

IBM Applied Data Science Capstone Project

The Battle of Neighborhoods: Choosing the Best Location for Your Next Food Business

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Introduction

Quezon City is the largest city in the Philippines in terms of population. Quezon City has an area of 16,112.58 hectares, which accounts for one-fourth of the entire Metropolitan Manila. According to the [Quezon City Government Official Website](#), there has been an increasing trend in the number of registered businesses from 2008 to 2013. The latest count is at 64,515 with 13,417 as new and 51,098 renewals. More than 90% belongs to the services sector, where hotels & restaurants activities rank 3rd in terms of share.

Quezon City is located on the northeast side of Metro Manila. It is easily accessible from the major highways and mass transit systems, making it a good location for one's food business. The online real estate marketplace [Lamudi](#) even considers Quezon City as a haven for food lovers and bar-hoppers due to a wide variety of restaurants available in the area.

The goal of this project is to help entrepreneurs in their search for the best location for their food business. It is generally considered that location is one of the most crucial factors to consider when putting up a business. Along with the restaurant's menu, location can make a huge difference in the success of a food business. In an article published by the [Entrepreneur](#) magazine, Greg Kahn, founder and CEO of Kahn Research Group said that "the best place to be is as close to your biggest competitor as you can be". This means that other restaurants selected their locations based on the favorable aspects of that area. On the other hand, having a concept that is almost indistinguishable to neighboring restaurants also have its drawbacks as highlighted in an article by [EHL Insights](#). For one, it will be very difficult to win over your neighbors' loyal customers.

The main contribution of this project is to provide entrepreneurs with business location alternatives. Specifically, it seeks to:

- identify the most common restaurant types in each of the neighborhoods in Quezon City
- cluster similar establishments in the city
- visualize these clusters on the map
- develop actionable insights and make recommendations about possible locations for a food business in Quezon City

Data

In order to achieve the objectives of this project, the following data were obtained and preprocessed.

1. The list of neighborhoods in Quezon City were collected. It is publicly available on the official website of the [Philippine Statistics Authority](#).

2. The latitude and longitude values of Quezon City were obtained using the Geopy library. This was used to create the map of the city.
3. The coordinates of each of the neighborhoods in Quezon City were also obtained using the Geopy library. This was used to show the location of the neighborhoods in the map.
4. The number and types of restaurants for each location were collected using the Foursquare API. This will address the first objective outlined above.

Methodology

In this section, the methodology used to analyze the data will be discussed.

Data Collection and Preprocessing

The necessary data is collected from various sources. The process is detailed as follows.

1. The list of *barangays* was downloaded from the official website of the Philippine Statistics Authority. A **barangay**¹ is a small territorial and administrative district forming the most local level of government in the Philippines. There are 142 barangays in Quezon City. Refer to Appendix A for the list of barangays.
2. The coordinates of Quezon City and its neighborhoods were obtained using the Geopy library. The latitude and longitude values were used to create a map visualizing Quezon city and its neighborhoods. This was done using the Folium library.
3. The resulting map was inspected, and it was observed that the coordinates of one of the neighborhoods were incorrectly assigned. See Figure 1. This is Barangay San Roque. In the Philippines, there is a province called Quezon. Filipinos refer to it as Quezon Province to distinguish it from Quezon City. Apparently, a neighborhood called San Roque also exists in Quezon Province. This was then incorrectly picked up by Geopy. To rectify this, the coordinates of Barangay San Roque, Quezon City was checked separately. This replaced the incorrect values initially supplied.
4. The Foursquare API was used to collect the number and types of food establishments in the area.

Exploratory Data Analysis

The analyses performed to explore the data are discussed below.

1. The venues collected using the Foursquare API were then grouped by neighborhood. This showed the number of venues returned for each neighborhood. Notice that there were no venues returned for 2 neighborhoods i.e., a total of 140 out of 142 neighborhoods had information on food venues. Furthermore, 84 different categories of food establishments in the area were noted.
2. The 10 most common restaurant types as well as the 10 least common restaurant types in Quezon City were also identified. Refer to Tables 1 and 2.
3. The DataFrame with the coordinates of the neighborhoods were merged with the DataFrame showing the number of food venues for each neighborhood. The resulting DataFrame contains the name of the neighborhood, the latitude, the longitude and the number of food venues in that neighborhood. Using this information, a map was created to visualize the area. The size of the markers corresponds to the number of food venues in the neighborhood. See Figure 2.

¹ Throughout this study, *neighborhood* will be used interchangeably with *barangay*.

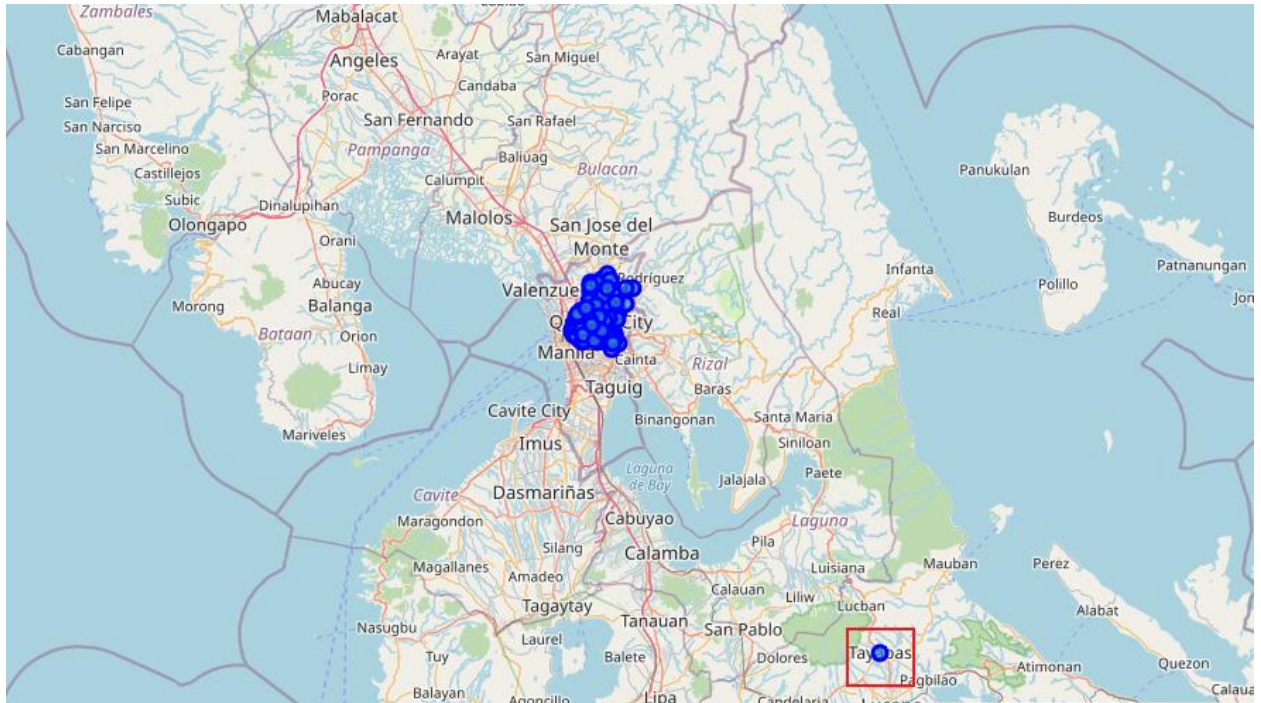


Figure 1. Zoomed-out Map of Quezon City and its Neighborhoods to show the Incorrect Coordinates for One Neighborhood (Barangay San Roque).

Venue Category	
Fast Food Restaurant	248
Café	232
Filipino Restaurant	222
Chinese Restaurant	197
Bakery	173
BBQ Joint	156
Pizza Place	114
Burger Joint	110
Restaurant	109
Japanese Restaurant	95

Table 1. Ten Most Common Restaurant Types in Quezon City.

Venue Category	
Pet Café	1
Udon Restaurant	1
Molecular Gastronomy Restaurant	1
Japanese Curry Restaurant	1
Taco Place	1
Theme Restaurant	1
German Restaurant	1
Peruvian Restaurant	1
Gluten-free Restaurant	1
Malay Restaurant	1

Table 2. Ten Least Common Restaurant Types in Quezon City.

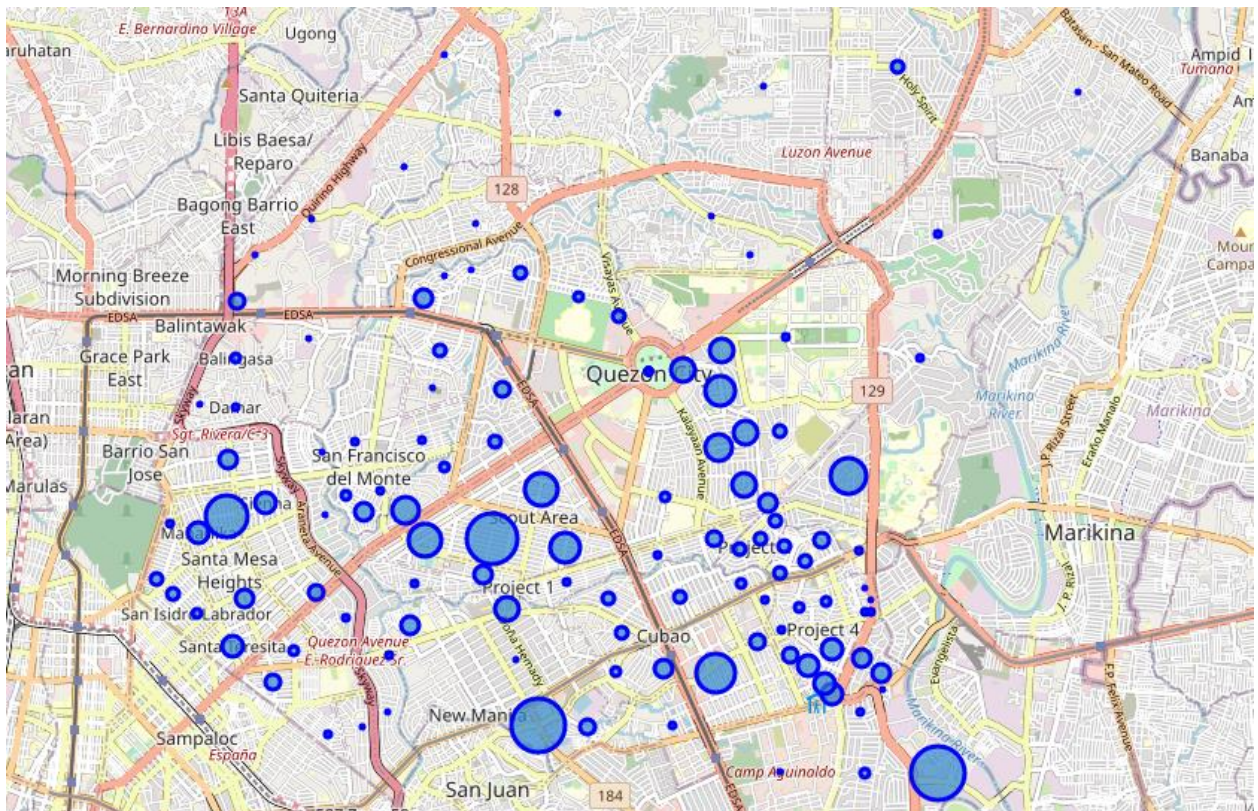


Figure 2. Map of Quezon City and its Neighborhoods. Size of Markers is Proportionate with the Number of Food Venues in that Neighborhood.

Clustering

The main objective of this project is to help entrepreneurs in their search for the best location for their food business. One way of doing this is to cluster similar food establishments in the area. K-means clustering, an unsupervised machine learning algorithm, was used in this project. This will be done with the help of the Scikit-learn library.

1. Venue categories, which are categorical variables, were transformed into dummy variables.
2. The rows of the resulting DataFrame were grouped by neighborhood and the mean occurrence of each category was calculated.
3. The optimal number of clusters was determined using the elbow method. Accordingly, six clusters were appropriate.

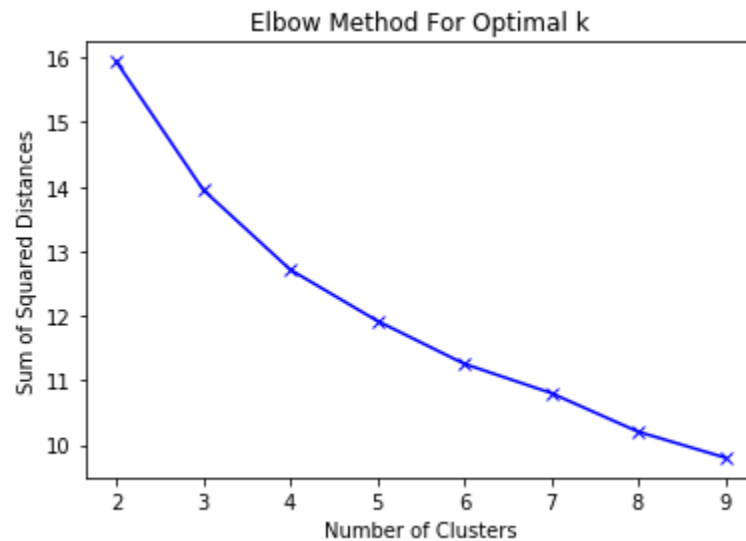


Figure 3. Elbow Method for Identifying the Optimal Number of Clusters

Results and Discussion

K-Means Clustering

The number of clusters was set at six as suggested by the elbow method. The Scikit-learn library was used to cluster the neighborhoods. Subsequently, the clusters were visualized in a map.

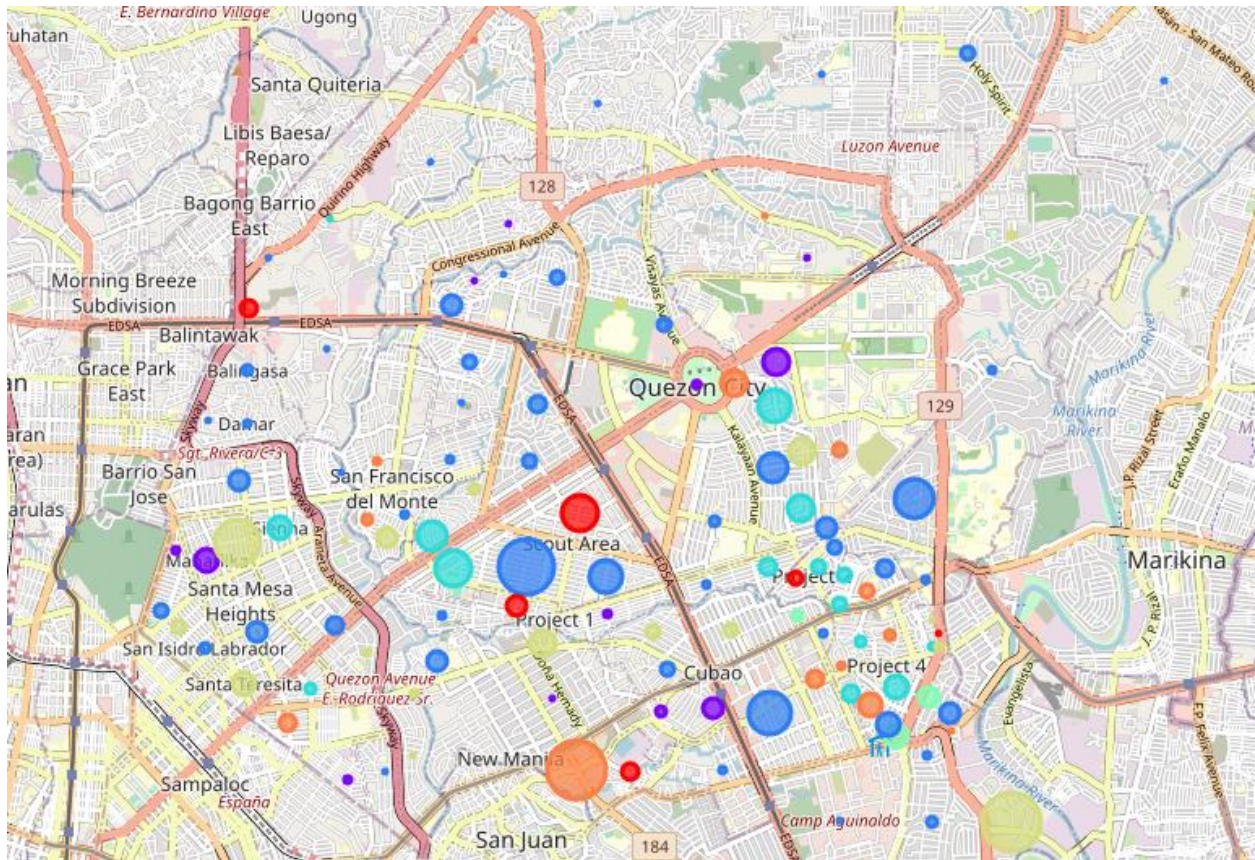


Figure 2. Map of Quezon City, its Neighborhoods, and their Clusters. Size of Markers are Proportionate to the Number of Food Venues in that Neighborhood.

Before examining each cluster, a new DataFrame that includes the cluster as well as the top 10 venues for each neighborhood was created. This made it easier to check the most common restaurant types in each cluster and in each of the neighborhoods. Note that neighborhoods with less than 10 food venues were excluded from this analysis. Out of 140, only 95 neighborhoods have 10 or more food venues.

Each cluster was then examined. Refer to Appendix B for the complete list of neighborhoods in each cluster. The most common types of restaurant for each cluster are shown in the below table.

Cluster	Most Common Type
Cluster 1	Burger Joint
Cluster 2	Filipino Restaurant
Cluster 3	Café
Cluster 4	Chinese Restaurants
Cluster 5	Filipino Restaurant, Wings Joint
Cluster 6	Fast Food Restaurant

Table 3. Most Common Restaurant Types in Each Cluster

Summary and Conclusion

In summary, the results provided in this project may help entrepreneurs select the location of their next food business. Knowledge of the most common types of restaurants in an area will enable them to plan strategically. Careful consideration whether to put up a restaurant in an area where similar restaurants are commonly found is therefore recommended. Close proximity to your competitors has both benefits and drawbacks. As mentioned earlier, one disadvantage is tight competition. It is harder to establish your presence, especially if your competitors are more established and well-known in the industry. In contrast, one benefit that you can take advantage of as mentioned by Greg Kahn in the [Entrepreneur](#) article is foot traffic. In many cases, your competitors may have already used large portions of their advertising budget towards driving traffic to their locations.

These are some of the factors to consider when choosing the best location for your next food business. Other considerations were not discussed in this report as business administration and marketing are outside the domain expertise of the author.

In conclusion, whether an entrepreneur looking to establish a food business in Quezon City believes that the advantages of close proximity to competitors outweigh the disadvantages or not, they could still benefit from the results of this study by being equipped with the knowledge of the most common restaurant types in each of the neighborhoods. For example, if an entrepreneur is planning to put up a burger joint and they believe that close proximity to competitors is beneficial, then they should set-up their restaurant in the neighborhoods in Cluster 1. In short, it is still up to the entrepreneur how they are going to utilize the insights provided by this project.

References

<https://www.lexico.com/definition/barangay>

<https://foursquare.com/>

<https://www.ibm.com/developerworks/library/os-foursquare/index.html>

<https://quezoncity.gov.ph/about-the-city-government/>

<https://www.lamudi.com.ph/journal/10-reasons-why-quezon-city-is-one-of-the-best-places-to-live-in-metro-manila/>

<https://stanford.edu/~cpiech/cs221/handouts/kmeans.html>

APPENDIX A: Barangays (Neighborhoods) in Quezon City, Metro Manila, Philippines

Alicia	Laging Handa	San Roque
Amihan	Libis	San Vicente
Apolonio Samson	Lourdes	Santa Cruz
Aurora	Loyola Heights	Santa Lucia
Baesa	Maharlika	Santa Monica
Bagbag	Malaya	Santa Teresita
Bagumbuhay	Manresa	Santo Cristo
Bagong Lipunan Ng Crame	Mangga	Santo Niño
Bagong Pag-asa	Mariana	Santol
Bagong Silangan	Mariblo	Sauyo
Bagumbayan	Marilag	Sienna
Bahay Toro	Masagana	Sikatuna Village
Balingasa	Masambong	Silangan
Bayanihan	Santo Domingo	Socorro
Blue Ridge A	(Matalahib)	South Triangle
Blue Ridge B	Matandang Balara	Tagumpay
Botocan	Milagrosa	Talayan
Bungad	Nagkaisang Nayon	Talipapa
Camp Aguinaldo	Nayong Kanluran	Tandang Sora
Central	Novaliches Proper	Tatalon
Claro	Obrero	Teachers Village East
Commonwealth	Old Capitol Site	Teachers Village West
New Era	Paang Bundok	U.P. Campus
Kristong Hari	Pag-ibig Sa Nayon	U.P. Village
Culiat	Paligsahan	Ugong Norte
Damar	Paltok	Unang Sigaw
Damayan	Pansol	Valencia
Damayang Lagi	Paraiso	Vasra
Del Monte	Pasong Putik Proper	Veterans Village
Dioquino Zobel	(Pasong Putik)	Villa Maria Clara
Doña Imelda	Pasong Tamo	West Kamias
Doña Josefa	Phil-Am	West Triangle
Don Manuel	Pinyahan	White Plains
Duyan-duyan	Pinagkaisahan	Balong Bato
E. Rodriguez	Project 6	Capri
East Kamias	Quirino 2-A	Sangandaan
Escopa I	Quirino 2-B	Payatas
Escopa II	Quirino 2-C	Batasan Hills
Escopa III	Quirino 3-A	Holy Spirit
Escopa IV	Ramon Magsaysay	Greater Lagro
Fairview	Roxas	North Fairview
N. S. Amoranto (Gintong Silahis)	Sacred Heart	
Gulod	Saint Ignatius	
Horseshoe	Saint Peter	
Immaculate Concepcion	Salvacion	
Kaligayahan	San Agustin	
Kalusugan	San Antonio	
Kamuning	San Bartolome	
Katipunan	San Isidro	
Kaunlaran	San Isidro Labrador	
Krus Na Ligas	San Jose	
	San Martin De Porres	

APPENDIX B: Complete List of Neighborhoods in Each Cluster

Cluster 1

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
39	Escopa IV	Burger Joint	Donut Shop	Food Court	Food Truck	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
42	Gulod	Café	Noodle House	Burger Joint	Food Truck	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
43	Horseshoe	Donut Shop	Pizza Place	Diner	Noodle House	Wings Joint	Eastern European Restaurant	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop
70	Obrero	Burger Joint	Steakhouse	Pizza Place	Fast Food Restaurant	Food Court	Food Stand	Empanada Restaurant	English Restaurant	Filipino Restaurant	Fish & Chips Shop
84	Quirino 2-A	Bakery	Diner	Deli / Bodega	Burger Joint	Wings Joint	Food Truck	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
115	South Triangle	Burger Joint	Donut Shop	Fast Food Restaurant	Bakery	Filipino Restaurant	Breakfast Spot	Tapas Restaurant	Pizza Place	Chinese Restaurant	Food Stand
126	Unang Sigaw	Burger Joint	Café	Donut Shop	Diner	Pizza Place	Gluten-free Restaurant	German Restaurant	English Restaurant	Hot Dog Joint	Fast Food Restaurant

Cluster 2

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1	Amihan	Bakery	Café	Burger Joint	Restaurant	Filipino Restaurant	Asian Restaurant	Pizza Place	Seafood Restaurant	Chinese Restaurant	Food Court
2	Apolonio Samson	Café	Fast Food Restaurant	Bakery	Snack Place	Chinese Restaurant	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
7	Bagong Lipunan Ng Crame	Diner	Filipino Restaurant	Food Truck	Burger Joint	Seafood Restaurant	Breakfast Spot	Tapas Restaurant	Sushi Restaurant	Fried Chicken Joint	Bakery
8	Bagong Pag-asa	Café	Fast Food Restaurant	Asian Restaurant	Steakhouse	Filipino Restaurant	Fried Chicken Joint	Pizza Place	Bakery	Donut Shop	Breakfast Spot
12	Balingasa	Fried Chicken Joint	Japanese Restaurant	Bakery	Fast Food Restaurant	Food Court	Snack Place	Steakhouse	Sushi Restaurant	Shabu-Shabu Restaurant	Buffet
15	Blue Ridge B	Bakery	Asian Restaurant	BBQ Joint	Café	Filipino Restaurant	Restaurant	Burger Joint	Wings Joint	Middle Eastern Restaurant	Diner
16	Botocan	BBQ Joint	Filipino Restaurant	Burger Joint	Asian Restaurant	Café	Diner	Steakhouse	Restaurant	Sandwich Place	Chinese Restaurant
17	Bungad	BBQ Joint	Filipino Restaurant	Burger Joint	Café	Restaurant	Wings Joint	Sandwich Place	Bakery	Diner	Fast Food Restaurant
18	Camp Aguinaldo	Café	BBQ Joint	Bakery	Asian Restaurant	Soup Place	Food Truck	Mediterranean Restaurant	Mexican Restaurant	Filipino Restaurant	Fast Food Restaurant
19	Central	BBQ Joint	Deli / Bodega	Fried Chicken Joint	Wings Joint	Food Stand	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
21	Commonwealth	Donut Shop	Snack Place	Food Stand	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
23	Kristong Hari	Fast Food Restaurant	BBQ Joint	Bakery	Filipino Restaurant	Donut Shop	Café	Fried Chicken Joint	Korean Restaurant	Burger Joint	Diner
25	Damar	Steakhouse	Café	Japanese Restaurant	Taco Place	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food

Cluster 2 (cont)

30	Doña Imelda	BBQ Joint	Filipino Restaurant	Pizza Place	Fast Food Restaurant	Wings Joint	Chinese Restaurant	Noodle House	Restaurant	Donut Shop	Middle Eastern Restaurant
34	E. Rodriguez	Burger Joint	Fast Food Restaurant	BBQ Joint	Bakery	Donut Shop	Filipino Restaurant	Café	Pizza Place	Noodle House	Fried Chicken Joint
37	Escopa II	BBQ Joint	Burger Joint	Pizza Place	Sandwich Place	Filipino Restaurant	Fish & Chips Shop	Comfort Food Restaurant	Food Court	Empanada Restaurant	English Restaurant
38	Escopa III	BBQ Joint	Donut Shop	Burger Joint	Sandwich Place	Filipino Restaurant	Fish & Chips Shop	Comfort Food Restaurant	Pizza Place	Gastropub	Fried Chicken Joint
44	Immaculate Concepcion	Korean Restaurant	Fast Food Restaurant	Café	BBQ Joint	Seafood Restaurant	Bakery	Pizza Place	Breakfast Spot	Filipino Restaurant	Burger Joint
45	Kaligayahan	Japanese Restaurant	Café	Seafood Restaurant	Filipino Restaurant	Italian Restaurant	Buffet	Cha Chaan Teng	Chinese Restaurant	French Restaurant	Korean Restaurant
46	Kalusugan	Café	Fast Food Restaurant	Asian Restaurant	Donut Shop	Bakery	Burger Joint	Portuguese Restaurant	Sandwich Place	Filipino Restaurant	Soup Place
48	Katipunan	Café	Chinese Restaurant	Pizza Place	Diner	Bakery	Fast Food Restaurant	Restaurant	Noodle House	Fried Chicken Joint	French Restaurant
50	Krus Na Ligas	Restaurant	Chinese Restaurant	Food Court	Vegetarian / Vegan Restaurant	Persian Restaurant	Bakery	Noodle House	Café	English Restaurant	Fast Food Restaurant
51	Laging Handa	Asian Restaurant	BBQ Joint	Bakery	Restaurant	Steakhouse	Burger Joint	Café	Food Court	Korean Restaurant	Italian Restaurant
52	Libis	Chinese Restaurant	Kebab Restaurant	Café	Japanese Restaurant	Bakery	Fast Food Restaurant	Pizza Place	Filipino Restaurant	Restaurant	Empanada Restaurant
53	Lourdes	Filipino Restaurant	Diner	Steakhouse	Chinese Restaurant	Burger Joint	Food Truck	Café	Middle Eastern Restaurant	Korean Restaurant	Southern / Soul Food Restaurant
54	Loyola Heights	Filipino Restaurant	Chinese Restaurant	BBQ Joint	Restaurant	Café	Fast Food Restaurant	Seafood Restaurant	Pizza Place	Steakhouse	Korean Restaurant
57	Manresa	Café	Burger Joint	Fried Chicken Joint	Wings Joint	Pizza Place	Fast Food Restaurant	Korean Restaurant	Steakhouse	Diner	Empanada Restaurant

Cluster 2 (cont)

58	Mangga	Bakery	Asian Restaurant	Seafood Restaurant	Fast Food Restaurant	Chinese Restaurant	Pizza Place	Noodle House	BBQ Joint	Vietnamese Restaurant	Filipino Restaurant
63	Masambong	Bakery	Fast Food Restaurant	Filipino Restaurant	Donut Shop	Japanese Restaurant	Restaurant	Chinese Restaurant	Fried Chicken Joint	Food Truck	Mediterranean Restaurant
64	Santo Domingo (Matalahib)	Burger Joint	Filipino Restaurant	Noodle House	Donut Shop	Shawarma Place	Café	Eastern European Restaurant	Bakery	BBQ Joint	Breakfast Spot
65	Matandang Balara	BBQ Joint	Filipino Restaurant	Wings Joint	Pizza Place	Burger Joint	Chinese Restaurant	Fast Food Restaurant	Middle Eastern Restaurant	Asian Restaurant	Noodle House
67	Nagkaisang Nayon	Café	Diner	Bistro	Filipino Restaurant	Pizza Place	Restaurant	Vietnamese Restaurant	Bakery	Greek Restaurant	Food Court
68	Nayong Kanluran	BBQ Joint	Filipino Restaurant	Burger Joint	Restaurant	Diner	Persian Restaurant	Wings Joint	Sandwich Place	Breakfast Spot	Café
71	Old Capitol Site	Chinese Restaurant	Café	Buffet	Pizza Place	Filipino Restaurant	Japanese Restaurant	Kebab Restaurant	Korean Restaurant	Steakhouse	English Restaurant
72	Paang Bundok	Diner	Café	Ramen Restaurant	Filipino Restaurant	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court
73	Pag-ibig Sa Nayon	Restaurant	Korean Restaurant	Filipino Restaurant	Snack Place	Chinese Restaurant	Food Court	Café	Gastropub	Fried Chicken Joint	French Restaurant
75	Paltok	Restaurant	Café	Filipino Restaurant	Bakery	Fast Food Restaurant	Japanese Restaurant	Italian Restaurant	BBQ Joint	Burger Joint	Chinese Restaurant
76	Pansol	Fast Food Restaurant	Filipino Restaurant	BBQ Joint	Restaurant	Italian Restaurant	Café	Food Truck	Donut Shop	Breakfast Spot	Bistro
77	Paraiso	Bakery	Asian Restaurant	Filipino Restaurant	Fast Food Restaurant	Snack Place	French Restaurant	Noodle House	Restaurant	Thai Restaurant	Buffet
79	Pasong Tamo	Café	Fast Food Restaurant	Filipino Restaurant	Japanese Restaurant	Restaurant	Chinese Restaurant	BBQ Joint	Diner	Dim Sum Restaurant	Comfort Food Restaurant
80	Phil-Am	Café	BBQ Joint	Fast Food Restaurant	Filipino Restaurant	Kebab Restaurant	Noodle House	Deli / Bodega	Food Truck	Fish & Chips Shop	Food
81	Pinyahan	Asian Restaurant	Buffet	Japanese Restaurant	Portuguese Restaurant	Chinese Restaurant	Restaurant	Udon Restaurant	Bistro	Food Stand	English Restaurant

Cluster 2 (cont)

83	Project 6	Donut Shop	Fast Food Restaurant	Pizza Place	Café	Bakery	Filipino Restaurant	Fried Chicken Joint	Burger Joint	Japanese Restaurant	Comfort Food Restaurant
86	Quirino 2-C	Café	Fast Food Restaurant	Filipino Restaurant	Burger Joint	Donut Shop	Portuguese Restaurant	Sandwich Place	Food	Snack Place	Food Court
88	Ramon Magsaysay	Restaurant	BBQ Joint	Filipino Restaurant	Diner	Snack Place	Fast Food Restaurant	Empanada Restaurant	Seafood Restaurant	Italian Restaurant	Burrito Place
89	Roxas	Café	Fast Food Restaurant	Diner	Soup Place	Korean Restaurant	Donut Shop	Deli / Bodega	Food Truck	Chinese Restaurant	Restaurant
90	Sacred Heart	Café	BBQ Joint	Fast Food Restaurant	Donut Shop	Burger Joint	Korean Restaurant	Diner	Food Truck	Sushi Restaurant	Restaurant
91	Saint Ignatius	Café	BBQ Joint	Bakery	Restaurant	Steakhouse	Donut Shop	Fast Food Restaurant	Filipino Restaurant	Diner	Mexican Restaurant
92	Saint Peter	Fast Food Restaurant	Pizza Place	Fried Chicken Joint	BBQ Joint	Donut Shop	Filipino Restaurant	Soup Place	Seafood Restaurant	Café	Food Truck
93	Salvacion	Snack Place	BBQ Joint	Fast Food Restaurant	Donut Shop	Pizza Place	Fried Chicken Joint	Breakfast Spot	Burger Joint	Asian Restaurant	Food Court
94	San Agustin	Café	Japanese Restaurant	Comfort Food Restaurant	Fast Food Restaurant	Filipino Restaurant	Food	Asian Restaurant	Breakfast Spot	Gluten-free Restaurant	German Restaurant
96	San Bartolome	Bakery	Wings Joint	Restaurant	Café	Comfort Food Restaurant	Japanese Restaurant	Noodle House	Asian Restaurant	Tapas Restaurant	Doner Restaurant
98	San Isidro Labrador	Bakery	Filipino Restaurant	Asian Restaurant	Fast Food Restaurant	Snack Place	French Restaurant	Noodle House	Chinese Restaurant	Restaurant	Thai Restaurant
107	Santo Cristo	Fast Food Restaurant	Filipino Restaurant	BBQ Joint	Chinese Restaurant	Japanese Restaurant	Food Truck	Italian Restaurant	Breakfast Spot	Café	Burrito Place
109	Santol	Fast Food Restaurant	Filipino Restaurant	Japanese Restaurant	Restaurant	Chinese Restaurant	Café	Diner	Dim Sum Restaurant	Donut Shop	BBQ Joint
114	Socorro	Café	Chinese Restaurant	Fast Food Restaurant	Asian Restaurant	Donut Shop	BBQ Joint	Japanese Restaurant	Kebab Restaurant	Hot Dog Joint	Burger Joint
119	Tandang Sora	Café	Bakery	BBQ Joint	Asian Restaurant	Burger Joint	Restaurant	Steakhouse	Filipino Restaurant	Donut Shop	English Restaurant

Cluster 2 (cont)

121	Teachers Village East	Fast Food Restaurant	Chinese Restaurant	BBQ Joint	Donut Shop	Seafood Restaurant	Filipino Restaurant	Bakery	Burger Joint	Diner	Pizza Place
122	Teachers Village West	Filipino Restaurant	BBQ Joint	Café	Chinese Restaurant	Diner	Burger Joint	Sandwich Place	Seafood Restaurant	Restaurant	Pizza Place
128	Vasra	Filipino Restaurant	Café	Diner	Japanese Restaurant	Bakery	Burger Joint	Chinese Restaurant	Korean Restaurant	Food Court	Steakhouse
129	Veterans Village	Filipino Restaurant	Bakery	Restaurant	Korean Restaurant	Japanese Restaurant	Café	Food Court	Burger Joint	Steakhouse	BBQ Joint
130	Villa Maria Clara	Café	Diner	Snack Place	Food Truck	Food Stand	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
131	West Kamias	Café	Filipino Restaurant	BBQ Joint	Italian Restaurant	Bakery	Japanese Restaurant	Korean Restaurant	Restaurant	Bistro	Diner
132	West Triangle	Café	Mexican Restaurant	Dim Sum Restaurant	Deli / Bodega	Italian Restaurant	Bakery	Greek Restaurant	Food Court	Fast Food Restaurant	Filipino Restaurant
133	White Plains	Fast Food Restaurant	Asian Restaurant	Bakery	Filipino Restaurant	Japanese Restaurant	Pizza Place	Shabu-Shabu Restaurant	Breakfast Spot	Buffet	Chinese Restaurant
134	Balong Bato	Chinese Restaurant	Japanese Restaurant	Bakery	Café	Pizza Place	BBQ Joint	Diner	Fast Food Restaurant	Filipino Restaurant	Fried Chicken Joint
135	Capri	Asian Restaurant	Filipino Restaurant	Diner	Mexican Restaurant	Indonesian Restaurant	Fast Food Restaurant	Empanada Restaurant	Doner Restaurant	Dim Sum Restaurant	Restaurant
136	Sangandaan	Filipino Restaurant	Bakery	Café	Japanese Restaurant	Wings Joint	Seafood Restaurant	BBQ Joint	Donut Shop	Fast Food Restaurant	Fried Chicken Joint
138	Batasan Hills	BBQ Joint	Filipino Restaurant	Asian Restaurant	Restaurant	Bakery	Burger Joint	Café	Middle Eastern Restaurant	Persian Restaurant	Wings Joint
139	Holy Spirit	Bakery	Restaurant	Fast Food Restaurant	Filipino Restaurant	Café	Japanese Restaurant	Greek Restaurant	Food Court	Empanada Restaurant	English Restaurant
140	Greater Lagro	Café	Diner	Fast Food Restaurant	Steakhouse	Chinese Restaurant	Noodle House	Restaurant	Japanese Restaurant	Fried Chicken Joint	Sandwich Place
141	North Fairview	Vietnamese Restaurant	Noodle House	Korean Restaurant	Chinese Restaurant	Dim Sum Restaurant	Diner	Café	Sushi Restaurant	Filipino Restaurant	Japanese Restaurant

Cluster 3

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Alicia	Filipino Restaurant	Fast Food Restaurant	Burger Joint	Wings Joint	Food Truck	Empanada Restaurant	English Restaurant	Fish & Chips Shop	Food	Food Court
3	Aurora	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
11	Bahay Toro	Filipino Restaurant	Korean Restaurant	Gastropub	Wings Joint	Food Stand	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food
22	New Era	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
24	Culiat	Restaurant	Breakfast Spot	Chinese Restaurant	Food Stand	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
40	Fairview	Filipino Restaurant	Donut Shop	Café	Comfort Food Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court	Food Stand
41	N. S. Amoranto (Gintong Silahis)	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
47	Kamuning	Asian Restaurant	BBQ Joint	Filipino Restaurant	Tapas Restaurant	Food Truck	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food
49	Kaunlaran	Filipino Restaurant	Restaurant	Breakfast Spot	Tapas Restaurant	Steakhouse	Japanese Restaurant	German Restaurant	Eastern European Restaurant	Empanada Restaurant	English Restaurant
55	Maharlika	Wings Joint	Bakery	Filipino Restaurant	Restaurant	Bagel Shop	Food Truck	English Restaurant	Fast Food Restaurant	BBQ Joint	Fish & Chips Shop
59	Mariana	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant

Cluster 3 (cont)

95	San Antonio	Filipino Restaurant	Café	Japanese Restaurant	Donut Shop	Korean Restaurant	Steakhouse	Pizza Place	Restaurant	Chinese Restaurant	Spanish Restaurant
99	San Jose	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
100	San Martin De Porres	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
102	San Vicente	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
104	Santa Lucia	Filipino Restaurant	Restaurant	Breakfast Spot	New American Restaurant	Fried Chicken Joint	Burger Joint	Café	Japanese Restaurant	BBQ Joint	Gluten-free Restaurant
108	Santo Niño	Restaurant	Food Truck	Filipino Restaurant	Burger Joint	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court
110	Sauyo	Restaurant	Bakery	Filipino Restaurant	Tapas Restaurant	Food Court	Food Stand	Eastern European Restaurant	Empanada Restaurant	English Restaurant	Fast Food Restaurant

Cluster 4

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
20	Claro	Fast Food Restaurant	Chinese Restaurant	Burger Joint	Wings Joint	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
26	Damayan	Chinese Restaurant	Steakhouse	Fried Chicken Joint	Filipino Restaurant	Dumpling Restaurant	Bakery	Greek Restaurant	Hawaiian Restaurant	Empanada Restaurant	English Restaurant
28	Del Monte	Pizza Place	Chinese Restaurant	Burger Joint	Fast Food Restaurant	Food Court	French Restaurant	Restaurant	Café	Fried Chicken Joint	Gastropub
32	Don Manuel	Chinese Restaurant	Filipino Restaurant	Wings Joint	Food Stand	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court
33	Duyan-duyan	Chinese Restaurant	Asian Restaurant	Café	Filipino Restaurant	Fast Food Restaurant	Pizza Place	Donut Shop	Snack Place	Restaurant	Bakery
56	Malaya	Chinese Restaurant	Fast Food Restaurant	Café	Asian Restaurant	Steakhouse	Fried Chicken Joint	Malay Restaurant	Pizza Place	Diner	Snack Place
61	Marilag	Chinese Restaurant	Dumpling Restaurant	Steakhouse	Wings Joint	Restaurant	Bakery	Café	Dim Sum Restaurant	Diner	Fast Food Restaurant
62	Masagana	Chinese Restaurant	Fast Food Restaurant	Filipino Restaurant	Wings Joint	Food Stand	Empanada Restaurant	English Restaurant	Fish & Chips Shop	Food	Food Court
78	Pasong Putik Proper (Pasong Putik)	Asian Restaurant	Pizza Place	Fast Food Restaurant	Chinese Restaurant	Food Stand	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
97	San Isidro	Chinese Restaurant	Japanese Restaurant	Asian Restaurant	Café	Korean Restaurant	Bakery	Dumpling Restaurant	Pizza Place	Fried Chicken Joint	Fast Food Restaurant
101	San Roque	Chinese Restaurant	BBQ Joint	Bakery	Fast Food Restaurant	Wings Joint	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food
118	Talipapa	Chinese Restaurant	Café	Japanese Restaurant	Fast Food Restaurant	Vegetarian / Vegan Restaurant	Asian Restaurant	Dumpling Restaurant	BBQ Joint	Korean Restaurant	Steakhouse
127	Valencia	Café	Chinese Restaurant	Donut Shop	Hot Dog Joint	Fast Food Restaurant	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court

Cluster 5

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
13	Bayanihan	Filipino Restaurant	Wings Joint	Dumpling Restaurant	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court	Food Stand
14	Blue Ridge A	Filipino Restaurant	Wings Joint	Dumpling Restaurant	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court	Food Stand
113	Silangan	Filipino Restaurant	Wings Joint	Dumpling Restaurant	Empanada Restaurant	English Restaurant	Fast Food Restaurant	Fish & Chips Shop	Food	Food Court	Food Stand

Cluster 6

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
4	Baesa	Fast Food Restaurant	Café	Comfort Food Restaurant	Wings Joint	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court	Food Stand
5	Bagbag	Fast Food Restaurant	Bakery	Food Truck	Korean Restaurant	Comfort Food Restaurant	Soup Place	Food Stand	English Restaurant	Filipino Restaurant	Fish & Chips Shop
6	Bagumbuhay	Fast Food Restaurant	Chinese Restaurant	Wings Joint	Snack Place	Café	German Restaurant	Noodle House	Asian Restaurant	Tapas Restaurant	Doner Restaurant
10	Bagumbayan	Fast Food Restaurant	BBQ Joint	Donut Shop	Fried Chicken Joint	Pizza Place	Noodle House	Shawarma Place	Filipino Restaurant	Gluten-free Restaurant	Fish & Chips Shop
27	Damayang Lagi	Bakery	BBQ Joint	Fast Food Restaurant	Asian Restaurant	Spanish Restaurant	Food Truck	Food Court	Pizza Place	Donut Shop	Burrito Place
29	Dioquino Zobel	Fast Food Restaurant	Bakery	Café	Food Truck	Pizza Place	BBQ Joint	Hawaiian Restaurant	Food Stand	English Restaurant	Filipino Restaurant
31	Doña Josefa	Fast Food Restaurant	Chinese Restaurant	Café	Bakery	Filipino Restaurant	Korean Restaurant	Noodle House	Food Court	Steakhouse	Pizza Place
35	East Kamias	Fast Food Restaurant	Donut Shop	Bakery	Italian Restaurant	Buffet	Chinese Restaurant	Mexican Restaurant	Pet Café	Breakfast Spot	Japanese Restaurant
36	Escopa I	Fast Food Restaurant	Burger Joint	Bakery	Diner	Chinese Restaurant	Café	Thai Restaurant	BBQ Joint	Donut Shop	Steakhouse
60	Mariblo	Fast Food Restaurant	Donut Shop	Pizza Place	Fried Chicken Joint	BBQ Joint	Wings Joint	Food Stand	English Restaurant	Filipino Restaurant	Fish & Chips Shop
66	Milagrosa	Bakery	Fast Food Restaurant	Deli / Bodega	Wings Joint	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
69	Novaliches Proper	Fast Food Restaurant	Bakery	Asian Restaurant	Burger Joint	Chinese Restaurant	Café	Gluten-free Restaurant	German Restaurant	Greek Restaurant	Gastropub
74	Paligsahan	Fast Food Restaurant	Bakery	Restaurant	Pizza Place	Filipino Restaurant	Chinese Restaurant	Food Court	Empanada Restaurant	English Restaurant	Fish & Chips Shop

Cluster 6 (cont)

82	Pinagkaisahan	Restaurant	BBQ Joint	Fast Food Restaurant	Bakery	Pizza Place	Spanish Restaurant	Food Truck	Donut Shop	German Restaurant	Gastropub
85	Quirino 2-B	Fast Food Restaurant	Bakery	Chinese Restaurant	Japanese Restaurant	Burger Joint	Pizza Place	Asian Restaurant	Kebab Restaurant	Korean Restaurant	Fried Chicken Joint
87	Quirino 3-A	Fast Food Restaurant	Pizza Place	Filipino Restaurant	Chinese Restaurant	Food Truck	Seafood Restaurant	Café	Fried Chicken Joint	French Restaurant	Gastropub
103	Santa Cruz	Fast Food Restaurant	Chinese Restaurant	Café	Snack Place	BBQ Joint	Bakery	Diner	Burger Joint	Sushi Restaurant	French Restaurant
105	Santa Monica	Fast Food Restaurant	Fried Chicken Joint	Pizza Place	Italian Restaurant	Chinese Restaurant	Diner	Seafood Restaurant	Donut Shop	Bakery	Filipino Restaurant
106	Santa Teresita	Fast Food Restaurant	BBQ Joint	Chinese Restaurant	Noodle House	Donut Shop	Italian Restaurant	Vegetarian / Vegan Restaurant	Restaurant	Kebab Restaurant	Burger Joint
111	Sienna	Fast Food Restaurant	Bakery	Filipino Restaurant	Burger Joint	Chinese Restaurant	Wings Joint	Food Truck	English Restaurant	Fish & Chips Shop	Food
112	Sikatuna Village	Fast Food Restaurant	Chinese Restaurant	Café	Pizza Place	Filipino Restaurant	Restaurant	Dumpling Restaurant	Bakery	Breakfast Spot	Donut Shop
116	Tagumpay	Restaurant	Pizza Place	Bakery	Fast Food Restaurant	Filipino Restaurant	Chinese Restaurant	Food Court	Empanada Restaurant	English Restaurant	Fish & Chips Shop
117	Talayan	BBQ Joint	Fast Food Restaurant	Wings Joint	Food Truck	Empanada Restaurant	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
120	Tatalon	Fast Food Restaurant	Pizza Place	Donut Shop	Fried Chicken Joint	Soup Place	Food Truck	Café	Breakfast Spot	Bakery	BBQ Joint
123	U.P. Campus	BBQ Joint	Fast Food Restaurant	Restaurant	Donut Shop	Kebab Restaurant	Filipino Restaurant	Noodle House	Chinese Restaurant	Food Court	English Restaurant
124	U.P. Village	Fast Food Restaurant	Bakery	Chinese Restaurant	Wings Joint	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food	Food Court
125	Ugong Norte	Fast Food Restaurant	BBQ Joint	Food	Burger Joint	Wings Joint	Food Truck	English Restaurant	Filipino Restaurant	Fish & Chips Shop	Food Court