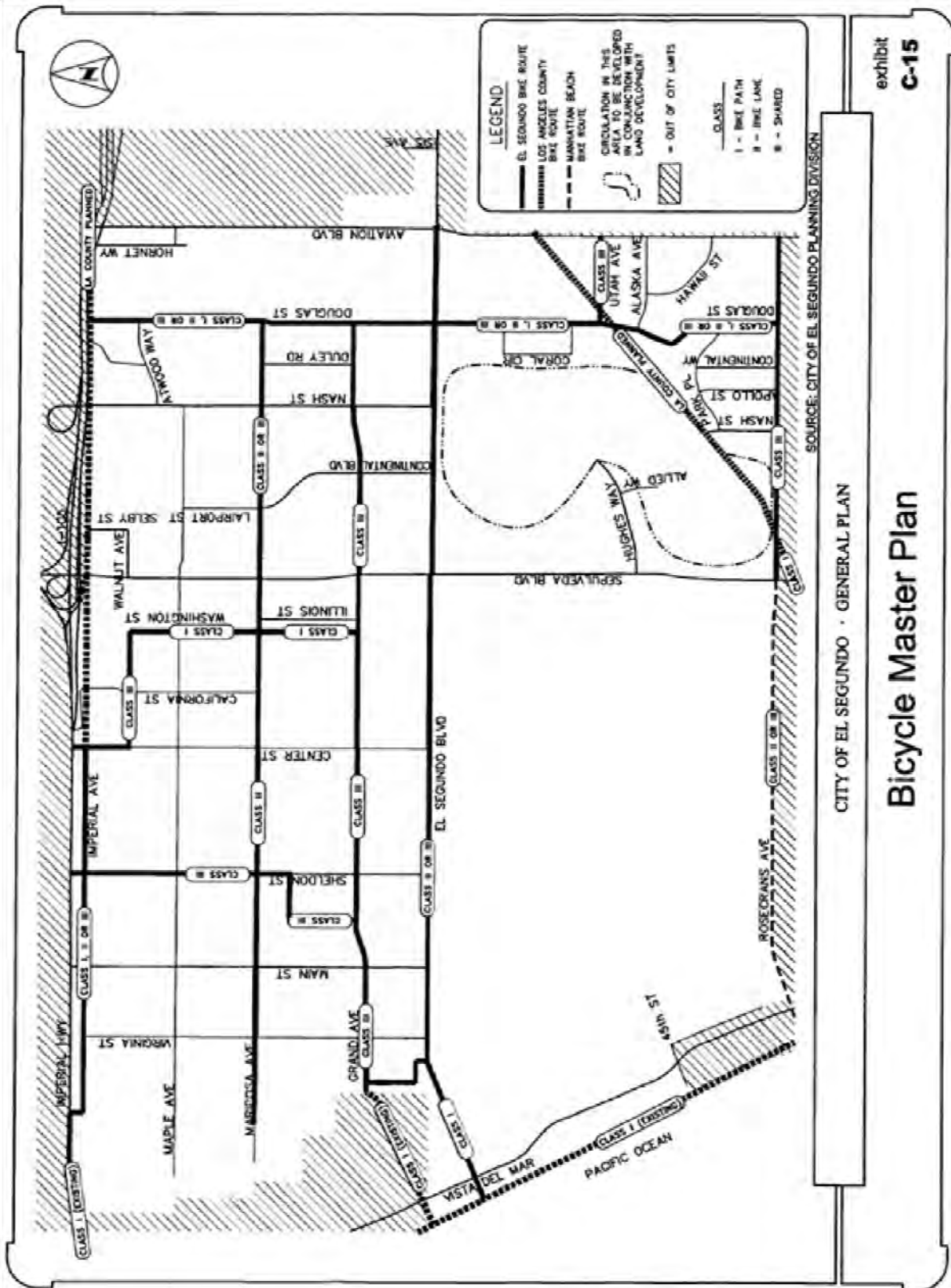
Approved	Requirement	Page(s)	Notes/Comments
	a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	270-275	
	b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	261-263	
	c) A map and description of existing and proposed bikeways.	264-268, 279-283	
	d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	265-269, 285-287	
	e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	265-269, 285-287	
	f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	265-269, 285-287	
	g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.	269, 277-279, 303-314	
	h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.	14-16, 270, 449-450	

## Appendices

Approved	Requirement	Page(s)	Notes/Comments
	i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	32-38, 264	
	j) A description of the projects proposed in the plan and a listing of their priorities for implementation.	290-293	
	k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	270, 289-290	



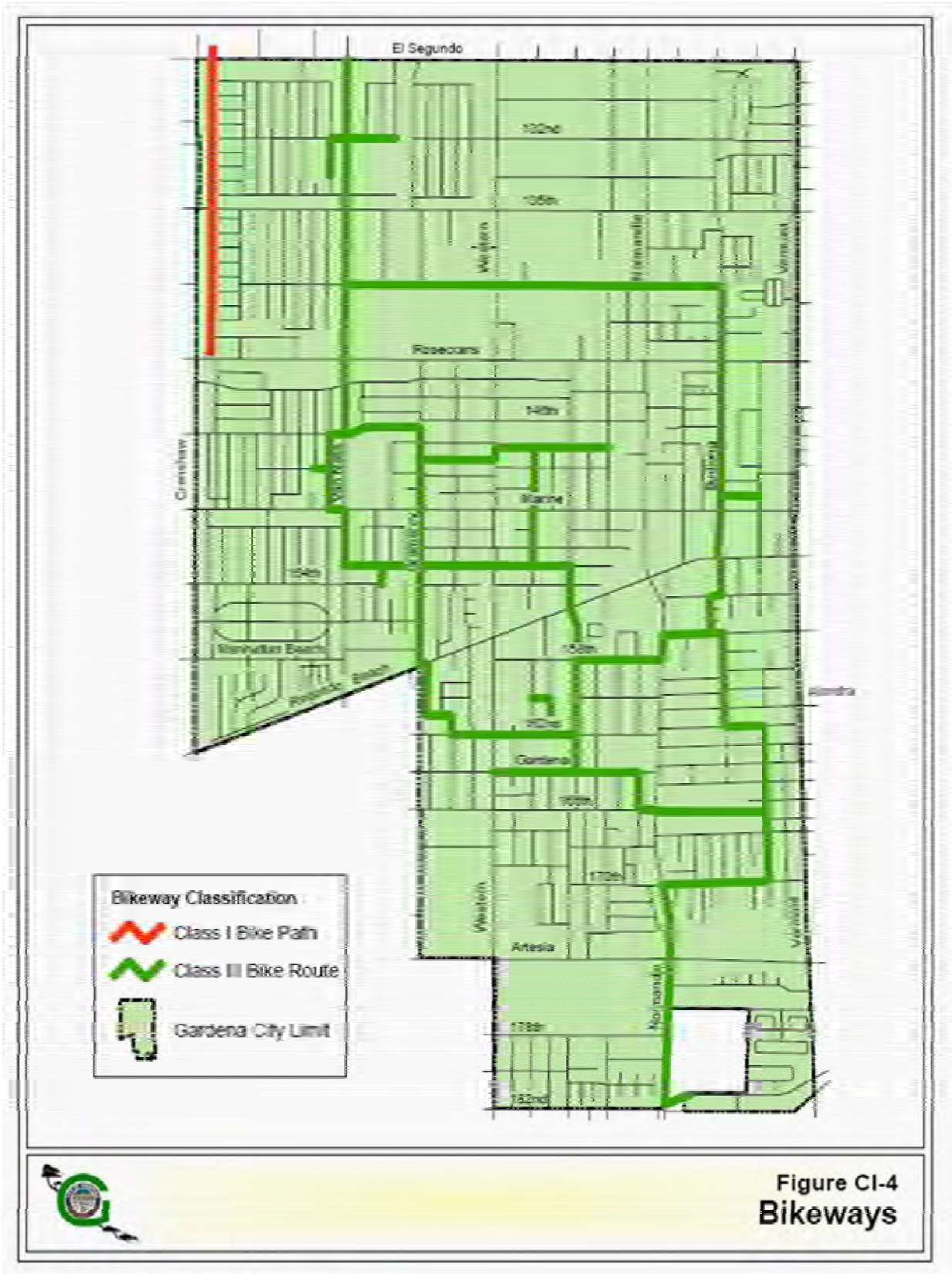
## **Appendix F: Participating City Existing Bicycle Plan Maps**



**Appendix F-1: City of El Segundo Bicycle Master Plan**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: City of El Segundo (1992)



**Appendix F-2: City of Gardena Bikeways Map**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: City of Gardena (2008)



**Appendix F-3: City of Hermosa Beach Proposed Bike Master Plan**

**South Bay Bicycle Master Plan**

El Segundo • Gardena • Hermosa Beach • Lawndale • Manhattan Beach • Redondo Beach • Torrance  
Source: City of Hermosa Beach (2009)

# City-wide Bikeway Plan



**Appendix F-4: Manhattan Beach City-wide Bikeway Plan**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Torrance - The Pointe - Lawndale - Manhattan Beach - Hermosa Beach - Redondo Beach  
 Source: City of Manhattan Beach (2005)



**LOCAL BIKEWAYS - Existing & Proposed**  
**North Redondo Beach**



December 6, 2005



**Appendix F-5: City of Redondo Beach Existing and Proposed Bikeways Map**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Homewood Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: City of Redondo Beach (2005)



**LOCAL BIKEWAYS - Existing & Proposed**  
 South Redondo Beach

December 8, 2008



**Appendix F-6: City of Redondo Beach Existing and Proposed Bikeways Map**

**South Bay Bicycle Master Plan**  
 El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
 Source: City of Redondo Beach (2008)



**Appendix F-7: City of Torrance Bicycle Master Plan**

**South Bay Bicycle Master Plan**

El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance  
Source: City of Torrance (2008)



## Appendix G: City Municipal Code Bicycle Parking Related Sections

City	Municipal Code Section
El Segundo	<p><b>15.15.5 (I)</b> No bicycle spaces are required at single-family and two-family dwellings. Multi-family residential establishments shall provide bicycle spaces that total to 10 percent of the required vehicle parking spaces for projects with six or more units.</p> <p><b>15.15.6 (B)</b> Nonresidential uses are required to provide a minimum of four spaces for buildings up to 15,000 square feet plus a minimum of five percent of the required vehicle spaces for the portion above 15,000 square feet and a maximum of 25 spaces.</p> <p><b>15.16.3 (A)</b> Nonresidential development of 25,000 square feet or more and all projects within the Urban Mixed-Use Zone must provide bicycle route and facility information including regional/local bicycle maps and bicycle safety information.</p> <p><b>15.16.3 (B)</b> Nonresidential development of 50,000 square feet or more must comply with subsection A (provide bicycle route and facility information) and must provide bicycle racks or other secure bicycle parking spaces. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location must be provided to the satisfaction of the Director of Planning and Building Safety. If nonresidential development of 50,000 square feet or more provide shower and locker facilities for bicycle riders, the number of preferential parking spaces required may be reduced by up to three percent and the total number of required spaces may be reduced up to one percent.</p>

City	Municipal Code Section
Hermosa Beach	<p><b>17.44. 210</b> Parking Plans – parking for development may be reduced based on a Parking Plan approved by the planning commission based on various factors including bicycle and foot traffic.</p> <p><b>17.38.550(I)(5)</b> Specific Plan Area No. 11 zone - (encompasses parcels fronting Pier Avenue between Valley Drive and Hermosa Avenue excluding parcels fronting Hermosa Avenue). Secure bicycle parking facilities shall be supplied at the rate of one space per seven employees or 3,000 square feet of floor area. Bicycle facilities installed onsite shall not be placed within required pedestrian ways. Where facilities cannot be accommodated onsite as determined by the community development director or planning commission, the developer shall pay a commensurate fee adopted by the city for the provision and installation of bicycle parking facilities along Pier Avenue in a manner determined by the public works director. 'Secure' facilities means firmly attached devices in well-lit locations, protected from rain if feasible.</p> <p><b>17.48.030</b> Transportation demand and trip reduction measures</p> <p><b>B(1)</b> Nonresidential development of 25,000 square feet or more shall provide bicycle route and facility information, including regional/local bicycle maps, bicycle safety information, and a listing of facilities available for bicyclists at the site.</p> <p><b>B(2)</b> Nonresidential development of 50,000 square feet or more shall comply with subsection B(1) of this section and shall provide bicycle racks or other secure bicycle parking to accommodate four bicycles per the first 50,000 square feet of nonresidential development and one bicycle per each additional 50,000 square feet of nonresidential development. Calculations which result in a fraction of 0.5 or higher shall be rounded up to the nearest whole number. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location (e.g., provision of racks, lockers, or locked room) shall be to the satisfaction of the city.</p> <p><b>B(3)</b> Nonresidential development of 100,000 square feet or more shall comply with subsections B(1) and (2) of this section, and shall provide safe and convenient access from the external circulation system to bicycle parking facilities onsite.</p>

Los Angeles County Bicycle Coalition and South Bay Bicycle Coalition  
South Bay Bicycle Master Plan

City	Municipal Code Section
Lawndale	<p><b>17.56.120</b> C-3 unlimited commercial zone – Video arcades</p> <p><b>B(4)</b> Bicycle racks shall be provided within 25 feet of any game arcade and must provide a total of at least two bicycle stalls for every four games located within the arcade. Bicycle racks shall not be located in any required landscape areas, entrances, exits, walkways to buildings, driveways, within any legally required parking space, public way, or in such a fashion as to obstruct any entrance or exit to any premises.</p> <p><b>17.92.030</b> Transportation demand and trip reduction measures</p> <p><b>B(1)</b> Nonresidential development of 25,000 square feet or more shall provide bicycle route and facility information, including regional/local bicycle maps and bicycle safety information, and a list of existing of facilities available bicyclists at the site.</p> <p><b>C(3)</b> Nonresidential development of 50,000 square feet or more shall comply with subsection (B) of this section and shall provide bicycle racks or other secure bicycle parking to accommodate four bicycles per the first 50,000 square feet of nonresidential development and one bicycle per each additional 50,000 square feet of nonresidential development. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location (e.g., provision of racks, lockers, or locked room) shall be to the satisfaction of the City.</p> <p><b>D</b> Nonresidential development of 100,000 square feet or more shall comply with subsections (B) and (C) of this section, and shall provide safe and convenient access from the external circulation system to bicycle parking facilities onsite.</p>
Manhattan Beach	<p><b>10.64.080</b> Bicycle Parking</p> <p><b>A.</b> Where Required - Bicycle parking spaces shall be provided as required by this section; the provisions of Section 10.64.020 shall apply.</p> <p><b>B.</b> Number Required.</p> <p>1. Public and Semipublic Use Classifications: as specified by use permit.</p> <p>2. Commercial Use Classifications: Five percent of the requirement for automobile parking spaces, except for the following classifications, which are exempt:</p> <ul style="list-style-type: none"> <li>a. Ambulance Services;</li> <li>b. Animal Boarding;</li> <li>c. Animal Grooming;</li> <li>d. Catering Services;</li> <li>e. Commercial Filming;</li> <li>f. Horticulture, Limited;</li> <li>g. Funeral and Interment Services;</li> <li>h. Vehicle/Equipment Sales and Services (all classifications).</li> </ul> <p>3. Industrial Use Classification. None.</p> <p><b>C.</b> Design Requirements. For each bicycle parking space required, a stationary object shall be provided to which a user can secure both wheels and the frame of a bicycle with a user-provided six-foot (6') cable and lock. The stationary object may be either a freestanding bicycle rack or a wall-mounted bracket.</p>

City	Municipal Code Section
Redondo Beach	<p><b>10-2.2406</b> Development standards</p> <p>(a) Nonresidential development of 25,000 square feet or more shall provide bicycle route and facility information, including regional/local bicycle maps and bicycle safety information, and a list of existing of facilities available bicyclists at the site.</p> <p>(b) Nonresidential development of 50,000 square feet or more shall comply with subsection (a) of this section and shall provide bicycle racks or other secure bicycle parking to accommodate four bicycles per the first 50,000 square feet of nonresidential development and one bicycle per each additional 50,000 square feet of nonresidential development. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather. Specific facilities and location (e.g., provision of racks, lockers, or locked room) shall be to the satisfaction of the City.</p> <p>(c) Nonresidential development of 100,000 square feet or more shall comply with subsections (a) and (b) of this section, and shall provide safe and convenient access from the external circulation system to bicycle parking facilities onsite.</p>
Torrance	<p><b>910.3.2</b> Development Standards</p> <p>a) Nonresidential development twenty-five thousand (25,000) square feet or more shall provide the following:</p> <p>1)D) A bulletin board, display case or kiosk displaying transportation information located where the greatest number of employees are likely to see it. Information on the board, case or kiosk shall include, but is not limited to bicycle route and facility information, including regional/local bicycle maps and bicycle safety information.</p> <p>1)E) A listing of facilities available for carpoolers, vanpoolers, bicyclists, transit riders and pedestrians at the site.</p> <p>b) 3) Nonresidential development of fifty thousand (50,000) square feet or more shall comply with subsection a) above and shall provide bicycle racks or other secure bicycle parking to accommodate four (4) bicycles for the first fifty thousand (50,000) square feet of nonresidential development and one (1) bicycle rack for each additional fifty thousand (50,000) square feet of nonresidential development. Calculations which result in a fraction of 0.5 or higher shall be rounded up to the nearest whole number. A bicycle parking facility may also be a fully enclosed space or locker accessible only to the owner or operator of the bicycle, which protects the bike from inclement weather.</p> <p>c)4) Nonresidential development of one hundred thousand (100,000) square feet or more shall comply with subsections a) and b) above, and shall provide safe and convenient access from the external circulation system to onsite bicycle parking facilities.</p>

## Appendix H: Bicycle Count Data

**Table H-1: South Bay Bicycle Counts Thursday, November 4, 2010 3:00 p.m. to 6:00 p.m.**

Count Location	Number of Bicyclists						
	Males	Females	Child Under 13	On Sidewalk	With Helmet	Wrong Way	Total
<b>El Segundo</b>							
Center St / Mariposa Ave	17	0	2	9	10	3	<b>19</b>
Douglas St / Green Line Station (near Park Place)	49	7	1	32	20	2	<b>57</b>
El Segundo Blvd/ Nash St (Green Line Station)	34	2	2	23	9	4	<b>38</b>
El Segundo Blvd / Sepulveda Blvd	32	1	1	25	26	0	<b>34</b>
Main St / Grand Ave	37	7	2	34	17	0	<b>46</b>
Main St / Imperial Highway	25	1	1	13	3	2	<b>27</b>
Mariposa Ave / Nash St (Green Line Station)	54	1	0	38	24	2	<b>55</b>
Rosecrans Ave / Aviation	48	2	0	37	42	0	<b>50</b>
Rosecrans Ave / Sepulveda Blvd	20	1	0	21	14	0	<b>21</b>
<b>Gardena</b>							
Crenshaw Blvd / Manhattan Beach Blvd	90	14	2	97	85	1	<b>106</b>
Normandie Ave / Gardena Blvd	49	2	0	49	46	0	<b>51</b>
Redondo Beach Blvd / Crenshaw Blvd	53	12	1	62	51	25	<b>66</b>
Normandie Ave / 182 <sup>nd</sup> St	26	1	0	22	20	0	<b>27</b>
<b>Hermosa Beach</b>							
Valley Dr / 8th St	31	7	2	24	8	2	<b>40</b>
Hermosa Ave / 8 <sup>th</sup> St	122	30	0	93	8	0	<b>152</b>
Hermosa Ave / 24 <sup>th</sup> St	103	14	2	43	7	4	<b>119</b>
Monterey Ave / Pier Ave	97	21	6	109	33	22	<b>124</b>
Pacific Coast Highway / Pier Ave	28	4	0	29	28	4	<b>32*</b>
Valley Dr / 21st St	8	2	15	6	16	16	<b>25</b>
<b>Lawndale</b>							
Grevillea Ave / 163 <sup>rd</sup> St	13	1	1	5	0	0	<b>15</b>
Manhattan Beach Blvd/Inglewood Ave	72	8	0	74	70	1	<b>80</b>
Marine Ave/Hawthorne Blvd	119	4	11	127	110	0	<b>134</b>
Marine Ave / Inglewood Ave	89	8	7	96	95	0	<b>104</b>
Rosecrans Ave / Prairie Ave	93	7	0	96	83	0	<b>100</b>

Appendices

Count Location	Number of Bicyclists						
	Males	Females	Child Under 13	On Sidewalk	With Helmet	Wrong Way	Total
<b>Manhattan Beach</b>							
Artesia Blvd / Peck Ave	10	3	0	8	1	0	<b>13</b>
Highland Ave / Rosecrans Ave	18	2	0	12	5	0	<b>20</b>
Manhattan Beach Blvd / Redondo Ave	34	3	18	18	30	0	<b>55</b>
Manhattan Beach Blvd / Manhattan Ave	58	15	2	50	3	4	<b>75</b>
Marine Ave / Redondo Ave	28	2	0	18	11	1	<b>30</b>
Valley Dr / Pacific Ave	22	4	3	15	1	1	<b>29</b>
<b>Redondo Beach</b>							
Harbor Dr / Beryl St	380	114	5	343	28	4	<b>499</b>
Prospect Ave / Torrance Blvd	67	8	11	44	41	1	<b>86</b>
Redondo Beach Ave / Manhattan Beach Blvd	47	4	4	27	12	2	<b>55</b>
<b>Torrance</b>							
190th St / Anza	54	6	0	37	33	0	<b>60</b>
Torrance Blvd / Madrona Ave	43	3	6	27	30	0	<b>52</b>
Pacific Coast Highway / Calle Mayor	43	1	0	16	25	1	<b>44</b>

\*The counts at this location were from 4:00 p.m. to 6:00 p.m.

**Table H-2: South Bay Bicycle Counts Saturday, November 6, 2010 10:30 a.m. to 1:30 p.m.**

Count Locations	Number of Bicyclists						
	Males	Females	Child Under 13	On Sidewalk	With Helmet	Wrong Way	Total
<b>El Segundo</b>							
Center St / Mariposa Ave	3	0	1	3	3	0	<b>4</b>
El Segundo Blvd/ Nash St (Green Line Station)	12	2	0	10	9	10	<b>14</b>
El Segundo Blvd / Sepulveda Blvd	7	0	2	8	7	0	<b>9</b>
Main St / Grand Ave	51	10	4	40	21	2	<b>65</b>
Main St / Imperial Highway	30	1	0	7	0	1	<b>31</b>
Mariposa Ave / Nash St (Green Line Station)	17	0	0	10	8	3	<b>17</b>
Rosecrans Ave / Aviation	30	2	0	24	20	8	<b>32</b>
Rosecrans Ave / Sepulveda Blvd	19	9	0	7	1	1	<b>28</b>
Douglas St / Green Line Station (near Park Place)	20	1	0	12	2	0	<b>21</b>
<b>Gardena</b>							
Normandie Ave / Gardena Blvd	33	6	5	40	36	1	<b>44</b>
Redondo Beach Blvd / Arcturus Ave	38	3	2	39	11	5	<b>43</b>
Redondo Beach Blvd / Crenshaw Blvd	53	3	0	49	38	2	<b>56</b>
<b>Hermosa Beach</b>							
Hermosa Ave / 8th St	294	87	4	130	13	1	<b>385</b>
Hermosa Ave / 24th St	584	280	58	619	0	0	<b>922</b>
Monterey Ave / Pier Ave	40	15	4	40	12	1	<b>59</b>
Pacific Coast Highway / Pier Ave	57	12	8	50	57	0	<b>77</b>
Valley Dr / 8th St	59	20	4	41	10	1	<b>83</b>
Valley Dr / 21st St	5	1	1	2	0	0	<b>7</b>
Prospect Ave / 18th St	1	0	0	0	0	0	<b>1</b>
<b>Lawndale</b>							
Manhattan Beach Blvd/Inglewood Ave	39	8	0	37	30	0	<b>47</b>
Marine Ave/Hawthorne Blvd	70	4	12	84	65	31	<b>86</b>
<b>Manhattan Beach</b>							
Artesia Blvd / Peck Ave	11	6	0	10	4	0	<b>17</b>
Highland Ave / Rosecrans Ave	111	26	0	21	6	0	<b>137</b>
Manhattan Beach Blvd / Redondo Ave	31	5	0	19	11	0	<b>36</b>

Appendices

Count Locations	Number of Bicyclists						
	Males	Females	Child Under 13	On Sidewalk	With Helmet	Wrong Way	Total
Manhattan Beach Blvd / Manhattan Ave	149	45	29	107	54	8	<b>223</b>
Manhattan Beach Blvd / The Strand	433	124	32	335	10	38	<b>589</b>
Valley Dr / Pacific Ave	19	5	3	15	2	0	<b>27</b>
Marine Ave / Redondo Ave	18	3	2	13	6	0	<b>23</b>
<b>Redondo Beach</b>							
Esplanade / Avenue C	249	76	0	67	12	8	<b>325</b>
Herondo Street / The Strand	461	236	35	528	0	0	<b>732</b>
Marvin Braude Bikeway (The Strand) / Ave. F	310	126	24	277	0	0	<b>460</b>
Prospect / Torrance	92	16	6	47	32	14	<b>114</b>
Redondo Beach Ave / Manhattan Beach Blvd	30	7	1	27	18	1	<b>38</b>
<b>Torrance</b>							
190th St / Anza	32	7	14	33	26	14	<b>53</b>
Palos Verdes Blvd / Catalina Ave	58	14	10	31	14	6	<b>82</b>
Sepulveda Blvd / Crenshaw Blvd	35	6	4	29	40	0	<b>45</b>



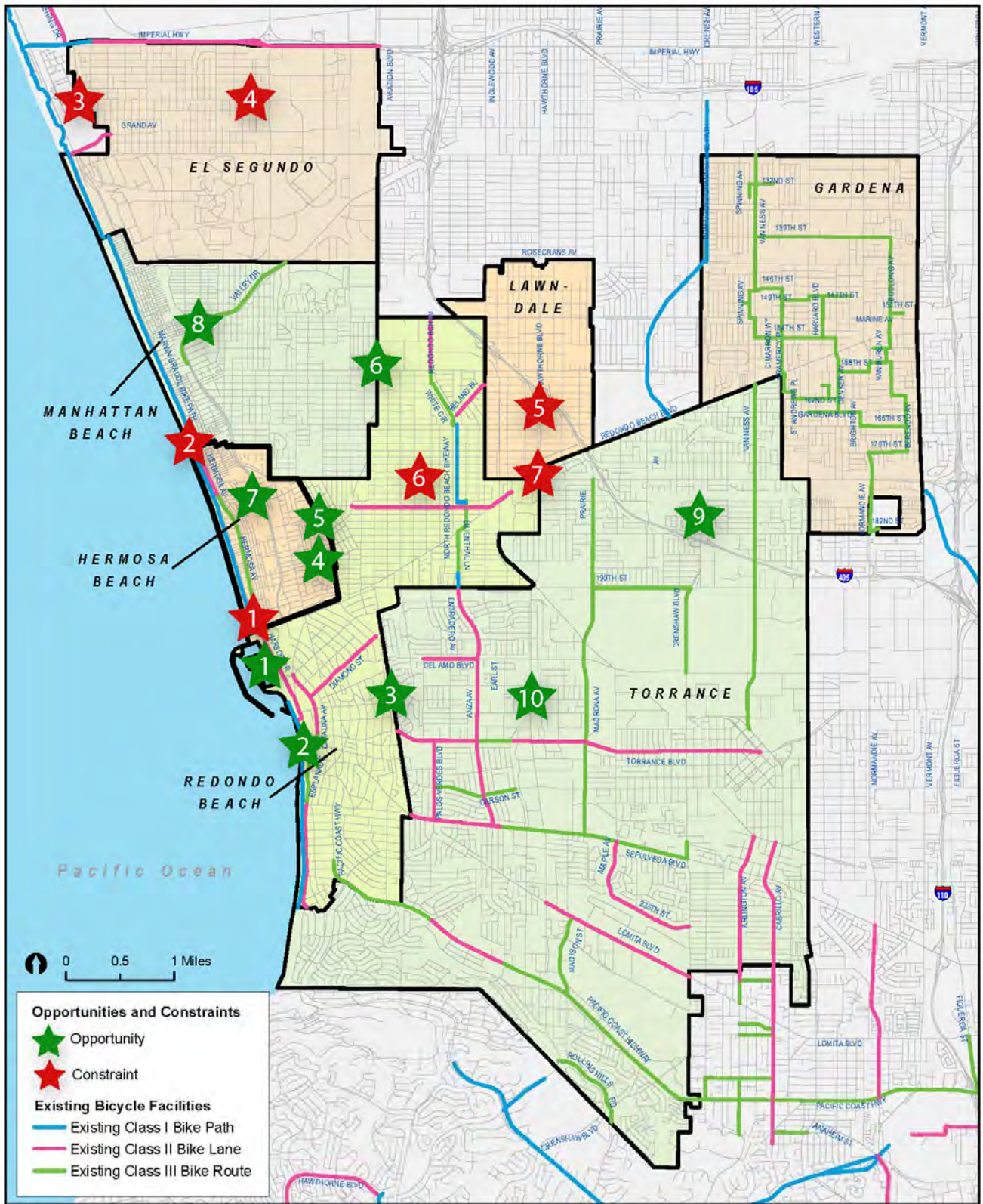
## Appendix I: Opportunities and Constraints

There are several opportunities and constraints in implementing bicycle facilities in the South Bay Region. Opportunities and constraints for new bicycle facilities are discussed below. They are also shown on the map following the table below.

ID Number	Opportunities and Constraints
Opportunities	
1	Proposed Class I on Harbor Drive: See Vitality City’s Livability Plan for further detail.
2	Proposed Class II on Catalina: See Vitality City’s Livability Plan for further detail.
3	Proposed Class III on Prospect Avenue in Redondo Beach: See Vitality City’s Livability Plan for further detail.
4	Proposed Bike Friendly Street on Prospect Avenue in Hermosa Beach: See Vitality City’s Livability Plan for further detail.
5	Proposed Class II on Aviation Blvd in Hermosa Beach: Hermosa Beach’s section of Aviation Blvd is particularly rich with retail and commercial uses. Bike facilities could greatly improve the area’s visibility and access. See Vitality City’s Livability Plan for further detail.
6	Proposed Class II on Aviation Blvd in Redondo Beach and Manhattan Beach: This major thoroughfare provides significant connectivity between residences and major employment centers and thus will encourage increased bike commuting to these destinations. See Vitality City’s Livability Plan for further detail.
7	Proposed Class III on Valley/Ardmore in Hermosa Beach: While this plan recommends a Class III route, the Vitality City Livability Plan recommends additional options. See the Vitality City Livability Plan for further detail and opportunities.
8	Proposed Class III on Valley/Ardmore in Manhattan Beach: While this plan recommends a Class III route, the Vitality City Livability Plan recommends additional options. See the Vitality City Livability Plan for further detail and opportunities.
9	Crenshaw Boulevard in Torrance: While it is not feasible to propose bicycle lanes on Crenshaw Boulevard at the time of this Plan, there may be opportunity in the future if the street undergoes reconstruction or other changes that would provide adequate space. There may also be opportunity to proposed parallel facilities as Crenshaw Boulevard is an important regional connection.
10	Hawthorne Boulevard in Torrance: While it is not feasible to propose bicycle lanes on Hawthorne Boulevard at the time of this Plan, there may be opportunity in the future if the street undergoes reconstruction or other changes that would provide adequate space. There may also be opportunity to propose parallel facilities as Hawthorne Boulevard is an important regional connection.
Constraints	
1	“The Wall” on the Strand at Hermosa Beach / Redondo Beach: This wall severs the Marvin Braude Bikeway at the Hermosa Beach-Redondo Beach border. South-bound bicyclists are forced to make a sharp 90-degree and are led out to the bike lanes on Harbor Drive. This plan recommends the removal of the wall and that parking lot 13 in Redondo Beach be partially utilized to accommodate a short extension of the Class I facility that will lead to Harbor Drive in a safer and more navigable

## Appendices

	way.
2	The stairs on the Strand between Hermosa Beach and Manhattan Beach: This constraint is also noted as being outside this plan's jurisdiction because those stairs (along with the rest of the Strand with the exception of Hermosa Beach) are operated by the State and maintained by the County of Los Angeles. However, this plan urges the cities to remedy the disruption caused by the stairs. This remedy could come in several forms ranging from a bike-friendly ramp that connects the two sections of the Strand to signage that warns cyclists of the disruption and safely guides them to facilities along Hermosa Ave.
3	Proposed Class I in El Segundo east of the waste processing plant: This facility would require the City to gain approval from Los Angeles Department of Water and Power (LADWP) as this land is LADWP right-of-way. The facility would run underneath the right of way of high-tension power lines. An example of such a facility can be seen in Redondo Beach along the North Redondo Beach Bikeway.
4	Proposed Class I in El Segundo between Walnut and Holly: This facility would require the City to gain approval from Los Angeles Department of Water and Power (LADWP) as this land is LADWP right-of-way. The facility would run underneath the right of way of high-tension power lines. An example of such a facility can be seen in Redondo Beach along the North Redondo Beach Bikeway.
5	Proposed Class II along Hawthorne Blvd in Lawndale: This facility poses some unique constraints in terms of space availability. This is a busy thoroughfare that is dense with commercial and retail uses. This Plan recommends the consideration of a Class II facility along Hawthorne Blvd to the extent feasible. One option to consider would be to utilize the necessary space along the center parking landscaped median rather than removing on street parking or travel lanes.
6	Proposed Class II on Artesia Blvd in Redondo Beach: Artesia Blvd between Aviation Blvd and the city's eastern boundary has undergone an extensive streetscape improvement in recent history. These improvements included an extensively landscaped center median and bulb-outs. As such, this facility is one that can be considered in any future streetscape improvements that might be implemented along Artesia in the years to come.
7	Proposed Class II along Redondo Beach Boulevard from Hawthorne Boulevard to Artesia Boulevard in Lawndale/Redondo Beach: This segment experiences high vehicular traffic volumes due to the South Bay Galleria, which creates a challenging environment for bicyclists. Upon plan implementation, Lawndale and Redondo Beach should work together to design a facility that provides safety for bicyclists.



**Appendix I: Opportunities and Constraints in the South Bay Region**

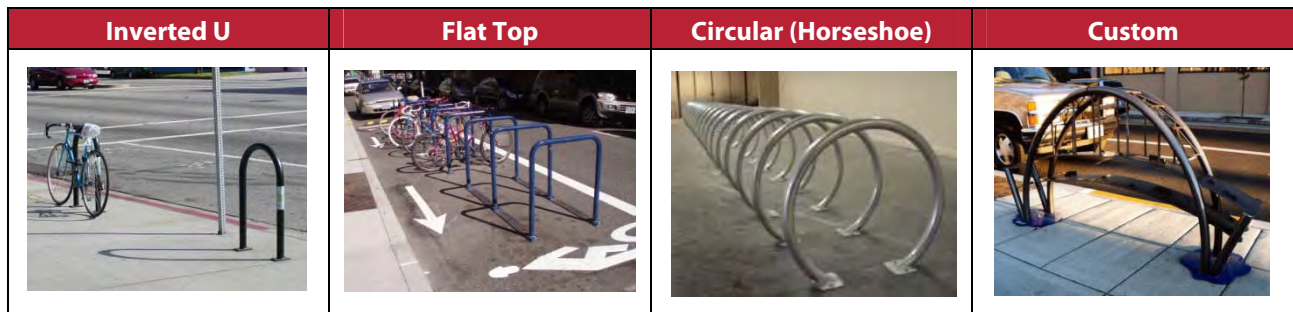
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## Appendix J: Recommended Bicycle Parking Standards

### Short-term Bicycle Parking

Short-term bicycle parking comes in the form of bicycle racks that are meant for storing bicycles up to two hours. Bicycle rack designs should include racks that provide two points of contact with the bicycle so that it can be locked from both the front wheel/frame and the rear wheel. This will provide a high degree of security and support for the bicycle. Recommended bicycle rack types include the inverted U rack (commonly known as the U rack), flat top rack, post and ring rack, and custom racks that provide the security mentioned above.



### Long-term Bicycle Parking

Commuters and other bicyclists that plan to stay at their destinations more than two hours require more secure bicycle parking. Long-term bicycle parking should be in the form of:

- Covered, lockable enclosures with permanently anchored racks for bicycles;
- Lockable bicycle rooms with permanently anchored racks; or
- Lockable, permanently anchored bicycle lockers.

Bicycle lockers can hold up to two bicycles and come in a variety of materials, such as metal and polyethylene.



### High Volume Bicycle Parking

Where bicycle parking demand is high, more formal structures and larger facilities should be provided. Several options for high-volume bicycle parking are outlined below.

### On-Street Bike Parking Corral

A relatively inexpensive solution to providing high-volume bicycle parking is to convert one or two on-street motor vehicle parking spaces into on-street bicycle parking. Bike racks are installed in the street and protected from motor vehicles with removable curbs and bollards. These facilities move bicycles off the sidewalks, and leave space for sidewalk café tables or pedestrians. Bicycle parking does not block sightlines like motor vehicles do, so it may be possible to locate bicycle parking in no-parking zones near intersections and crosswalks.



Bike parking corral in Portland, Oregon

### Bike Oasis

Bike Oases are installed on curb extensions and consist of attractive covered bike parking and an information panel. Portland's Bike Oases, for example, provide parking space for ten bikes. Bike and walking maps are installed on the information panel.



Bike oasis parking area in Portland, Oregon

### Bike Station

Bike Stations serve as one-stop bicycle service centers for bicycle commuters. They include 24-hour secure bicycle parking and may provide additional amenities such as a store to purchase items (helmets, raingear, tubes, patch kits, bike lights, and locks), bicycle repair facilities, showers and changing facilities, bicycle rentals, and information about biking. Some Bike Stations provide free bike parking, while others charge a fee or require membership.

Bike Stations have been installed in several cities in California, including Long Beach, San Francisco, Los Angeles and Berkeley, as well as in Chicago, and Seattle.

The following amenities should be considered for the Bike Station:

- Attended bicycle parking
- Bicycle rental establishment
- Accessory shop
- Bicycle repair shop
- Changing rooms
- Shower and locker facilities



Bike station in Long Beach, California

### Bicycle Parking Styles Not Recommended

Bicycle rack styles are not recommended if they do not provide two points of contact with the bicycle so that it can be locked from both the front wheel/frame and the rear wheel. Examples of rack styles not

## Appendices

recommended include wheel bender and wave racks. Because both types of racks do not provided two points of contact, parked bicycles are not supported and can fall, which can potentially cause damage to the bicycle. Without two points of contact there are fewer places to lock the bicycle, which reduces the amount of security the racks provide. Wave racks in particular are also not recommended because the lack of two points of contact cause bicycles to tip over and reduce the capacity of the racks.



Wheel Bender Racks



Wave Racks

## Appendix K: Prioritization Methodology

Each criterion contains information about a facility and its ability to address an existing or future need in the participating South Bay city. The resulting project ranking determines each project's relative importance in funding and scheduled construction.

### Prioritization Criteria

The following criteria are used to evaluate each proposed bicycle facility, its ability to address demand and deficiencies in the existing bicycle network, and its ease of implementation. The criteria is organized into "utility" and "implementation" prioritization factors.

#### Utility Prioritization Factors

Utility criteria include conditions of bicycle facilities that enhance the bicycle network. Each criterion is discussed below.

##### Gap Closure

Gaps in the bicycle network come in a variety of forms, ranging from a "missing link" on a roadway to larger geographic areas without bicycle facilities. Gaps in the bikeway network discourage bicycle use because they limit access to key destinations and land uses. Facilities that fill a gap in the existing and proposed bicycle network are of high priority.

##### Connectivity to Existing Facilities

Proposed bikeways that connect to existing bicycle facilities in the participating South Bay city and to the greater South Bay network increase the convenience of bicycle commuting. Proposed facilities that fit this criterion are of high importance to the participating South Bay city.

##### Connectivity to Regional Proposed Facilities

Proposed bikeways in Los Angeles County will eventually become existing bicycle facilities and thus facilities that link to them will enhance future connectivity. This will continue to enhance bicycle travel in the participating South Bay city.

##### Connectivity to Activity Centers

Activity centers include major commuter destinations, such as commercial and employment centers and downtowns. These locations generate many trips which could be made by bicycle if the proper facilities were available. Bicycle facilities on roadways that connect to activity centers are of priority to the participating South Bay city.

##### Connectivity to Multi-Modal Transportation Centers

Bicycle facilities that link to modes of public transportation increase the geographical distance that bicyclists are able to travel. Proposed bicycle facilities that connect to transit stops and centers, and park-and-ride lots improve bicyclist mobility and are therefore key pieces of the bicycle network.

## Appendices

### Safety

Bicycle facilities have the potential to increase safety by reducing the potential conflicts between bicyclists and motorists, which often result in collisions. Proposed facilities that are located on roadways with past bicycle-automobile collisions are important to the City.

### Public Input

The participating South Bay city solicited public input through community workshops and an online survey. Facilities that community members identified as desirable for future bicycle facilities are of priority to the network because they address the needs of the public.

### Underserved Communities

Low-income households often cannot afford to own a vehicle. Providing bicycle facilities to areas that may be dependent on the bicycle as a form of transportation is important to the participating South Bay city.

## **Implementation Prioritization Factors**

Implementation criteria address the ease of implementing each proposed project. Each criterion is discussed below.

### Project Cost

Projects that are less expensive do not require as much funding as other projects and are therefore easier to implement. Projects that cost less are of higher priority to the participating South Bay city.

### Parking Displacement

In order to fit bicycle facilities in the existing right-of-way, on-street parking must be removed on some streets. Because this is not desirable, those projects that do not require parking displacement are of importance to the City.

## **Project Ranking**

Table K-1 shows how the criteria described in the previous section translate into weights for project prioritization and ranking. Weights are based on direct, secondary, or no service at all. Direct service means that a facility intersects with a facility/destination, whereas secondary access occurs when the primary facility runs in close proximity to an existing facility/destination.



**Table K-1: Proposed Facility Weight and Scoring**

Criteria	Score	Multiplier	Total	Description
<b>Utility Prioritization Factors</b>				
Gap Closure	2	3	6	Fills a network gap between two existing facilities
	1	3	3	Fills a network gap between an existing facility and a proposed facility
	0	3	0	Does not directly or indirectly fill a network gap
Connectivity: Existing	2	3	6	Provides direct access to an existing bicycle facility
	1	3	3	Provides secondary connectivity to an existing bicycle facility
	0	3	0	Does not directly or indirectly access an existing bicycle facility
Connectivity: Regional Proposed	2	1	2	Provides direct access to a regional proposed bicycle facility
	1	1	1	Provides secondary connectivity to a regional proposed bicycle facility
	0	1	0	Does not directly or indirectly access a regional proposed bicycle facility
Connectivity: Activity Centers	2	2	4	Provides direct access to a major trip-generating destination
	1	2	2	Provides secondary connectivity to a major trip-generating destination
	0	2	0	Does not directly or indirectly access an Activity Center
Connectivity: Multi-Modal	2	2	4	Provides direct access to a multi-modal transportation center
	1	2	2	Provides secondary connectivity to a multi-modal transportation center
	0	2	0	Does not directly or indirectly access a multi-modal transportation center
Safety	2	1	2	Provides a bicycle facility on a roadway that experienced 3 or more bicycle collisions between 2007-2009
	1	1	1	Provides a bicycle facility on a roadway that experienced 1-2 bicycle collisions between 2007-2009
	0	1	0	Provides a bicycle facility on a roadway that did not experience any bicycle collisions between 2007-2009
Public Input	2	1	2	Roadway was identified by the public as a desirable for a future facility multiple times
	1	1	1	Roadway was identified by the public as desirable for a future facility once
	0	1	0	Roadway was not identified by the public as desirable for a future facility
Underserved Communities	2	1	2	Serves census tract areas in which over 10.1 percent of households do not own a vehicle
	1	1	1	Serves census tract areas in which 3.1 to 10 percent of households do not own a vehicle
	0	1	0	Serves census tract areas in which 3 percent or less of households do not own a vehicle
<b>Implementation Prioritization Factors</b>				
Project Cost	2	1	2	Will cost less than \$25,000 to implement

## Appendices

Criteria	Score	Multiplier	Total	Description
	1	1	1	Will cost between \$25,001 and \$75,000 to implement
	0	1	0	Will cost over \$75,000 to implement
Parking Displacement	2	1	2	Does not require any parking removal
	1	1	1	Requires removal of some on-street parking stalls
	0	1	0	Requires removal of all on-street parking stalls

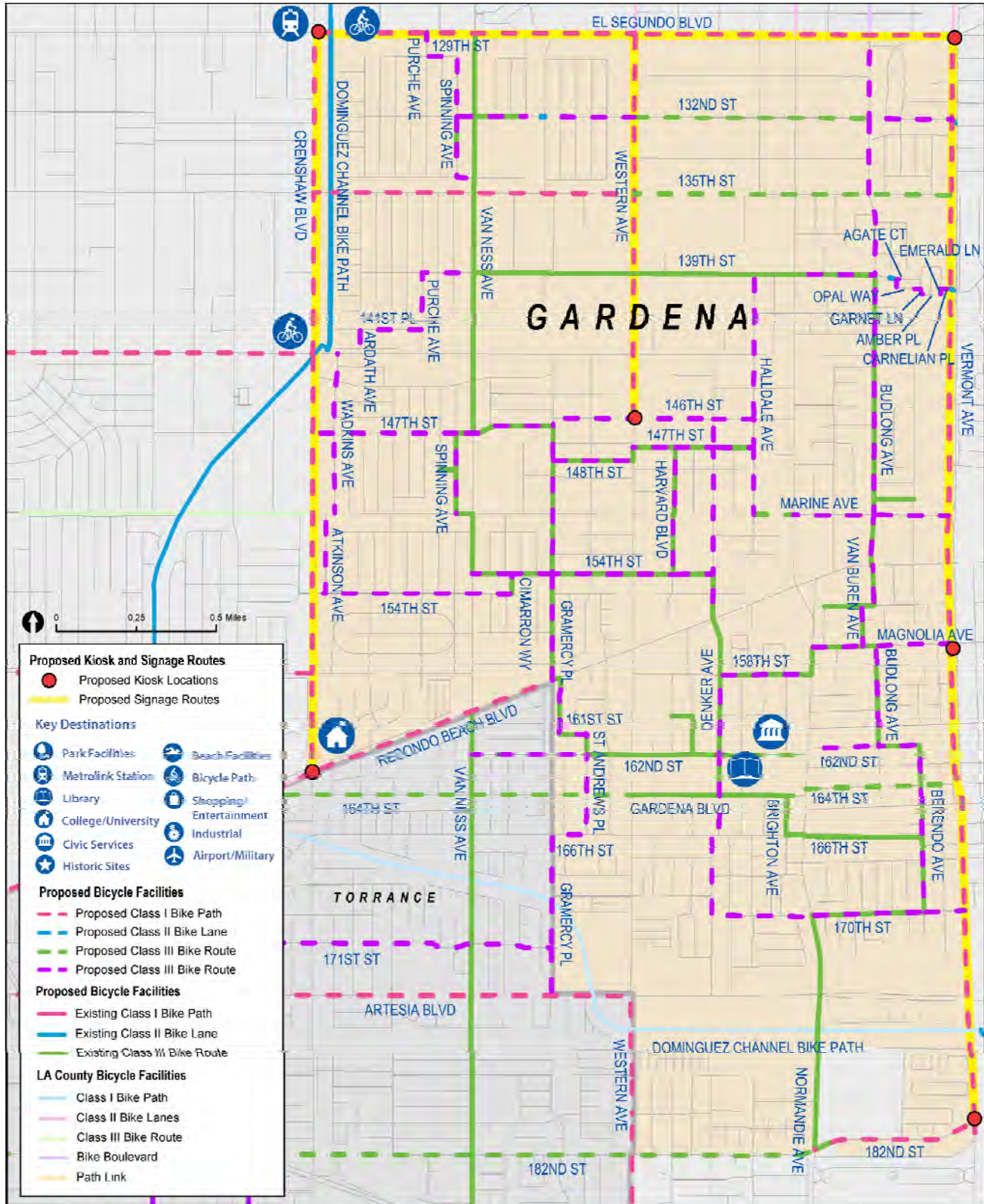
## Appendix L: Proposed Kiosk and Signage Routes



**Appendix L-1: Proposed Kiosk Locations and Signage Routes in El Segundo**

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**Appendix L-2: Proposed Kiosk Locations and Signage Routes In Gardena**

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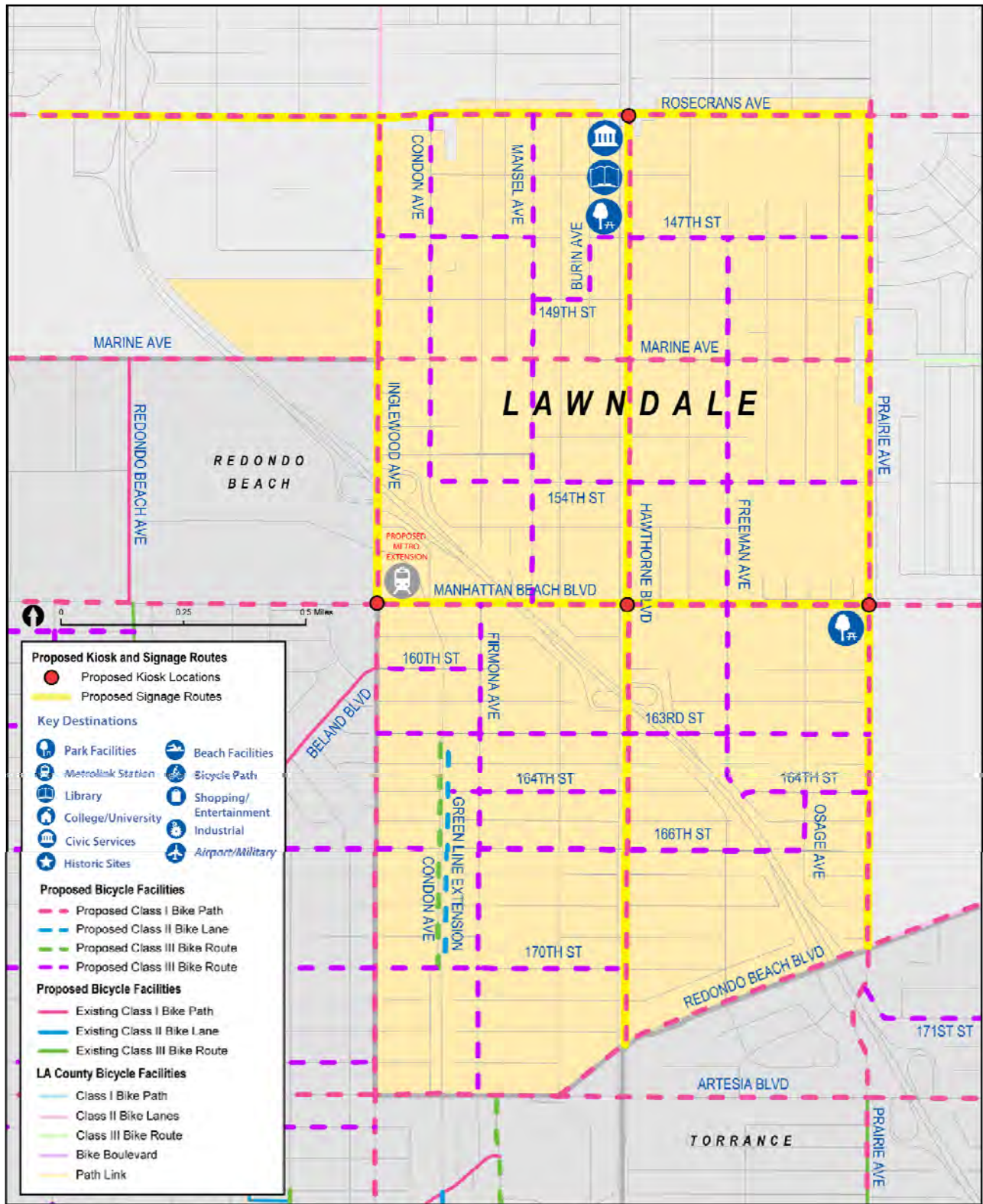
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**Appendix L-3: Proposed Kiosk Locations and Signage Routes in Hermosa Beach**

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**Appendix L-4: Proposed Kiosk Locations and Signage Routes in Lawndale**

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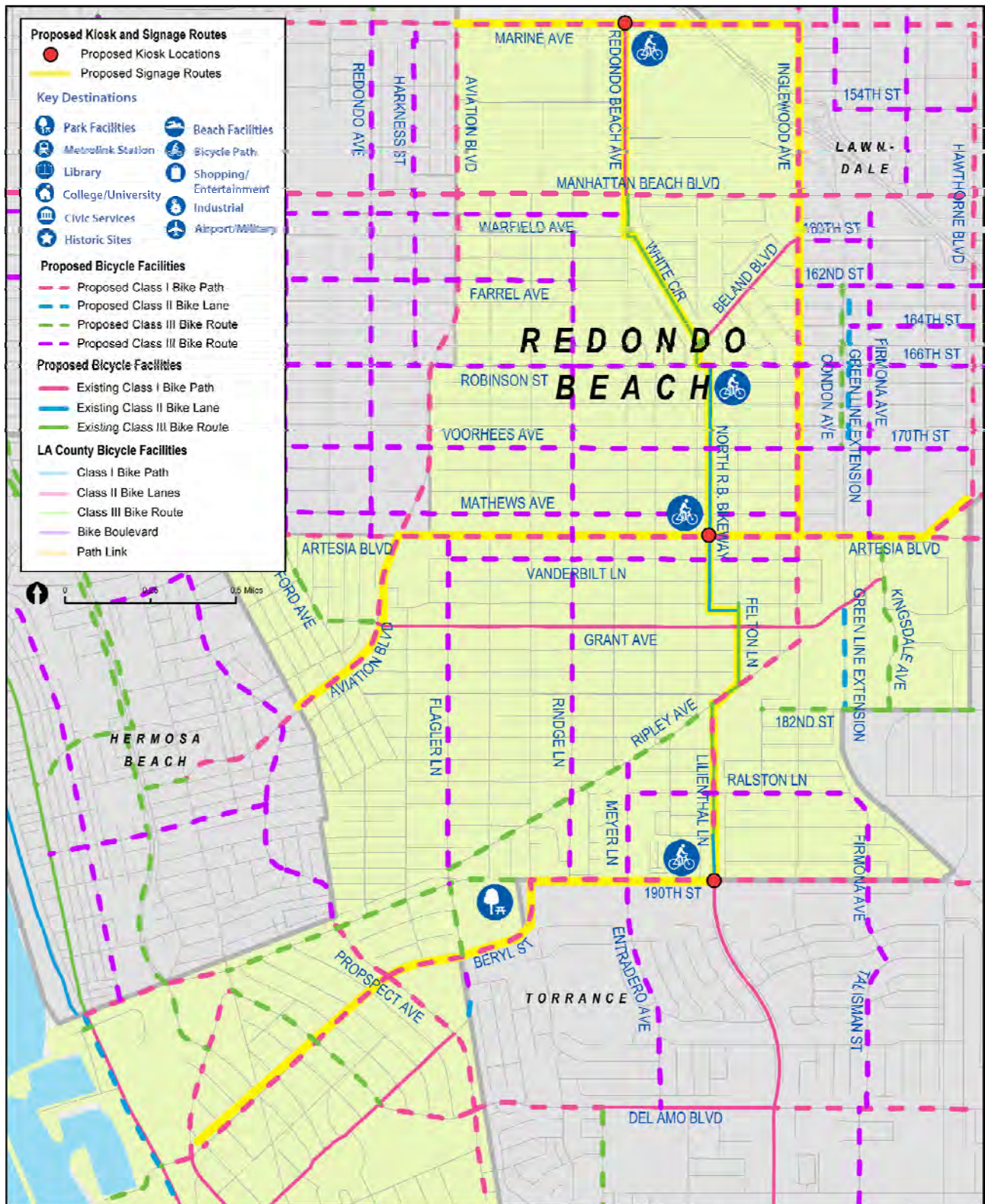
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**Appendix L-5: Proposed Kiosk Locations and Signage Routes in Manhattan Beach**

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El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance



**Appendix L-6a: Proposed Kiosk Locations and Signage Routes in North Redondo Beach**

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El Segundo - Gardena - Hermosa Beach - Lawndale - Manhattan Beach - Redondo Beach - Torrance



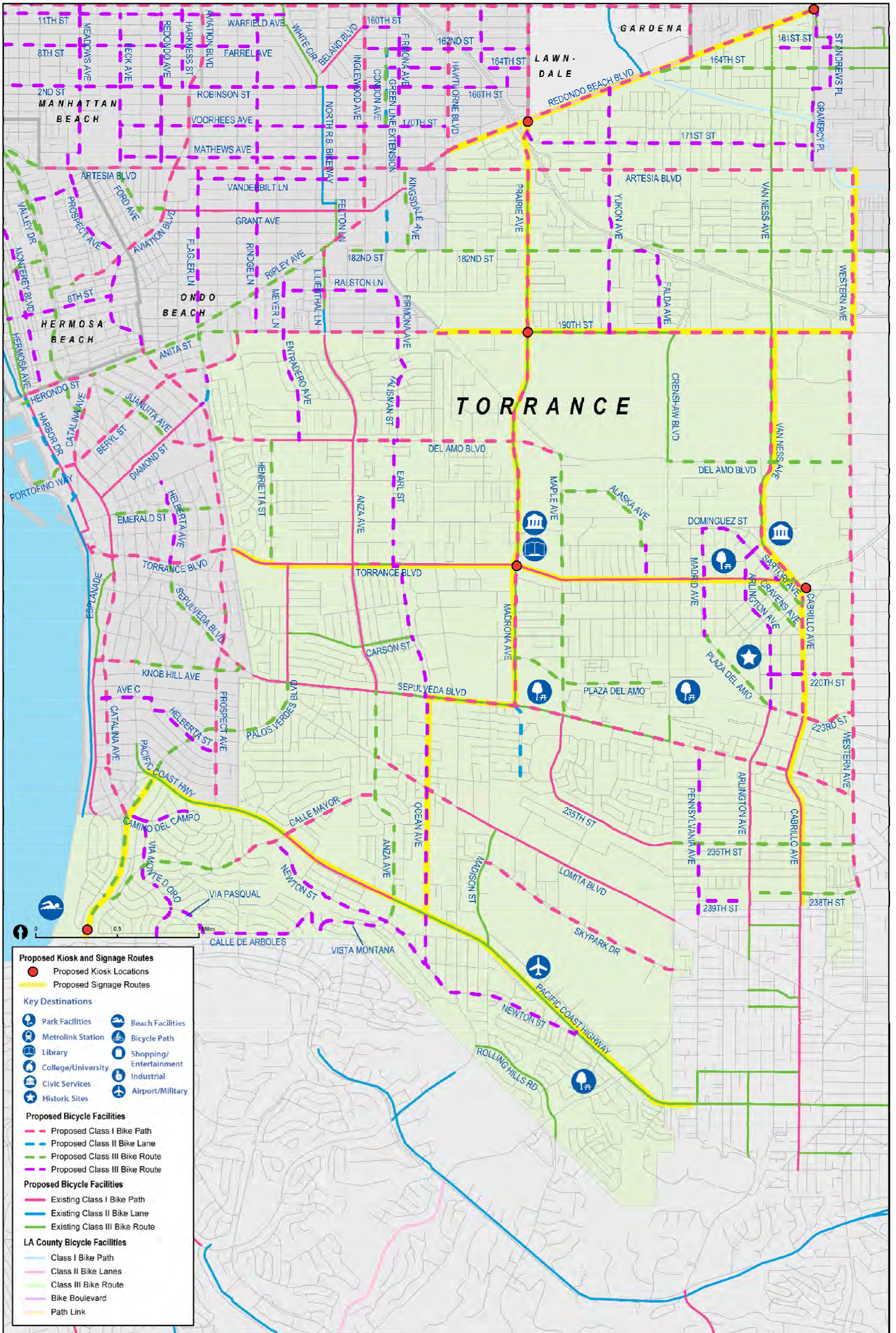


**Appendix L-6b: Proposed Kiosk Locations and Signage Routes in South Redondo Beach**

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Appendix L-7: Proposed Kiosk Locations and Signage Routes In Torrance

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## Appendix M: Glossary of Terms

Word	Definition
Assembly Bill 1358	California Assembly Bill 1358, also known as the Complete Streets Act of 2008, amended the California Government Code §65302 to require that all major revisions to a city or county's Circulation Element include provisions for the accommodation of all roadway users including bicyclists and pedestrians. Accommodations include bikeways, sidewalks, crosswalks, and curb extensions.. See section 2.2.2.1 of this plan for more information.
Mobility Coordinator	A part- or full-time employee dedicated to the implementation of alternative transportation, which can include bicycle program administration. As related to bicycles, a mobility coordinator tracks, coordinates and oversees implementation of bike facilities, programs, grant applications and data collection.
Bicycle Facility	A street or off-road path designed for bicycle travel
Bike Path	A completely separated, paved right-of-way designated for the exclusive use of bicycles and pedestrians
Bike Lane	A restricted right-of-way striped on a street and designated for the exclusive use of bicycles, with crossflows by pedestrians and motorists permitted
Bike Route	An on-street right-of-way designated by signs or pavement markings to be shared between bicyclists and motorists
Bicycle Transportation Account (BTA)	An annual program of the State of California providing state funds for city and county projects that improve safety and convenience for bicycle commuters. To establish eligibility for these funds, local agencies must have a Bicycle Transportation Plan that complies with CalTrans requirements in CA Streets and Highways Code Section 891.2. This plan complies with BTA requirements.
Class I, II, and III Bikeways	State of California definitions for Bicycle Paths, Bicycle Lanes, and Bicycle Routes, respectively, in the California Streets and Highways Code Section 890.4. For additional detail see Section 1.3 of this plan.
Complete Streets	Complete streets refers to the principle that all transportation improvements should address the safety, access, and mobility of all travelers, including motorists, bicyclists, pedestrians, transit riders, and the disabled. CalTrans Deputy Directive 64 formally states that Caltrans views all transportation improvements as opportunities to improve conditions for all users, and adopts such a policy for all planning, programming, design, construction, operations, and maintenance activities and products on the State Highway System.
Bike Friendly Street	Local roads that have been enhanced with treatments that prioritize bicycle travel. These treatments include wayfinding signage, pavement markings and traffic calming
Bike Station	Modeled after the secure indoor bicycle parking facilities provided by the private firm BikeStation, these are locations that provide bicycle storage and other amenities such as showers and bicycle repair stations. They are often located near transit stations.
Bike Valet	The provision of monitored bicycle parking, typically at a large event

## Appendices

Word	Definition
Sharrows	Pavement markings denoting the safe and legal riding position for bicyclists. The name “sharrows” derives from “shared-use arrows.” Among other things, sharrows clarify bicyclists’ right to occupy the center of a travel lane, and encourage bicyclists to ride away from parked cars, so that they are not in danger of being struck by opening doors.

## Appendix N: Complete Streets Policy Language

### Assembly Bill 1358

California Assembly Bill (AB) 1358, also known as the Complete Streets Act of 2008, amended the California Government Code §65302 to require that all major revisions to a city or county's Circulation Element include provisions for the accommodation of all roadway users including bicyclists and pedestrians. Accommodations include bikeways, sidewalks, crosswalks, and curb extensions. See section 2.2.2.1 of this plan for more information. Below is the language from the bill as a reference for the participating South Bay cities when implementing related policies presented in this Plan.

AB 1358, Leno. Planning: circulation element: transportation.

(1) Existing law requires the legislative body of each county and city to adopt a comprehensive, long-term general plan for the physical development of the county or city with specified elements, including a circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan. This bill would require, commencing January 1, 2011, that the legislative body of a city or county, 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, bicyclists, 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. By requiring new duties of local officials, this bill would impose a state-mandated local program.

(2) Existing law establishes in the Office of the Governor the Office of Planning and Research with duties that include developing and adopting guidelines for the preparation of and content of mandatory elements required in city and county general plans. This bill would require the office, commencing January 1, 2009, and no later than January 1, 2014, upon the next revision of these guidelines, to prepare or amend guidelines for a legislative body to accommodate the safe and convenient travel of users of streets, roads, and highways in a manner that is suitable to the rural, suburban, or urban context of the general plan, and in doing so to consider how appropriate accommodation varies depending on its transportation and land use context. It would authorize the office, in developing these guidelines, to consult with leading transportation experts, including, but not limited to, bicycle transportation planners, pedestrian planners, public transportation planners, local air quality management districts, and disability and senior mobility planners.

(3) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement. This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. This act shall be known and may be cited as the California Complete Streets Act of 2008.

SEC. 2. The Legislature finds and declares all of the following: (a) The California Global Warming Solutions Act of 2006, enacted as Chapter 488 of the Statutes of 2006, sets targets for the reduction of greenhouse gas emissions in California to slow the onset of human-induced climate change. (b) The State Energy Resources

## Appendices

Conservation and Development Commission has determined that transportation represents 41 percent of total greenhouse gas emissions in California. (c) According to the United States Department of Transportation's 2001 National Household Travel Survey, 41 percent of trips in urban areas nationwide are two miles or less in length, and 66 percent of urban trips that are one mile or less are made by automobile. (d) Shifting the transportation mode share from single passenger cars to public transit, bicycling, and walking must be a significant part of short- and long-term planning goals if the state is to achieve the reduction in the number of vehicle miles traveled and in greenhouse gas emissions required by current law. (e) Walking and bicycling provide the additional benefits of improving public health and reducing treatment costs for conditions associated with reduced physical activity including obesity, heart disease, lung disease, and diabetes. Medical costs associated with physical inactivity were estimated by the State Department of Health Care Services to be \$28 billion in 2005. (f) The California Blueprint for Bicycling and Walking, prepared pursuant to the Supplemental Report of the Budget Act of 2001, sets the goal of a 50 percent increase in bicycling and walking trips in California by 2010, and states that to achieve this goal, bicycling and walking must be considered in land use and community planning, and in all phases of transportation planning and project design. (g) In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled and to shift from short trips in the automobile to biking, walking, and use of public transit. (h) It is the intent of the Legislature to require in the development of the circulation element of a local government's general plan that the circulation of users of streets, roads, and highways be accommodated in a manner suitable for the respective setting in rural, suburban, and urban contexts, and that users of streets, roads, and highways include bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, public transportation, and seniors.

SEC. 3. Section 65040.2 of the Government Code is amended to read: 65040.2. (a) In connection with its responsibilities under subdivision (l) of Section 65040, the office shall develop and adopt guidelines for the preparation of and the content of the mandatory elements required in city and county general plans by Article 5 (commencing with Section 65300) of Chapter 3. For purposes of this section, the guidelines prepared pursuant to Section 50459 of the Health and Safety Code shall be the guidelines for the housing element required by Section 65302. In the event that additional elements are hereafter required in city and county general plans by Article 5 (commencing with Section 65300) of Chapter 3, the office shall adopt guidelines for those elements within six months of the effective date of the legislation requiring those additional elements. (b) The office may request from each state department and agency, as it deems appropriate, and the department or agency shall provide, technical assistance in readopting, amending, or repealing the guidelines. (c) The guidelines shall be advisory to each city and county in order to provide assistance in preparing and maintaining their respective general plans. (d) The guidelines shall contain the guidelines for addressing environmental justice matters developed pursuant to Section 65040.12. (e) The guidelines shall contain advice including recommendations for best practices to allow for collaborative land use planning of adjacent civilian and military lands and facilities. The guidelines shall encourage enhanced land use compatibility between civilian lands and any adjacent or nearby military facilities through the examination of potential impacts upon one another. (f) The guidelines shall contain advice for addressing the effects of civilian development on military readiness activities carried out on all of the following: (1) Military installations. (2) Military operating areas. (3) Military training areas. (4) Military training routes. (5) Military airspace. (6) Other territory



adjacent to those installations and areas. (g) By March 1, 2005, the guidelines shall contain advice, developed in consultation with the Native American Heritage Commission, for consulting with California Native American tribes for all of the following: (1) The preservation of, or the mitigation of impacts to, places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code. (2) Procedures for identifying through the Native American Heritage Commission the appropriate California Native American tribes. (3) Procedures for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects. (4) Procedures to facilitate voluntary landowner participation to preserve and protect the specific identity, location, character, and use of those places, features, and objects. (h) Commencing January 1, 2009, but no later than January 1, 2014, upon the next revision of the guidelines pursuant to subdivision (i), the office shall prepare or amend guidelines for a legislative body to accommodate the safe and convenient travel of users of streets, roads, and highways in a manner that is suitable to the rural, suburban, or urban context of the general plan, pursuant to subdivision (b) of Section 65302. (1) In developing guidelines, the office shall consider how appropriate accommodation varies depending on its transportation and land use context, including urban, suburban, or rural environments. (2) The office may consult with leading transportation experts including, but not limited to, bicycle transportation planners, pedestrian planners, public transportation planners, local air quality management districts, and disability and senior mobility planners. (i) The office shall provide for regular review and revision of the guidelines established pursuant to this section.

SEC. 4. Section 65302 of the Government Code is amended to read: 65302. The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The plan shall include the following elements: (a) A land use element that designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land. The location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources pursuant to paragraph (3) of subdivision (d). The land use element shall include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan. The land use element shall identify and annually review those areas covered by the plan that are subject to flooding identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of Water Resources. The land use element shall also do both of the following: (1) Designate in a land use category that provides for timber production those parcels of real property zoned for timberland production pursuant to the California Timberland Productivity Act of 1982 (Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5). (2) Consider the impact of new growth on military readiness activities carried out on military bases, installations, and operating and training areas, when proposing zoning ordinances or designating land uses covered by the general plan for land, or other territory adjacent to military facilities, or underlying designated military aviation routes and airspace. (A) In determining the impact of new growth on military readiness activities, information provided by military facilities shall be considered. Cities and counties shall address military impacts based on information from the military and other sources. (B) The following definitions govern this paragraph: (i) "Military readiness activities" mean all of the following: (I) Training, support, and operations that prepare the men and women of the military for combat. (II) Operation, maintenance, and security of any military installation. (III) Testing of

## Appendices

military equipment, vehicles, weapons, and sensors for proper operation or suitability for combat use. (ii) "Military installation" means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the United States Department of Defense as defined in paragraph (1) of subsection (e) of Section 2687 of Title 10 of the United States Code. (b) (1) A circulation element consisting of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, any military airports and ports, and other local public utilities and facilities, all correlated with the land use element of the plan. (2) (A) Commencing January 1, 2011, upon any substantive revision of the circulation element, the legislative body shall modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the general plan. (B) For purposes of this paragraph, "users of streets, roads, and highways" means bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, and seniors. (c) A housing element as provided in Article 10.6 (commencing with Section 65580). (d) (1) A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The conservation element shall consider the effect of development within the jurisdiction, as described in the land use element, on natural resources located on public lands, including military installations. That portion of the conservation element including waters shall be developed in coordination with any countywide water agency and with all district and city agencies, including flood management, water conservation, or groundwater agencies that have developed, served, controlled, managed, or conserved water of any type for any purpose in the county or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or county. (2) The conservation element may also cover all of the following: (A) The reclamation of land and waters. (B) Prevention and control of the pollution of streams and other waters. (C) Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan. (D) Prevention, control, and correction of the erosion of soils, beaches, and shores. (E) Protection of watersheds. (F) The location, quantity and quality of the rock, sand and gravel resources. (3) Upon the next revision of the housing element on or after January 1, 2009, the conservation element shall identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. (e) An open-space element as provided in Article 10.5 (commencing with Section 65560). (f) (1) A noise element that shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources: (A) Highways and freeways. (B) Primary arterials and major local streets. (C) Passenger and freight on-line railroad operations and ground rapid transit systems. (D) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation. (E) Local industrial plants, including, but not limited to, railroad classification yards. (F) Other ground stationary noise sources, including, but not limited to, military installations, identified by local agencies as contributing to the community noise environment. (2) Noise contours shall be shown for all of these sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (Ldn). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources

identified in paragraphs (1) to (6), inclusive. (3) The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise. (4) The noise element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards. (g) (1) A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards identified pursuant to Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code, and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, military installations, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards. (2) The safety element, upon the next revision of the housing element on or after January 1, 2009, shall also do the following: (A) Identify information regarding flood hazards, including, but not limited to, the following: (i) Flood hazard zones. As used in this subdivision, "flood hazard zone" means an area subject to flooding that is delineated as either a special hazard area or an area of moderate or minimal hazard on an official flood insurance rate map issued by the Federal Emergency Management Agency. The identification of a flood hazard zone does not imply that areas outside the flood hazard zones or uses permitted within flood hazard zones will be free from flooding or flood damage. (ii) National Flood Insurance Program maps published by FEMA. (iii) Information about flood hazards that is available from the United States Army Corps of Engineers. (iv) Designated floodway maps that are available from the Central Valley Flood Protection Board. (v) Dam failure inundation maps prepared pursuant to Section 8589.5 that are available from the Office of Emergency Services. (vi) Awareness Floodplain Mapping Program maps and 200-year flood plain maps that are or may be available from, or accepted by, the Department of Water Resources. (vii) Maps of levee protection zones. (viii) Areas subject to inundation in the event of the failure of project or nonproject levees or floodwalls. (ix) Historical data on flooding, including locally prepared maps of areas that are subject to flooding, areas that are vulnerable to flooding after wildfires, and sites that have been repeatedly damaged by flooding. (x) Existing and planned development in flood hazard zones, including structures, roads, utilities, and essential public facilities. (xi) Local, state, and federal agencies with responsibility for flood protection, including special districts and local offices of emergency services. (B) Establish a set of comprehensive goals, policies, and objectives based on the information identified pursuant to subparagraph (A), for the protection of the community from the unreasonable risks of flooding, including, but not limited to: (i) Avoiding or minimizing the risks of flooding to new development. (ii) Evaluating whether new development should be located in flood hazard zones, and identifying construction methods or other methods to minimize damage if new development is located in flood hazard zones. (iii) Maintaining the structural and operational integrity of essential public facilities during flooding. (iv) Locating, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities or identifying construction methods or other methods to minimize damage if these facilities are located in flood hazard zones. (v) Establishing cooperative working relationships among public agencies with responsibility for flood protection. (C) Establish a set of feasible implementation measures designed to carry out the goals, policies, and objectives established pursuant to subparagraph (B). (3) After the initial revision of the safety element pursuant to paragraph (2), upon each revision of the housing

## Appendices

element, the planning agency shall review and, if necessary, revise the safety element to identify new information that was not available during the previous revision of the safety element. (4) Cities and counties that have flood plain management ordinances that have been approved by FEMA that substantially comply with this section, or have substantially equivalent provisions to this subdivision in their general plans, may use that information in the safety element to comply with this subdivision, and shall summarize and incorporate by reference into the safety element the other general plan provisions or the flood plain ordinance, specifically showing how each requirement of this subdivision has been met. (5) Prior to the periodic review of its general plan and prior to preparing or revising its safety element, each city and county shall consult the California Geological Survey of the Department of Conservation, the Central Valley Flood Protection Board, if the city or county is located within the boundaries of the Sacramento and San Joaquin Drainage District, as set forth in Section 8501 of the Water Code, and the Office of Emergency Services for the purpose of including information known by and available to the department, the office, and the board required by this subdivision. (6) To the extent that a county's safety element is sufficiently detailed and contains appropriate policies and programs for adoption by a city, a city may adopt that portion of the county's safety element that pertains to the city's planning area in satisfaction of the requirement imposed by this subdivision.

SEC. 5. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

### **Complete Streets Policy Elements**

According to the National Coalition for Complete Streets (<http://www.completestreets.org/changing-policy/policy-elements/>), an ideal complete streets policy:

- Includes a vision for how and why the community wants to complete its streets
- Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles.
- Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
- Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
- Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
- Is adoptable by all agencies to cover all roads.
- Directs the use of the latest and best design criteria and guidelines while recognizing the need for flexibility in balancing user needs.
- Directs that complete streets solutions will complement the context of the community.
- Establishes performance standards with measurable outcomes.
- Includes specific next steps for implementation of the policy

## Appendix O: Summary of Public Comments Received

During the South Bay Bicycle Master Plan's public review period from June 13-July 13, 2011, the South Bay Bicycle Coalition received 105 comments from the public. 25 of the commenters were in full support of the Plan. Four were generally against the Plan for various reasons, including bicyclists' disobedience of traffic laws, the high cost of Plan implementation in a recession, and the Plan not being representative of the general public.

The majority of the remaining comments were critiques of specific proposals within the Plan rather than statements of general support or opposition. Alta Planning + Design, the Los Angeles County Bicycle Coalition, and the South Bay Bicycle Coalition addressed critiques to the Plan through revisions to the proposed bicycle network and policies as appropriate and feasible. Below is a summary of the comments received from the public. A complete list of comments can be found at [www.SouthBayBicycleCoalition.org](http://www.SouthBayBicycleCoalition.org).

### General Comments

Many of the public comments received were general in nature and included requests for additional bicycle resources, improved bicycle safety, increased or decreased signage, changes to City municipal codes, and additional information regarding laws pertaining to sidewalk riding. There was also desire for stronger policy language and increased policies in order drive accountability of plan implementation for participating South Bay cities. Other comments about implementation included the suggestion that the cities focus first on high priority projects, that bikeway installation be coordinated with City resurfacing schedules, and that participating cities should work together after Plan adoption, as well as with the cities of Hawthorne and Los Angeles.

### Specific Comments

Many of the comments received from the public were either in support of or opposition to specific facilities; such as support for the proposed bike friendly street on Ocean Drive and bike lanes on Douglas Street, and opposition to the proposed bike routes on Valley Drive/Ardmore Avenue and Highland Avenue. Other specific comments were requests for additional facilities and treatments, including the desire for bicycle facilities on Pacific Coast Highway and Sepulveda Boulevard; traffic calming on Prospect Avenue, Harkness Avenue, and Aviation Boulevard; improved safety as Redondo Beach Boulevard transitions to Grant Avenue at the Torrance/Lawndale/Redondo border; and bikeways to provide connectivity to Walking School Bus maps.

Comments on specific facilities also came from the Metro Green Line extension team, who requested the extents of the recommended bike path along the proposed Green Line alignment be changed to accurately reflect the facilities they are planning. Additionally, many supporters of special interest group *Friends of the South Bay Bicycle Paths* expressed criticisms via email and a signed petition of the proposed cycle track (bike path) on Harbor Drive in Redondo Beach, citing safety concerns. Conversely, several supportive comments of that same Harbor Drive facility were also received from various lease holders in the Harbor Area.

Some specific comments received focused on changes to existing bicycle facilities, including removal of the wall at the south end of the Hermosa Beach strand, finding a more convenient way to access Harbor Drive from Hermosa Beach, and concerns about the bi-directional bicycle lanes along Hermosa Avenue. This level of

## Appendices

specificity is looked at more closely during the design and engineering of each facility and is generally beyond the purview of the master planning effort.

In addition to facility-specific comments, there were a number of comments that posed questions regarding terminology and methodology used in various parts of the plan, as well as the structure of the public workshops.

### **Participating City Comments**

Along with public comment, City staff from each of the seven participating cities also provided comments, the majority of which pertained to the verbiage used in the policies found in Chapter Two. The most common request from City staff was for the language to be softened to include such verbiage as “consider” or “to the extent feasible.” City staff also requested the removal of a number of proposed facilities including the bike lanes on Hawthorne Blvd. and Crenshaw Blvd. in Torrance, the class I bike path behind the Scattergood treatment facility in El Segundo, and the removal of proposed bike lanes along Van Ness Ave., Normandie Ave., Rosecrans Ave., Manhattan Beach Blvd. and sections of Western Ave., Artesia Ave. and Redondo Beach Blvd. in Gardena. The majority of these comments were addressed through revisions to policy language and the proposed network, or proposals of alternative policies or facilities.