

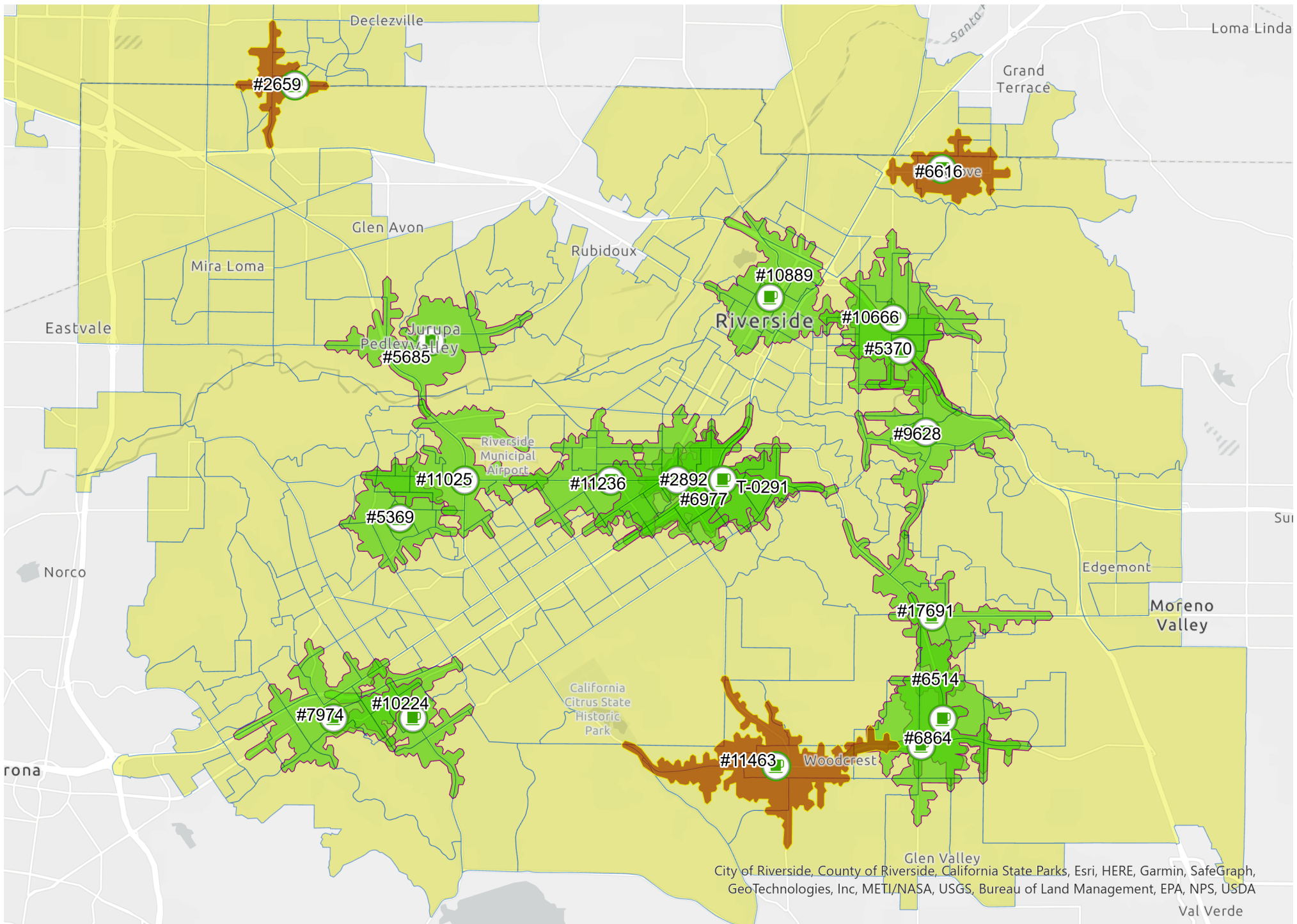
Aaron Goodman
 Ruth Engel
 UCLA GEOG XL 181B
 23 April 2023

Unit 2 - Network Analysis: Introduction

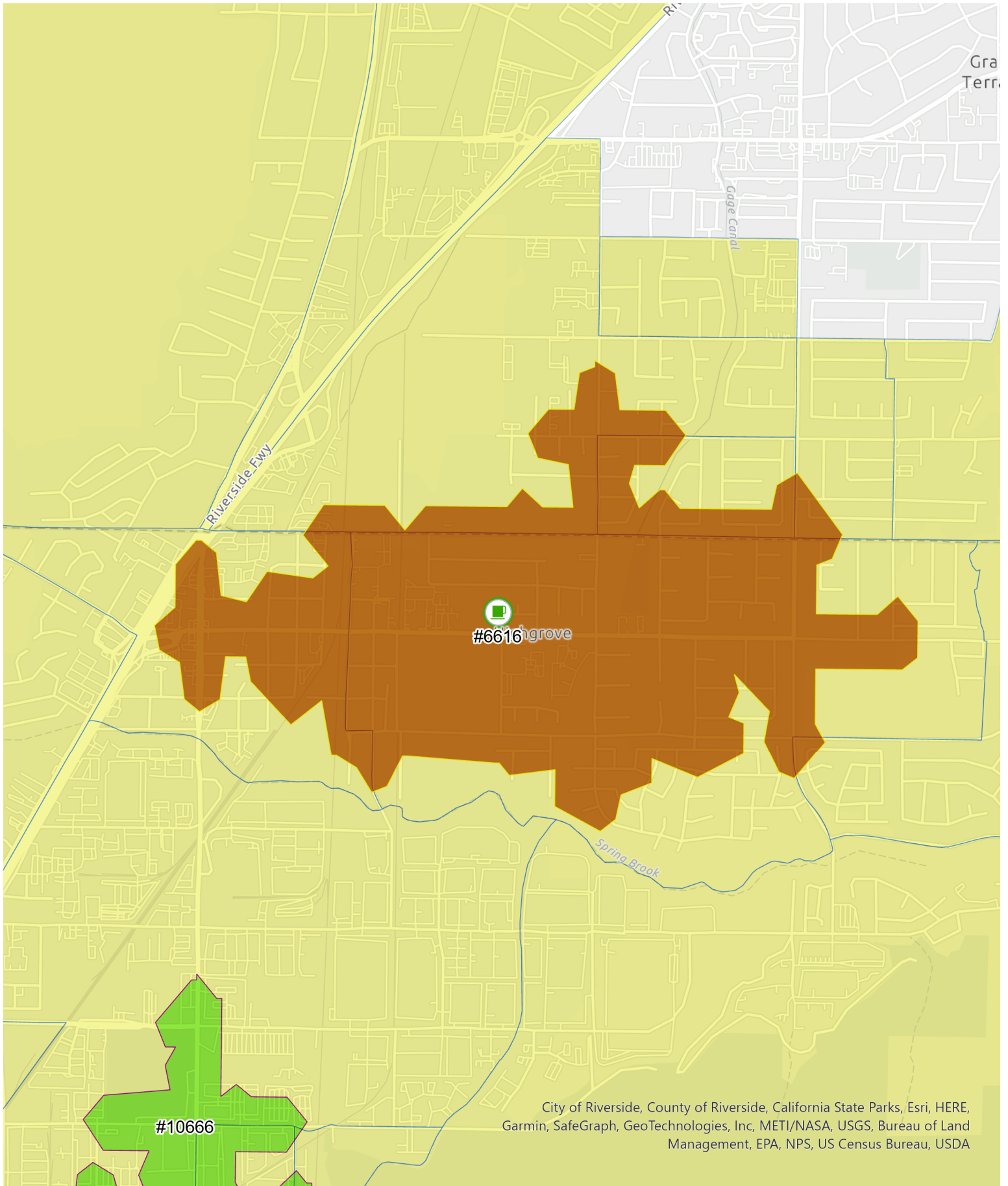
The table below and the maps that follow examine the geographic characteristics of 19 Starbucks Coffee locations in and around Riverside, California. The “service area” of each Starbucks location was evaluated with network analysis, which uses travel time estimates to calculate the area served by a given point location. Overlay analysis of these service areas with US Census demographic data provides deeper insights into the populations served by a given Starbucks.

19 Starbucks locations appear in the table below, in increasing order of population served. In the pages to follow, the 3 least populated service areas and their respected locations are considered for potential closure.

STORE NUMBER	SQ MILEAGE SERVED	TOTAL POP SERVED	PCT/METRO POP	TOTAL COMMUTERS SERVED
#6616	1.08710	8,723	1.588 %	1,268
#2659	0.74477	17,355	3.160 %	3,247
#11463	2.81347	22,663	4.127 %	5,396
#5685	2.11817	27,624	5.030 %	6,007
#17691	2.22607	31,180	5.678 %	6,758
#5370	1.78034	31,579	5.750 %	3,621
#10666	2.37948	32,477	5.914 %	3,871
#10889	2.32177	33,367	6.076 %	5,385
#9628	2.20228	35,264	6.421 %	5,315
T-0291	2.41186	35,996	6.555 %	6,345
#6977	2.43771	36,892	6.718 %	6,583
#5369	1.66987	37,665	6.858 %	8,371
#10224	1.81785	40,529	7.380 %	10,122
#11025	2.34217	42,080	7.662 %	8,865
#6864	2.39599	42,846	7.802 %	9,943
#7974	2.45169	44,403	8.085 %	10,818
#6514	2.29111	44,488	8.101 %	10,150
#2892	2.82028	47,134	8.583 %	8,639
#11236	2.67512	49,191	8.957 %	9,629



19 Starbucks Locations in Riverside, CA 0 0.75 1.5 3 Miles **1:120,000**
 3-minute-drive service areas; 3 locations marked for closure
 Cartography by Aaron Goodman
 Data source: UCLA GEOG XL 181B course website
 TIGER/Line American Community Survey data



Starbucks #6616

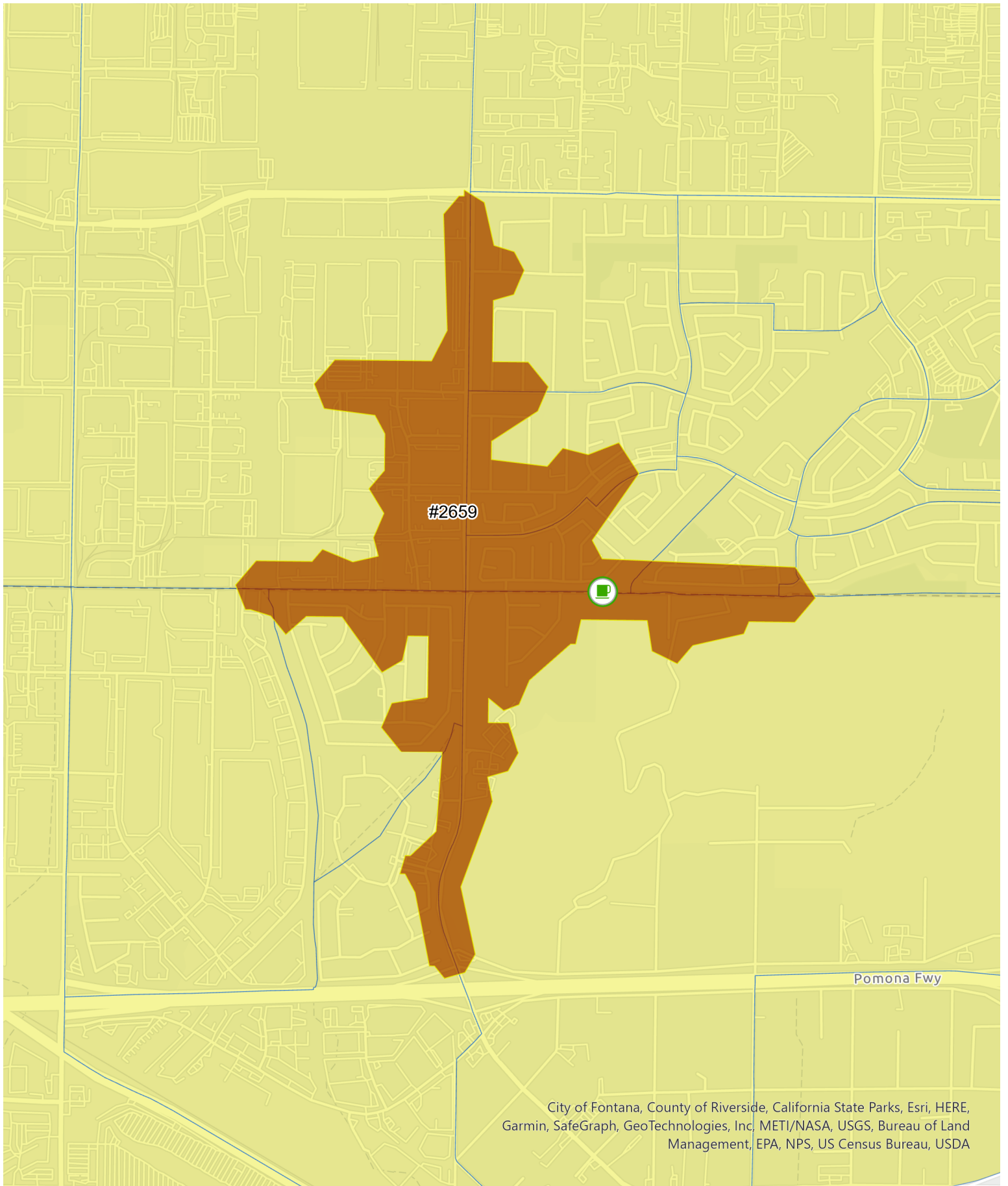
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1st contender for possible store closure

0 0.13 0.25 0.5 Miles

8,723 people within 3 minute service area of location
 (1.588% of examined metropolitan population)
 1,268 long-distance commuters served here

Cartography by Aaron Goodman
 Data source: UCLA GEOG XL 181B course website
 TIGER/Line American Community Survey data



Starbucks #2659

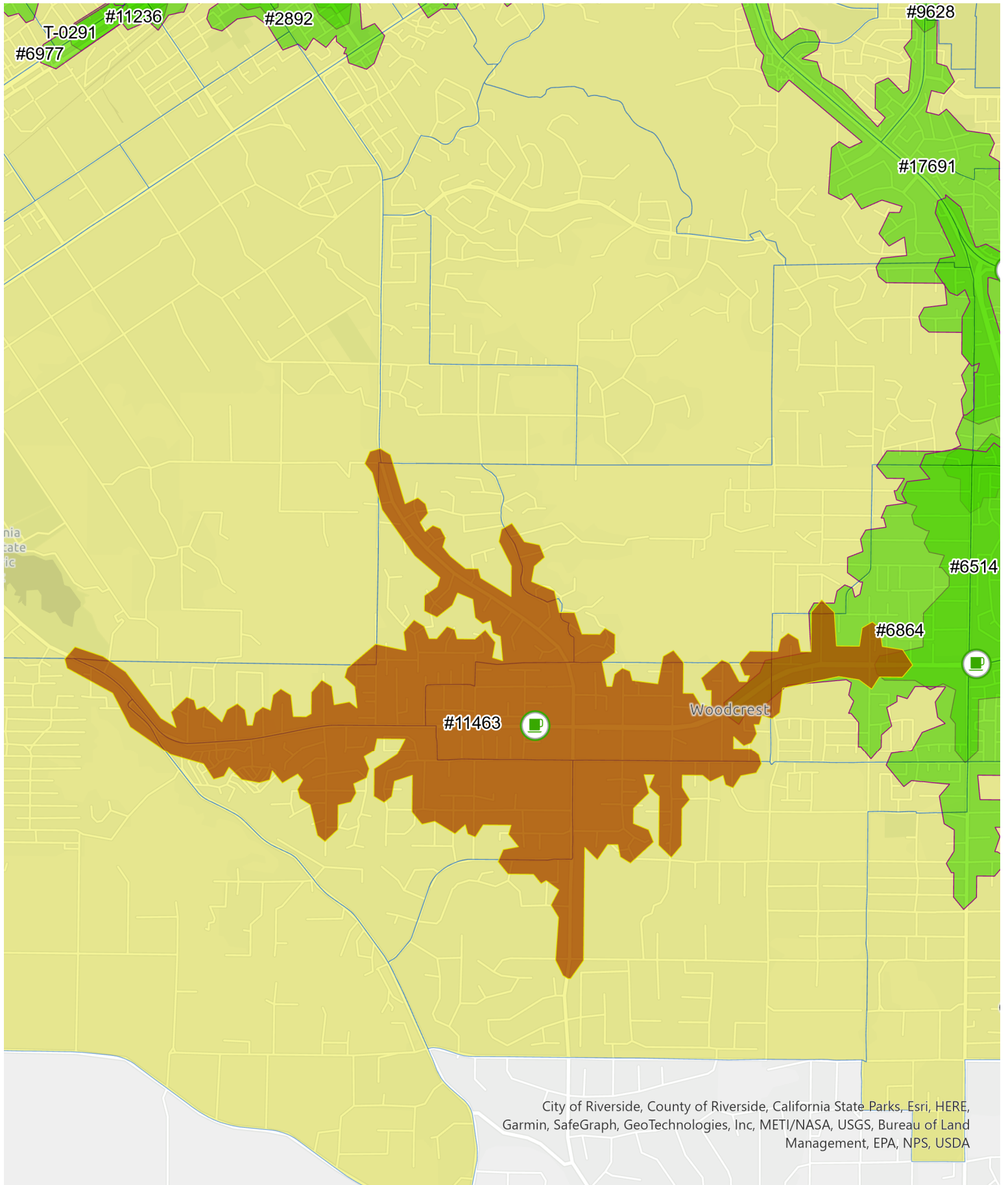
1:20,000

2nd contender for possible store closure



*17,355 people within 3 minute service area of location
 (3.160% of examined metropolitan population)
 3,247 long-distance commuters served here*

Cartography by Aaron Goodman
 Data source: UCLA GEOG XL 181B course website
 TIGER/Line American Community Survey data



City of Riverside, County of Riverside, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

Starbucks #11463

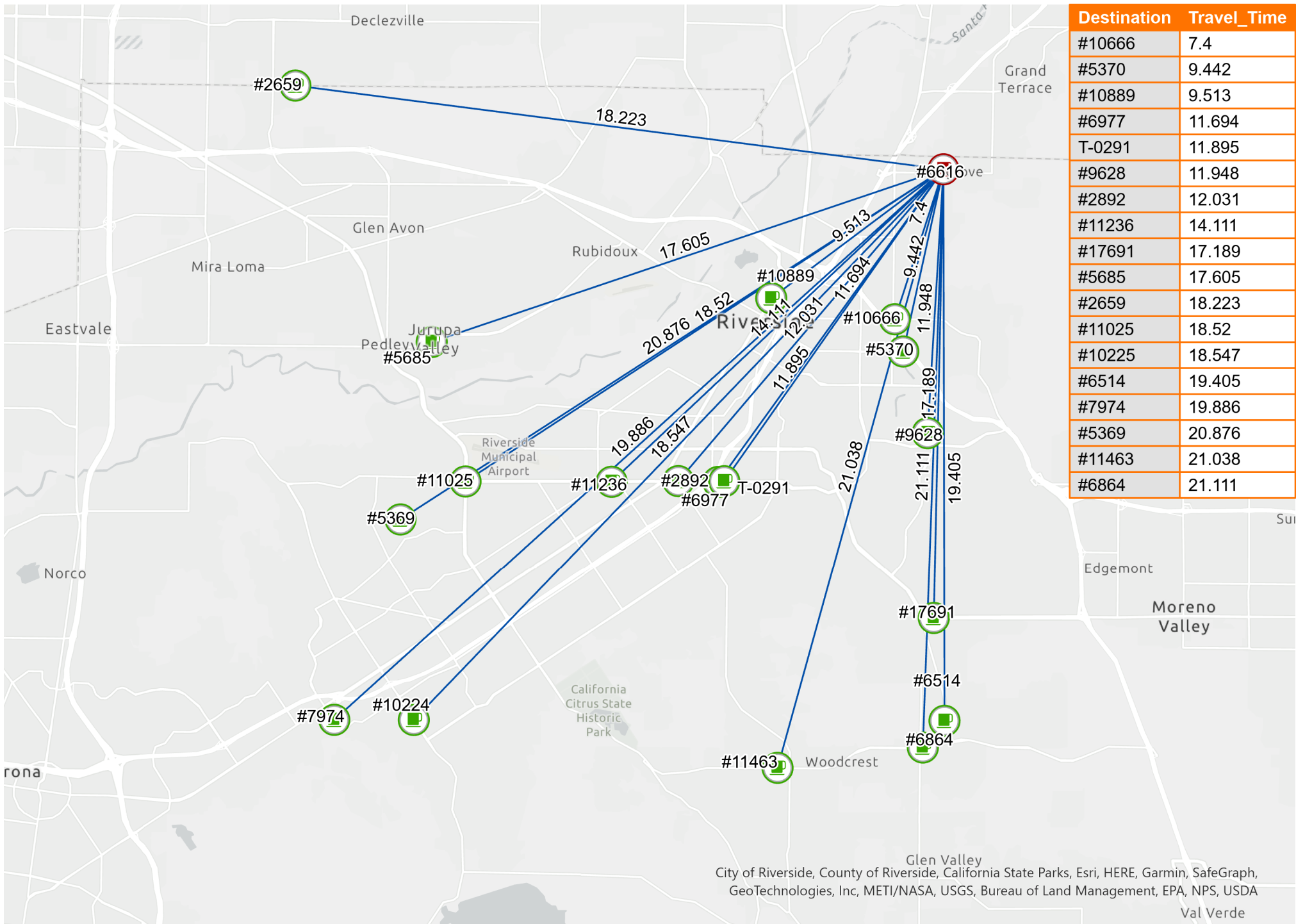
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3rd contender for possible store closure



22,663 people within 3 minute service area of location
 (4.127% of examined metropolitan population)
 5,396 long-distance commuters served here

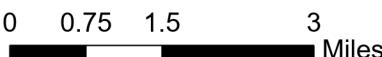
Cartography by Aaron Goodman
 Data source: UCLA GEOG XL 181B course website
 TIGER/Line American Community Survey data



City of Riverside, County of Riverside, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA

19 Starbucks Locations in Riverside, CA

Origin/Destination Cost Matrix from Store #6616 (time in min)



1:120,000
Miles
Cartography by Aaron Goodman

Data source: UCLA GEOG XL 181B course website
TIGER/Line American Community Survey data

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Unit 2 - Network Analysis: Conclusion

The three Starbucks stores considered for closure are presented again in the table below in increasing order of population served. An additional column ("PCT/POP LD COMMUTER") has been appended to present data pertinent to the selection process.

STORE NUMBER	SQ MILEAGE SERVED	TOTAL POP SERVED	PCT/METRO POP	TOTAL LD COMMUTERS SERVED	PCT/POP LD COMMUTER
#6616	1.08710	8,723	1.59 %	1,268	14.54 %
#2659	0.74477	17,355	3.16 %	3,247	18.71 %
#11463	2.81347	22,663	4.13 %	5,396	23.81 %

Ultimately I think store #6616 is the best choice for closing. Not only does it serve the smallest population by a considerable margin, but it also serves a population which includes fewer long-distance commuters. While age and sex based insights too can be drawn from census data, for my analysis I chose to focus on another aspect of the Starbucks market: fast delivery of on-the-go coffee beverages.

One way of further improving future analysis of Starbucks catchment areas for commuters would be to acquire data on locations' drive-thru facilities, if applicable.