

# REDISTRICTING PARTNERS



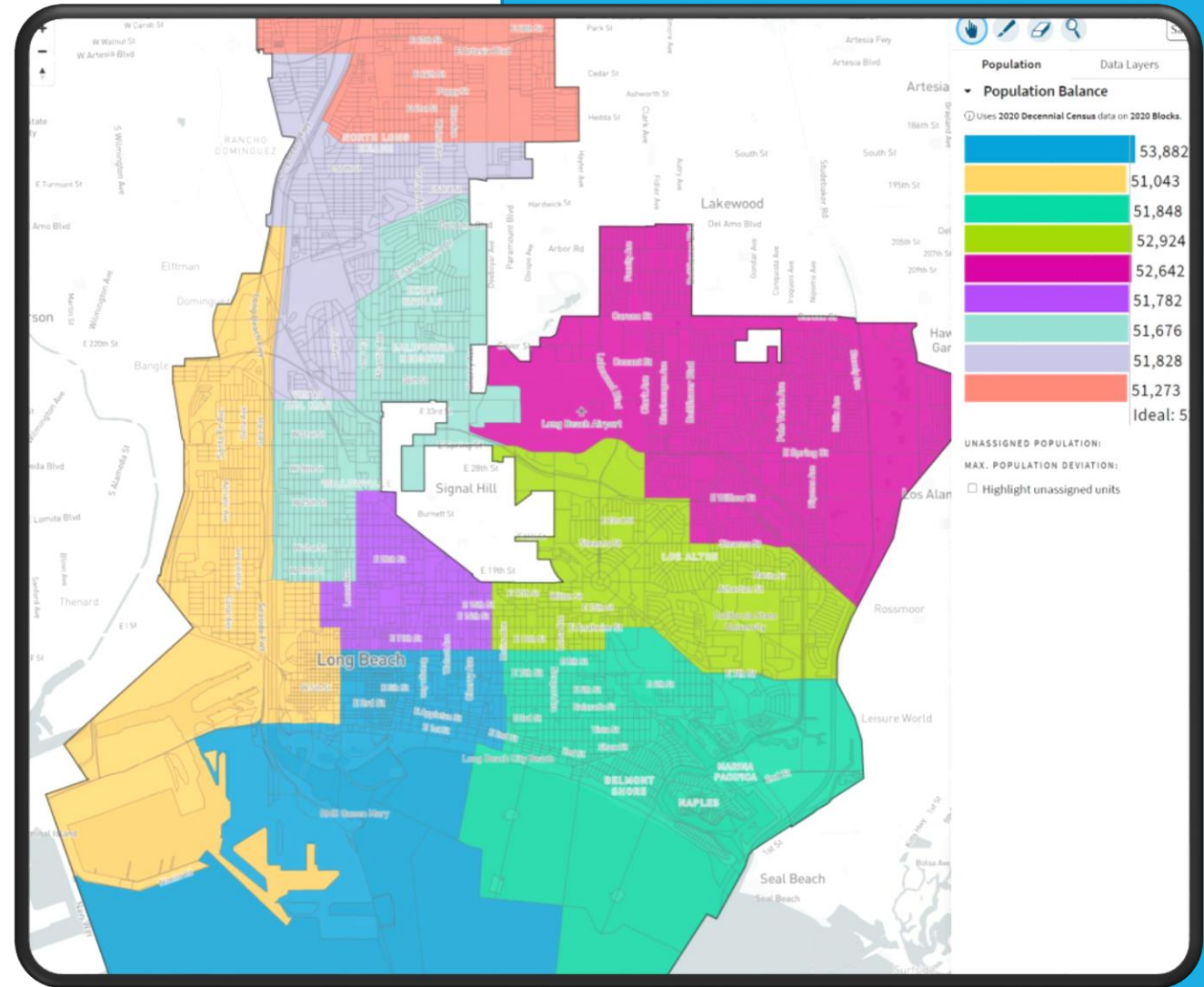
City of Long Beach Draft Maps

OCTOBER 20, 2021

# Public Submissions

The City of Long Beach Independent Redistricting Commission obtained dozens of public map submissions.

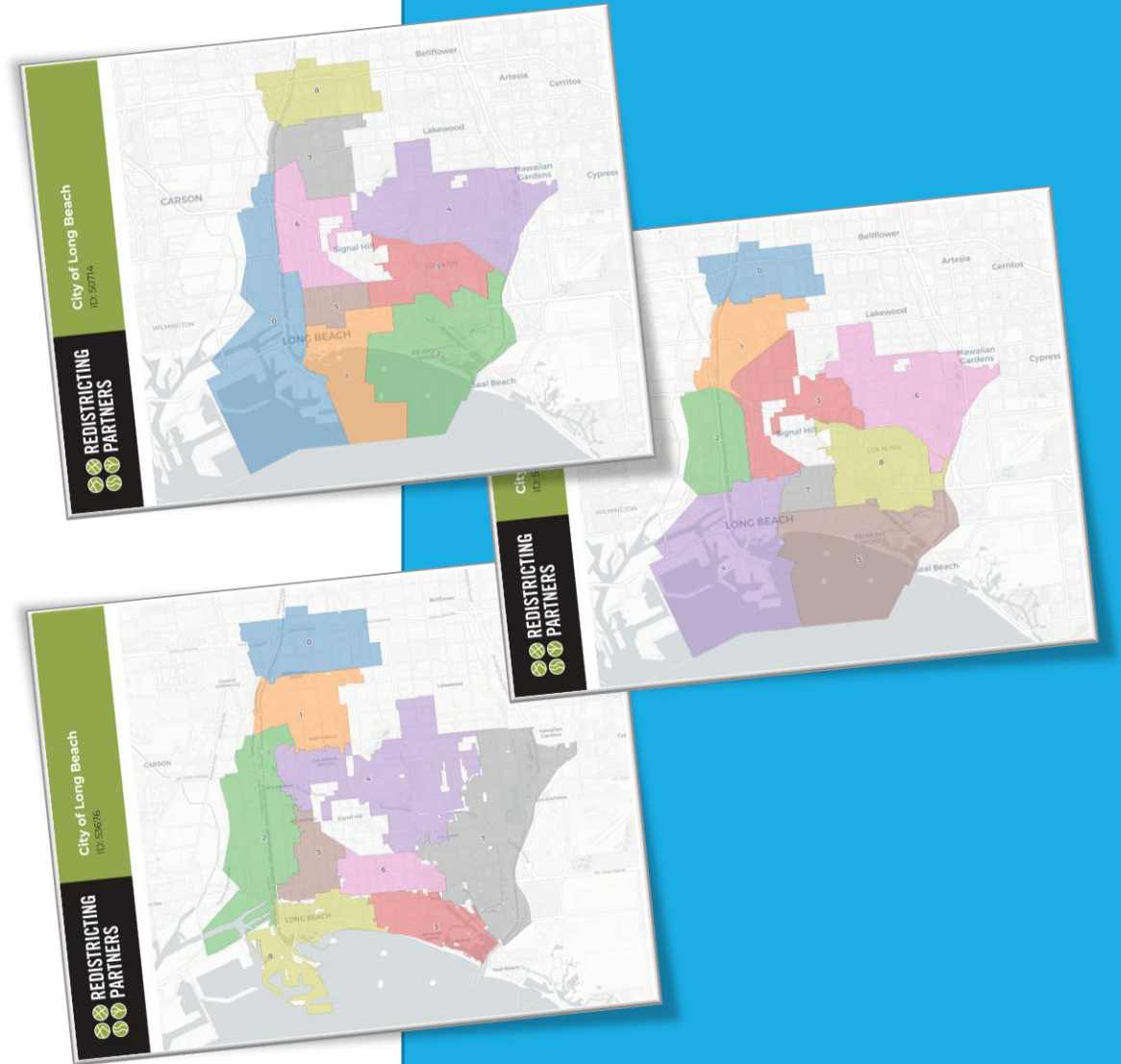
- Use of two tools – Maptitude Online and DistrictR to solicit input.
- Several in-person mapping workshops.
- Online training in use of both programs at outreach hearings.
- Dozens of full citywide plans and community of interest submissions.



# Public Submissions

We have converted dozens of full and partial plans to our “Atlas” format which includes:

- *Cover page with full districting plan overview.*
- Data table with population, deviation, ethnic population, Citizen Voting Age Population (CVAP) Ethnicity and breakdowns for each district (numbered 0-8 for a complete plan)
- Individual district maps with street-details and data tables and charts.





# Public Submissions

We have converted dozens of full and partial plans to our “Atlas” format which includes:

- Cover page with full districting plan overview.
- *Data table with population, deviation, ethnic population, Citizen Voting Age Population (CVAP) Ethnicity and breakdowns for each district (numbered 0-8 for a complete plan)*
- Individual district maps with street-details and data tables and charts.

The image displays three overlapping sample pages from a redistricting plan for the City of Long Beach, Draft Plan A. Each page features a header with the 'REDISTRICTING PARTNERS' logo and the title 'City of Long Beach Draft Plan A'. The pages contain data tables for the 2020 Census and Citizen Voting Age Population (CVAP).

**2020 Census Data (Sample Page 1):**

	A	B	C	D	E	F	G	H	I
Population	50,251	64,507	53,597	53,722	50,237	53,288	50,623	54,410	50,249
Deviation	-0.48	2.02	4.98	0.23	-1.82	1.89	-1.40	2.31	-1.80
Deviation %	-3.9%	4.8%	1.0%	1.2%	-3.6%	2.3%	-2.9%	4.4%	-3.6%
Other	5,583	18,979	31,427	28,530	30,454	5,849	10,688	12,033	6,390
Other %	11%	34.8%	58.8%	54%	60.6%	11.0%	21.0%	22.1%	12.7%
Latino	28,603	22,485	14,247	13,877	12,886	29,823	25,638	44,596	5,802
Latino %	57.0%	43.7%	27.7%	26.3%	25.7%	56.0%	50.6%	81.8%	11.8%
Asian	8,531	4,897	3,582	6,339	5,024	10,433	7,056	14,716	7,238
Asian %	17.0%	9.0%	6.8%	12.4%	10.0%	19.8%	13.9%	27.0%	14.4%
Black	7,486	8,140	3,331	3,776	1,863	7,088	3,327	10,500	7,238
Black %	14.9%	14.9%	6.3%	7.2%	3.7%	13.3%	6.6%	19.3%	14.4%

**Citizen Voting Age Population (CVAP) Data (Sample Page 1):**

	A	B	C	D	E	F	G	H	I
Total CVAP	28,444	36,038	40,391	40,740	36,855	29,580	30,906	34,579	27,945
Other CVAP	4,234	16,298	28,666	25,807	23,825	4,290	8,899	9,964	5,553
Other CVAP %	14.9%	45.2%	68.2%	63.9%	64.6%	14.9%	28.9%	28.9%	19.9%
Latino CVAP	13,096	10,774	8,131	7,782	7,411	19,872	12,247	12,265	13,000
Latino CVAP %	46.0%	29.9%	19.9%	19.1%	20.2%	67.0%	39.4%	35.2%	46.9%
Asian CVAP	5,884	2,952	3,258	4,569	3,339	7,882	5,234	4,975	3,422
Asian CVAP %	20.7%	8.2%	8.0%	11.3%	9.0%	26.3%	16.9%	14.4%	12.2%
Black CVAP	5,231	6,015	2,856	2,762	2,051	5,805	5,726	8,175	5,870
Black CVAP %	18.4%	16.7%	7.0%	6.8%	5.6%	19.6%	18.5%	23.3%	21.0%





# Public Submissions

We have converted dozens of full and partial plans to our “Atlas” format which includes:

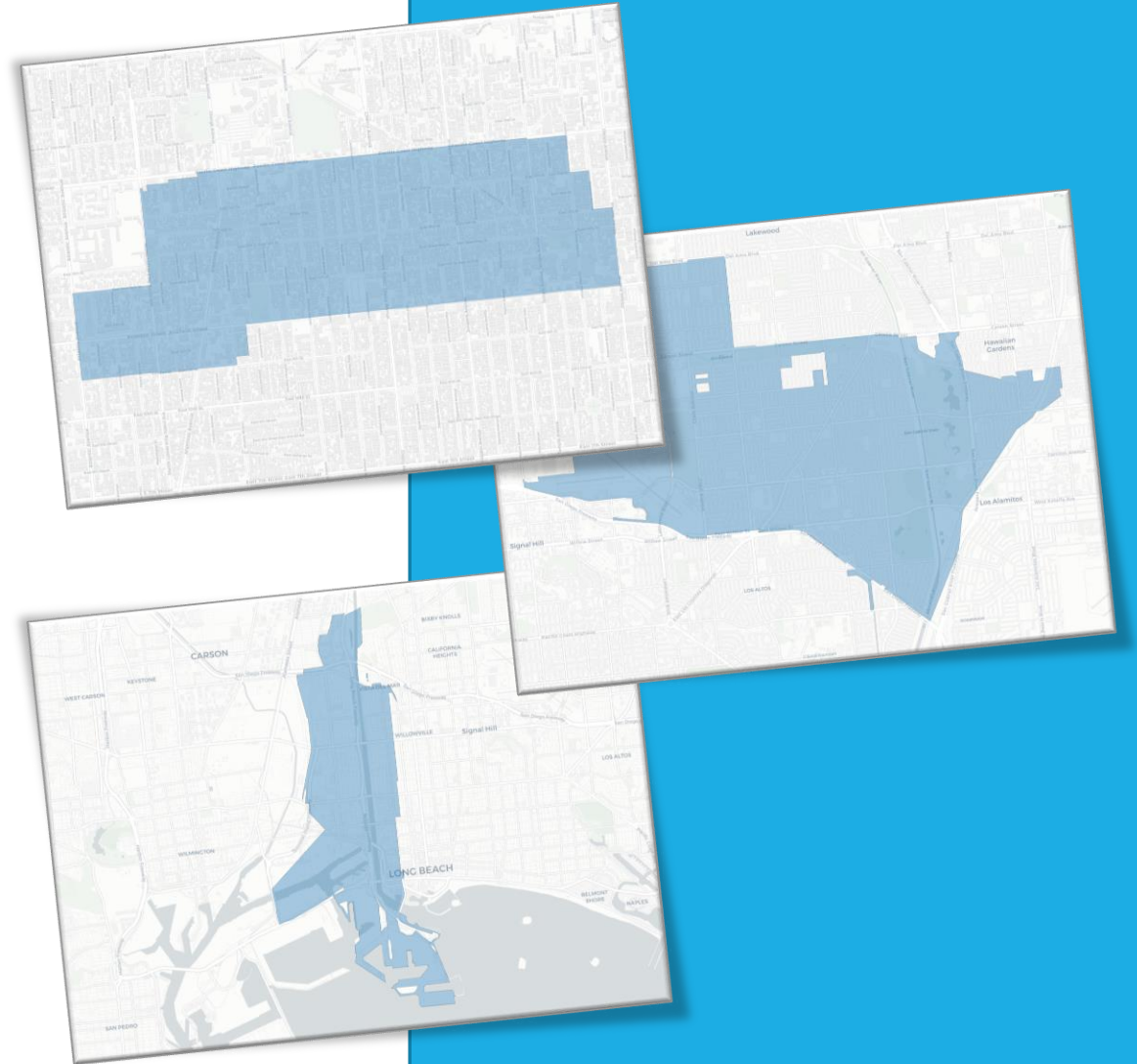
- Cover page with full districting plan overview.
- Data table with population, deviation, ethnic population, Citizen Voting Age Population (CVAP) Ethnicity and breakdowns for each district (numbered 0-8 for a complete plan)
- *Individual district maps with street-details and data tables and charts.*



# Public Submissions

There were dozens of Community of Interest maps drawn by the public, each also converted to Atlas format.

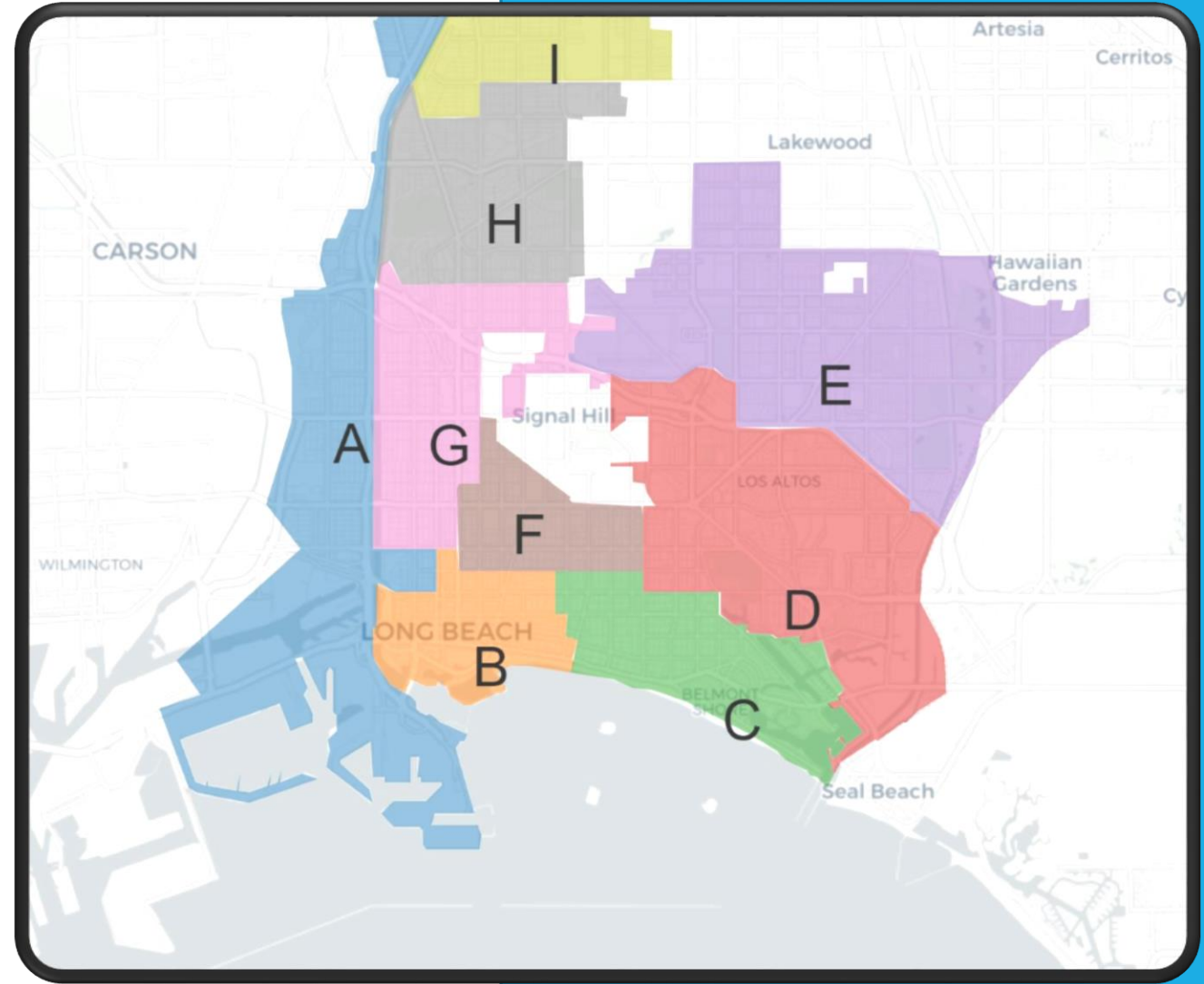
- Community of Interest submissions provided to commission with descriptions provided by the public.
- All COI submissions are available on DistrictR site with points of interest and descriptions.
- Communities of Interest used to develop draft plans based on commission direction.



# Public Submissions

In addition to PDF maps of all submissions, there are also web maps provided.

These allow the user to zoom in to street level for a closer inspection.

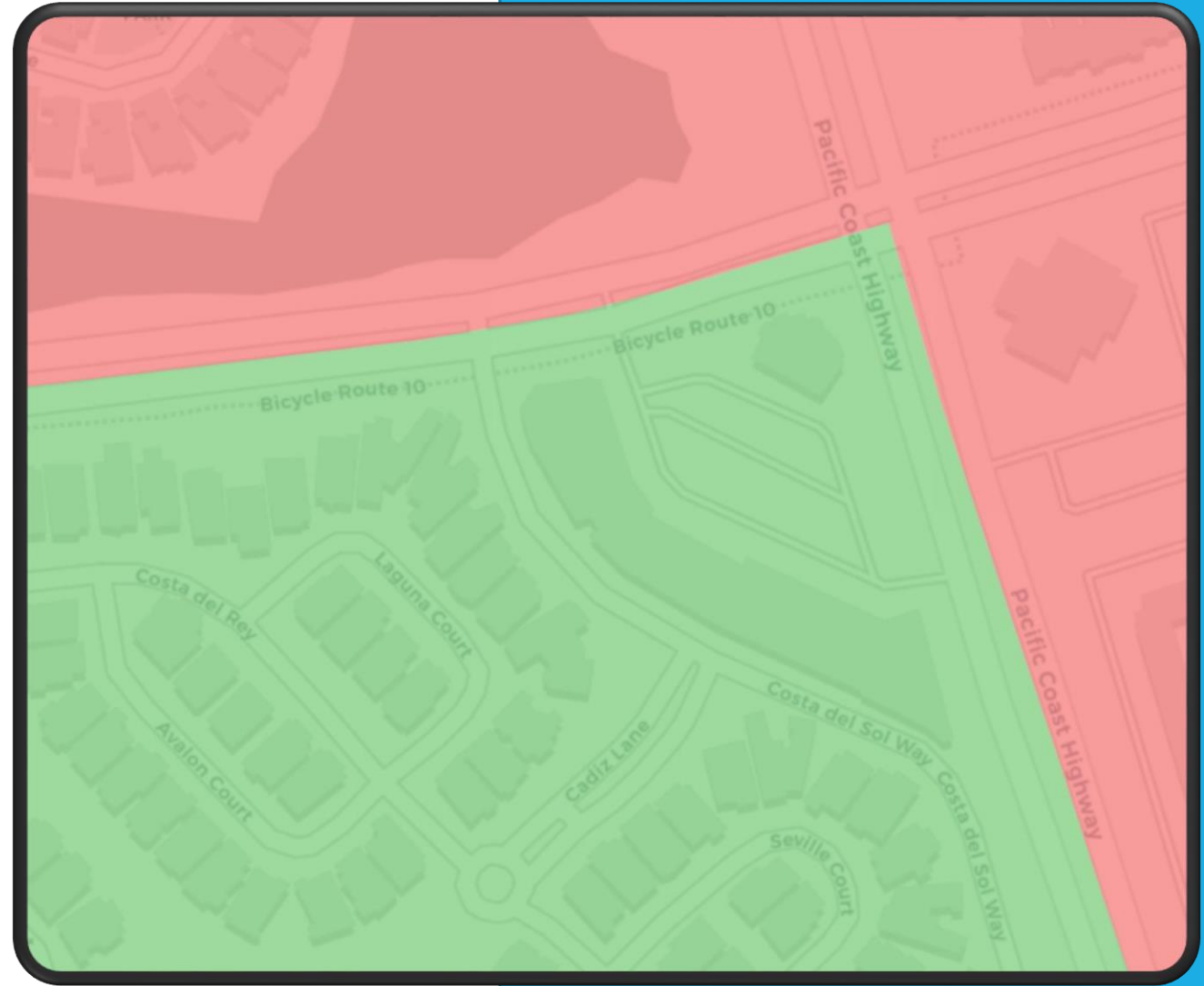




# Public Submissions

In addition to PDF maps of all submissions, there are also web maps provided.

These allow the user to zoom in to street level for a closer inspection of where district lines are placed.



# Plans Report

The Submitted Public Plans Report provides public submissions, modified public submissions and staff drawn maps, with the following summary data:

- Submission date
- Thumbnail image of plan
- Checks for completeness, contiguity
- Total plan deviation
- Provided for draft plans and public submissions.



## City of Long Beach | Redistricting Partners Draft Maps

Plan A	Released: October 13, 2021	
	Complete Plan: Yes	Contiguous: Yes
Total Deviation: 8.2%		

Plan B	Released: October 13, 2021	
	Complete Plan: Yes	Contiguous: Yes
Total Deviation: 9.2%		

Plan C	Released: October 13, 2021	
	Complete Plan: Yes	Contiguous: Yes
Total Deviation: 9.1%		

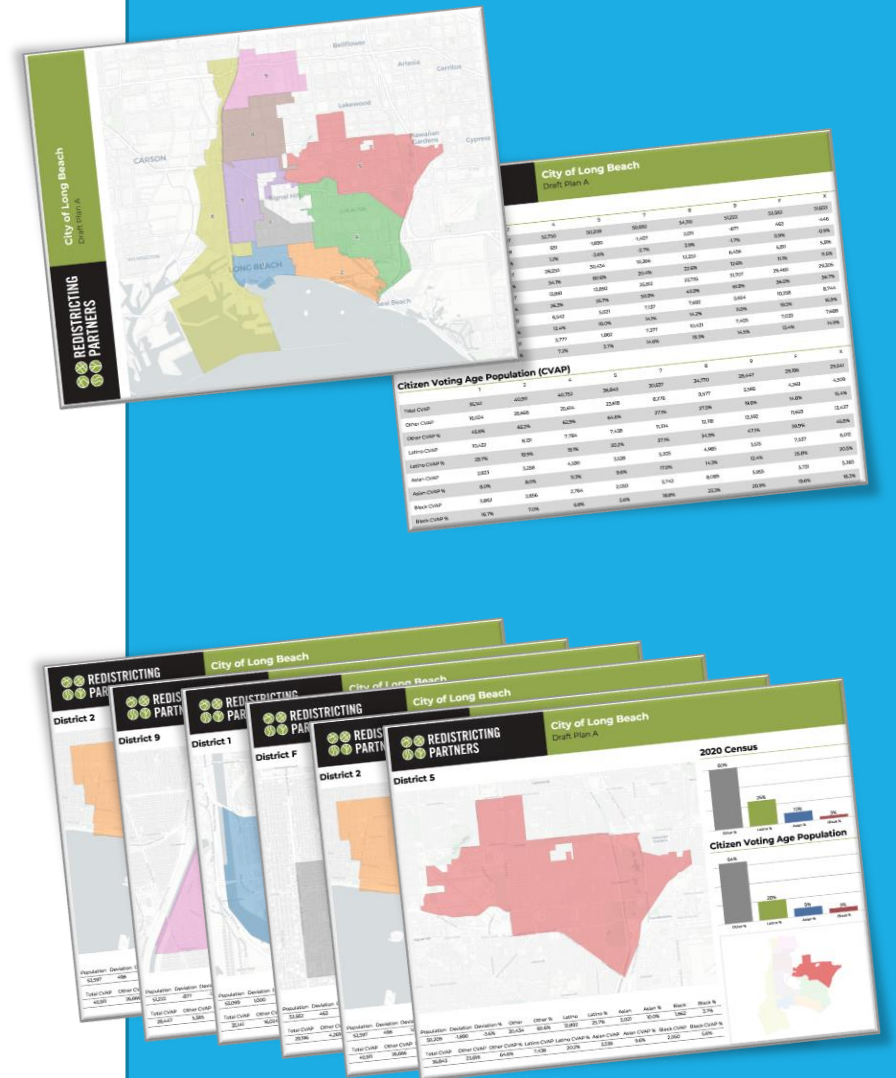
Plan D	Released: October 13, 2021	
	Complete Plan: Yes	Contiguous: Yes
Total Deviation: 7.7%		



# Draft Plans A - E

Commissioners were provided a packet with five consultant created plans based on versioning requests. These maps were posted to the commission website for the public a week prior to Draft Map hearing.

- Districts are letters, not numbers. This is a temporary structure for identifying seats as the final draft plan is required to be numbered based on a formula in the charter.
- Each draft has been created with a less than 10% total deviation. For each of the five draft plans in this packet, there is an accompanying version of that plan but with a less than 5% deviation.

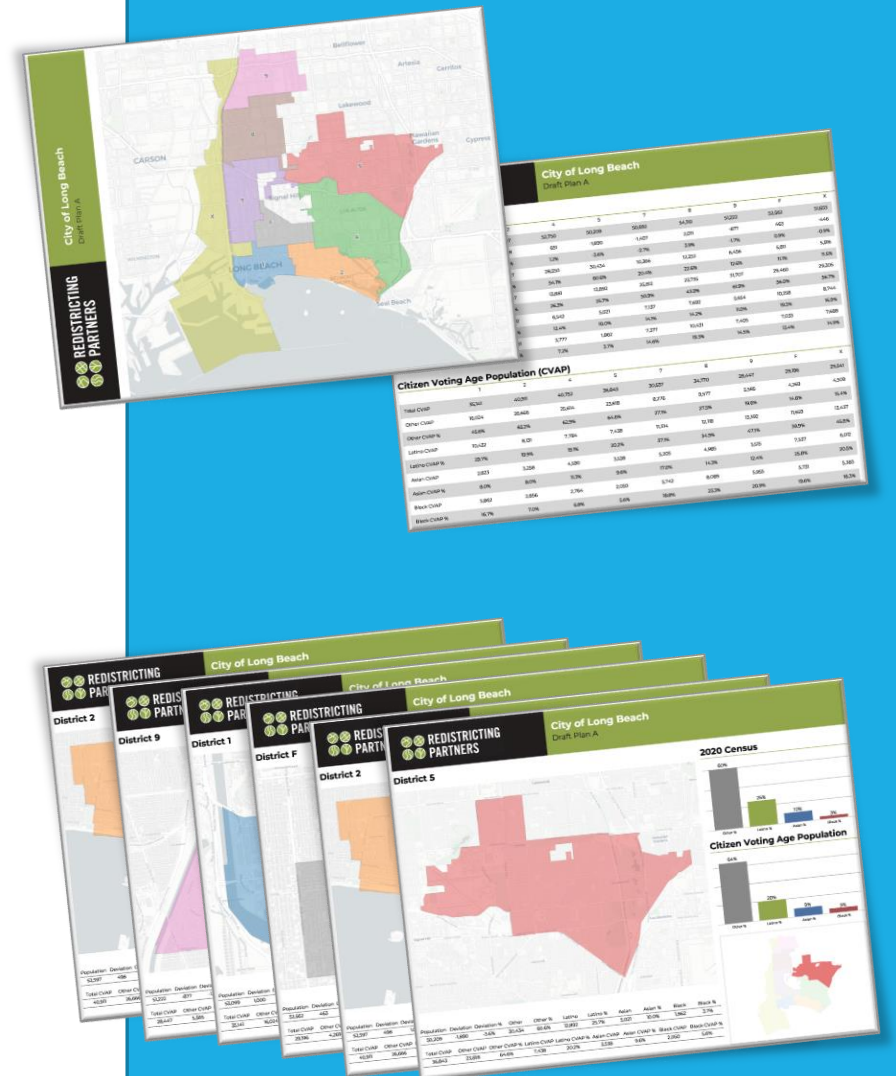




# RP Draft Plans

We have created draft plans based on the commission criteria and requests for elements to include in multiple versions.

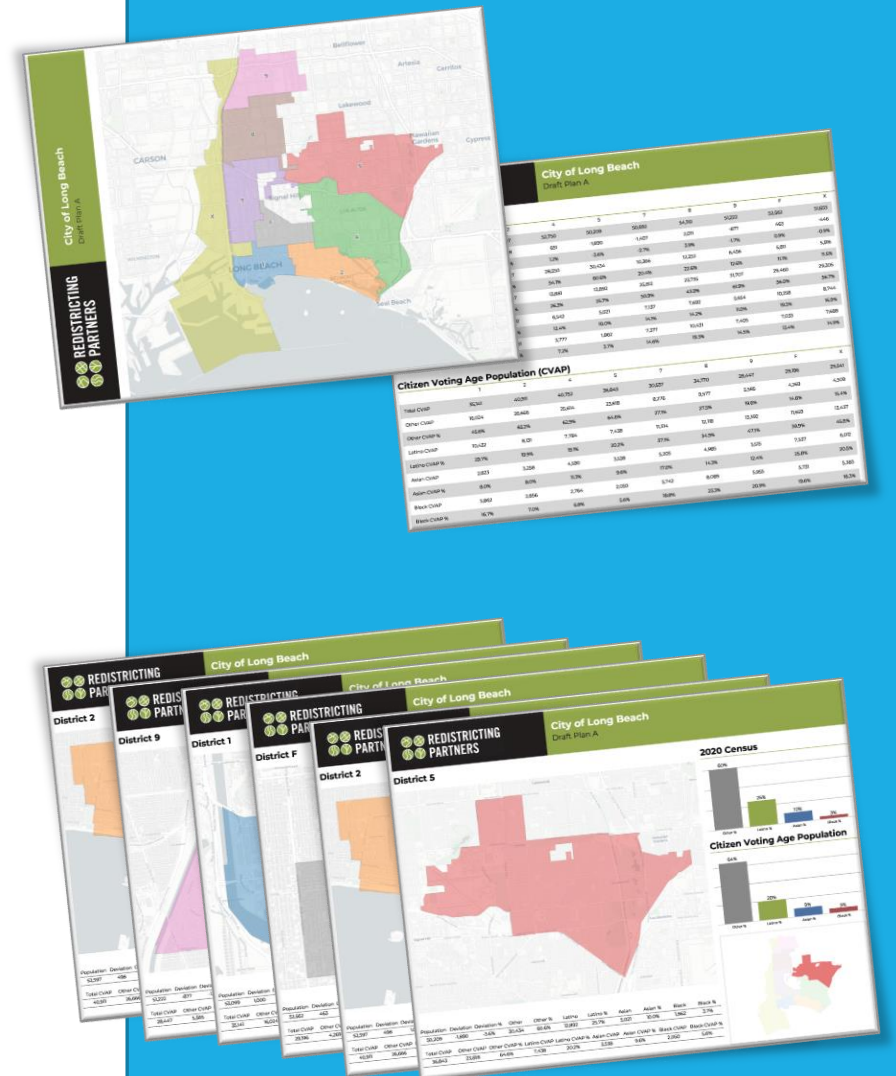
- Consider ethnic and cultural communities not within the existing neighborhood structure
- Plans with three or more districts adjacent to the airport
- Combine 710 / Western / Port / LA river into a district, including one plan that goes all the way north along the west side of the LA River
- Keep Los Altos, Puvunga and CSULB in the same district



# RP Draft Plans

We have created draft plans based on the commission criteria and requests for elements to include in multiple versions.

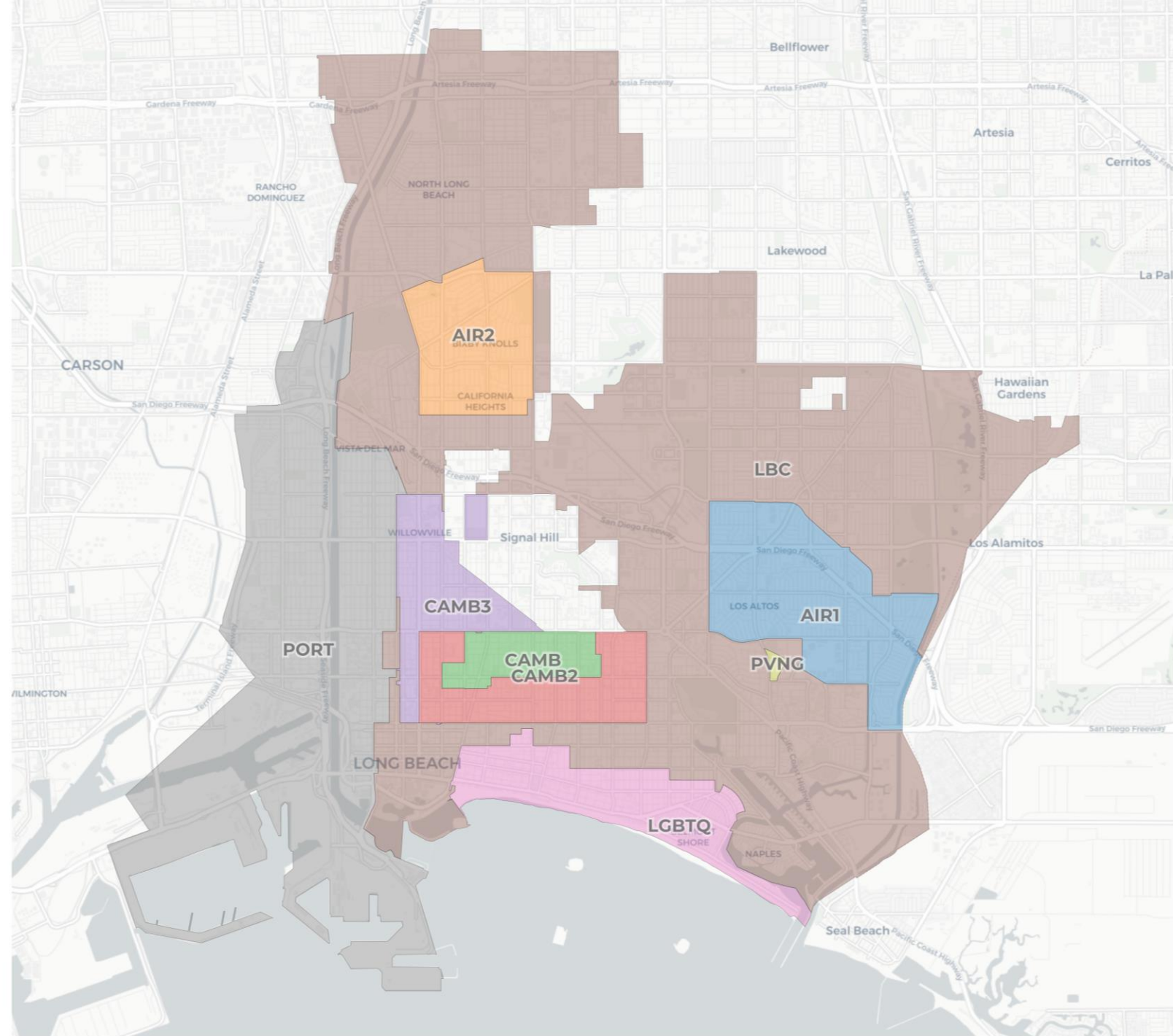
- Eliminate the “whale tail”
- California Heights / Bixby / Country Club / Los Cerritos
- District with downtown neighborhoods
- LGBT Community of Interest
- Plans under 10% deviation but at least one that is under 5%



# Mapping COI

Several of the COI had related maps from the DistrictR site.

- Airport community
- Puvunga
- Cambodian Community
- Ports
- LGBTQ

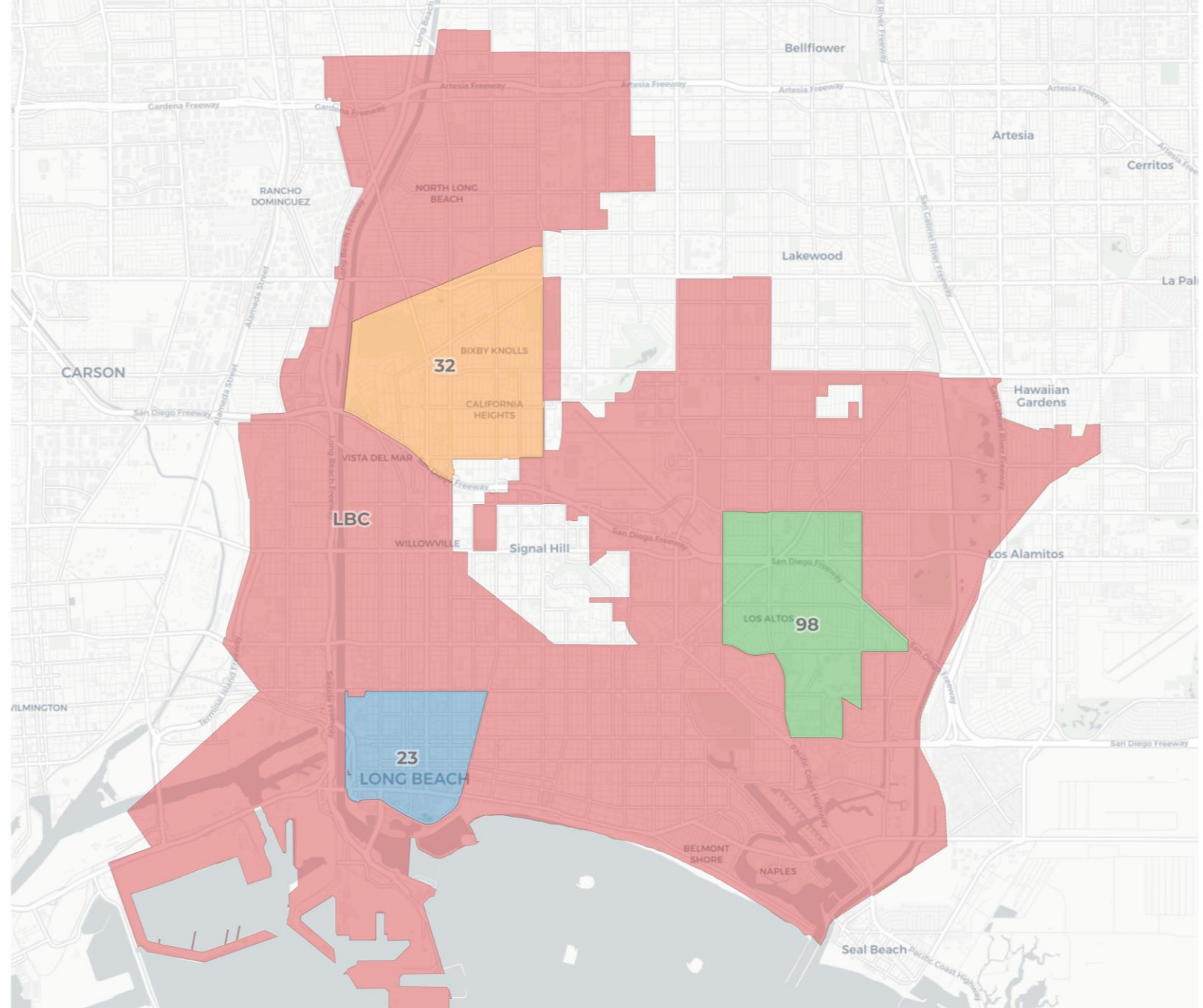




# Mapping COI

Neighborhoods identified to keep together were also mapped and can be seen as overlays of the maps.

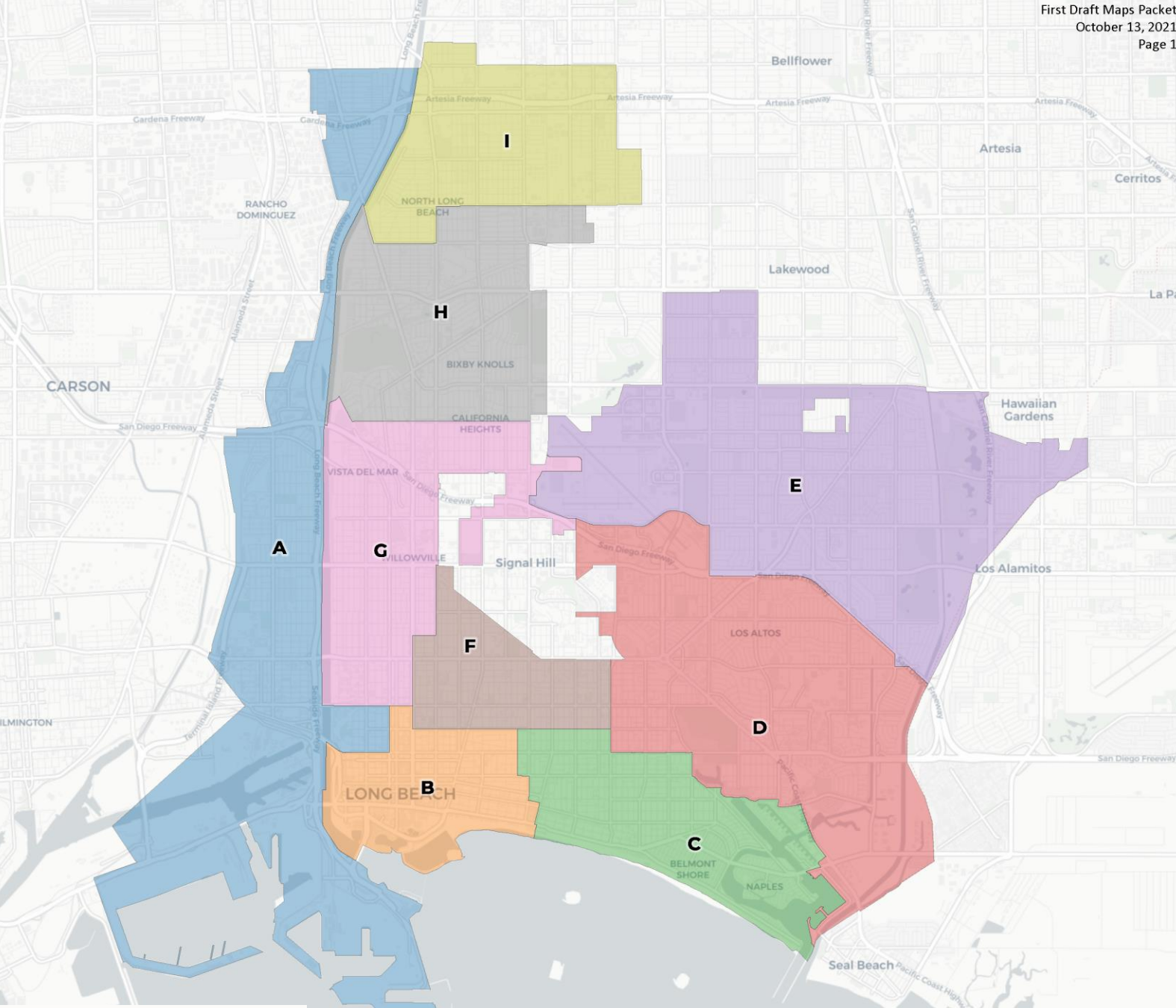
- Bixby Knolls / Los Cerritos
- Los Altos / CSULB
- Downtown Neighborhoods



# Plan A

Plan meets commission required criteria and also achieves the following:

- Deviation of 8.2%
- Preserves 93 of 102 whole neighborhoods
- Takes District A up the west side of the LA River including port with inclusion of Willmore neighborhood for population equality.
- Three districts touching the airport.

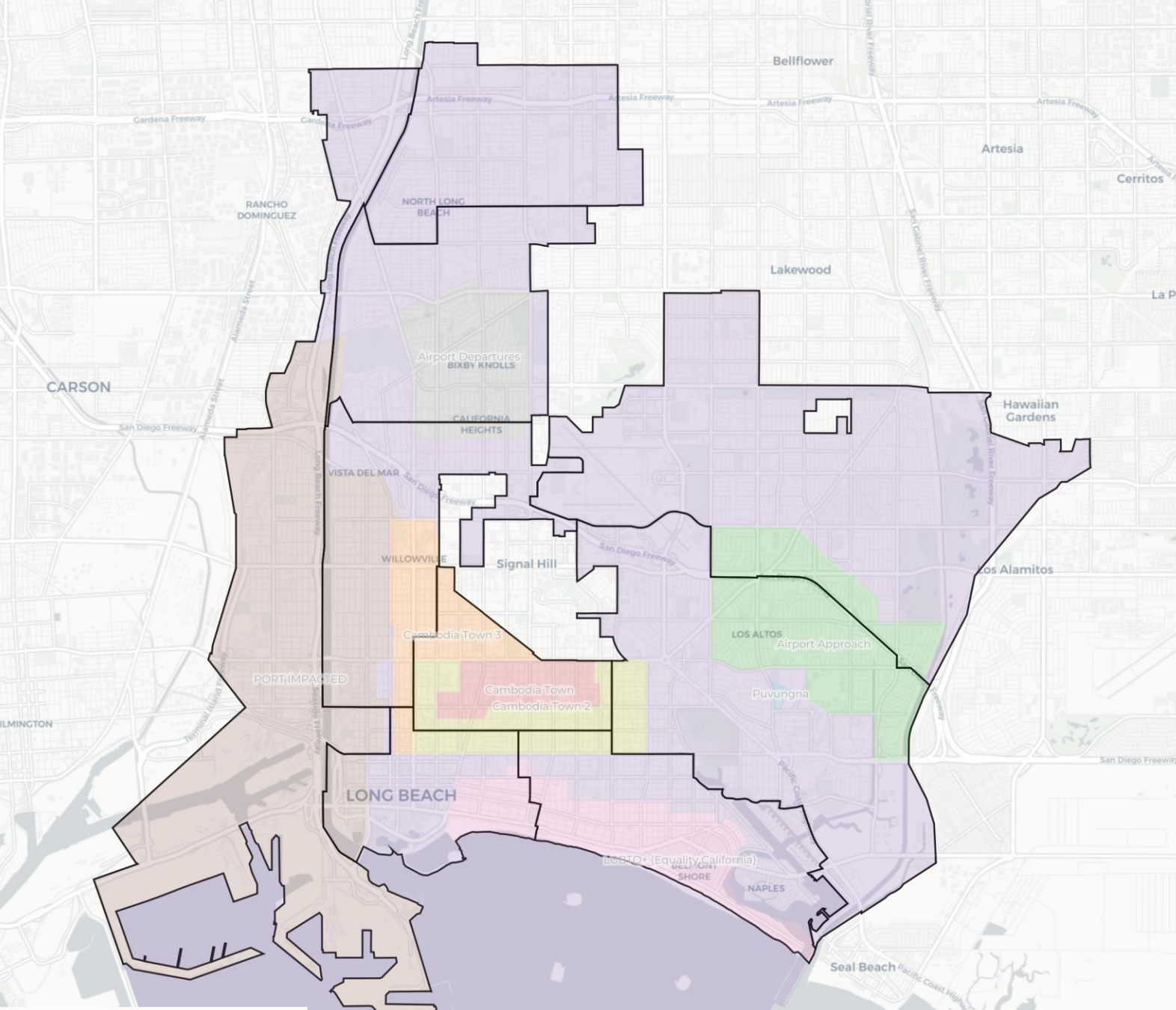




# Plan A

Plan meets commission required criteria and also achieves the following:

- Airport Departure Community of interest largely whole in single district. Three other districts touching the airport.
- Entirety of Cambodia Town primary community of interest in single district with elements of two additional Cambodian COI interpretations.
- District on western side goes all the way north along west of LA River.

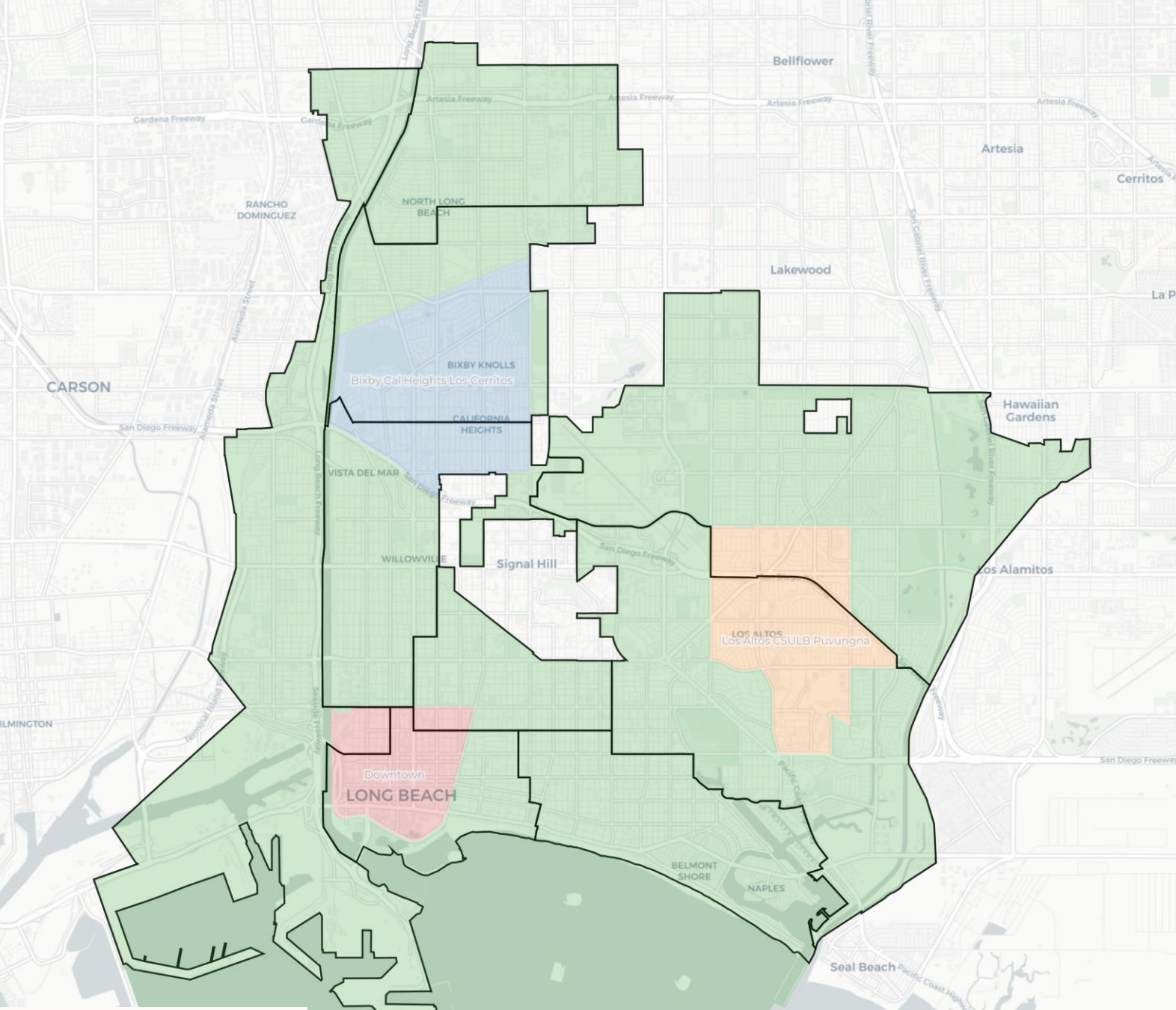




# Plan A

Plan meets commission required criteria and also achieves the following:

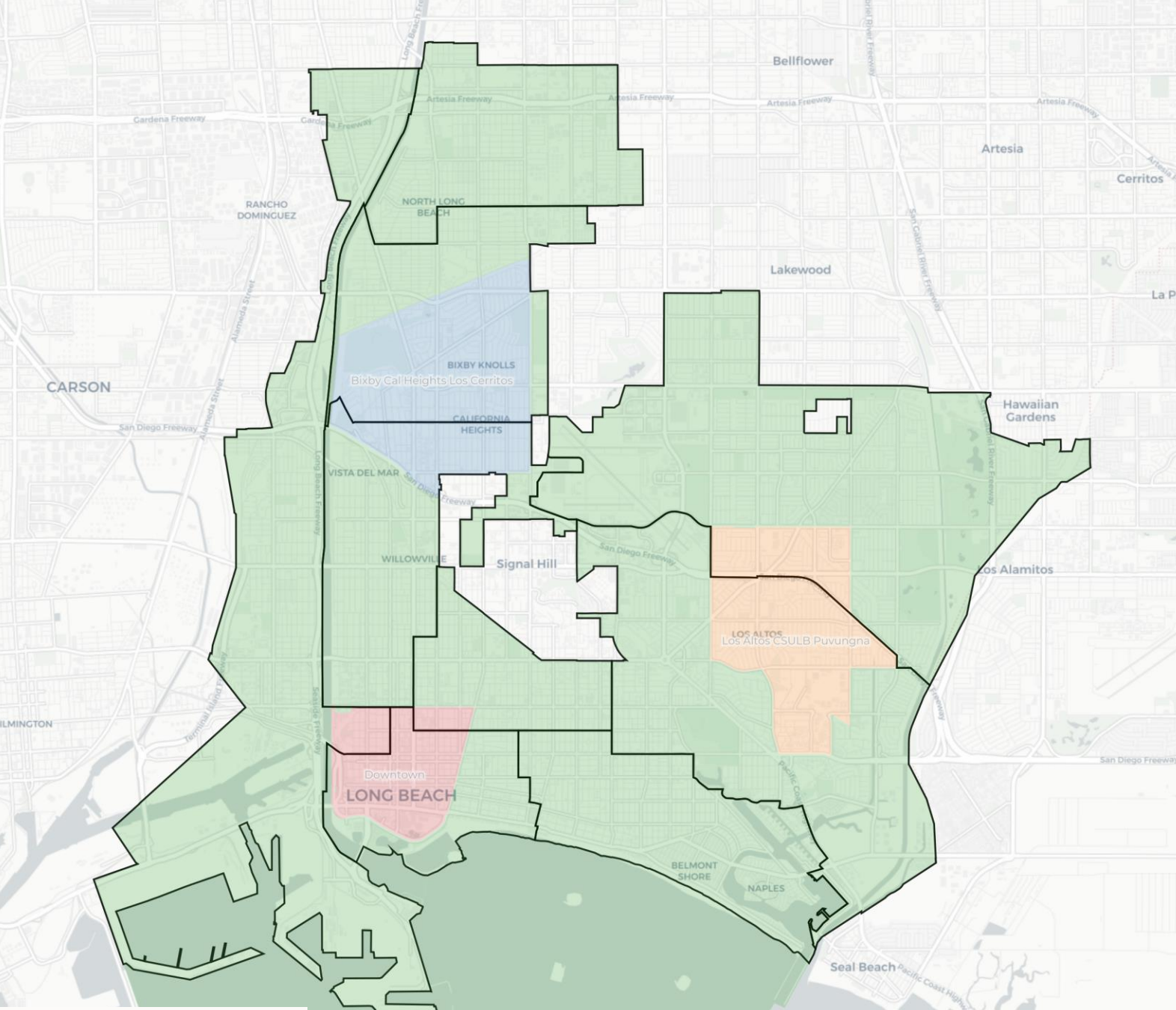
- Downtown encroached from the west, taking entire Whilmore neighborhood due to the need for population in Port district
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos split for population.



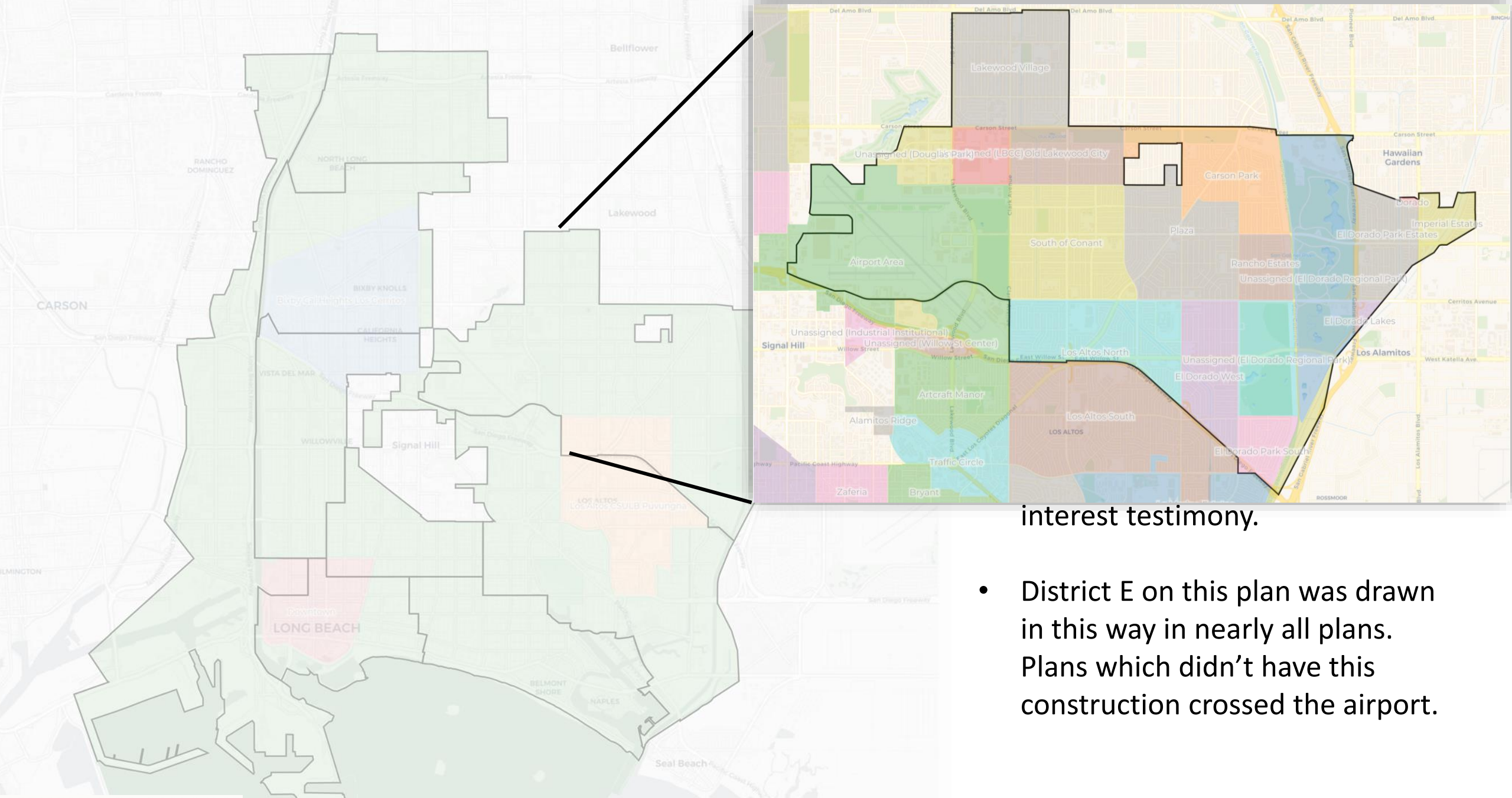
# Plan A

Plan meets commission required criteria and also achieves the following:

- Eastern side of city is less dense, with three districts compared to six on the western side.
- Three districts were constructed with high levels of community of interest testimony.
- District E on this plan was drawn in this way in nearly all plans. Plans which didn't have this construction crossed the airport.







interest testimony.

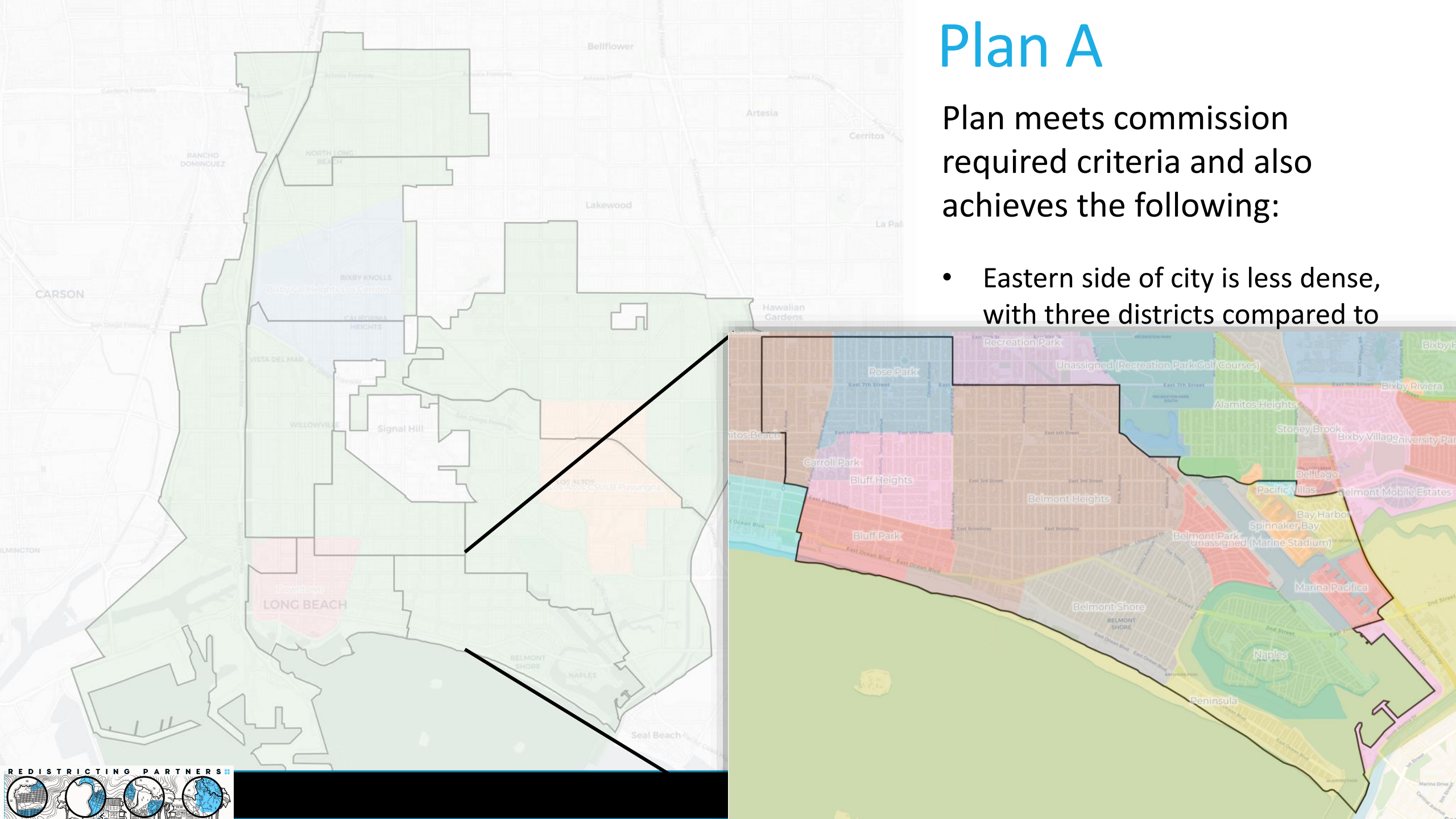
- District E on this plan was drawn in this way in nearly all plans. Plans which didn't have this construction crossed the airport.



# Plan A

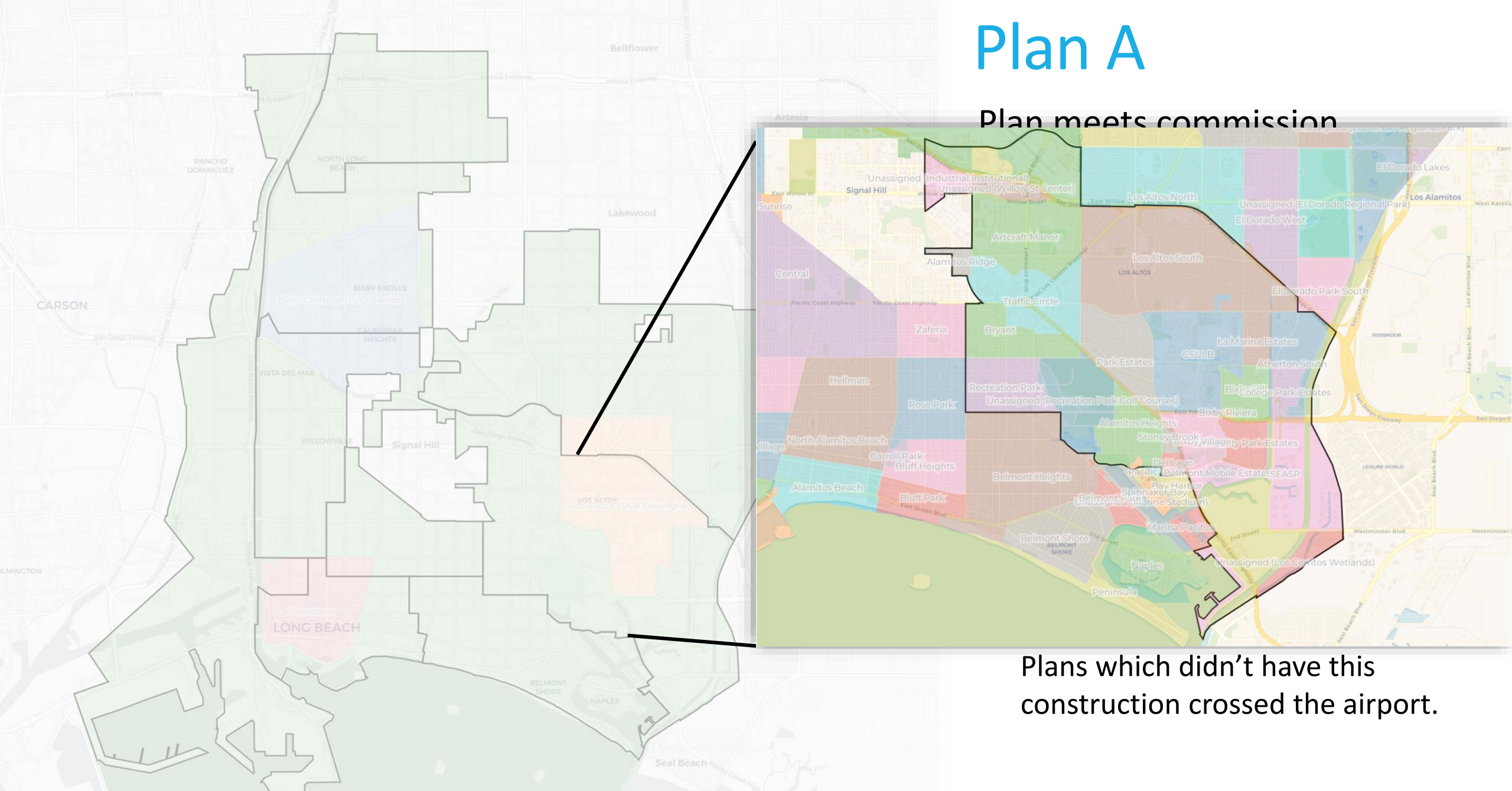
Plan meets commission required criteria and also achieves the following:

- Eastern side of city is less dense, with three districts compared to



# Plan A

Plan meets commission



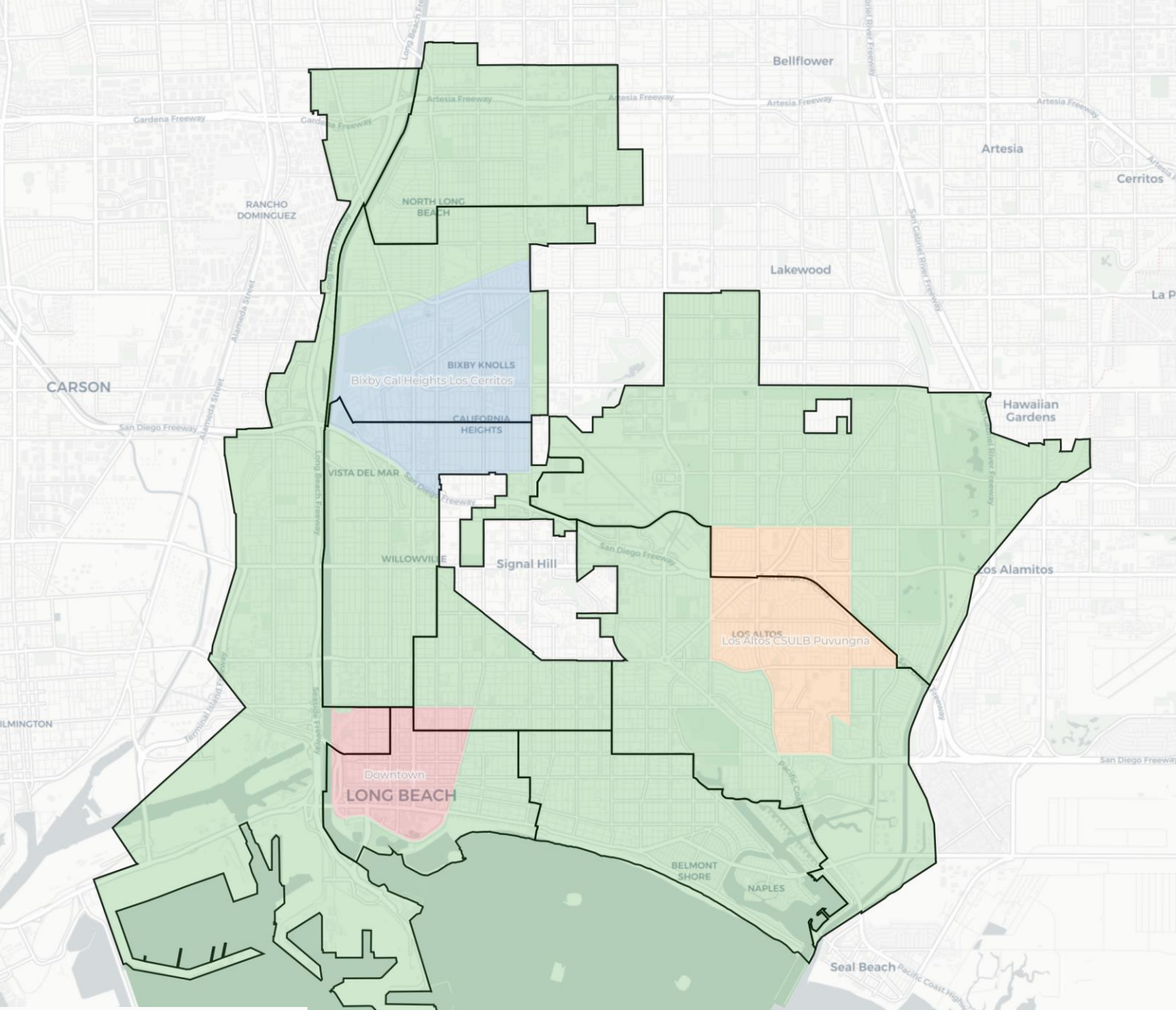
Plans which didn't have this construction crossed the airport.



# Plan A

Plan meets commission required criteria and also achieves the following:

- Downtown encroached from the west, taking entire Whilmore neighborhood due to the need for population in Port district
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos split for population.

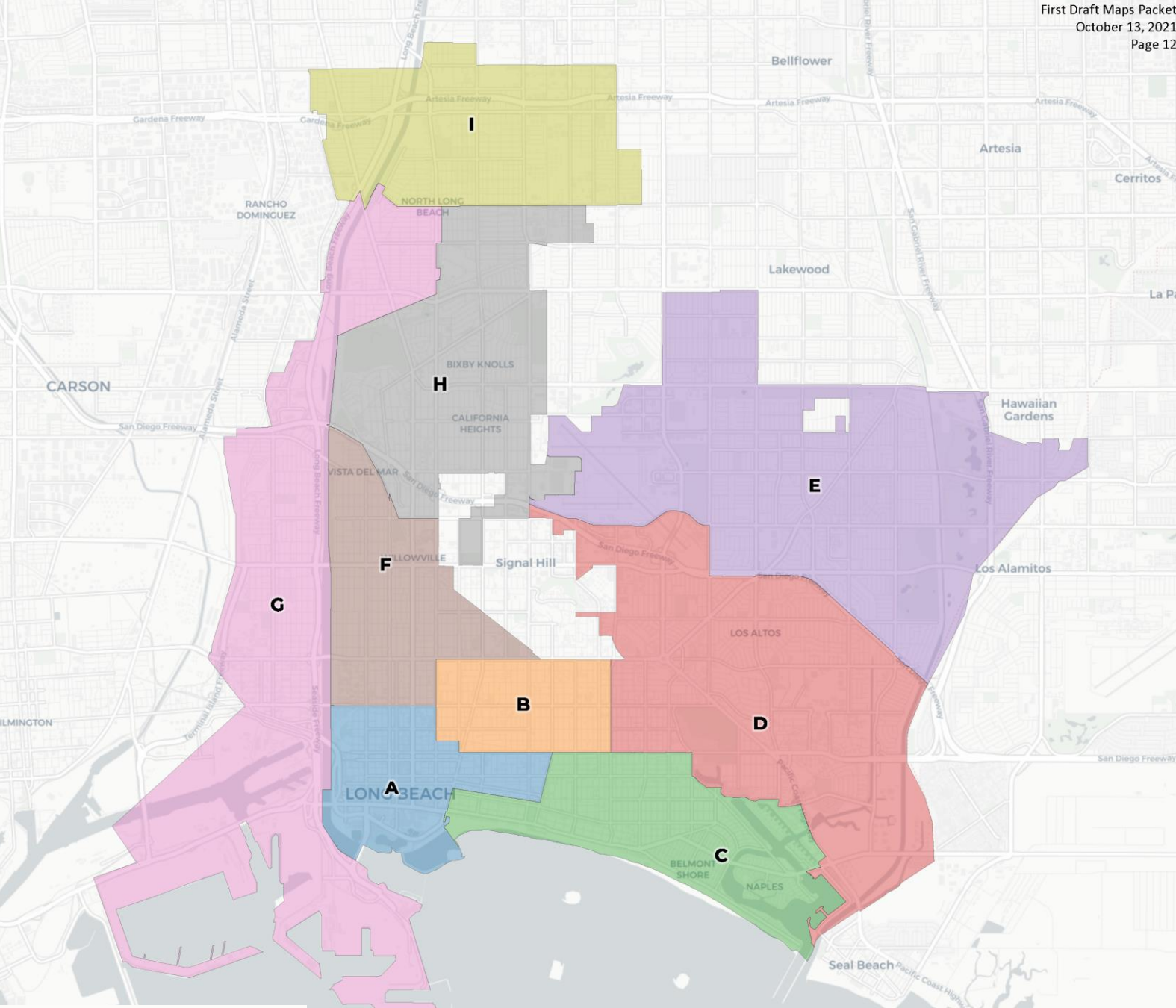




# Plan B

Plan meets commission required criteria and also achieves the following:

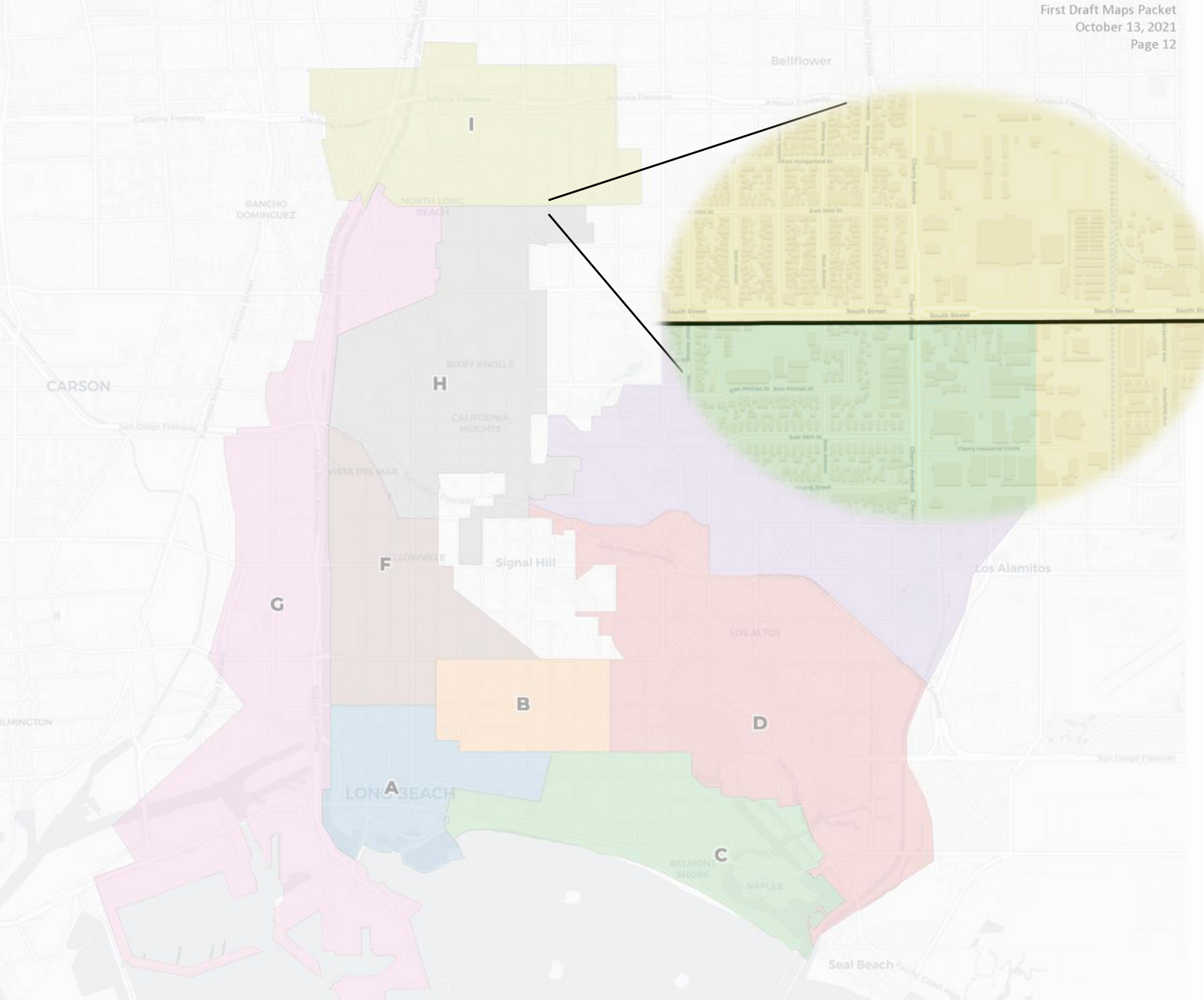
- Deviation of 9.2%
- Preserves 92 of 102 whole neighborhoods
- Western Port district goes up to North Long Beach, but not all the way – allowing a district that goes horizontally at South Street in North Long Beach.
- Three districts touching the airport



# Plan B

Plan meets commission required criteria and also achieves the following:

- Deviation of 9.2%
- Preserves 92 of 102 whole neighborhoods
- Western Port district goes up to North Long Beach, but not all the way – allowing a district that goes horizontally at South Street in North Long Beach.
- Three districts touching the airport

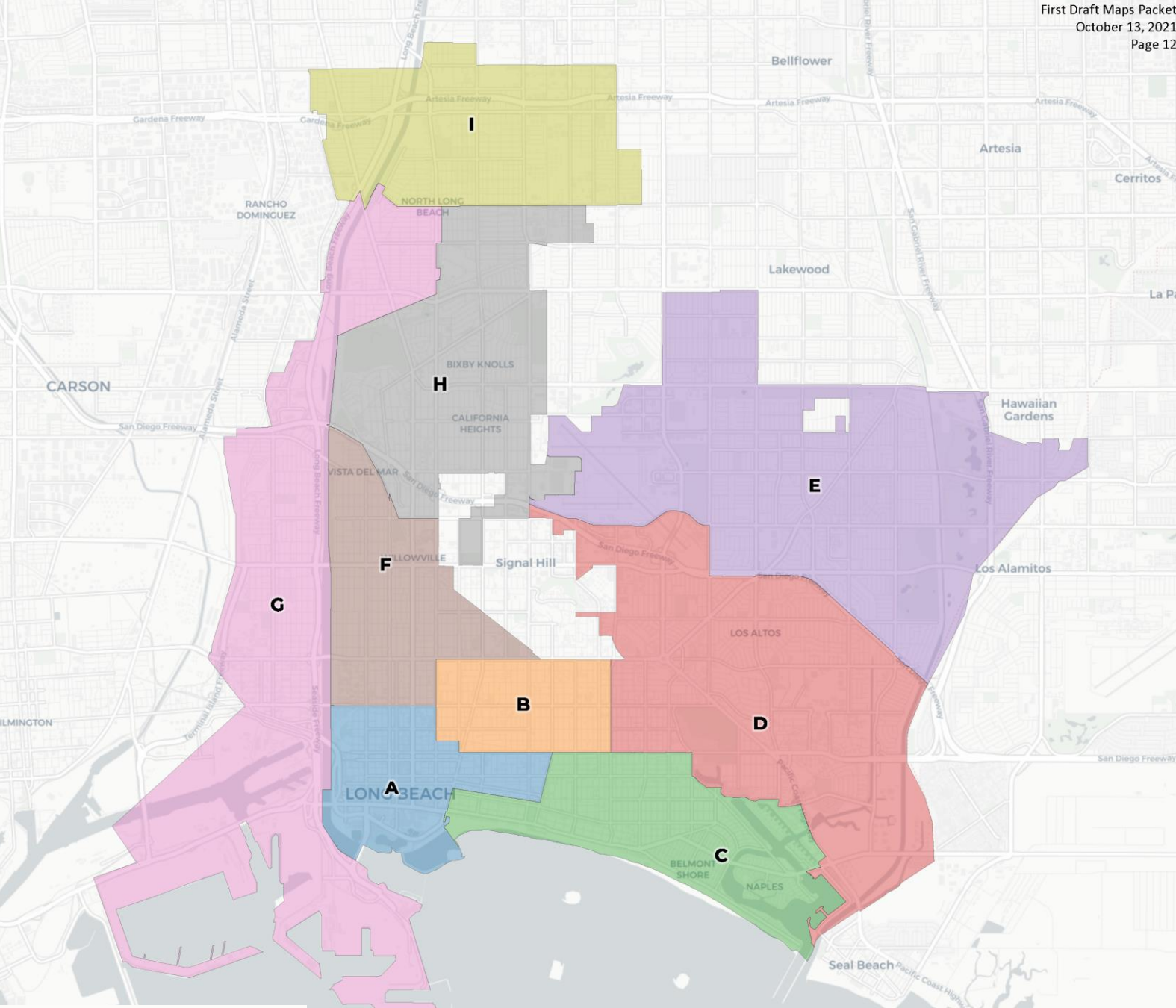




# Plan B

Plan meets commission required criteria and also achieves the following:

- Deviation of 9.2%
- Preserves 92 of 102 whole neighborhoods
- Western Port district goes up to North Long Beach, but not all the way – allowing a district that goes horizontally at South Street in North Long Beach.
- Three districts touching the airport

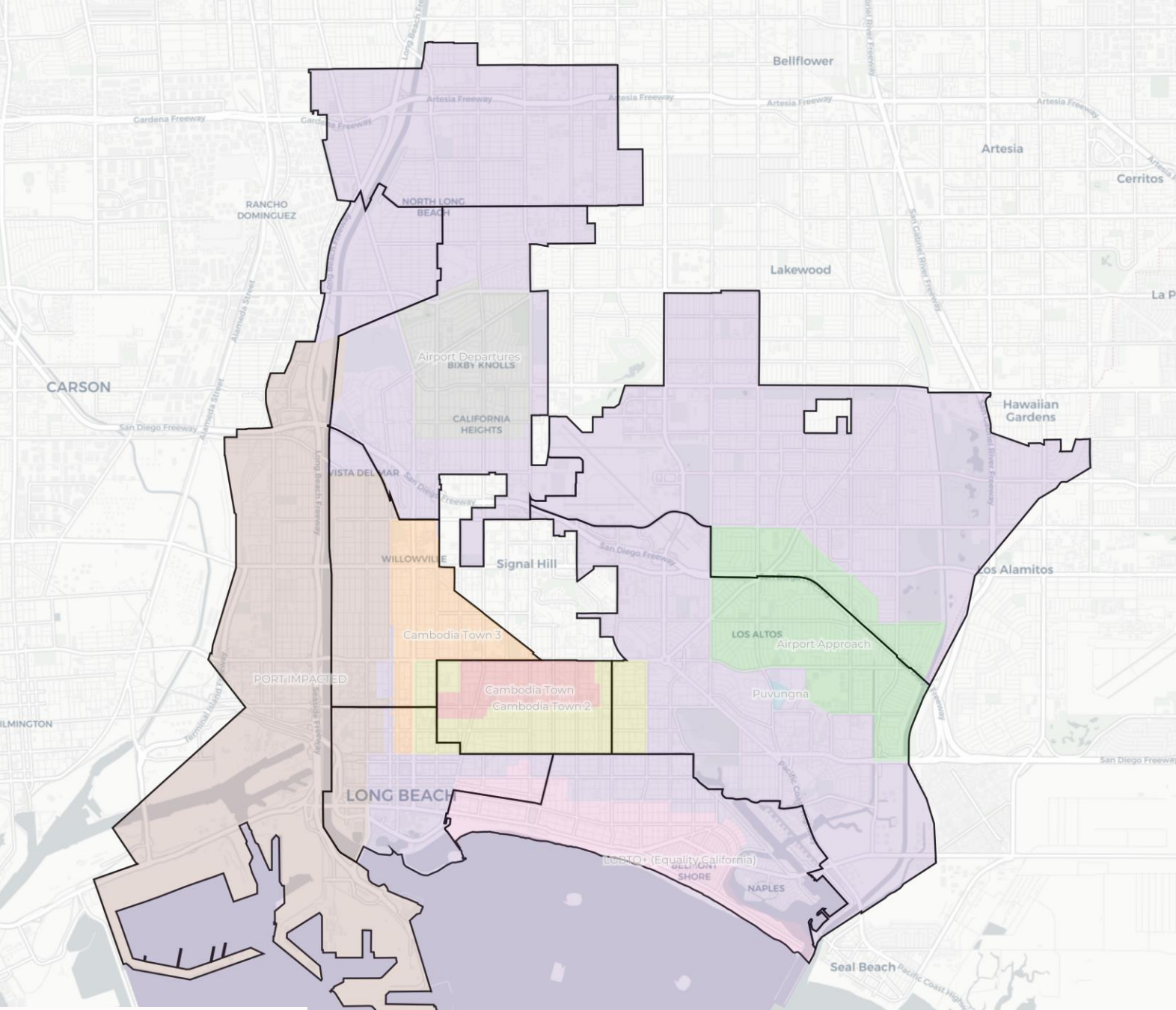




# Plan B

Plan meets commission required criteria and also achieves the following:

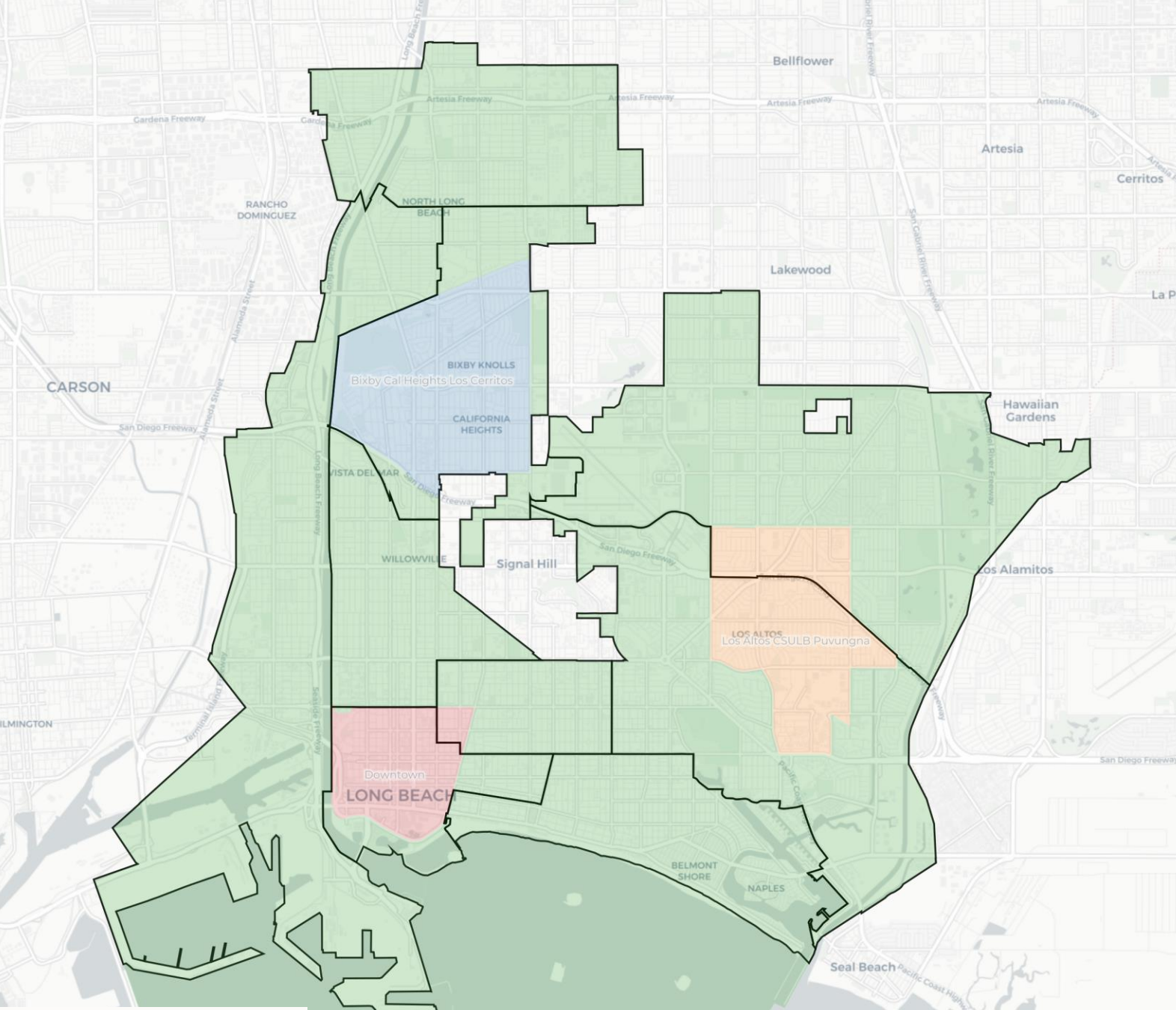
- Airport Departure Community of interest whole in single district.
- Entirety of Cambodia Town primary community of interest in single district with elements of one larger interpretation of that COI
- Largest overlap of LGBTQ Community of Interest in this plan, including LGBTQ businesses in Alamitos Beach Neighborhood.



# Plan B

Plan meets commission required criteria and also achieves the following:

- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos whole in single district.
- Three districts touching the airport.

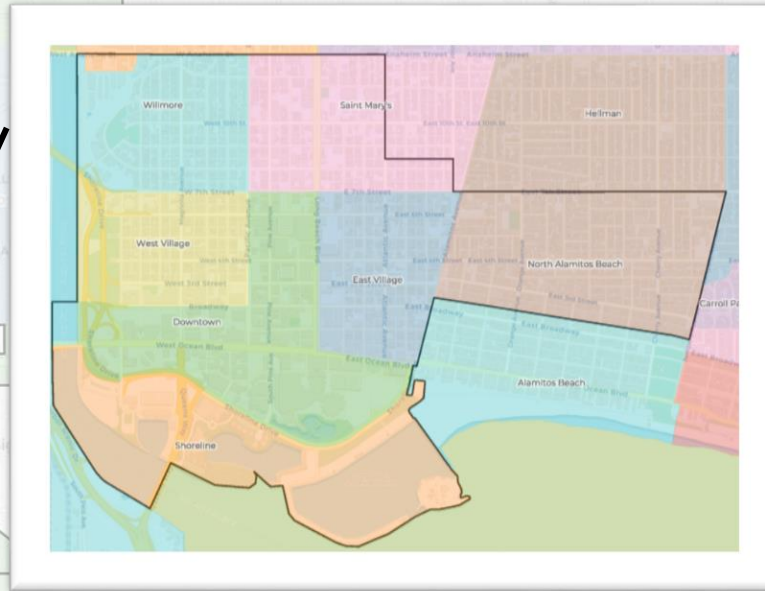




# Plan B

Plan meets commission required criteria and also achieves the following:

- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos whole in single district.
- Three districts touching the airport.

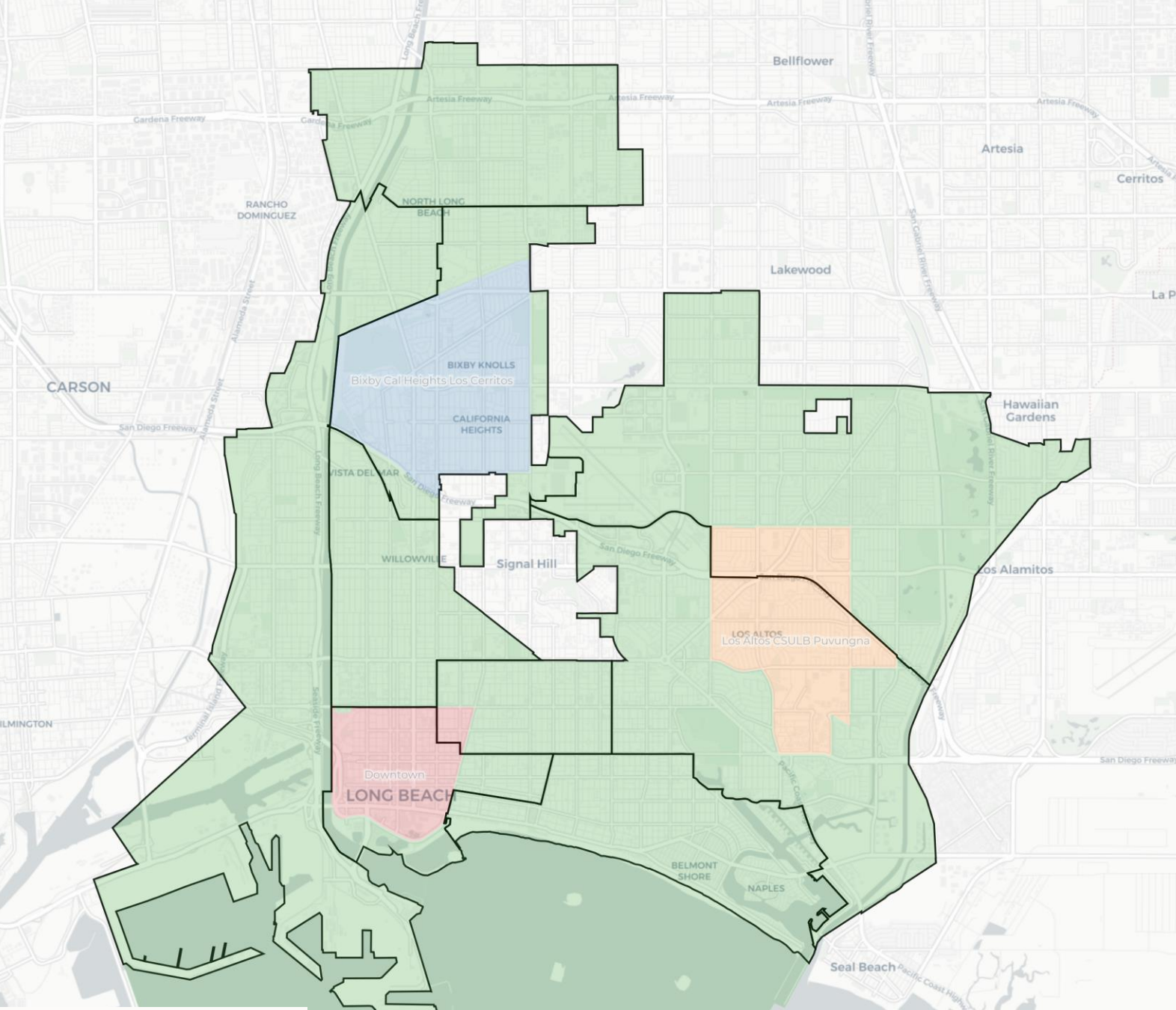




# Plan B

Plan meets commission required criteria and also achieves the following:

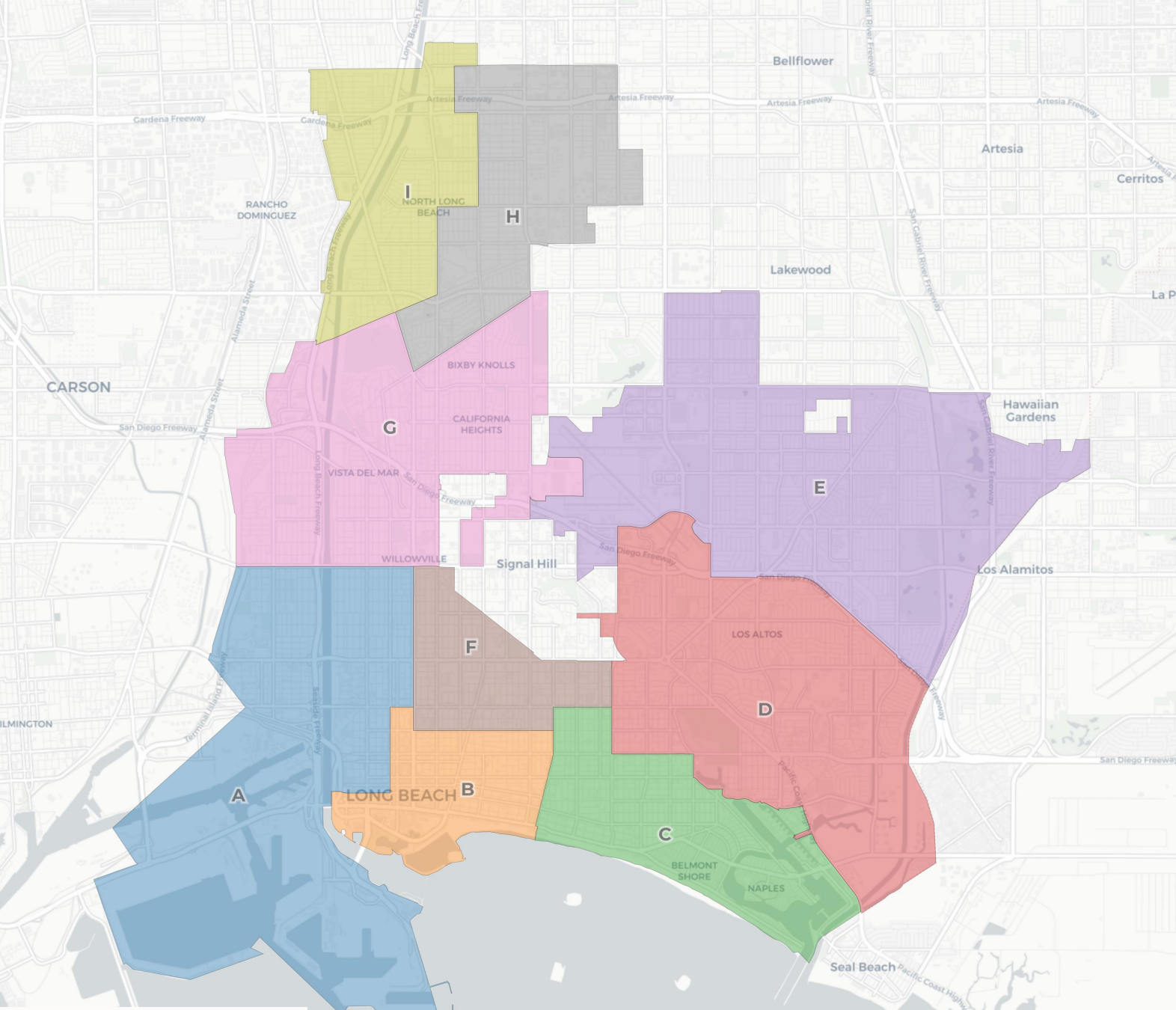
- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos whole in single district.
- Three districts touching the airport.



# Plan C

Plan meets commission required criteria and also achieves the following:

- Deviation of 9.1%
- Preserves 92 of 102 whole neighborhoods
- More Compressed West Side / Port District
- Creates a district that is 50%+ Latino Citizen Voting Age Population in "I"

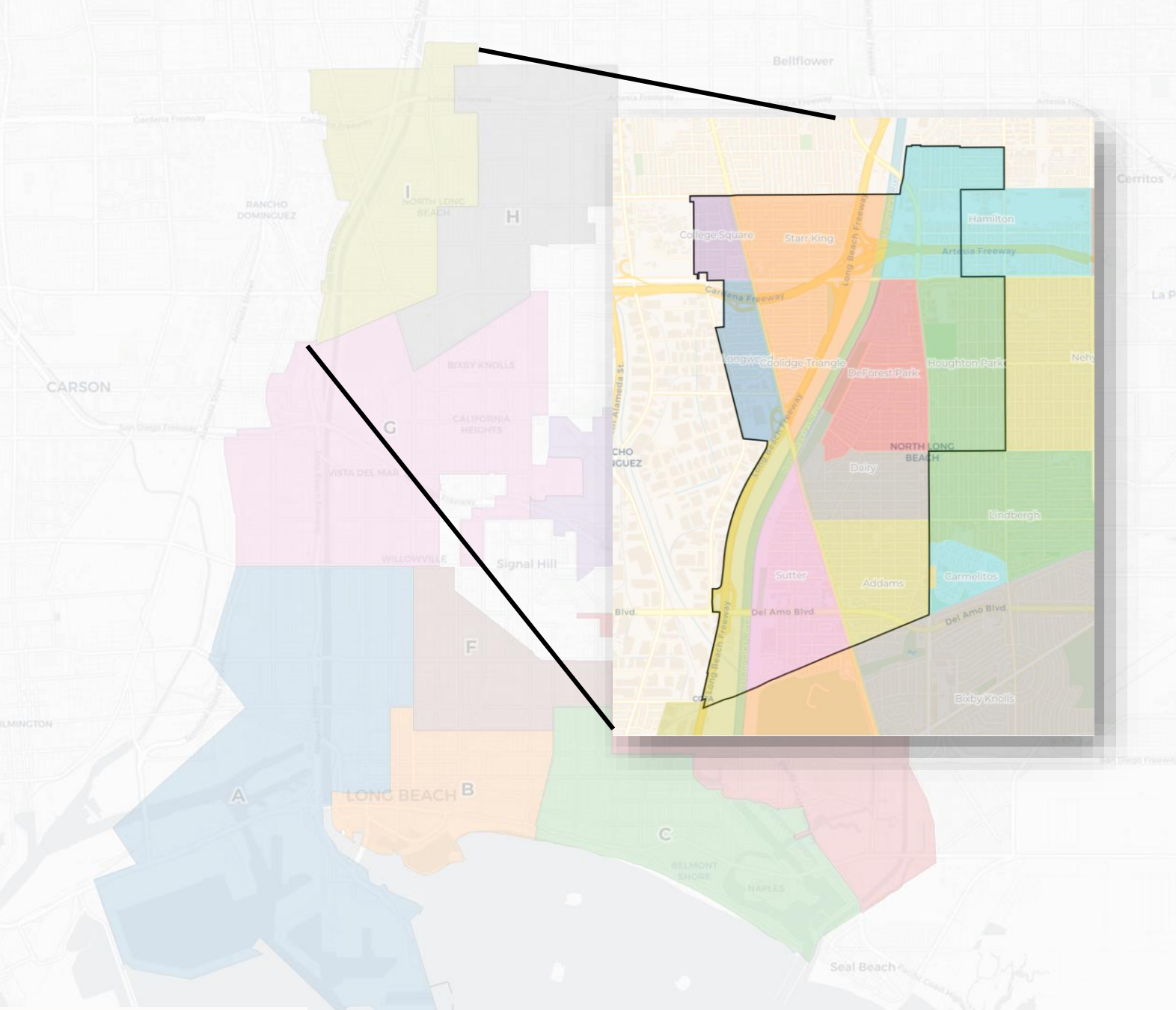




# Plan C

Plan meets commission required criteria and also achieves the following:

- Deviation of 9.1%
- Preserves 92 of 102 whole neighborhoods
- More Compressed West Side / Port District
- Creates a district that is 50%+ Latino Citizen Voting Age Population in "1"

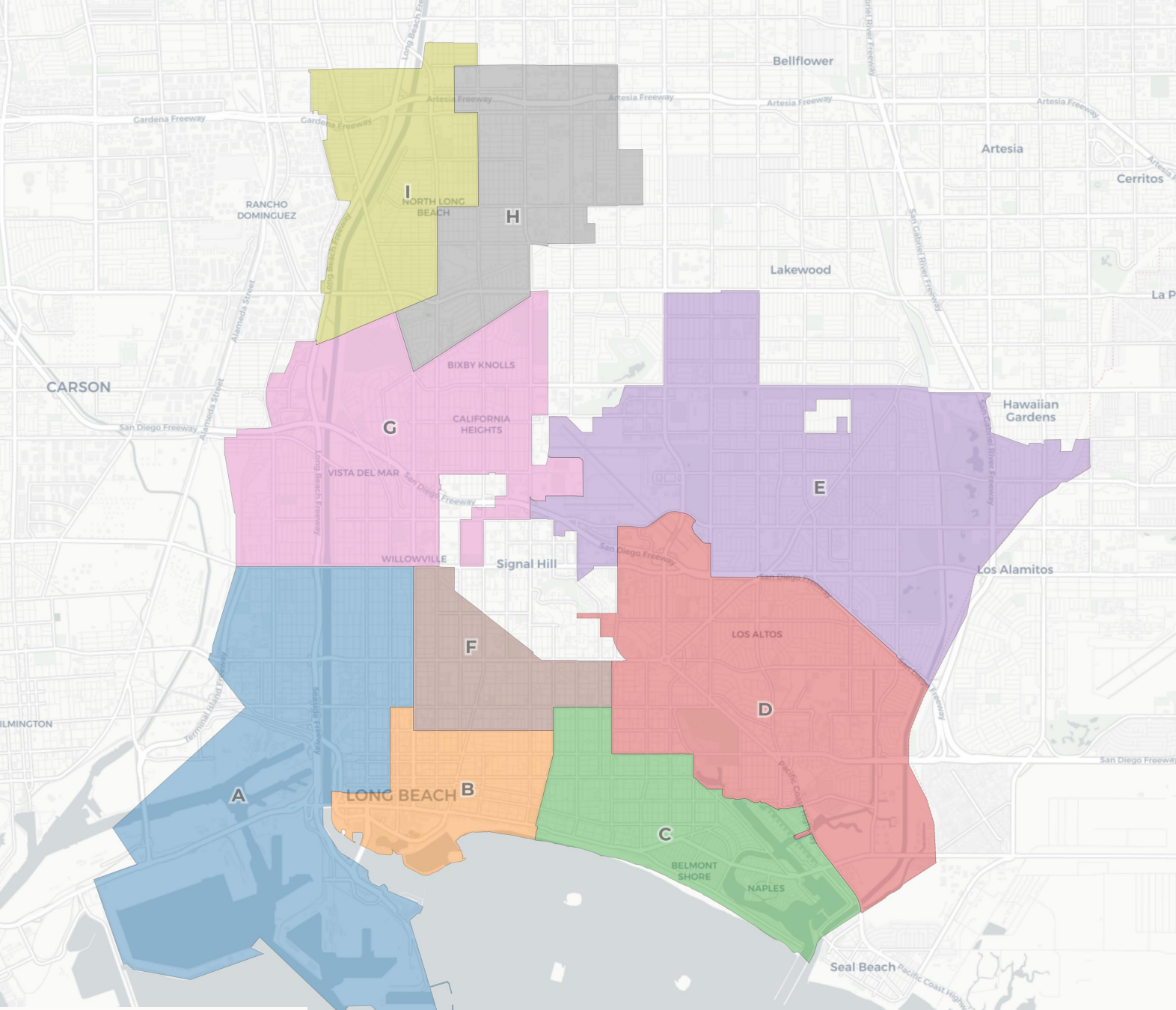




# Plan C

Plan meets commission required criteria and also achieves the following:

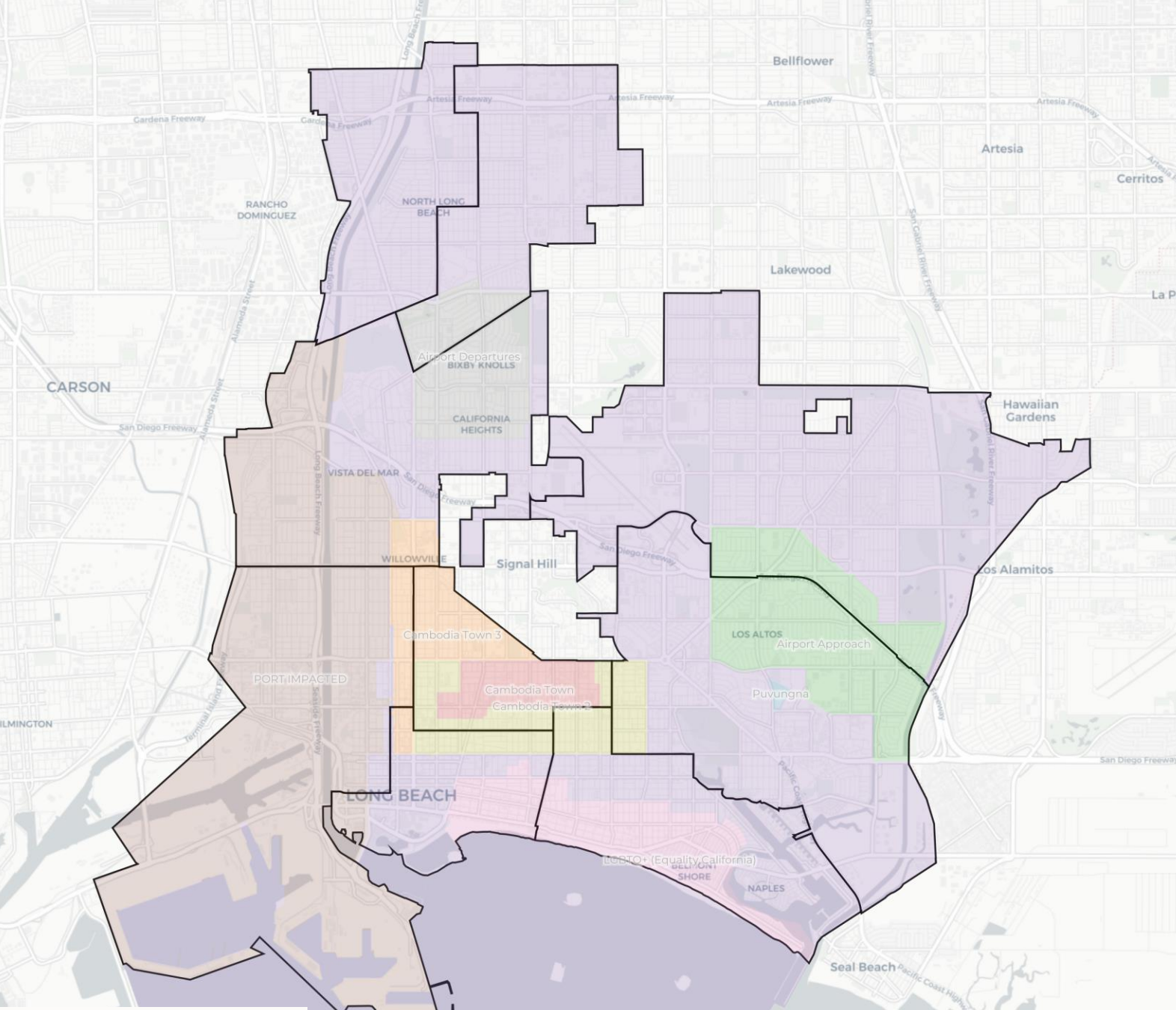
- Deviation of 9.1%
- Preserves 92 of 102 whole neighborhoods
- More Compressed West Side / Port District
- Creates a district that is 50%+ Latino Citizen Voting Age Population in "I"



# Plan C

Plan meets commission required criteria and also achieves the following:

- Airport Departure Community of interest whole in single district.
- Entirety of Cambodia Town primary community of interest in single district with elements of one larger interpretation of that COI
- Largest portion of LGBTQ COI in this plan, including Los Altos Beach neighborhood





# Plan C

Plan meets commission required criteria and also achieves the following:

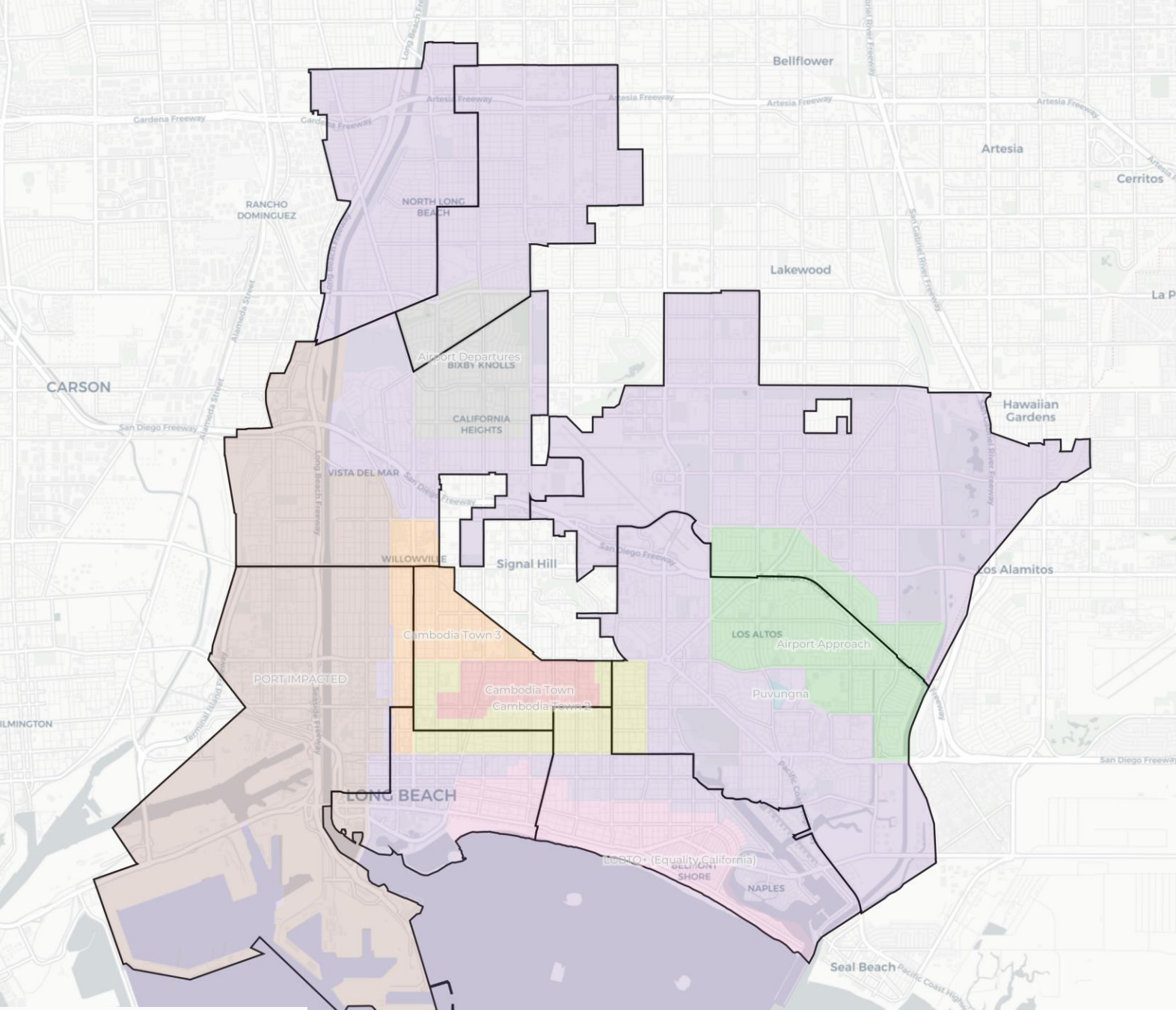
- Airport Departure Community of interest whole in single district.
- Entirety of Cambodia Town primary community of interest in single district with elements of one larger interpretation of that COI
- Largest portion of LGBTQ COI in this plan, including Los Altos Beach neighborhood



# Plan C

Plan meets commission required criteria and also achieves the following:

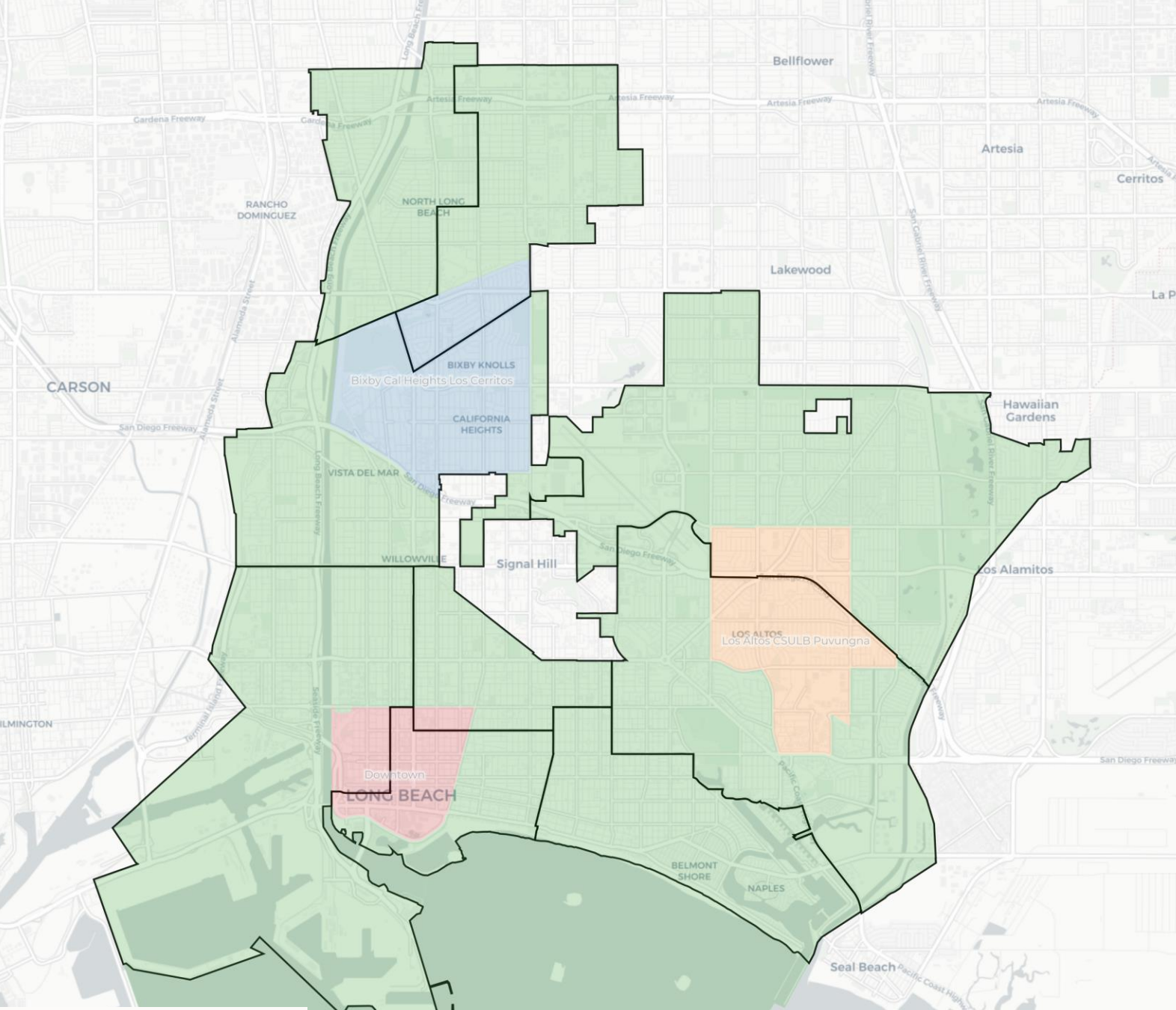
- Airport Departure Community of interest whole in single district.
- Entirety of Cambodia Town primary community of interest in single district with elements of one larger interpretation of that COI
- Largest portion of LGBTQ COI in this plan, including Los Altos Beach neighborhood



# Plan C

Plan meets commission required criteria and also achieves the following:

- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos whole in single district.
- Three districts touching the airport.

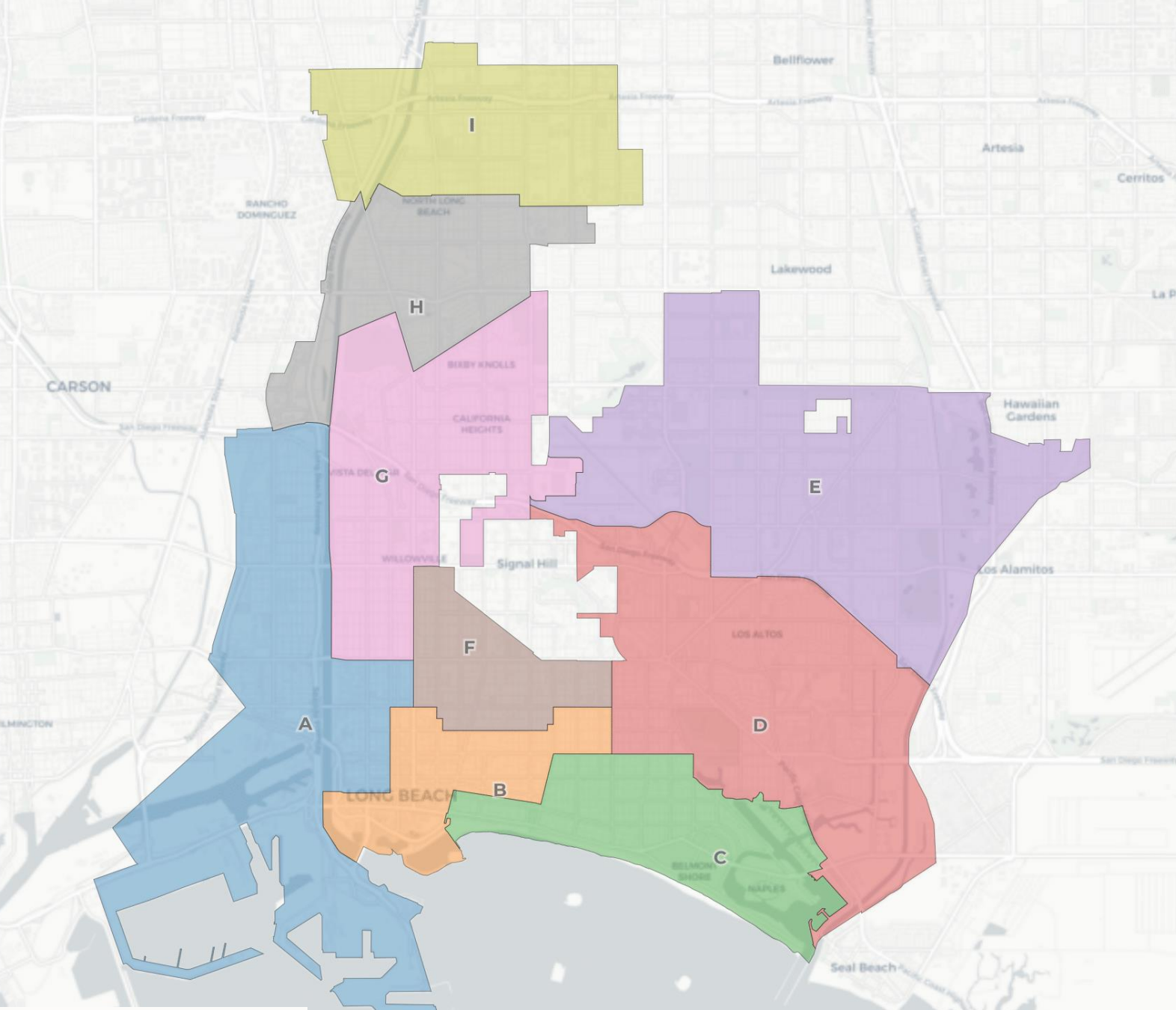




# Plan D

Plan meets commission required criteria and also achieves the following:

- Deviation of 8.2%
- Preserves 93 of 102 whole neighborhoods
- Takes District A up the west side of the LA River including port with inclusion of Whillmore, West Village, Washington School and Magnolia District neighborhoods for population equality.

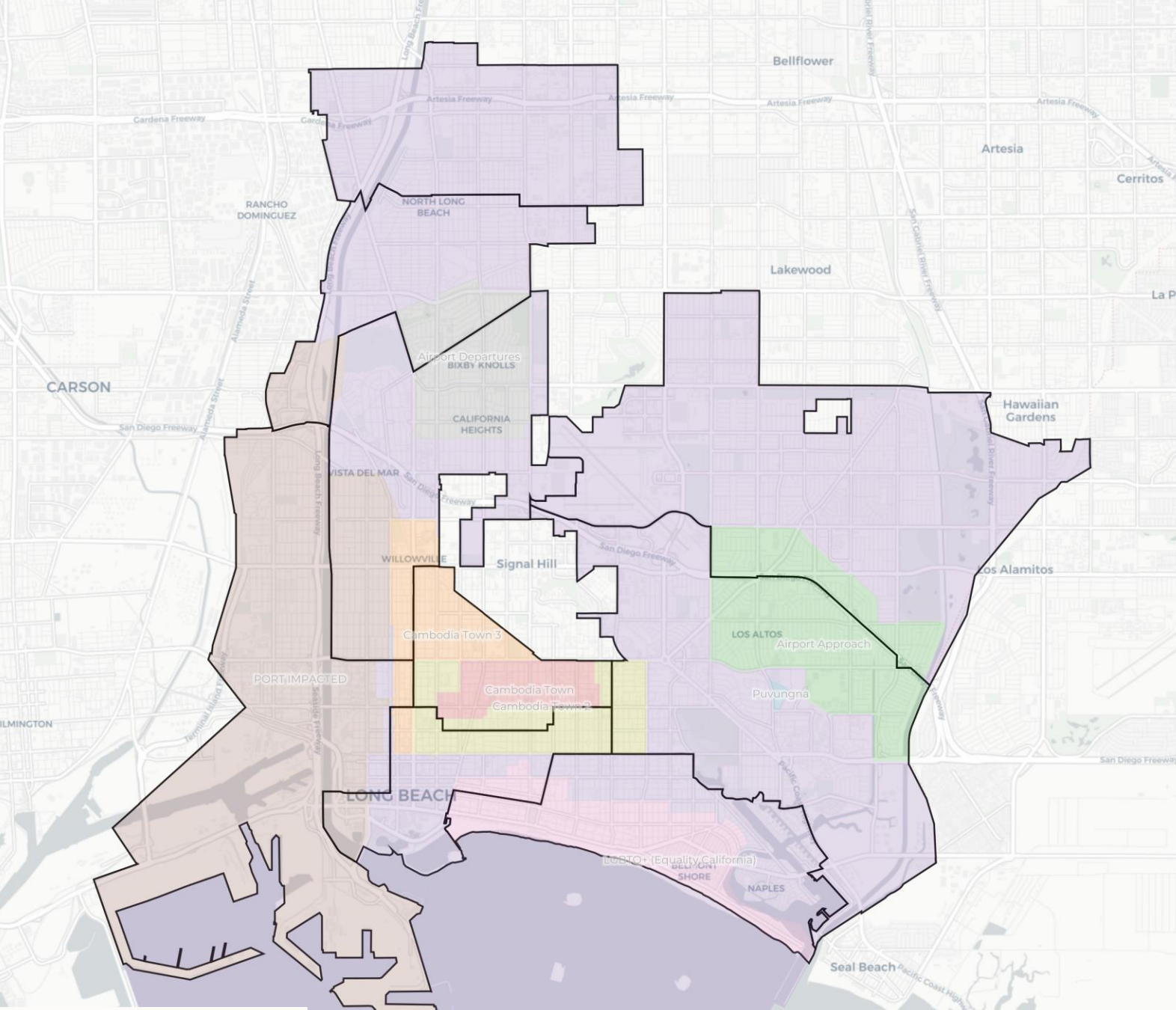




# Plan D

Plan meets commission required criteria and also achieves the following:

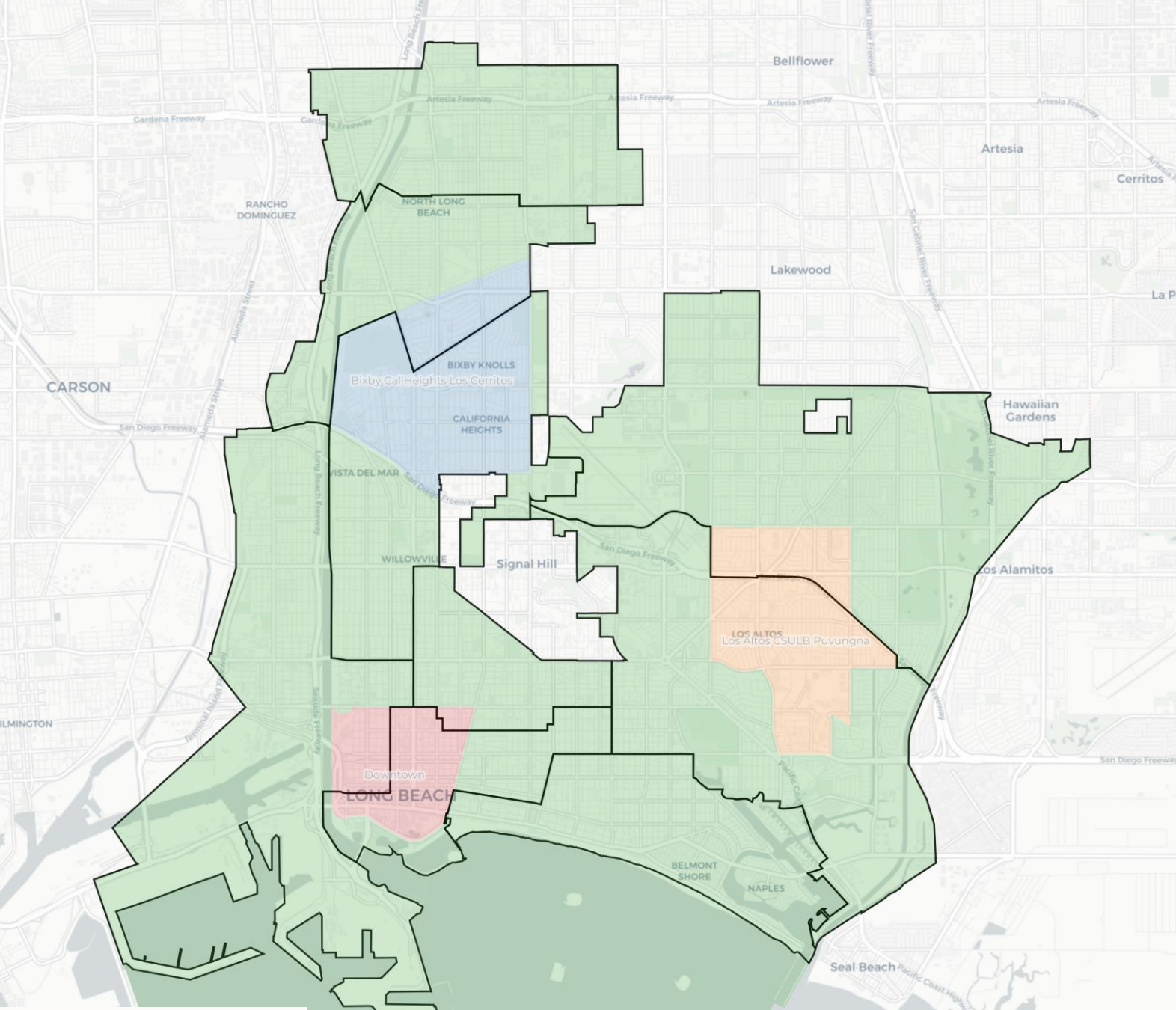
- Airport Departure Community of interest largely in single district.
- Entirety of Cambodia Town primary community of interest in single district with portions of two larger interpretation of that COI
- Largest portion of LGBTQ COI in this plan, including Los Altos Beach neighborhood



# Plan D

Plan meets commission required criteria and also achieves the following:

- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Bixby Knolls / California Heights and Los Cerritos divided at northern part of Bixby Knolls for population.
- Three districts touching the airport.

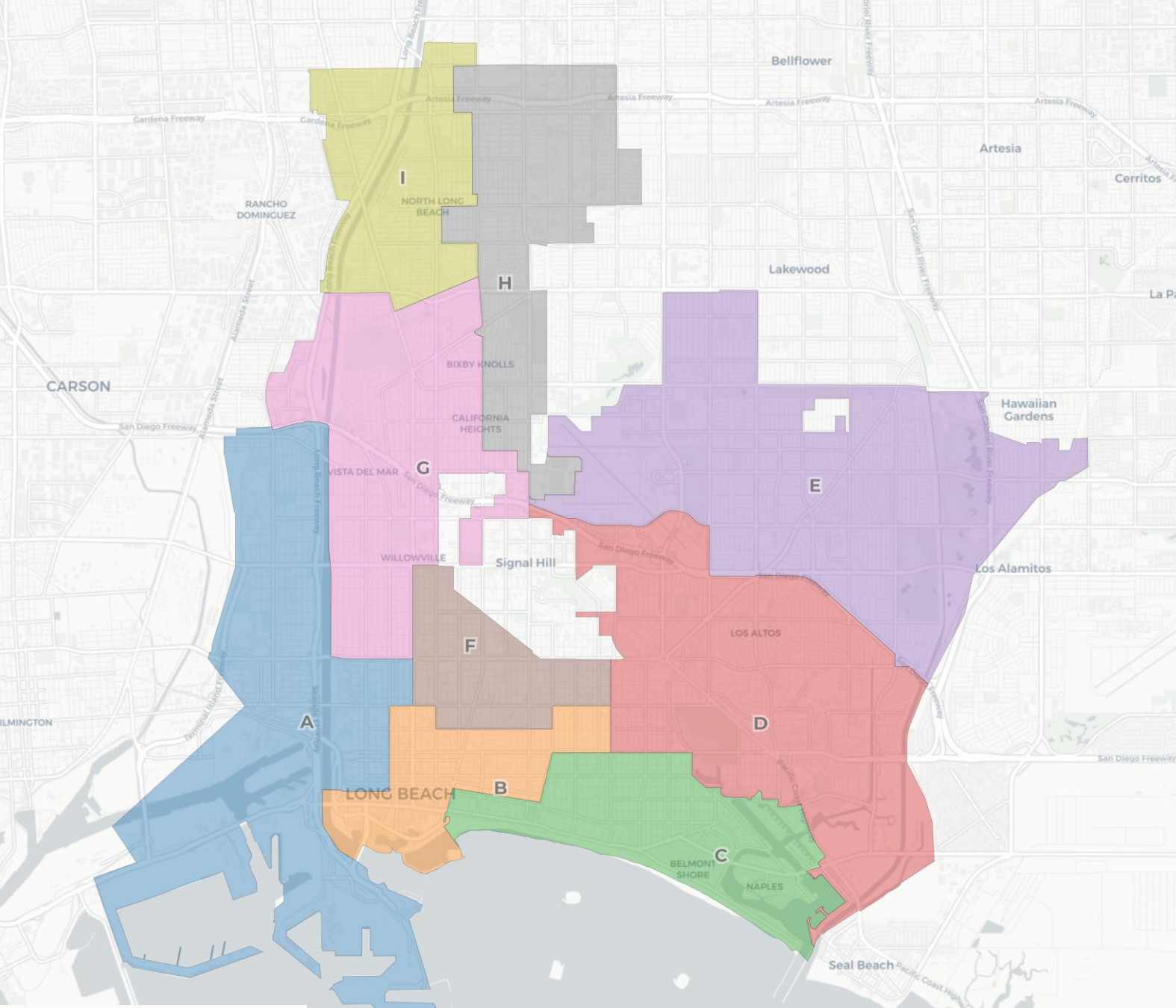




# Plan E

Plan meets commission required criteria and also achieves the following:

- Deviation of 8.6
- Preserves 91 whole neighborhoods
- Based on D, but with different construction of North Long Beach.
- Creates a district that is 50%+ Latino Citizen Voting Age Population in "I"

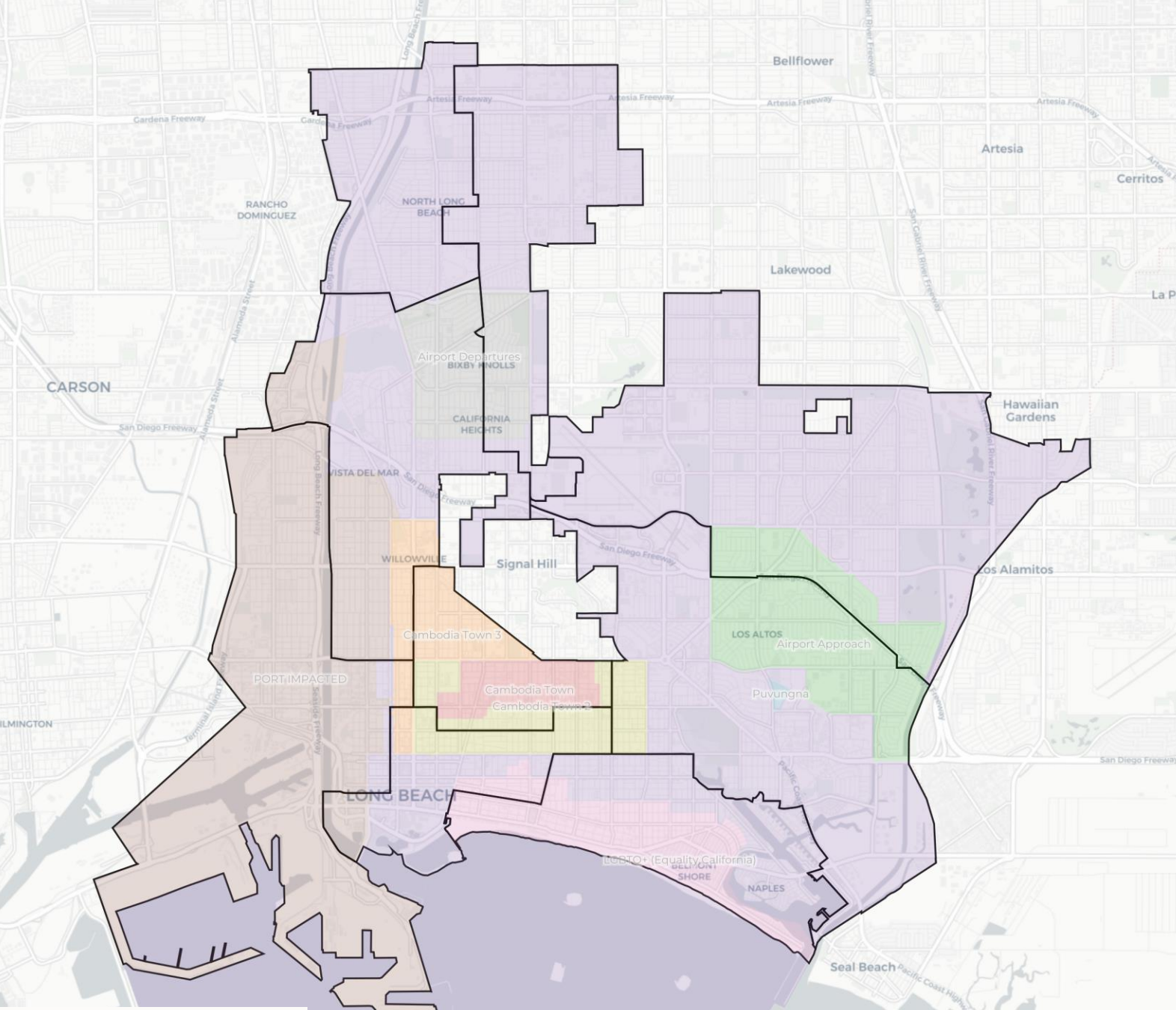




# Plan E

Plan meets commission required criteria and also achieves the following:

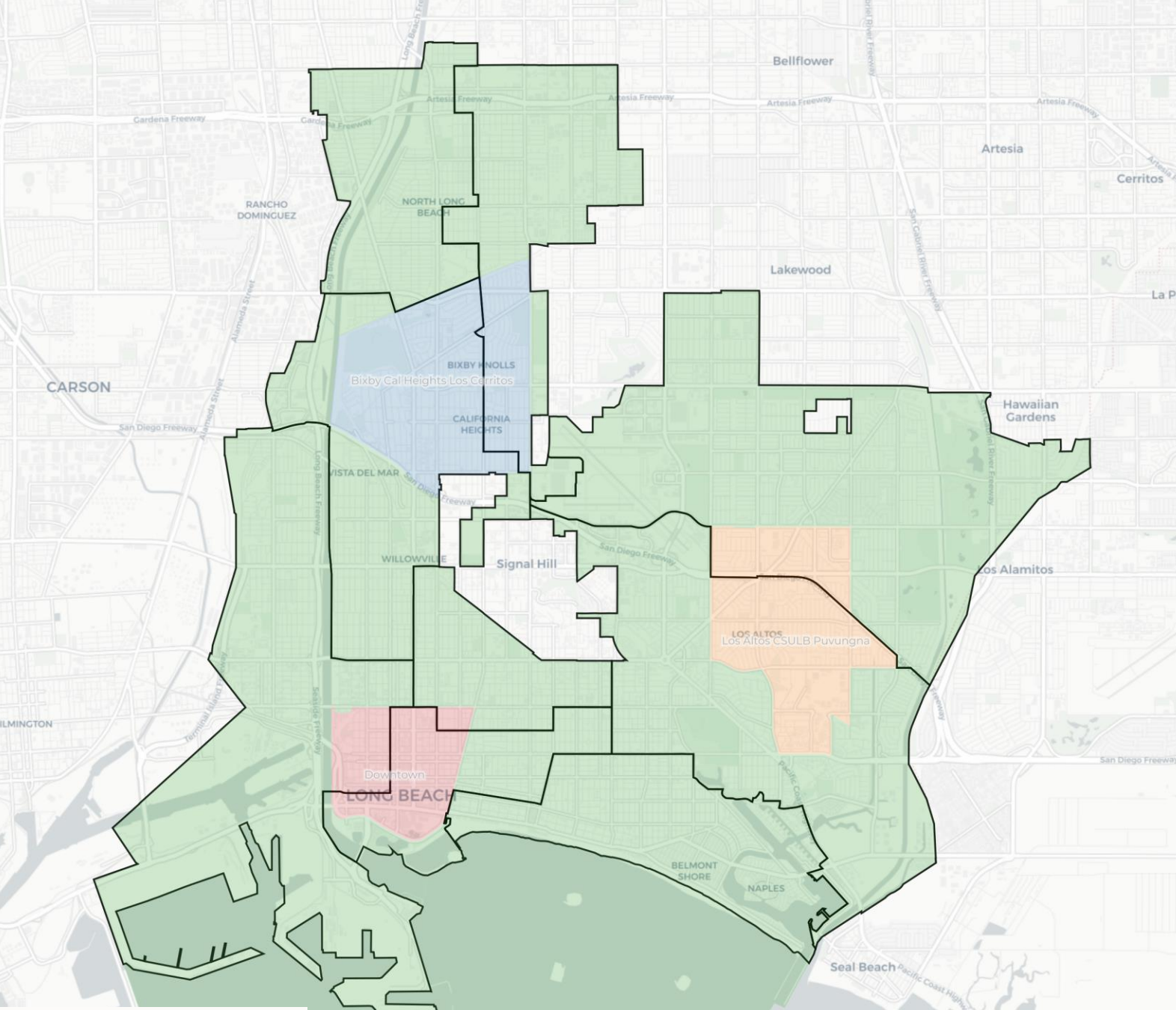
- Airport Departure Community of interest split to allow a fourth district to touch the airport
- Entirety of Cambodia Town primary community of interest in single district with elements of two larger interpretations of that COI
- Largest portion of LGBTQ COI in this plan, including Los Altos Beach neighborhood



# Plan E

Plan meets commission required criteria and also achieves the following:

- Downtown and surrounding neighborhoods largely within single district.
- CSULB and Puvunga in district with Los Altos, split at boundary with North Los Altos
- Downtown neighborhoods split into three districts with one arm reaching far to the east.
- Three districts touching the airport.

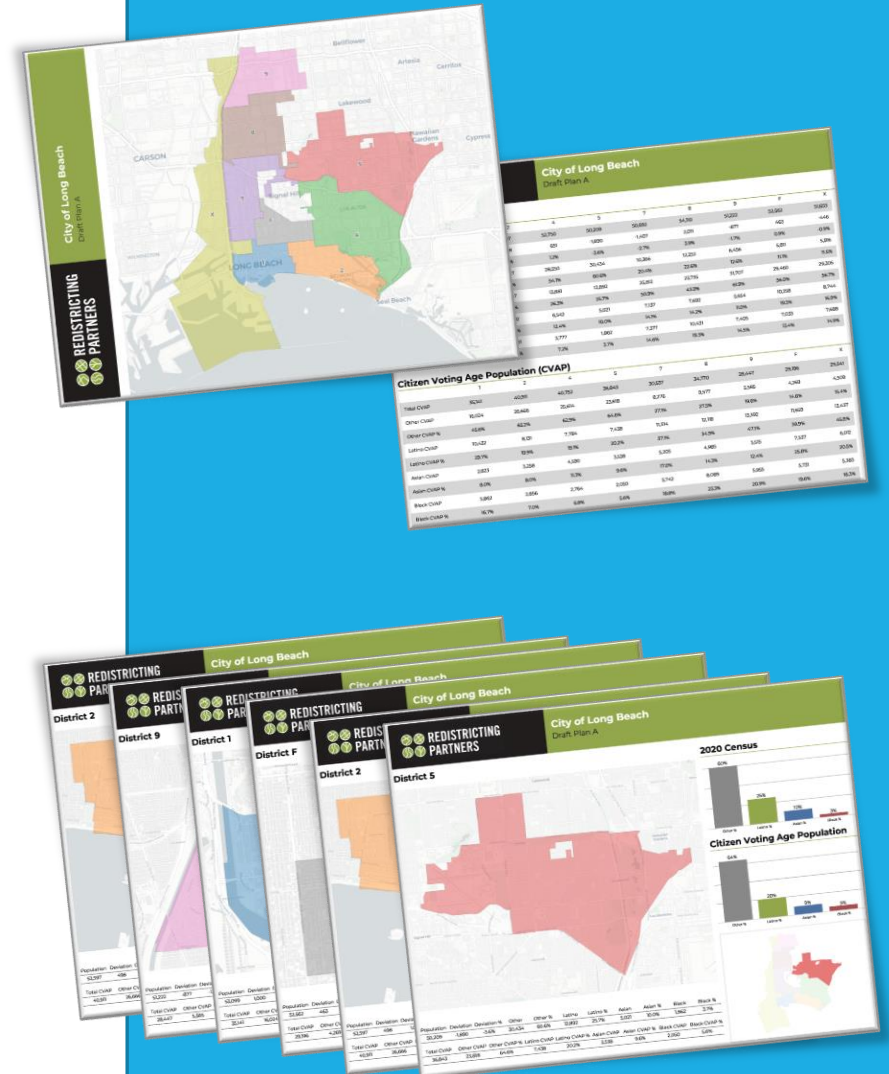




# Reduced Deviation Plans

Commission requested that Redistricting Partners provide at least one version of a plan at under 5%. We ended up making under 5% versions of all A - E

- 1) Reduced deviations better meets equal population goals
- 2) Increased splitting of neighborhoods – 2-3 in each plan.
- 3) No appreciable impact on the ability to improve representation for any community of interest.

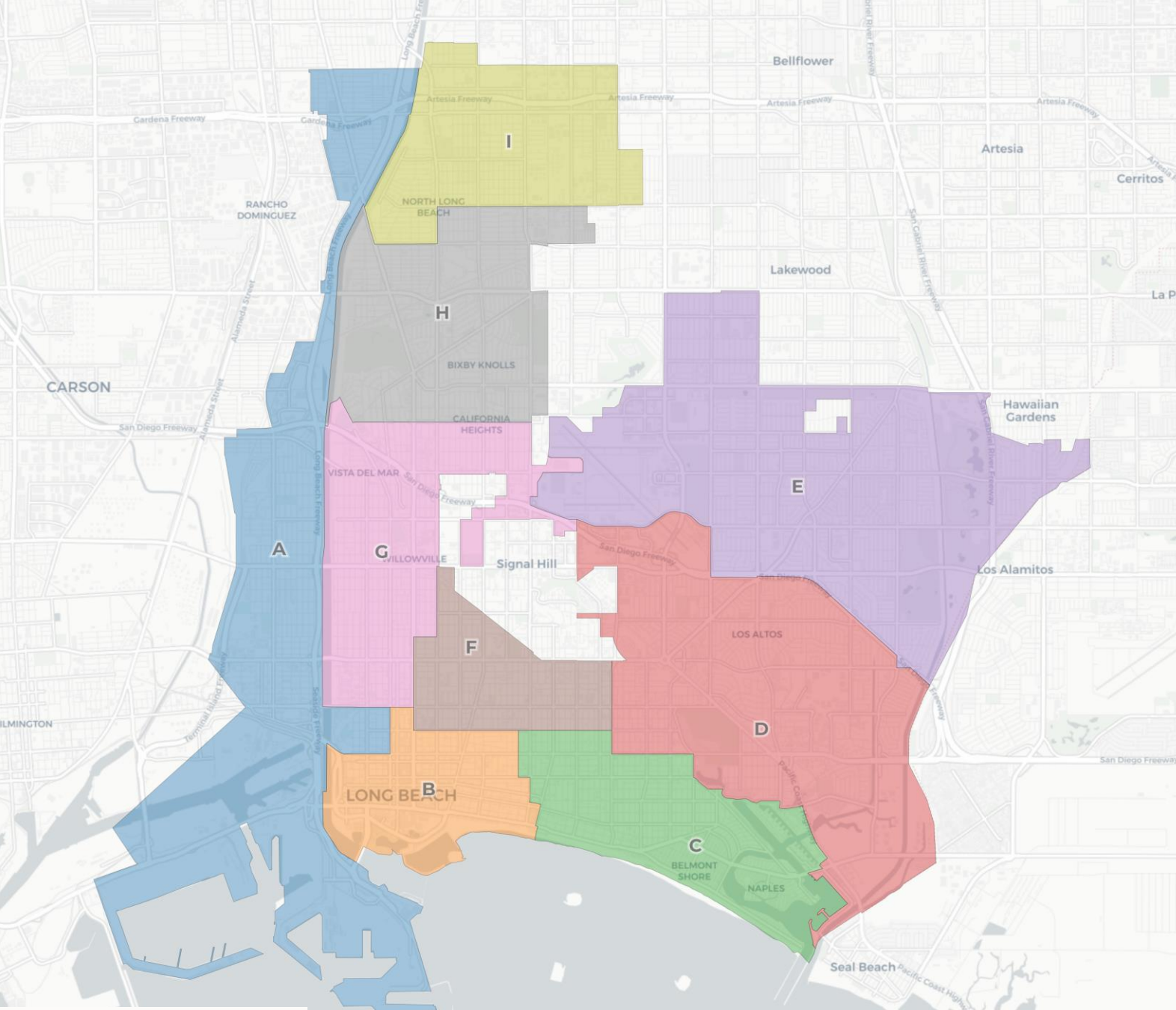


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan A

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



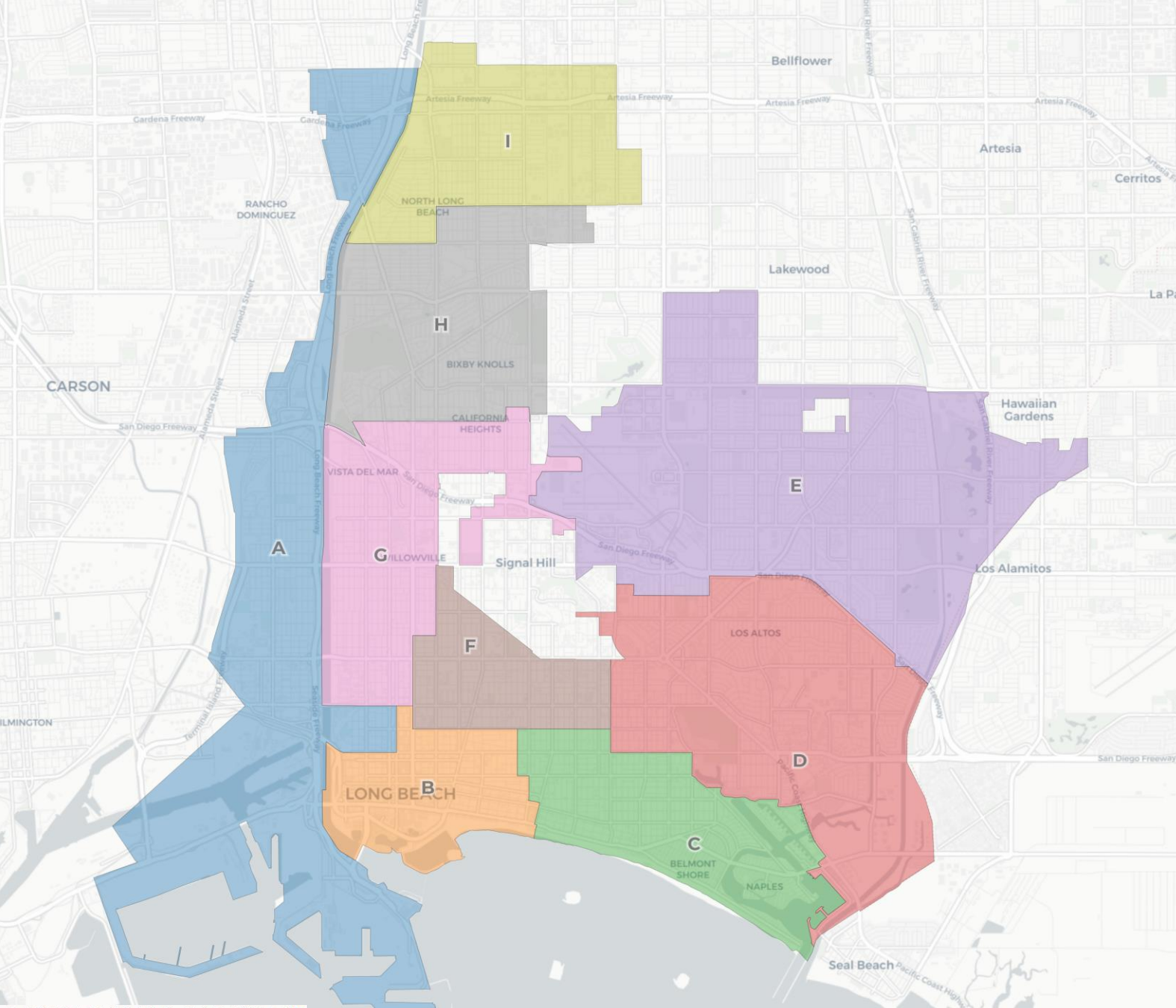


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan A5

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness

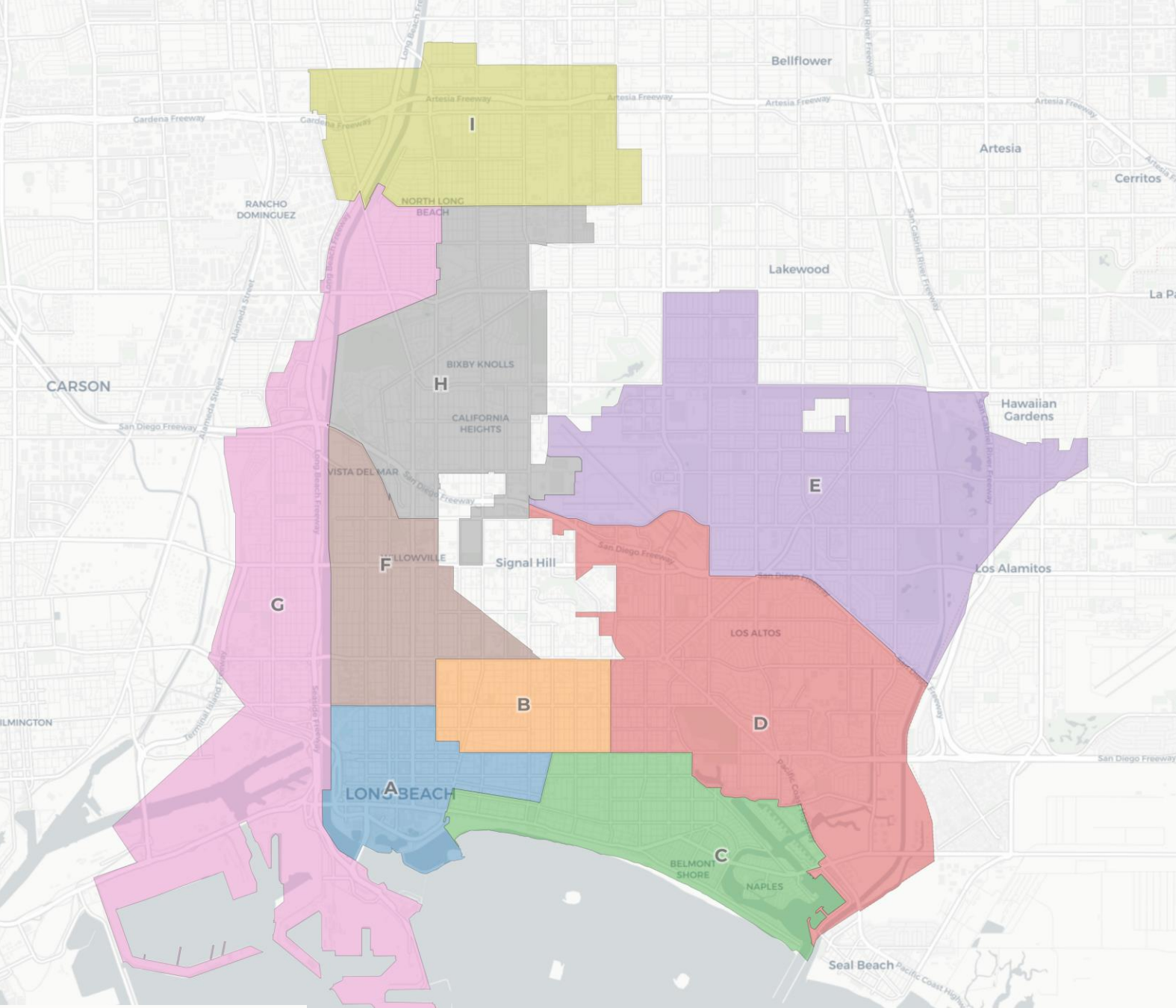


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan B

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



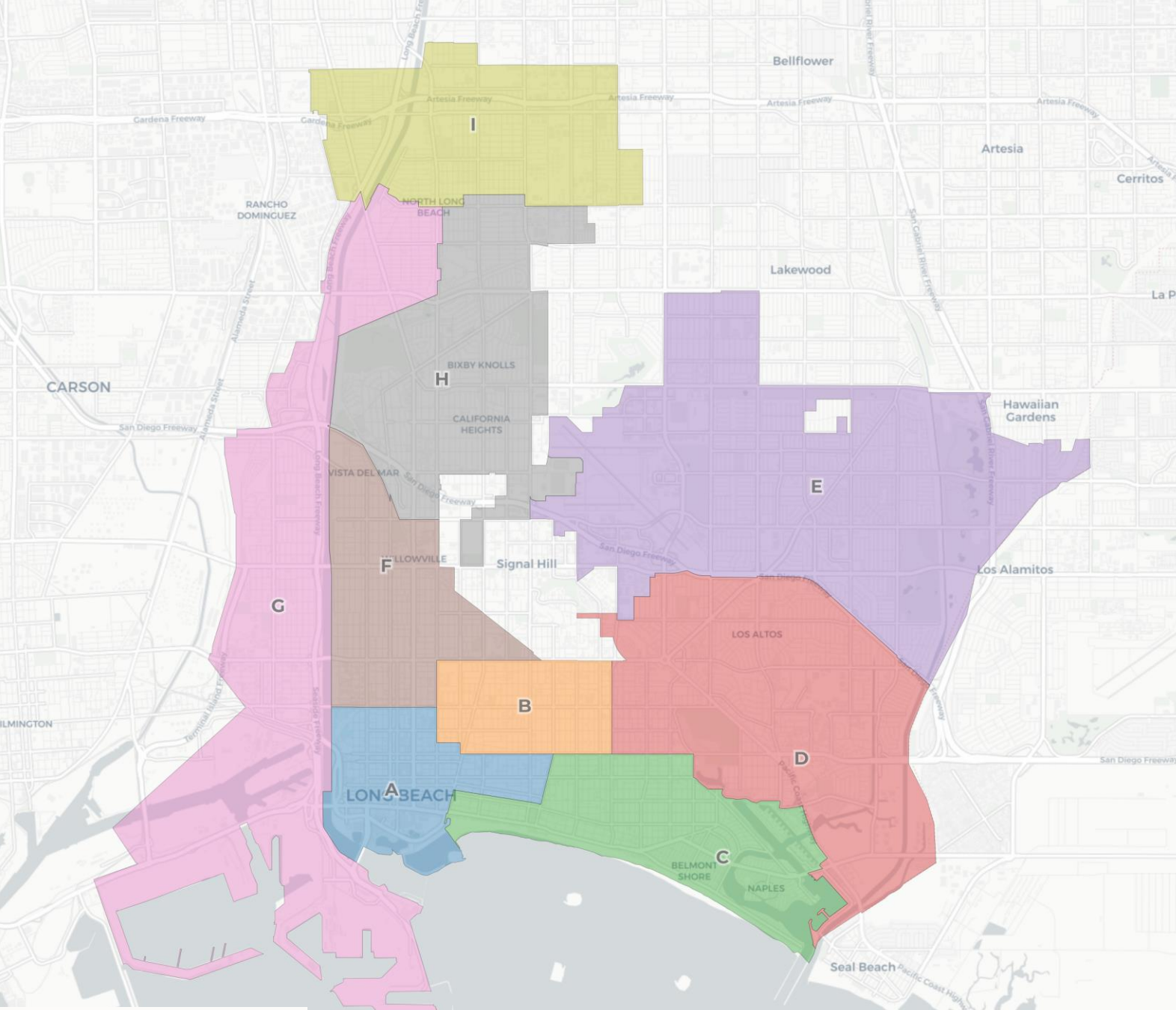


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan B5

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness

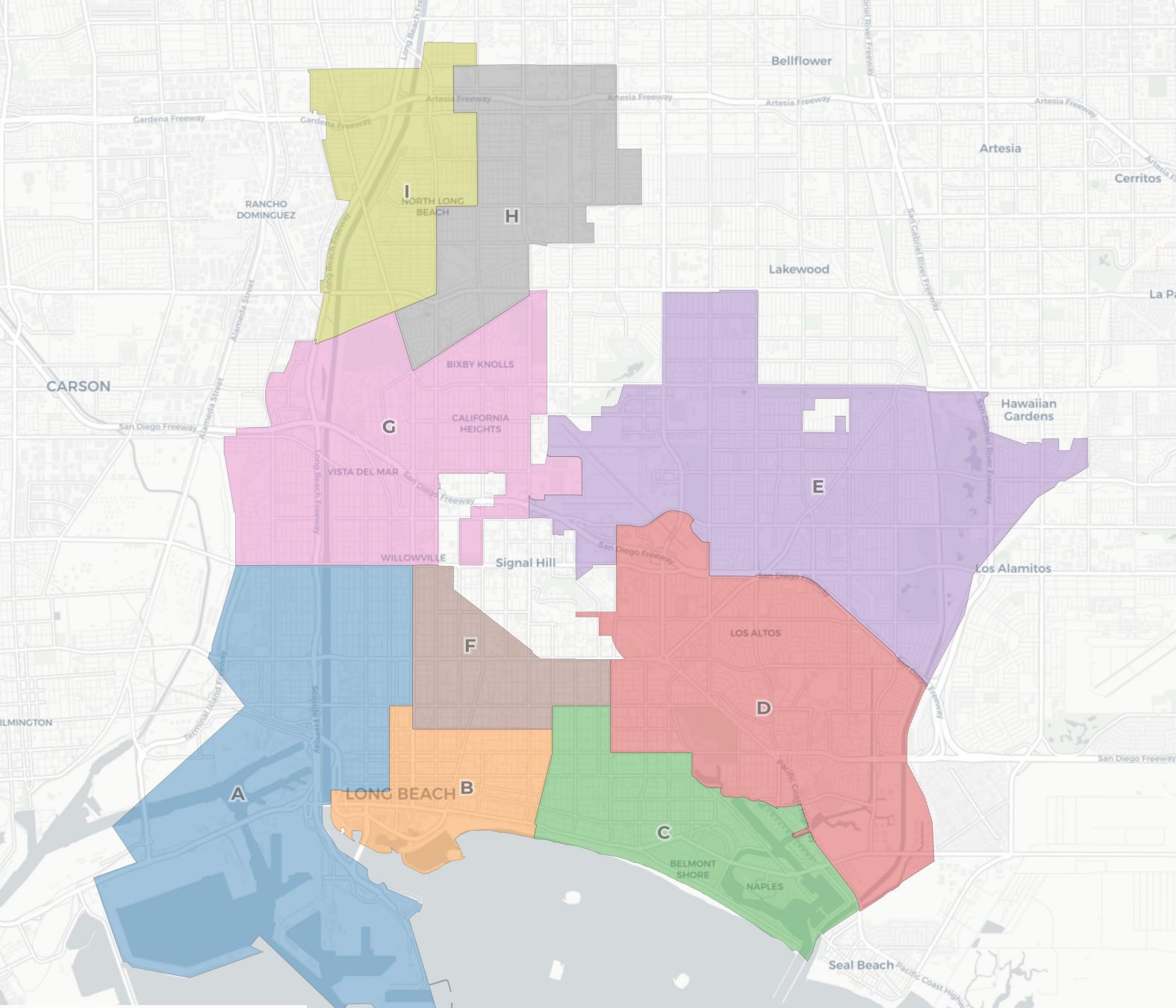


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan C

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



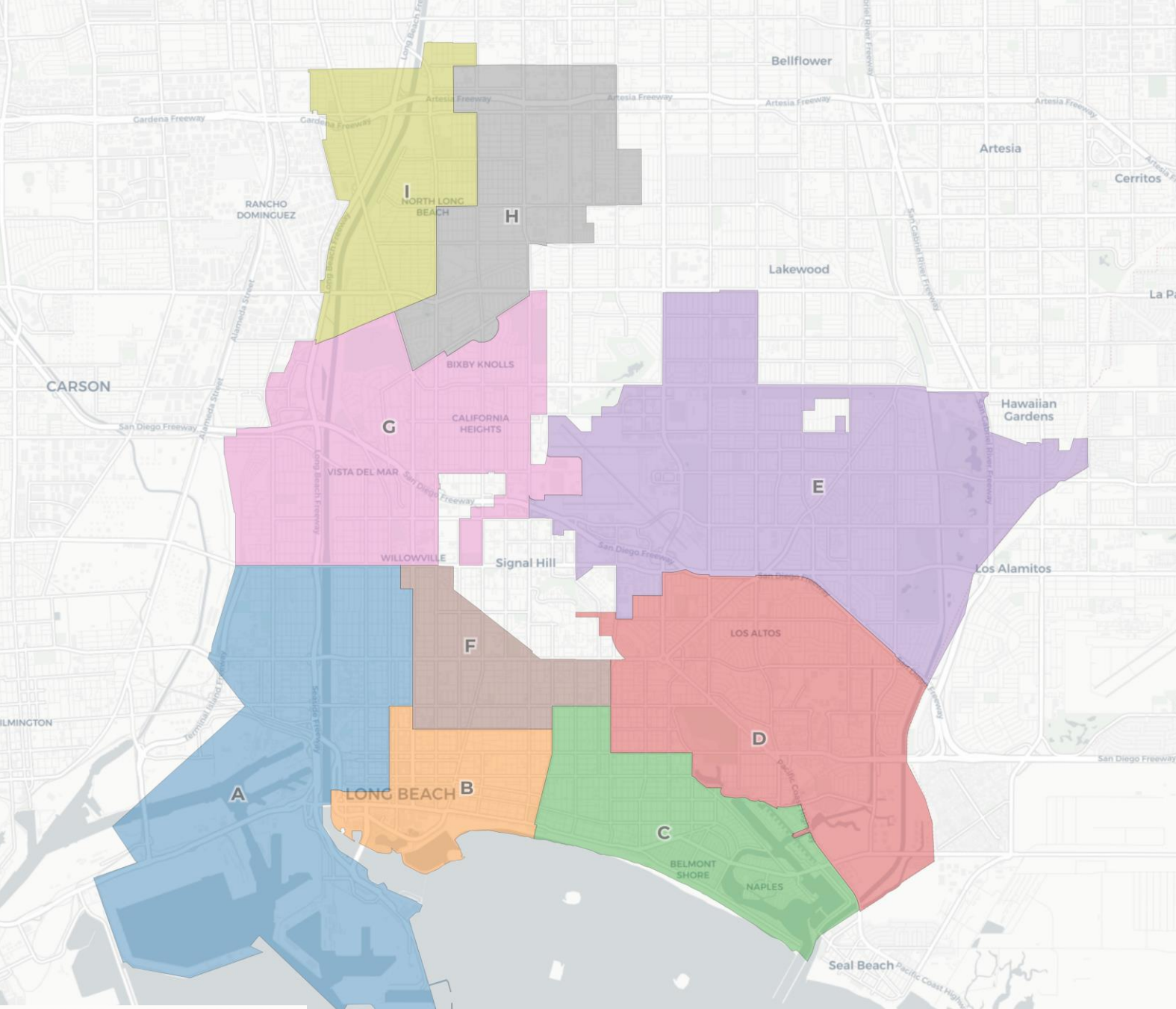


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan C5

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness

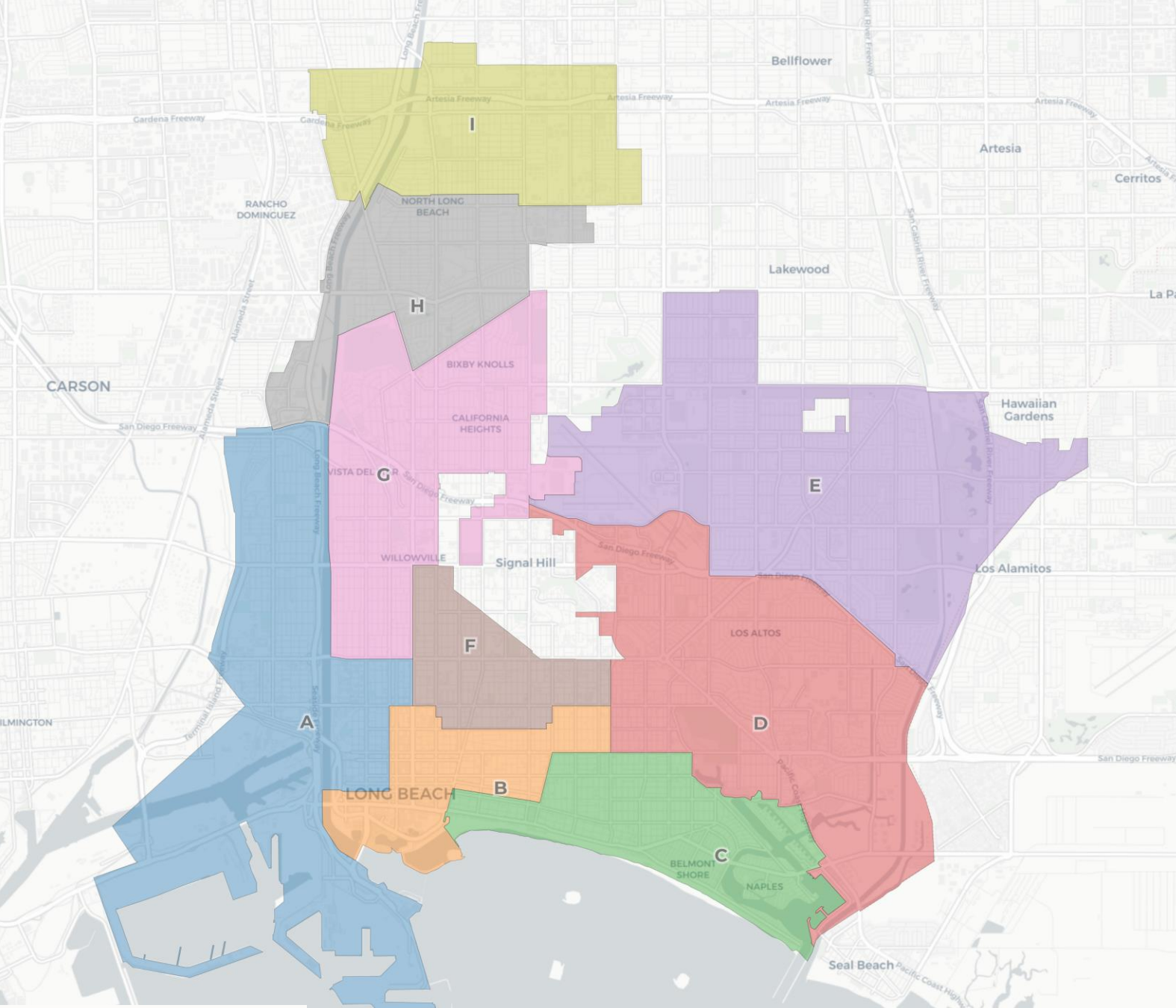


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan D

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



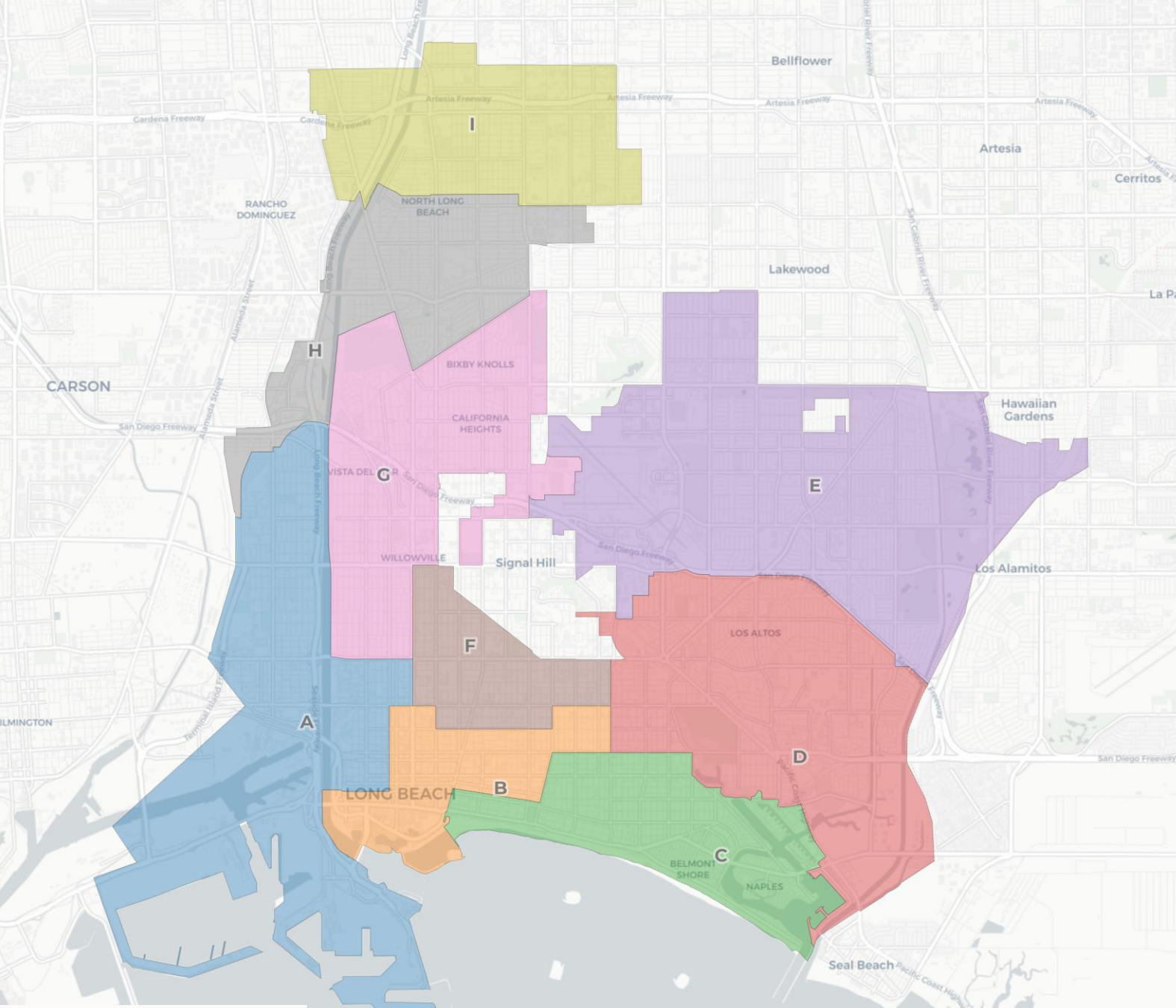


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan D5

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness

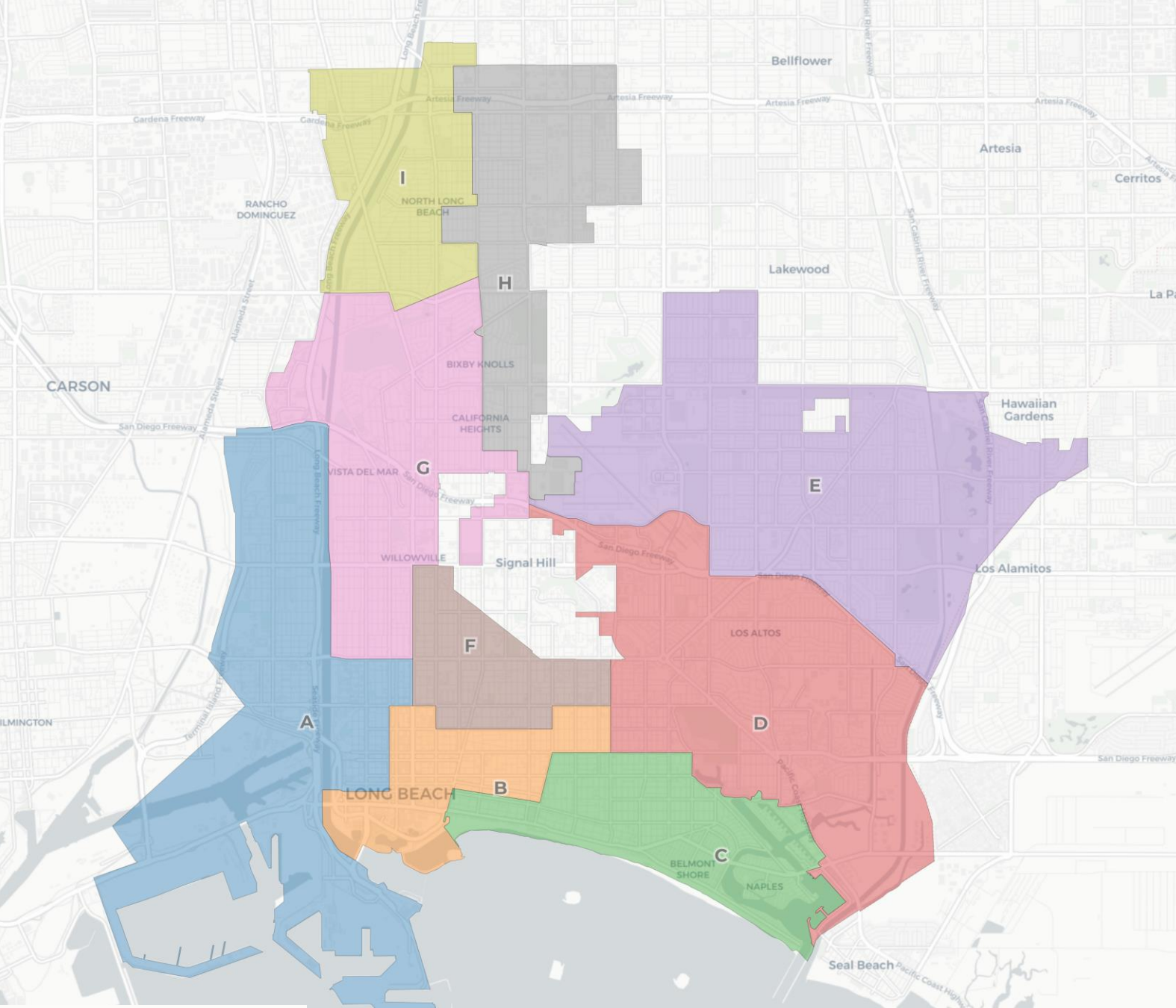


# >5% Versions

Each plan has a related version that is under 5% total deviation

## Plan E

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



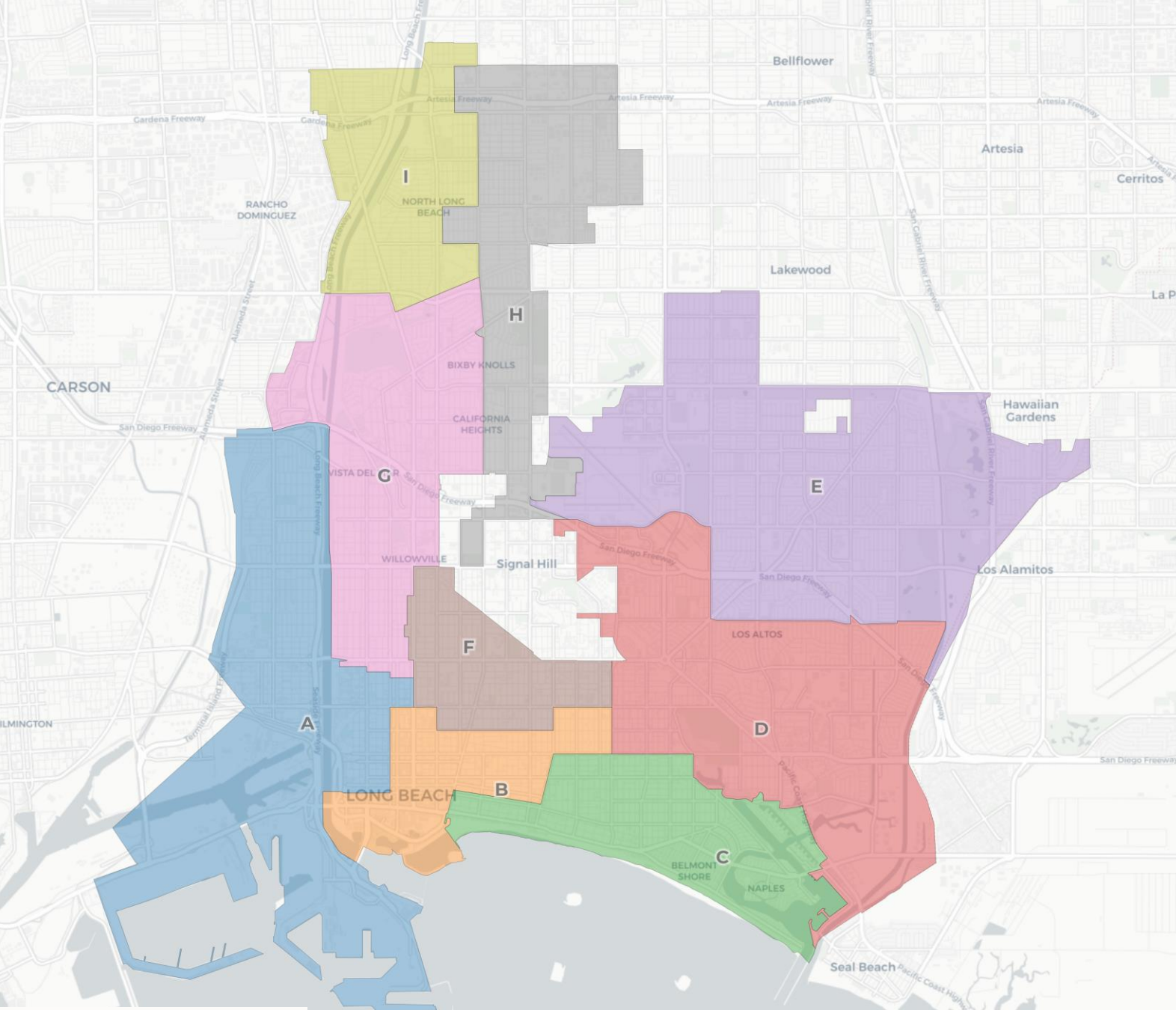


# >5% Versions

Each plan has a related version that is under 5% total deviation

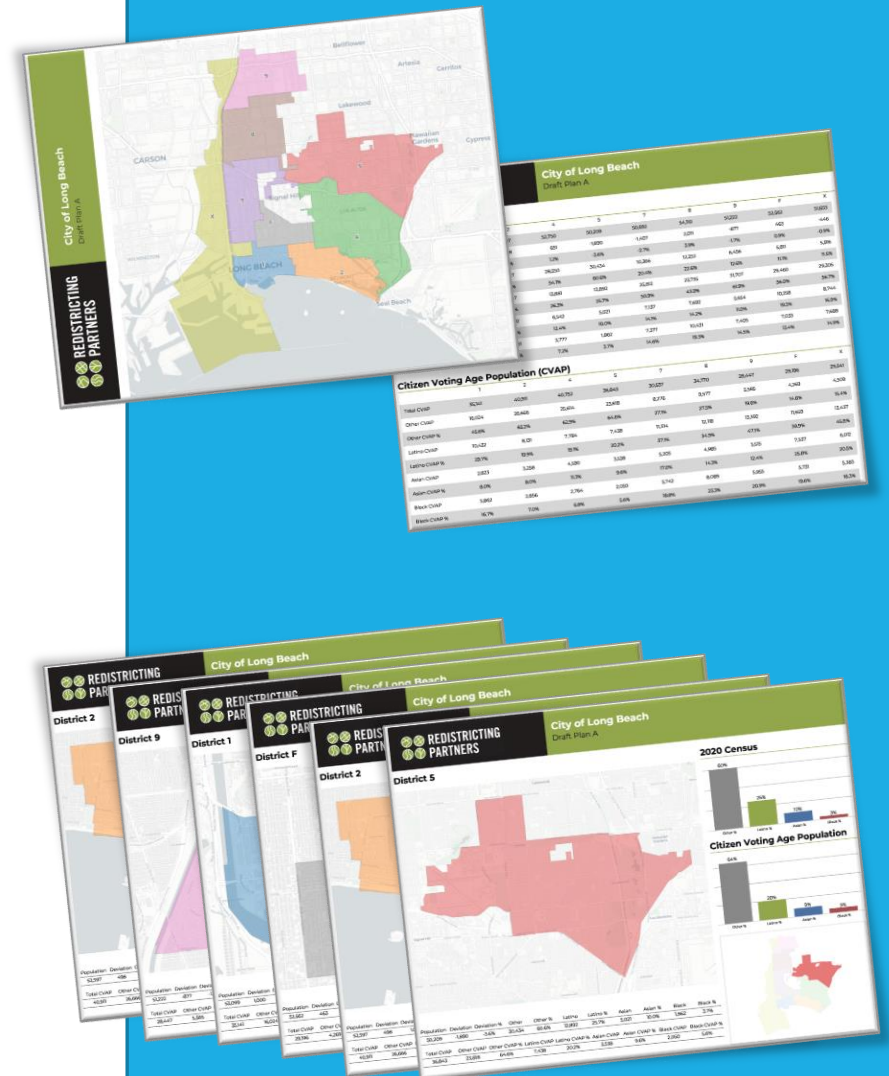
## Plan E5

- Changes increase neighborhood splits through the course of improved balancing.
- Makes it harder to achieve some of the priorities, such as having three districts touch the airport.
- Reduces compactness



# Total Splits and Deviations

	Whole NH	Total Splits
A	93	22
A5	90	28
B	92	25
B5	89	31
C	92	21
C5	90	21
D	93	21
D5	91	23
E	91	26
E5	87	33

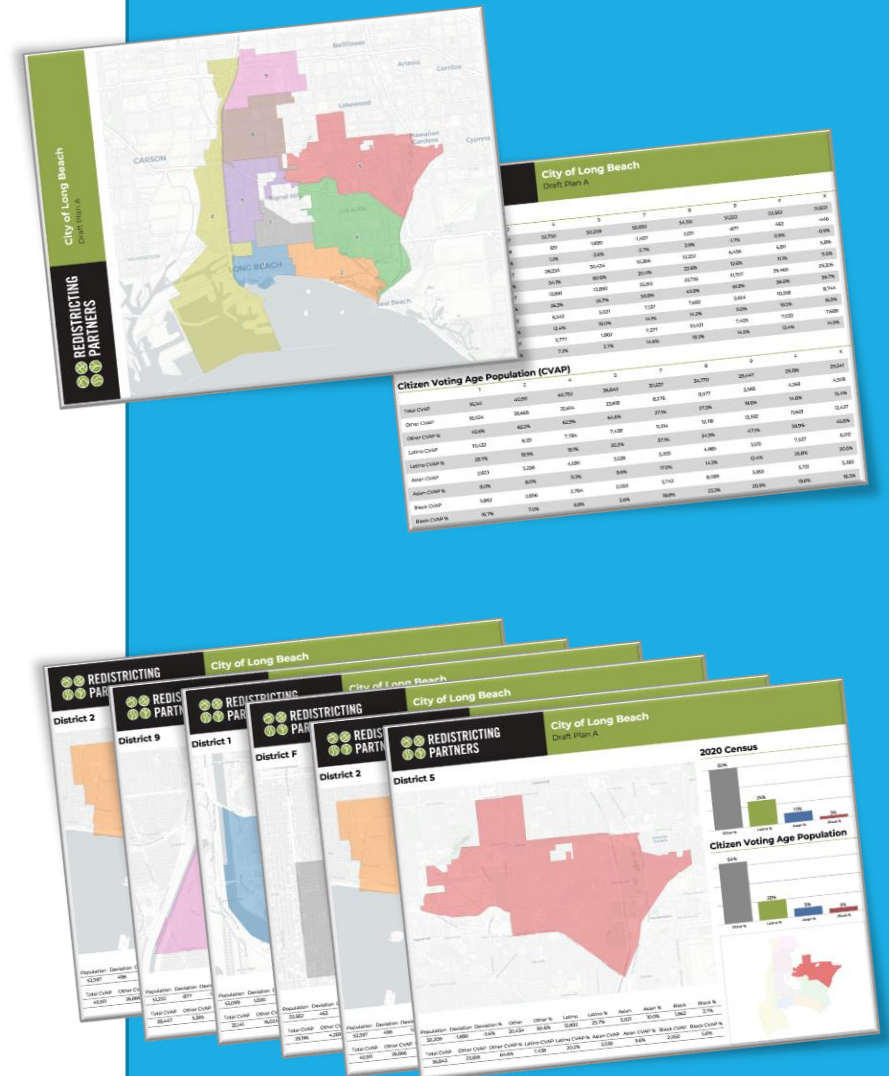




# Amendments to Plans

Changes to plans may need balancing and understanding of tradeoffs. Three types of changes.

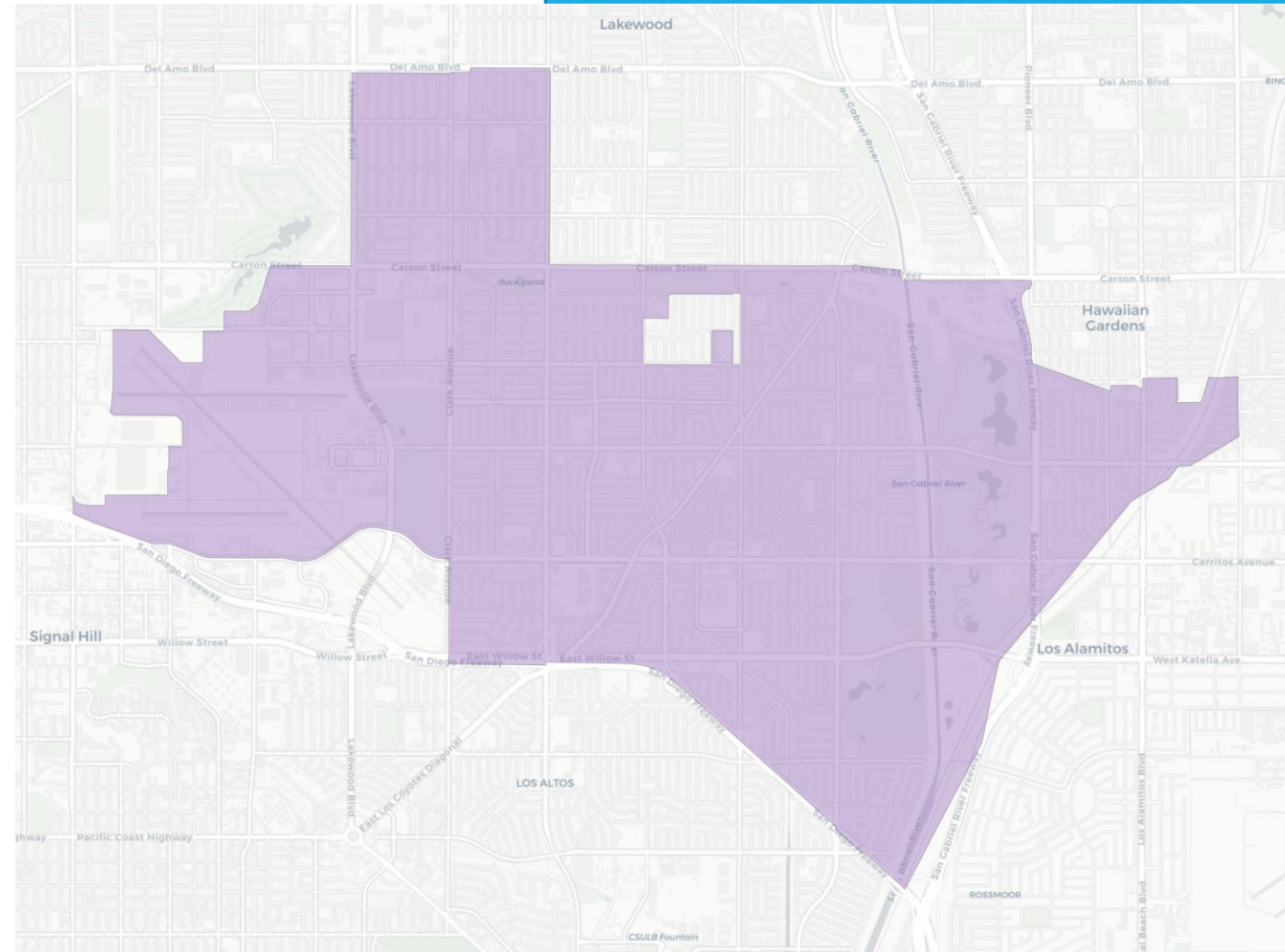
- 1) Keeps within deviation and doesn't necessitate other changes.
- 2) Identifying a change and a possible tradeoff with that same district – a “one to one swap”
- 3) Identify a change and a set of districts that involves multiple districts – a “rotation”



# Simple Change

Changes that impact just two districts trading population.

- This district with a portion of the western end that reaches to the airport.
- Could shift airport connection without an impact on the overall plan.

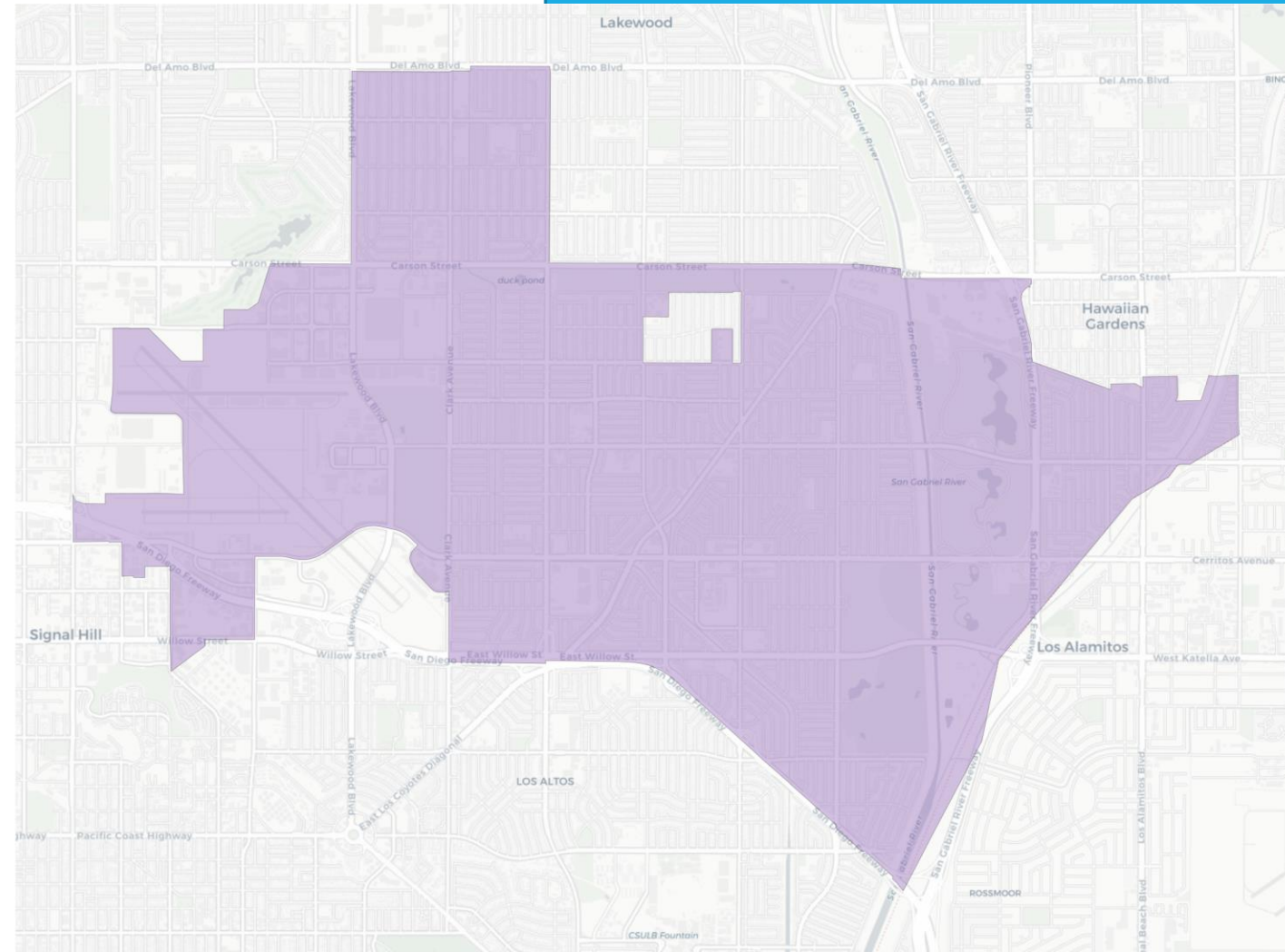




# Simple Change

Changes that impact just two districts trading population.

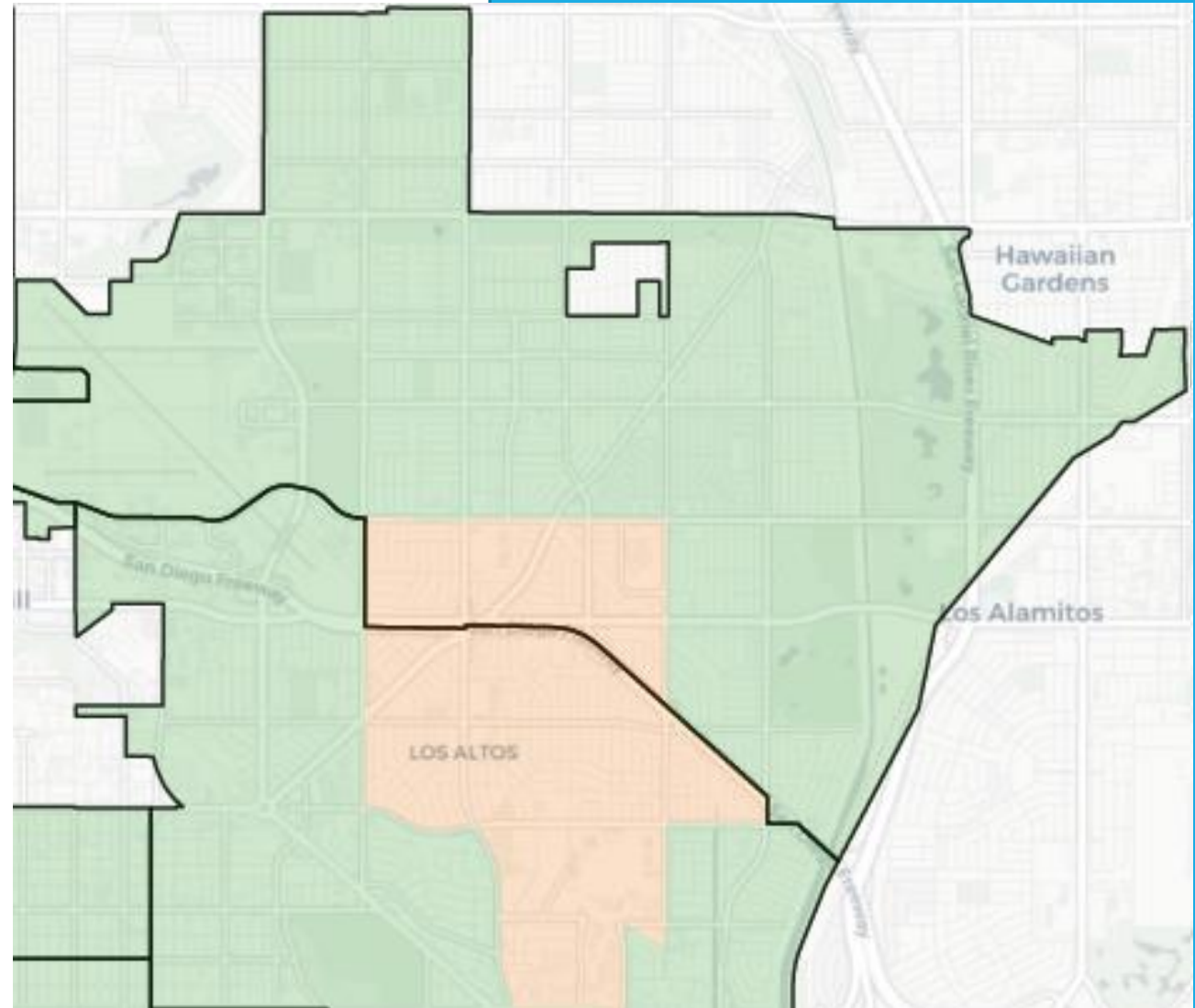
- This district with a portion of the western end that reaches to the airport.
- Could shift airport connection without an impact on the overall plan.



# Swap Example

Changes that impact just two districts trading population.

- This border with Los Altos splits between Los Altos and North Los Altos
- Splits Airport COI

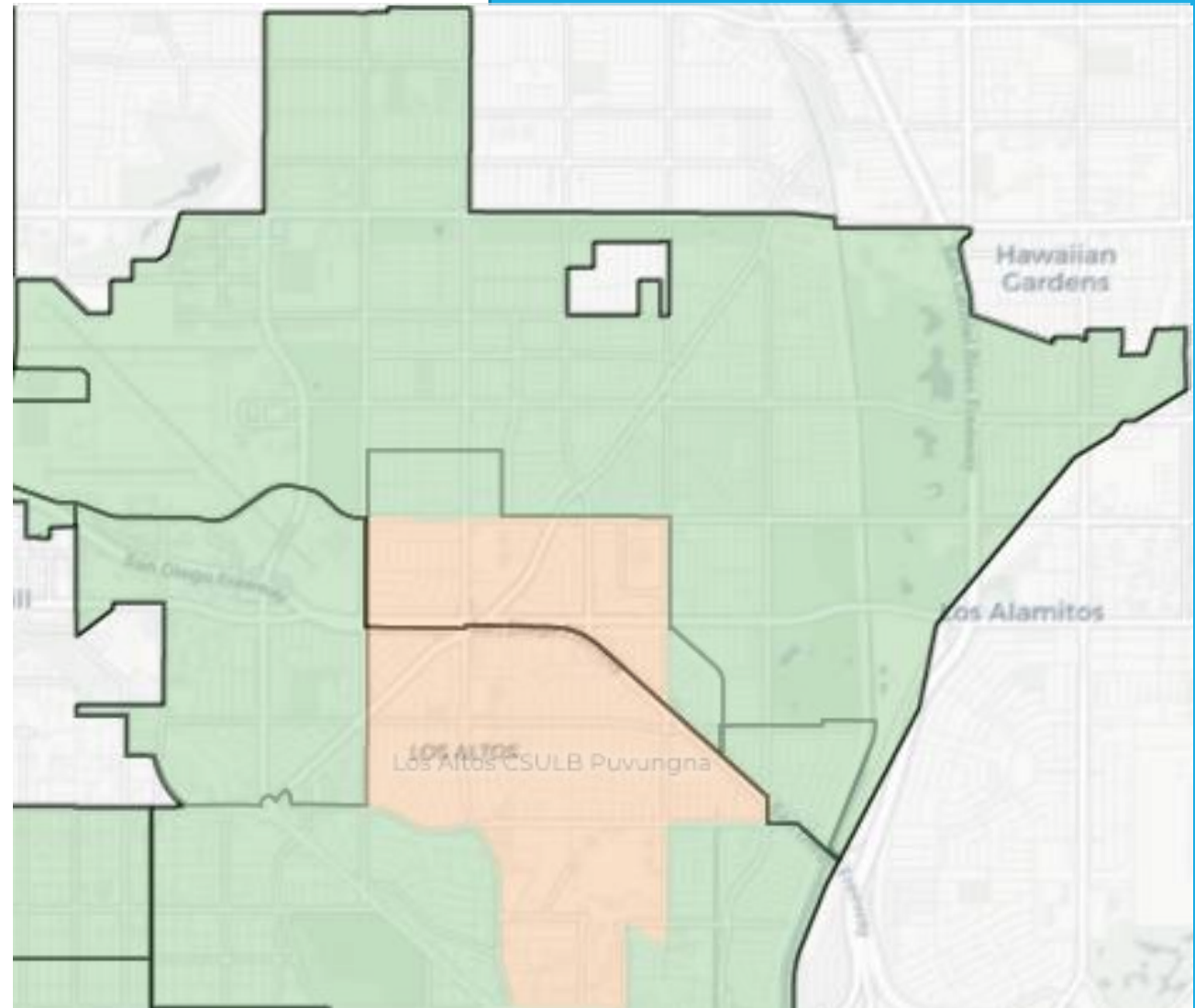




# Swap Example

Changes that impact just two districts trading population.

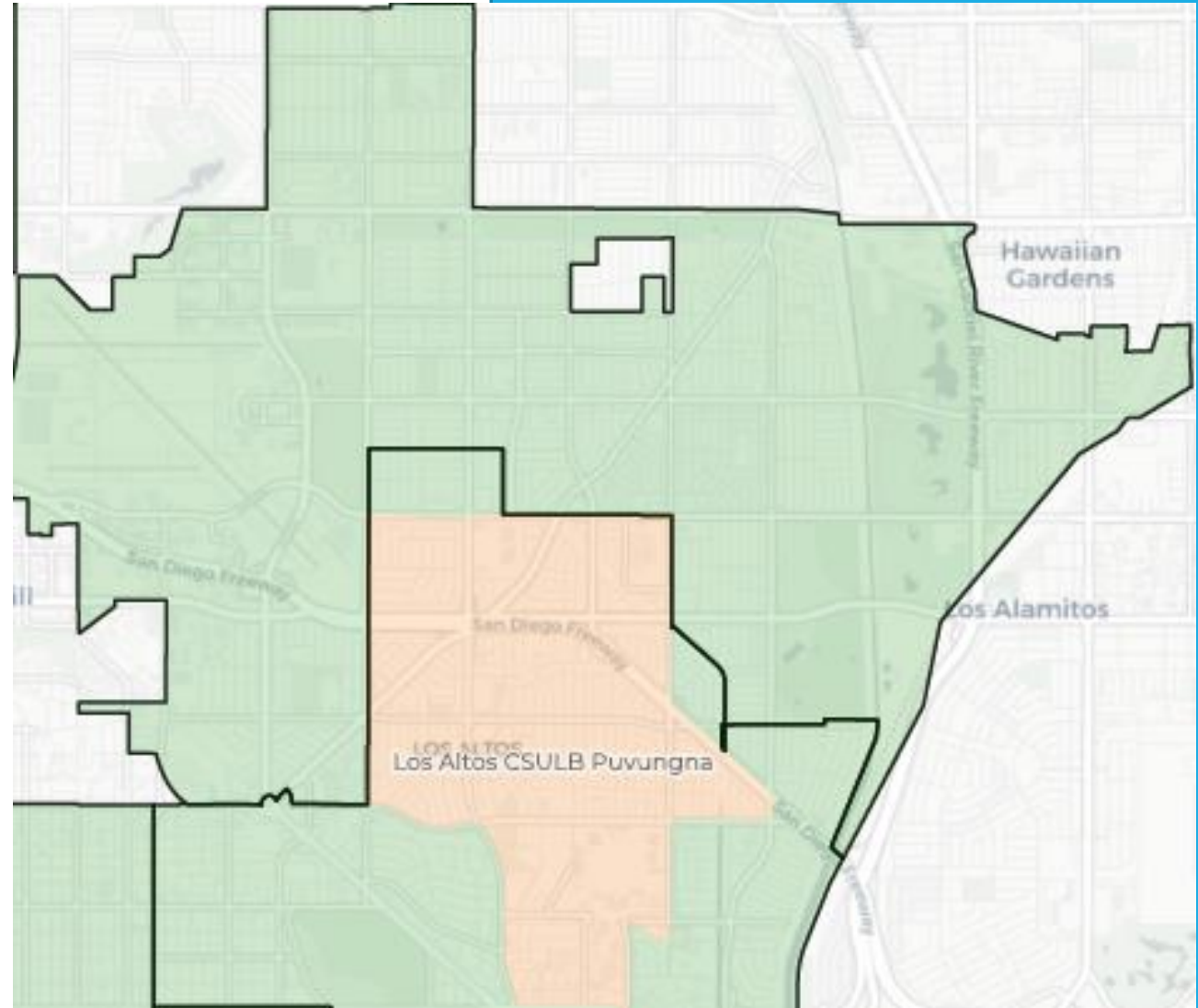
- This border with Los Altos splits between Los Altos and North Los Altos
- Splits Airport COI



# Swap Example

Changes that impact just two districts trading population.

- This border with Los Altos splits between Los Altos and North Los Altos
- Splits Airport COI

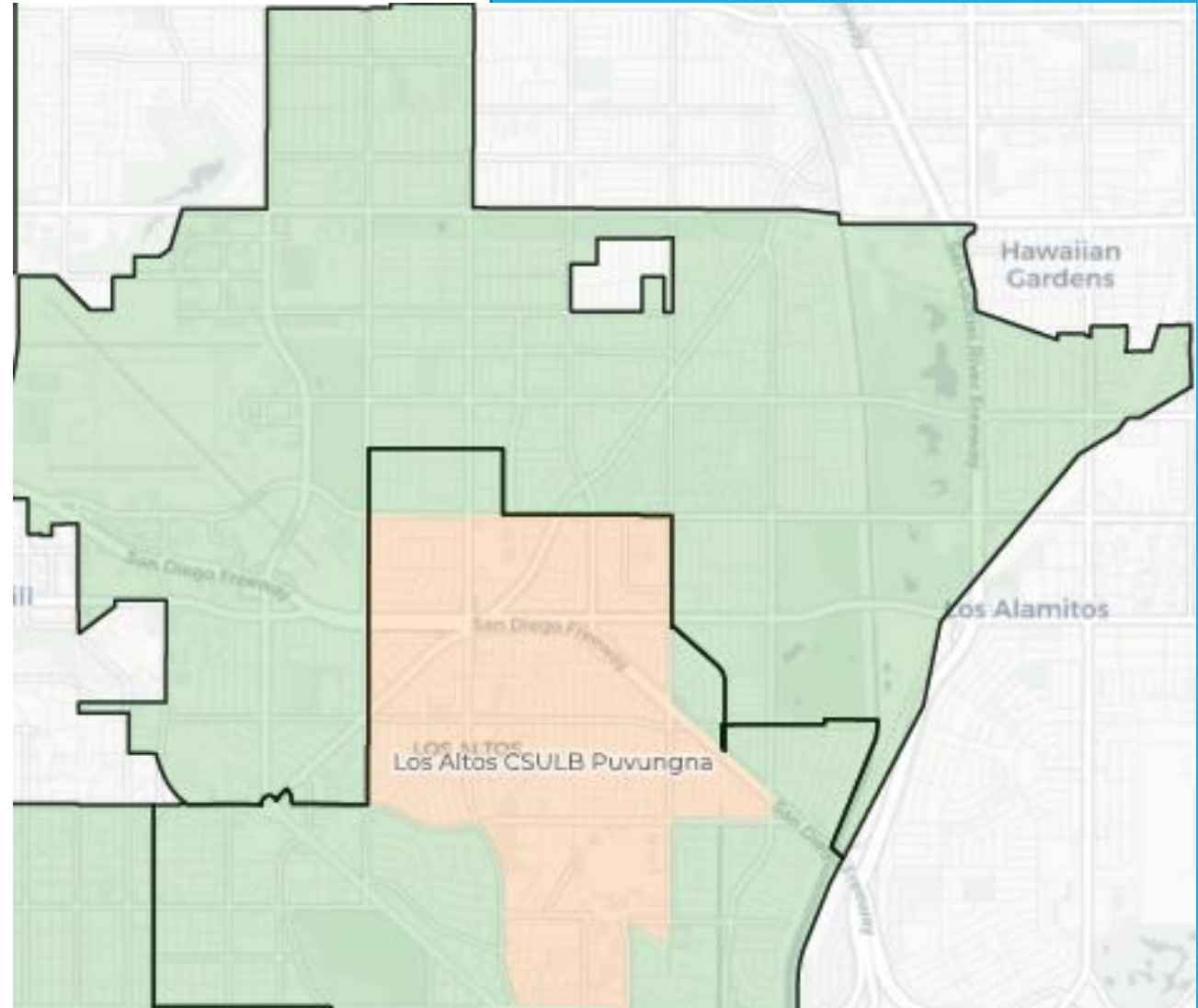




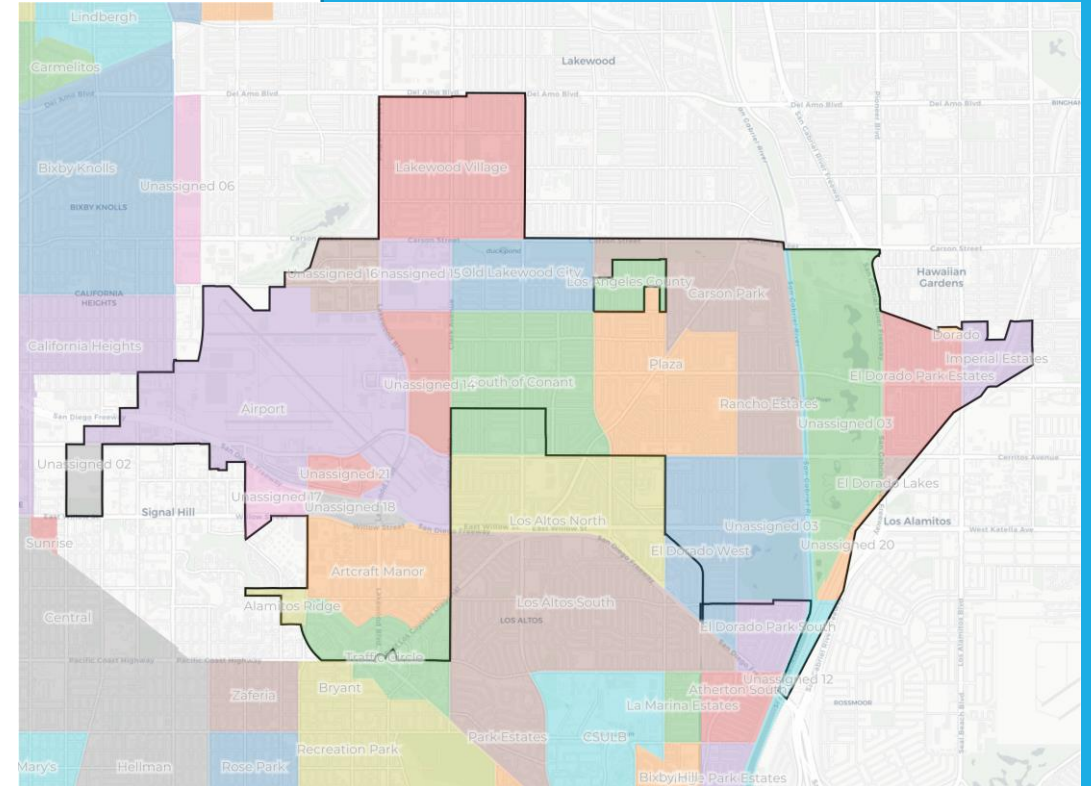
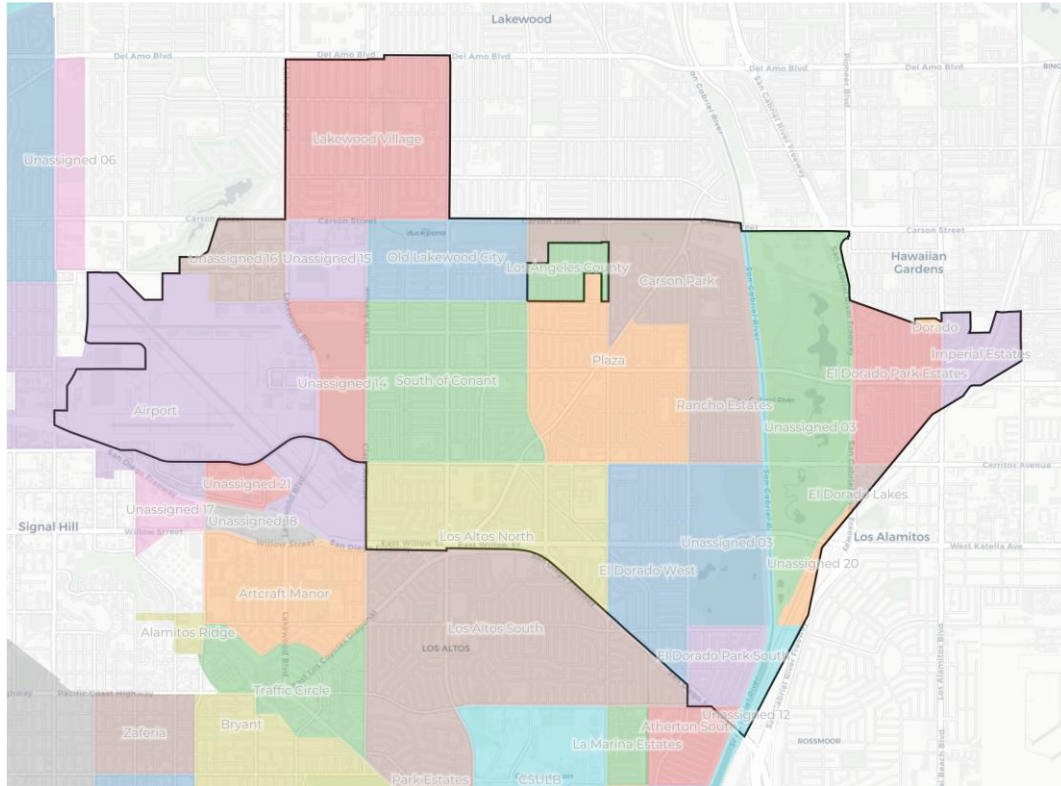
# Swap Example

Changes that impact just two districts trading population.

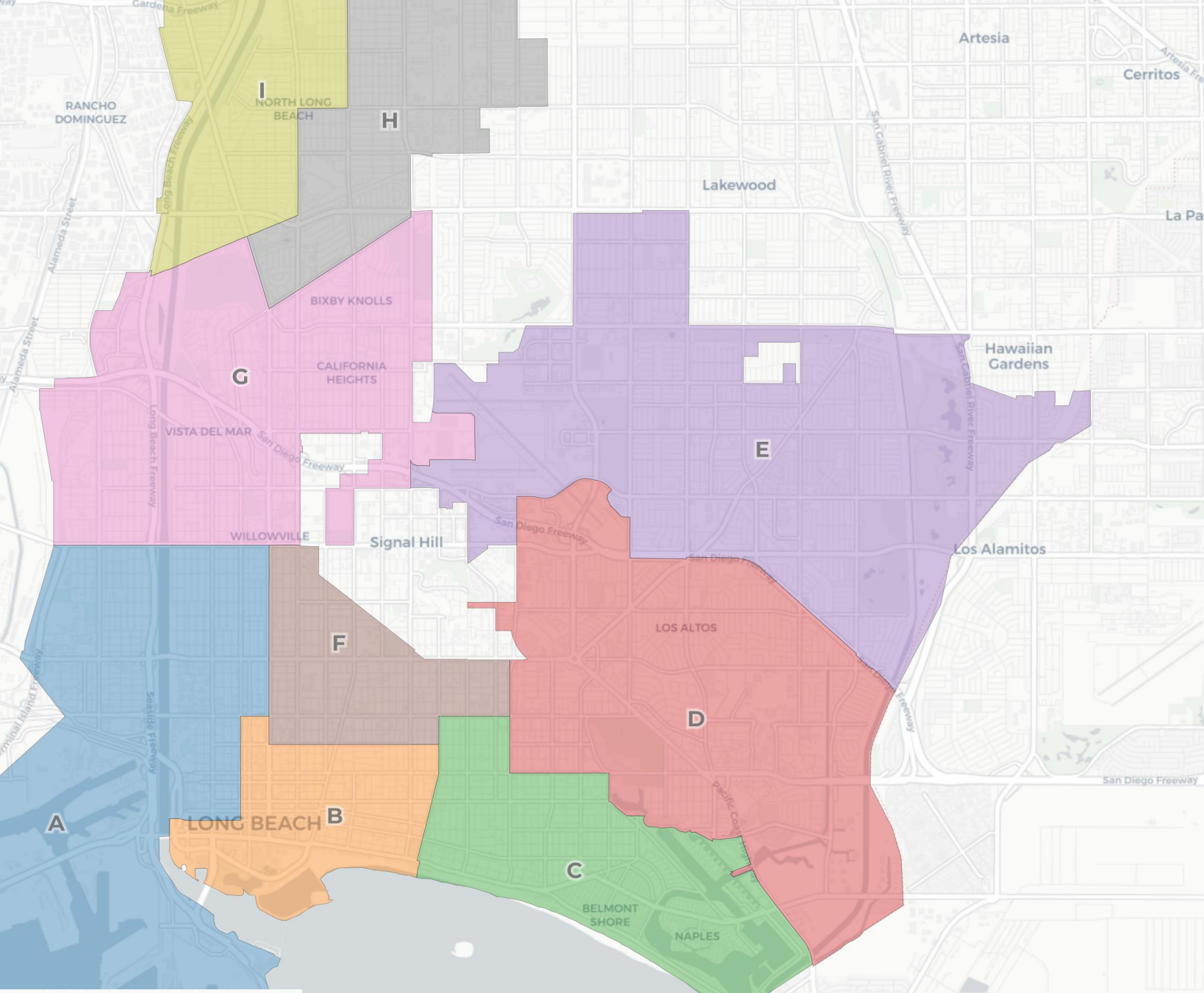
- Can be resolved by changing each district
- Commission can determine if this improves the districts.



# Swap Example



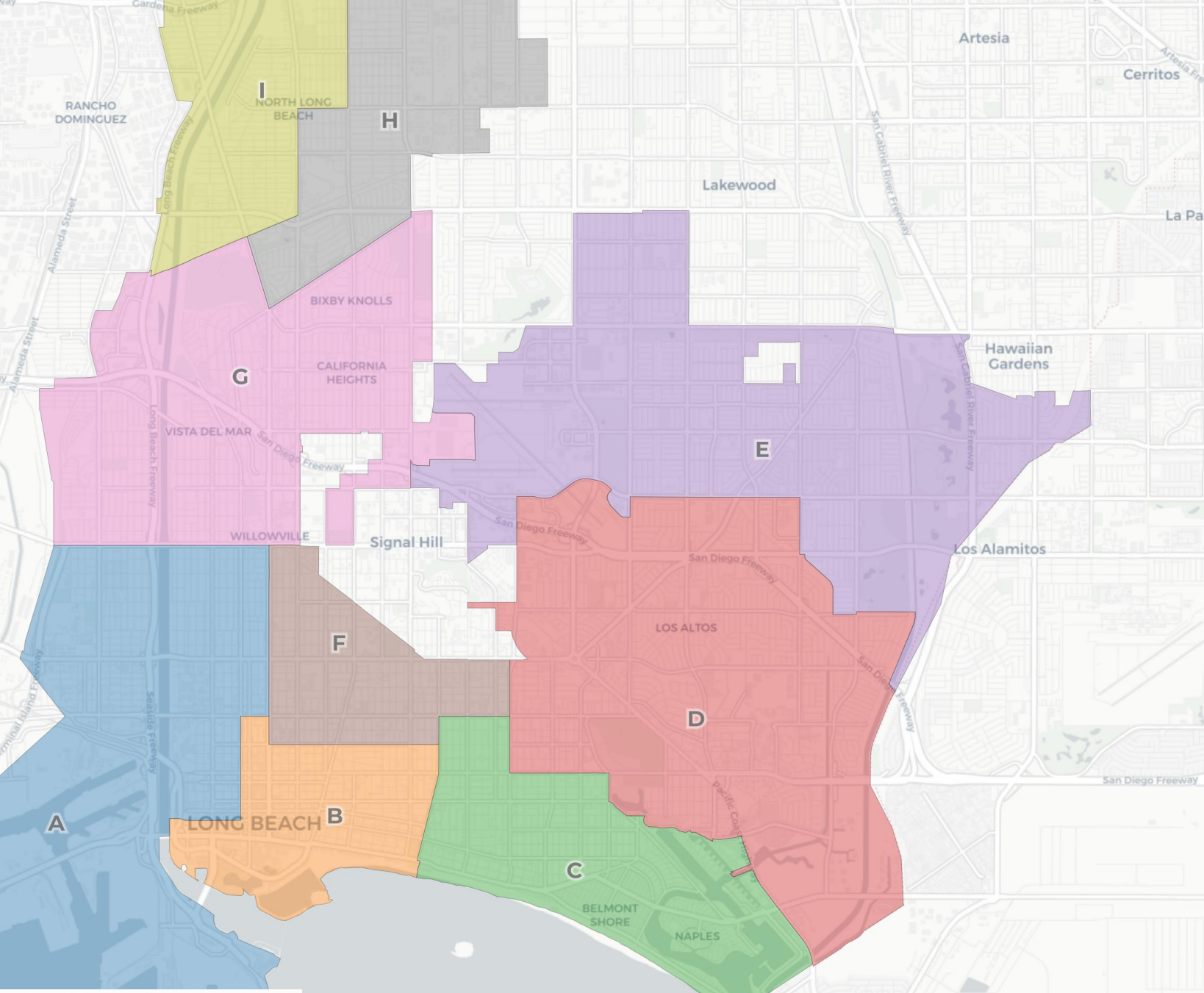




# Rotation Example

Changes that impact multiple seats

- Same border with Los Altos splits between Los Altos and North Los Altos
- This time, going across the airport.

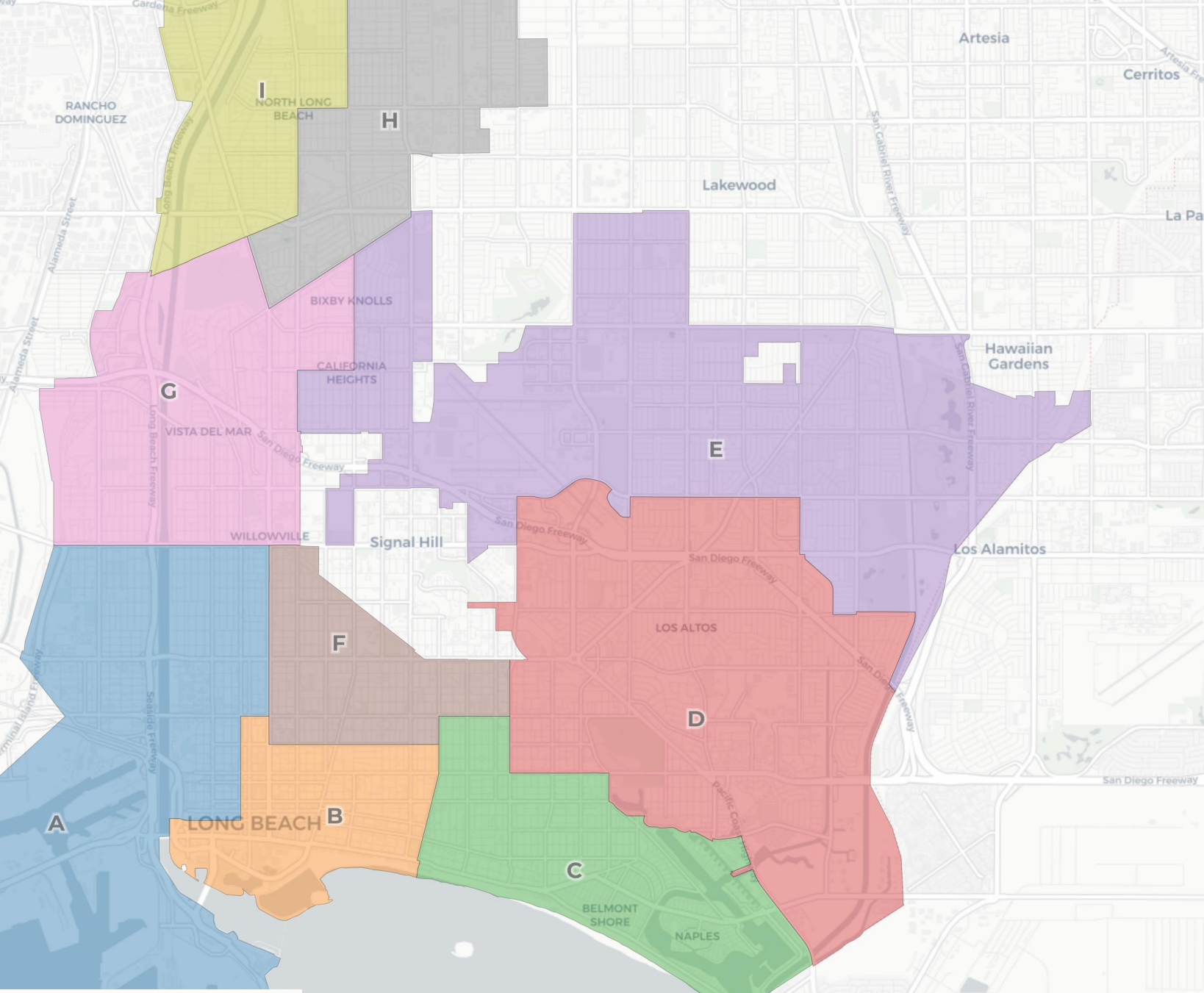


# Rotation Example

Changes that impact multiple seats

- Same border with Los Altos splits between Los Altos and North Los Altos
- This time, going across the airport.

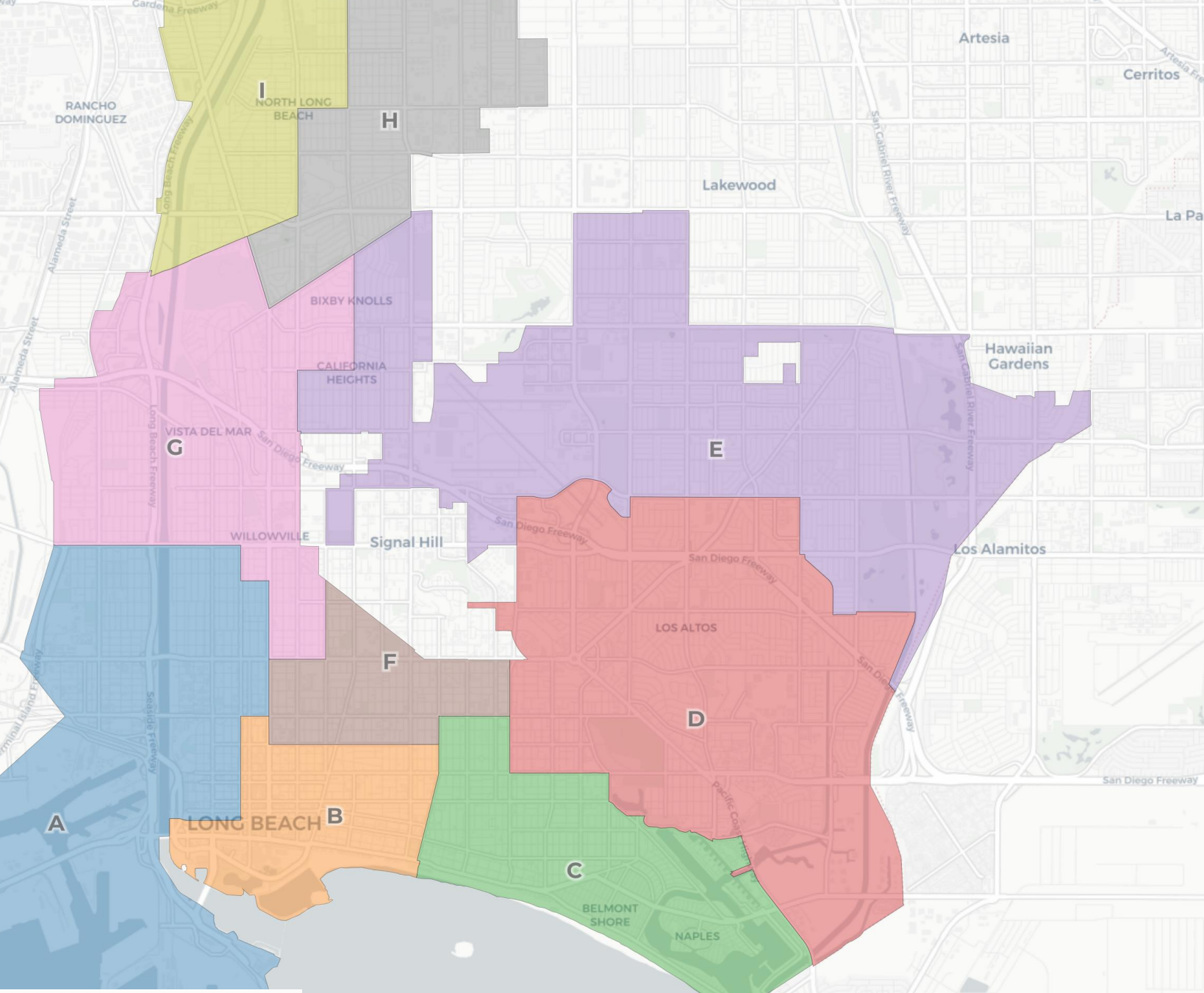




# Rotation Example

Changes that impact multiple seats

- Same border with Los Altos splits between Los Altos and North Los Altos
- This time, going across the airport.

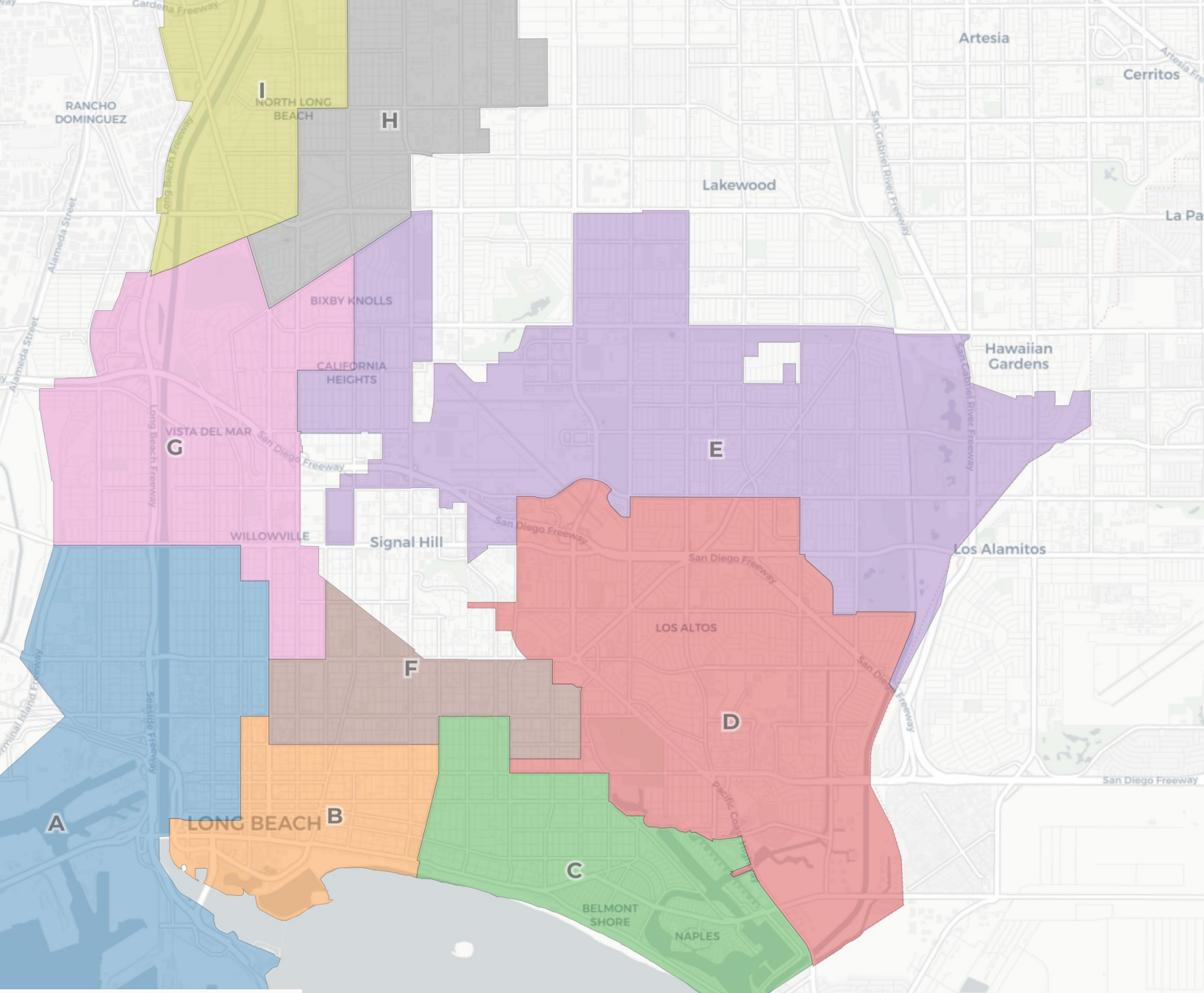


# Rotation Example

Changes that impact multiple seats

- Same border with Los Altos splits between Los Altos and North Los Altos
- This time, going across the airport.



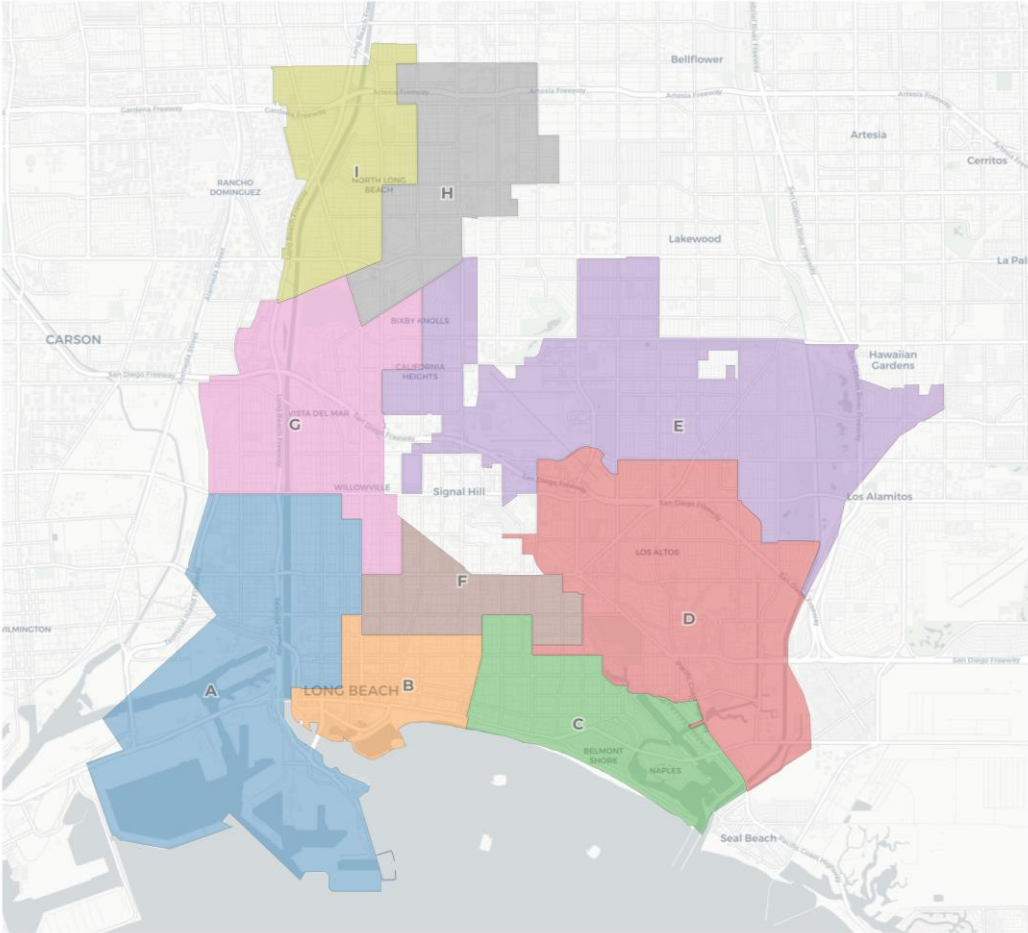
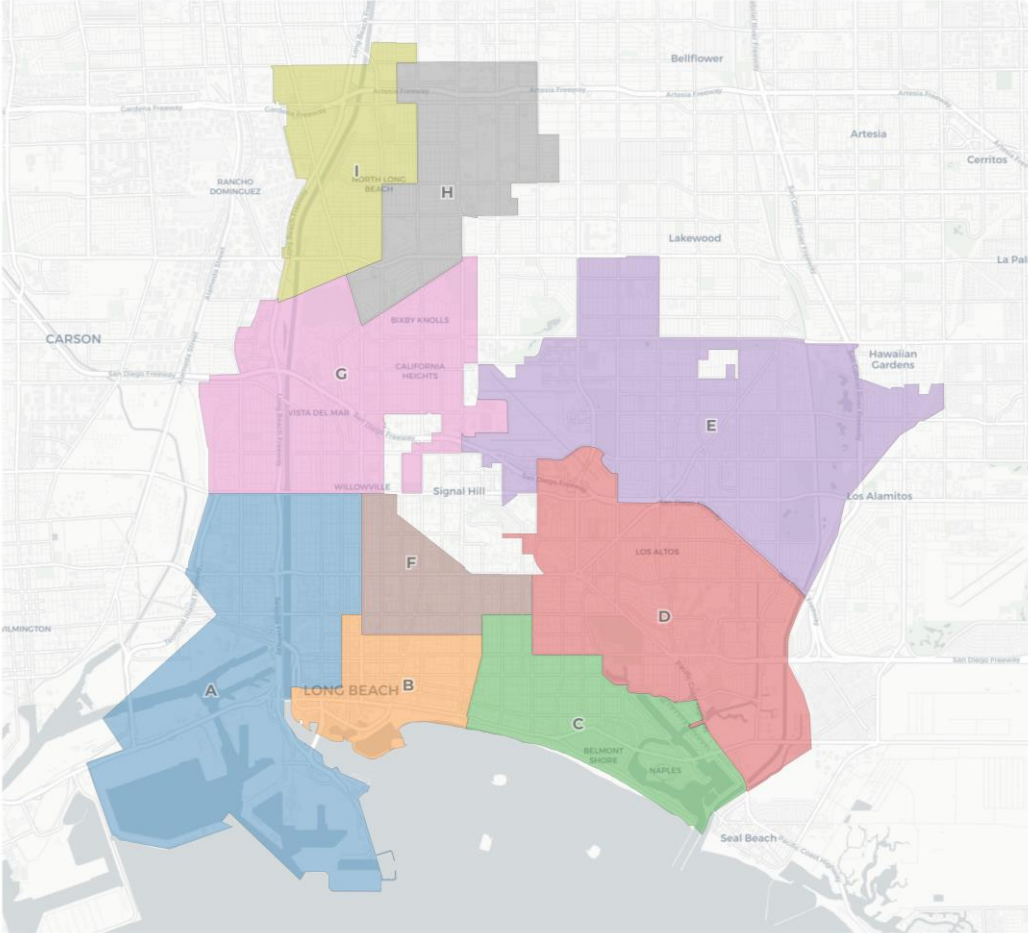


# Rotation Example

Changes that impact multiple seats

- Same border with Los Altos splits between Los Altos and North Los Altos
- This time, going across the airport.

# Rotation Example

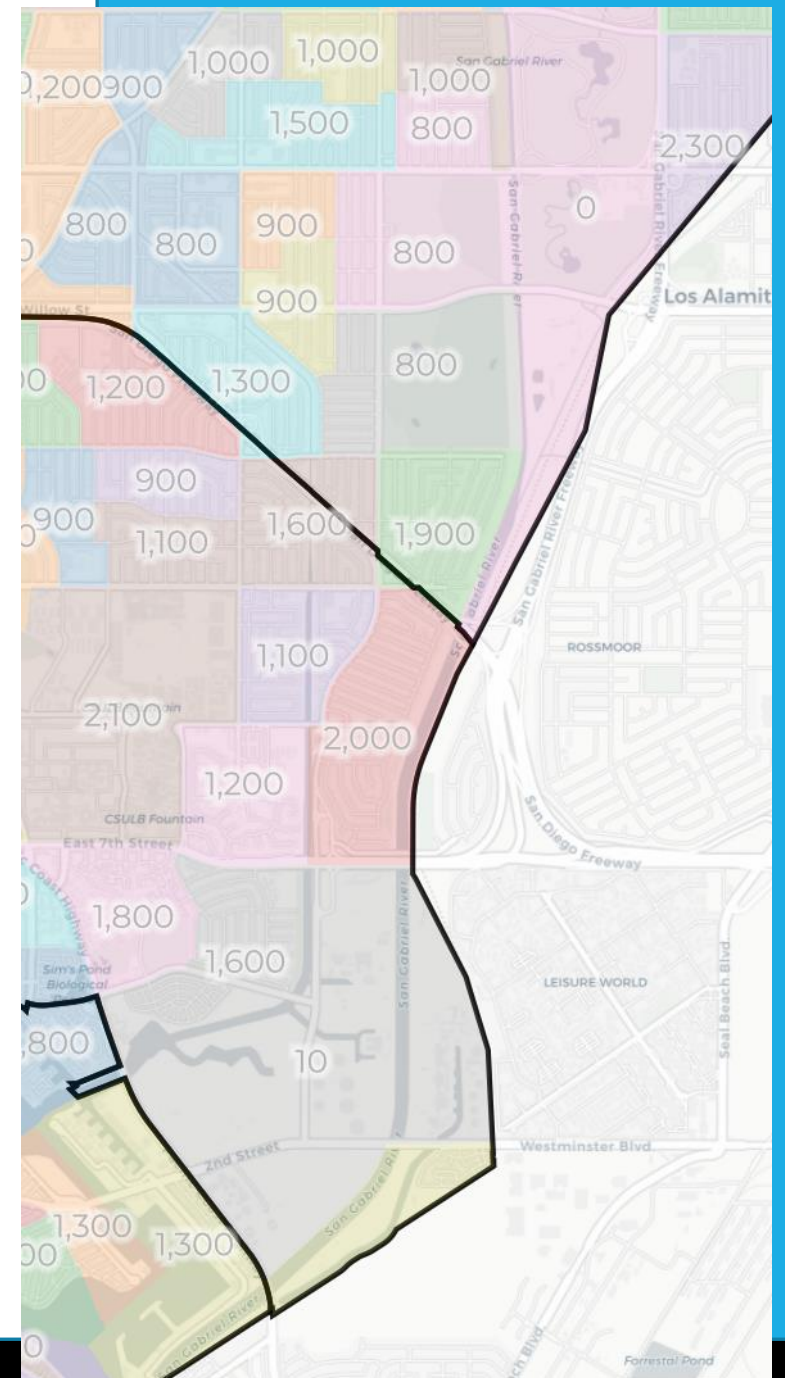




# Amendments to Plans

If there are proposed changes we can look at those individually and provide input on if they can be achieved easily or require more adjustments.

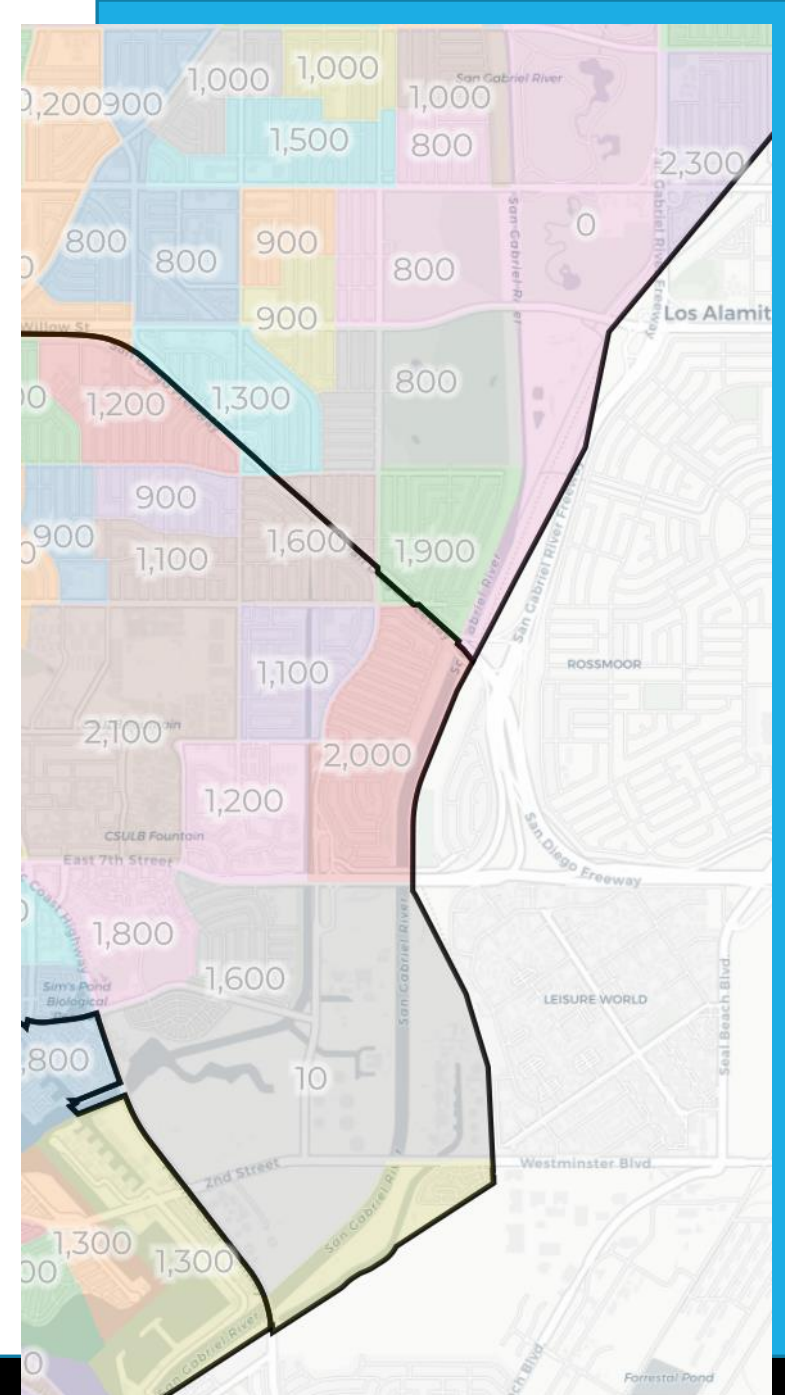
- We have access to the population counts by census block group so we can quickly provide an estimated impact of any change.
- The Margin of Error should be ample to provide for small changes without additional steps.



# Amendments to Plans

If there are proposed changes we can look at those individually and provide input on if they can be achieved easily or require more adjustments.

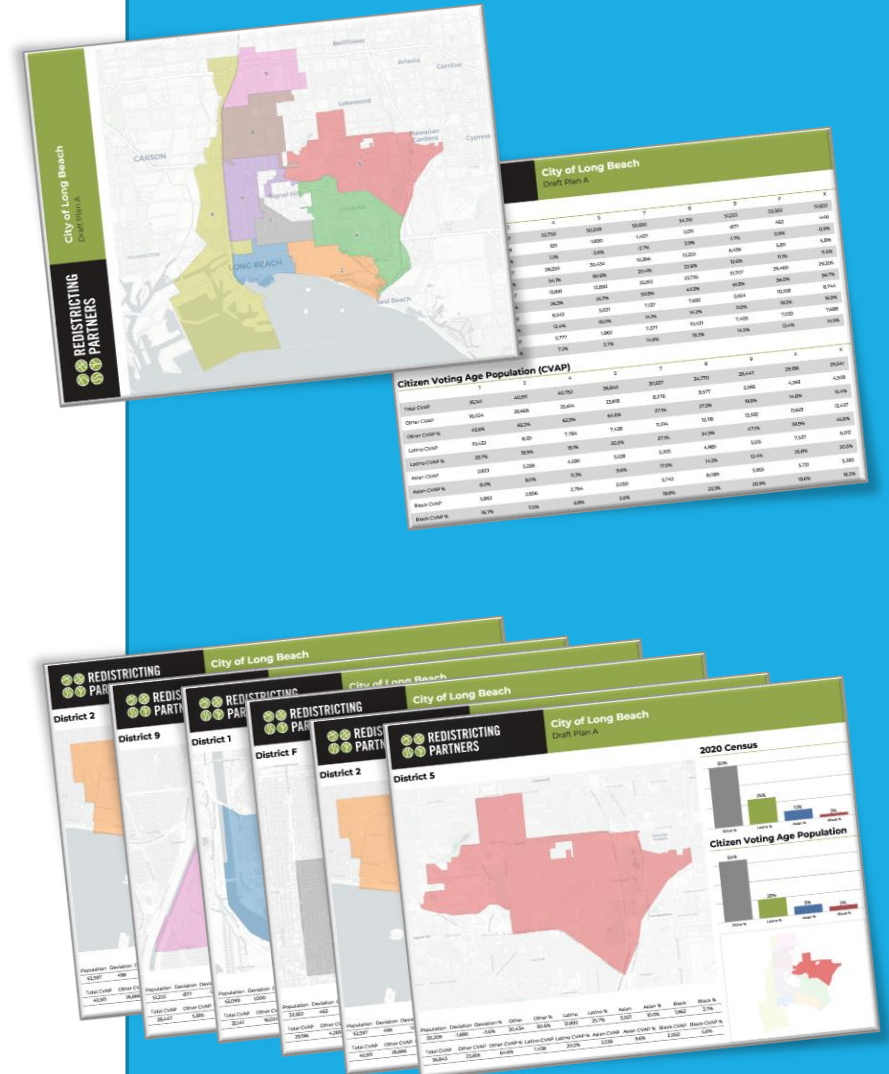
- If major changes need to be seen before consideration, we can take a break to perform those changes.
- Any changes that are approved can be completed and made public after the hearing.





# What's Next

- Official commission drafts will be made public in advance of a citywide public draft feedback hearing.
- All commission draft plans will go to a final plan selection hearing.
- Final Plan selection hearing will consider only draft plans that have been made public for seven days.
- *Numbering of districts is done at the end of the process by the commission using a formula of minimizing the number of residents who have to change district numbers.*



# REDISTRICTING PARTNERS

