Mobility AWARDS

bilang siklista

BILANG SIKLISTA

2023 Bicycle Count Report

ICSC Institute for Climate and Sustainable Cities

The Climate Reality Project PHILIPPINES

350

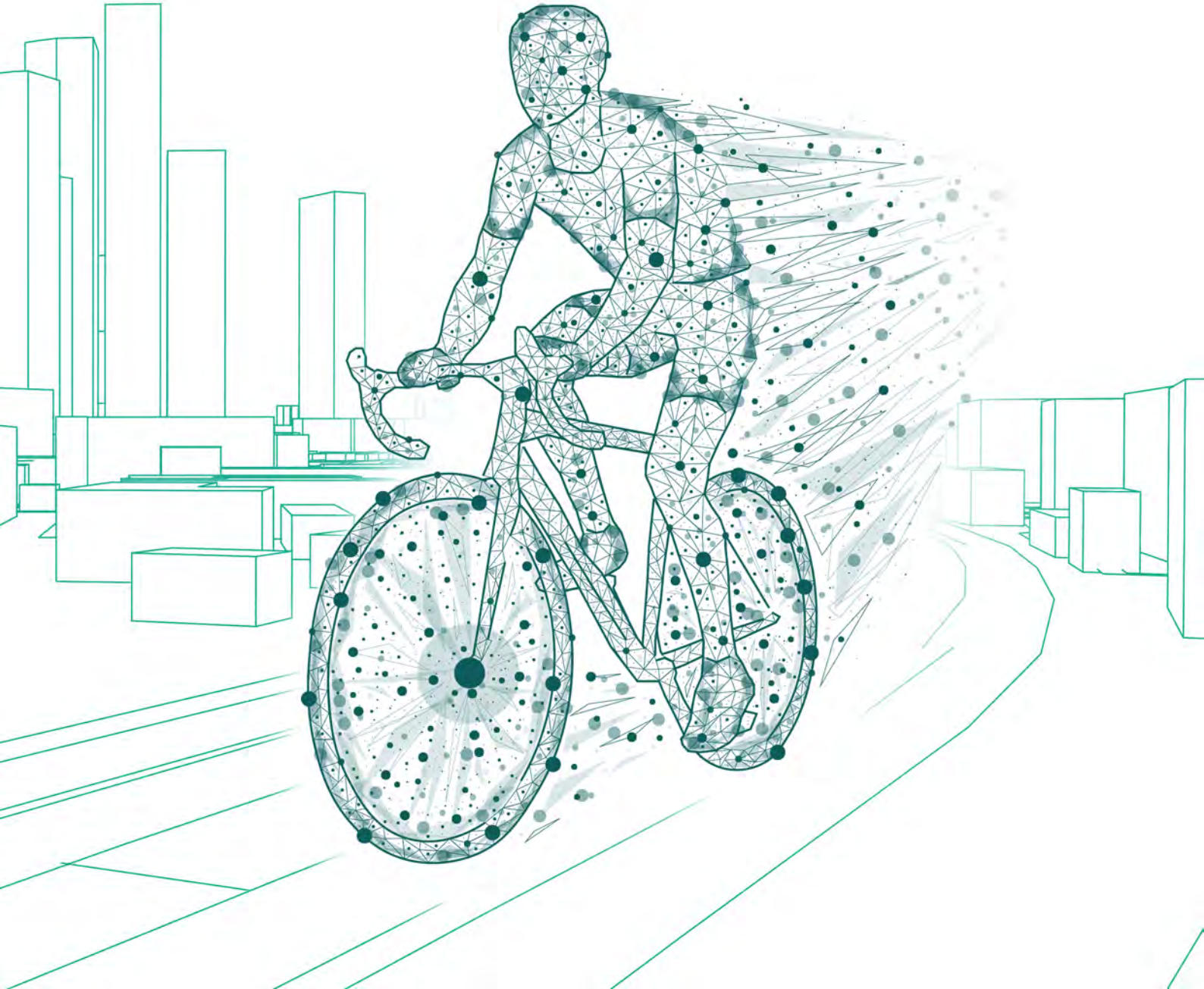
Pinay Bike Commuter Community

MNL MOVES


bilang
siklista

BILANG SIKLISTA

2023 Bicycle Count Report



ORGANIZED BY

ICSC Institute for Climate and Sustainable Cities

The Climate Reality Project PHILIPPINES

350

Pinay Bike Commuter Community

MNL MOVES

CO-ORGANIZED BY

Bebeng Gala Mandaluyong Bikers
Bike Attack CDO
Bike Rack Davao
Cebu Leads Foundation Inc. (CFLI)
Cycle for Life Davao
Daily Cycle Movement Baguio
Iloilo Folding Bike Riders (iFold)
Kevin's Cycles
Kuhntento Cycling Club
Kumbi CDO
Livestrong Cycling Group
Mabai Mandaluyong Bikers
Mandaluyong Barangka Bikers Group
Mandaluyong Cycling Group
Naga Active Transport Community
Oragon Bikers Inc.
Padyak Manda Bikers
Performance Mandaluyong Cyclist
Polytechnic University of the Philippines
Samahang Mandaleno Bikers
Team BAHMB
Team Next Generation - WAEWA Baguio
University of Mindanao

IN PARTNERSHIP WITH

Local Government of Baguio City
Local Government of Cagayan De Oro
Local Government of Cebu City
Local Government of Davao City
Local Government of Iloilo City
Local Government of Mandaluyong City
Local Government of Mandaue City
Local Government of Manila
Local Government of Marikina City
Local Government of Muntinlupa City
Local Government of Naga City
Local Government of Navotas City
Local Government of Pasig City
Local Government of Quezon City
Local Government of San Juan City
Local Government of Taguig City
Local Government of Valenzuela City
DPWH Western Visayas and Safety (GTO-DPOS)
Department of Public Works and Highways Region 6
Green Transport Office - Department of Public Order
Iloilo City Transportation Management and Traffic Regulation Office
Mandaluyong Transport Planning Division
Mandaue City Planning and Development Office
Manila City City Transport and Traffic Management Office
Manila City Transport and Traffic Management Office
Manila Sports Council Office
Marikina City Bikeways Office
Muntinlupa Traffic Management Bureau
Pasig Transport Office
Traffic and Parking Management Office
San Juan Traffic Parking Management Office
Sugbu Bike Lane Boards
Taguig Mobility Office

EDITORIAL BOARD

Engr. Ramir Angeles, Traffic Engineer and Transport Planner
Aldrin Pelicano, Institute for Climate and Sustainable Cities
Arielle Celine Tabinga, Institute for Climate and Sustainable Cities
Maria Golda Paz Hilario, Institute for Climate and Sustainable Cities
Ira Dominique Guerrero, Institute for Climate and Sustainable Cities
Karmela Lea Gonzales, Institute for Climate and Sustainable Cities

MAPS

Alexine Louise Carreon, UP Diliman Department of Geodetic Engineering

GRAPHIC DESIGN AND LAYOUT

Kristoffer Sanchez, The Climate Reality Project Philippines

CORRESPONDENCE

mobility@icsc.ngo; info@icsc.ngo

PUBLISHED ON

October 2023

ACKNOWLEDGEMENT

This report culminates the extensive data collection and analysis conducted through the Bilang Siklista Bike Count Project of the Mobility Awards. The editors express their sincere appreciation to the following organizations for their unwavering support in making this initiative a reality in their respective cities: Bike Rack Davao, Cebu Leads Foundation Inc. (CFLI), Cycle for Life Davao, Daily Cycle Movement Baguio, Team Next Generation - WAEWA Baguio, Iloilo Folding Bike Riders (iFold), Naga Active Transport Community, and Oragon Bikers Inc.

Our heartfelt gratitude also extends to the newly affiliated civil society organizations and cycling groups, including Bebeng Gala Mandaluyong Bikers, Bike Attack CDO, Kevin's Cycles, Kuhntento Cycling Club, Kumbi CDO, Livestrong Cycling Group, Mabai Mandaluyong Bikers, Mandaluyong Barangka Bikers Group, Mandaluyong Cycling Group, Padyak Manda Bikers, Performance Mandaluyong Cyclist, Samahang Mandaleno Bikers, Team BAHMB, as well as the University of Mindanao and Polytechnic University of the Philippines (PUP).

Above all, we extend our gratitude for the dedication and perseverance of the 817 bicycle advocates who volunteered to count cyclists in their respective cities, thereby contributing to the push for safer and more inclusive roadways for all. Without their invaluable contributions, this data-driven advocacy campaign would not have been possible.

We would also like to extend our appreciation to Engr. Ramir Angeles for his invaluable technical contributions, which played a pivotal role in the development of this report. His expertise and dedicated support greatly enhanced the quality and depth of the analysis presented herein. Engr. Angeles not only provided essential technical guidance, but also actively collaborated with us in the report's creation. His commitment to this endeavor is a testament to the collaborative spirit that has driven this project's success.

Our sincere thanks to Erris Sanciangco and Dr. Noriel Tiglao for their contributions as peer reviewers of this paper. Their expert insights and constructive feedback were instrumental in refining the content and ensuring its accuracy and clarity.

Lastly, the convenors of the Mobility Awards would like to acknowledge the steadfast support provided by the local governments of San Juan City, Pasig City, Quezon City, Baguio City, Mandaluyong City, Marikina City, Taguig City, Davao City, Iloilo City, Muntinlupa City, Naga City, Valenzuela City, Cagayan De Oro, Navotas City, Manila City, Cebu City, and Mandaue City. We value their eagerness to collaborate with the Mobility Awards, for their responsiveness to the call for enhanced bicycle- and pedestrian-friendly infrastructure, and their pivotal role in responding to the growing demand for safer, more inclusive, and more accessible transport nationwide. These leaders exemplify a forward-thinking approach that prioritizes the well-being of their constituents, making them inspiring examples of visionary leadership.


bilang siklista

EXECUTIVE SUMMARY

The *Bilang Siklista* Bike Count is a project led by active citizens who volunteer to manually count people on bicycles. The count was conducted in 17 cities around the Philippines on a particular day per city, during the peak rush hours of 6:00 a.m. to 8:00 a.m. and 4:00 p.m. to 6:00 p.m., in order to capture the influx of cyclist commuters.

This year's *Bilang Siklista* Bike Count, the project's third installment, was conducted from June to July 2023, succeeding the Metro Manila bike count in 2021 and the first nationwide bike count in 2022.

817 volunteers counted a total of **147,800 people on bicycles**, in **17 cities** across **153 different count locations** in a peak four-hour window!

SNAPSHOT OF THE 2023 BIKE COUNT RESULTS

City	Bike Count Date	Number of Locations	Total Number of Cyclists Counted	Average % of Women Cyclists	Average % of Helmet Users
San Juan City	June 8	9	6,332	3.06%	55.46%
Pasig City	June 15	10	14,959	2.58%	38.91%
Quezon City	June 15	14	16,119	0.81%	84.91%
Baguio City	June 22	15	1,213	1.57%	91.67%
Mandaluyong City	June 22	11	14,034	3.26%	36.97%
Marikina City	June 22	10	11,387	3.13%	41.24%
Taguig City	June 22	12	19,593	8.65%	44.20%
Cebu City	June 29	4	6,788	0.68%	59.63%
Davao City	June 29	5	2,840	1.69%	30.85%
Iloilo City	July 6	10	4,217	1.78%	11.24%
Muntinlupa City	July 6	6	4,674	1.73%	38.93%
Naga City	July 6	13	6,580	10.26%	13.28%
Valenzuela City	July 6	8	14,896	3.50%	33.31%
Cagayan de Oro City	July 13	8	1,101	1.09%	32.79%
Mandaue City	July 13	4	6,084	2.25%	34.47%
Navotas City	July 13	2	4,945	9.67%	27.08%
Manila City	July 20	12	12,038	7.42%	32.85%

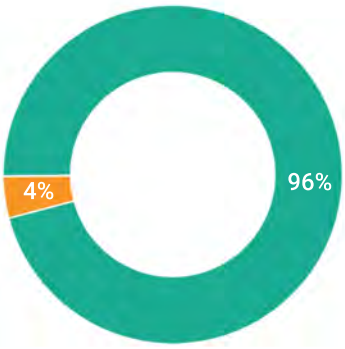
147,800

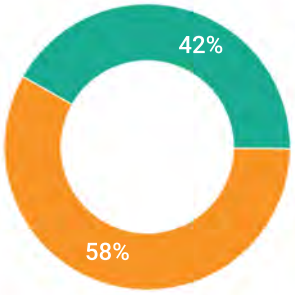
People on bicycles counted*

**in 17 cities in a particular weekday during the peak hours of 6:00 a.m. to 8:00 a.m. and 4:00 p.m. to 6:00 p.m.*

96%
or 141,888 are male

4%
or 5,912 are female





42%
or 62,076 are helmet users

58%
or 85,724 are non-helmet users

PER KILOMETER TRAVELED, 147,800 CYCLISTS ON THE ROAD EQUATE TO:

36.74
Estimated metric tons of CO_2 emissions reduced

PhP 208,223.80 (fuel savings from motorcycles) to **PhP 615,206.69** (fuel savings from cars)
Worth of fuel costs saved

29,560
Number of cars needed to move 147,800 people

WHY COUNT?

Now in its second year of nationwide implementation, the bike count project aims to provide more evidence to support the urgent need of investing in better bicycle infrastructure throughout the country as more and more Filipinos are relying on bicycles. According to a survey by Social Weather Stations (SWS), one in every three households in the country have at least one member who cycles.[1] This figure becomes even more compelling when juxtaposed with the data showing four bicycle owners for every car owner in the nation (SWS, 2022).[2]

A year-long bike count conducted by the Metropolitan Manila Development Authority (MMDA) in 2022 also recorded over 1.7 million bicycle trips along just three key routes in Metro Manila: Ortigas Avenue, Quirino Highway, and Commonwealth Avenue.[3]

The Mobility Awards has been collecting bike traffic data since 2021, with the Metro Manila bike count engaging 168 citizen volunteers across four cities. In 2022, its groundbreaking first nationwide bike count involved 600 volunteers in 10 cities across the Philippines.

We believe that the bike count project needs to be adopted and expanded in our cities. If this happens, active transportation would get the policy and infrastructure support it deserves. The Bilang Siklista project demonstrates the importance of data in pushing for cycling as a mobility option for many Filipino households that do not own and drive cars and rely mainly on the country's limited public transportation system.

We started the ***Bilang Siklista*** project to monitor bike travel patterns—including time, directional flow, and demographic factors such as gender; measure the usage of available bicycle facilities; understand safety concerns; and help inform local governments with the goal of making it easier and safer to choose cycling as everyday transportation.

Conducting volunteer bike counts also helps to quantify the many positive benefits of bicycle investments, track changes in bicycle travel over time, and lobby for facilities such as bike lanes, multi- and shared-use paths, among others.

The data gathered through bike counts show that many Filipinos ride bicycles in and around Philippine cities. We count people on bicycles because we believe that **"what gets counted, counts"** and every Filipino that chooses cycling to move around counts.

[1] Cycling households rise from 29% in 2022 to 36% in 2023, Social Weather Stations, First Quarter 2023
[2] One out of three Pinoy families use bicycles, Social Weathers Station Survey
[3] Metropolitan Manila Development Authority (MMDA) 2022 Bicycle Count

WHERE DID WE COUNT?

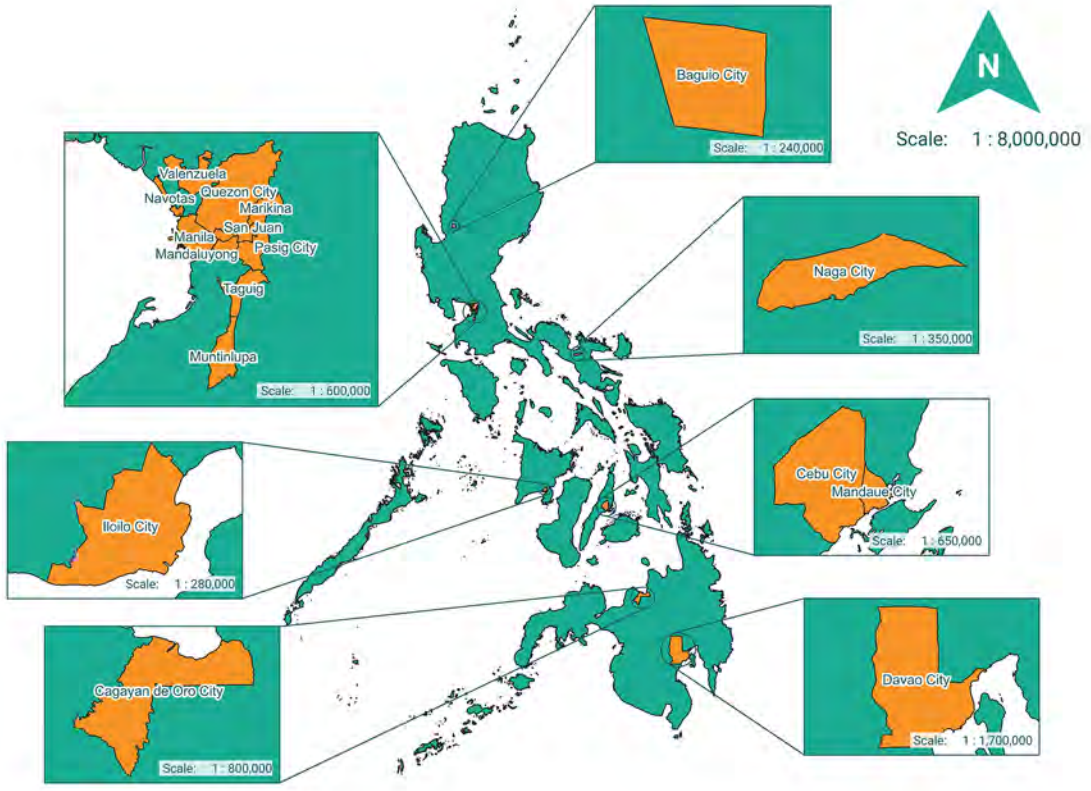


Image 1: Map of Cities for the Bilang Siklista project. (See Annex 2 for the complete list of locations per city)

This year's bike count was implemented in 17 cities (See Image 1) across 153 locations. The count locations were identified together with the city in consideration of the following criteria:

1. Locations where counts have been conducted previously (if applicable);
2. Key exit and entry points;
3. Areas with existing bicycle facilities (i.e: bike lanes, bike repair stations, etc);
4. High collision areas;
5. High traffic areas;
6. Proximity to establishments and institutions (i.e: public markets, schools, commercial areas, etc.);
7. Near transit (MRT/LRT stations, PUV Terminals, tricycle terminals);
8. Planned project; and
9. Stakeholder recommendations

It is worth noting that the manual count relied on the availability and quantity of counters. Although there is an uptick in volunteer participation, the surge in the number of designated count locations identified by our LGU partners also posed a challenge. Volunteers were deployed to stations based on proximity to their homes, resulting in an uneven distribution. This was particularly noticeable at locations with expansive intersections, where the number of assigned volunteers was limited.

WHAT DID WE COUNT?










This year, we captured:

A Number of people on bicycles in Philippine cities

This refers to 2-wheeled bicycles, 3-wheeler bicycles (three users would count as three cyclists), recumbent bike users, street vendors using bicycles, pedicabs, hand cyclists, and tandem bikes.

B. Gender distribution

Understanding the gender-specific data of cyclists in cities helps to ensure that the planning and infrastructure development in an area are inclusive and equitable. It can also provide insights into potential safety concerns. For example, it can help identify if certain gender groups avoid cycling in specific areas due to safety concerns, which can then inform targeted safety improvements.

C. Helmet usage

For urban planners and policymakers, data on helmet use can be valuable when designing and improving cycling infrastructure. It helps in understanding the behavior and preferences of cyclists and can inform decisions about where to allocate resources for bike lanes, bike-sharing programs, and other cycling-related initiatives.

D. Turning movement trends

By analyzing turning movement trends, planners can be informed of the optimal design of bike routes. Knowing where cyclists tend to make turns or change their route can help planners create more efficient and convenient paths that align with actual travel patterns.

Volunteers were strategically stationed at the following types of locations:

- **Straight/Screenline Roads:** linear road segments that can indicate either one-way or two-way directions of travel for cyclists.
- **T-Junctions or Y-Junctions:** where two roads intersect. Counts at these locations focus on observing turning movements.
- **Roundabouts:** circular traffic junctions where cyclists navigate in a circular path.
- **Intersection Counts:** typically characterized by 4-corner configurations, where more than two roadways and/or major commercial roads converge.

HOW DID WE COUNT?

The *Bilang Siklista* bike count is a citizen-led project led by active citizens who volunteered to manually count people on bicycles using a standardized count form adapted from the US National Bicycle and Pedestrian Documentation (NBPD) Project[4]. The count was conducted in 17 cities around the Philippines on a particular day per city, during the peak rush hours of 6:00 a.m. to 8:00 a.m. and 4:00 p.m. to 6:00 p.m., in order to capture the influx of cyclist commuters. This year's *Bilang Siklista* bike count, the project's third installment, was conducted from June to July 2023, succeeding the Metro Manila bike count in 2021 and the first nationwide bike count in 2022.

Volunteers used two types of counting forms: table and diagram (See Annex 7). The table count form tracks for gender and helmet use, while the diagram count form captures turning movements of people on bicycles.

WHAT CAN WE ANALYZE FROM THE COUNT?

Through the bike count data, we can get a snapshot of how bicycles compare to motorized vehicles as a mode of transportation. The analysis focuses on three benefits of cycling:

1. Cycling is a carbon-neutral mode of transport that does not use fossil fuels and does not emit tailpipe emissions;
2. Cycling is a form of physical exercise that provides health benefits to its users; and
3. Cycling takes up less road space than other private modes of transport.

From the number of people on bicycles on the road, we determined the following:

a. Greenhouse gas emissions saved from an equivalent number of car trips;
b. Economic savings resulting from fuel cost savings from an equivalent number of motorcycle and car trips;
c. Health cost savings based on potential health benefits of cycling activity against noncommunicable diseases (NCDs); and
d. Road capacity effects of bicycle use, considering standard traffic flow variables including Level-of-Service (LOS) and bicycle traffic density.

The analysis assumes a one-to-one equivalency of bicycle trips to passenger car or motorcycle trips, given the general individualistic nature of transport cycling trips (i.e. majority of cycling trips are people traveling alone, equivalent to a car or motorcycle with a single occupant). *Refer to Annex 5 for a list of key assumptions used in analysis.*

[4] Complete information on the project is available at bikepeddocumentation.org.

BICYCLE COUNT RESULTS

HOW MANY PEOPLE ON BICYCLES WERE COUNTED IN 17 CITIES?

City	Bike Count Date	Number of Locations	Total Number of Cyclists Counted
San Juan City	June 8	9	6,332
Pasig City	June 15	10	14,959
Quezon City	June 15	14	16,119
Baguio City	June 22	15	1,213
Mandaluyong City	June 22	11	14,034
Marikina City	June 22	10	11,387
Taguig City	June 22	12	19,593
Cebu City	June 29	4	6,788
Davao City	June 29	5	2,840
Iloilo City	July 6	10	4,217
Muntinlupa City	July 6	6	4,674
Naga City	July 6	13	6,580
Valenzuela City	July 6	8	14,896
Cagayan de Oro City	July 13	8	1,101
Mandaue City	July 13	4	6,084
Navotas City	July 13	2	4,945
Manila City	July 20	12	12,038
Total	**7 total days during peak hours of 6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.**	**153 locations counted**	**147,800 total cyclists counted in 17 cities**

WHAT IS THE IMPACT OF 147,800 PEOPLE ON BICYCLES?

City	Total Number of Cyclists Counted	Estimated Tons of CO_2 Emissions Avoided (per km traveled)	Estimated Motorcycle Fuel Cost Savings (per km traveled)	Estimated Car Fuel Cost Savings (per km traveled)
San Juan City	6,332	1.57	8,920.66	26,356.49
Pasig City	14,959	3.72	21,074.56	62,265.74
Quezon City	16,119	4.01	22,708.79	67,094.16
Baguio City	1,213	0.30	1,708.90	5,049.02
Mandaluyong City	14,034	3.49	19,771.40	58,415.50
Marikina City	11,387	2.83	16,042.25	47,397.55
Taguig City	19,593	4.87	27,603.04	81,554.43
Cebu City	6,788	1.69	9,563.08	28,254.55
Davao City	2,840	0.71	4,001.05	11,821.29
Iloilo City	4,217	1.05	5,941.00	17,552.95
Muntinlupa City	4,674	1.16	6,584.83	19,455.18
Naga City	6,580	1.64	9,270.04	27,388.77
Valenzuela City	14,896	3.70	20,985.80	62,003.51
Cagayan de Oro City	1,101	0.27	1,551.11	4,582.83
Mandaue City	6,084	1.51	8,571.27	25,324.20
Navotas City	4,945	1.23	6,966.62	20,583.20
Manila City	12,038	2.99	16,959.39	50,107.29
Total	**147,800**	**36.74**	**PhP 208,223.80**	**PhP 615,206.69**

- An estimated equivalent of **36.74 metric tons of carbon dioxide** emissions was avoided, which is equivalent to **15,649 liters of gasoline** consumed or **18,667 kilograms of coal** burned. This was calculated using the US EPA Greenhouse Gas Equivalencies Calculator[5].

- Estimated monetary savings by 147,800 cyclists amount to **PhP 208,223.80 - PhP 615,206.69 in fuel costs** avoided per kilometer traveled by people opting to travel using bicycles; and **PhP 44,340.00 in health cost savings** per kilometer traveled due to increased physical activity through cycling, with estimated annual health cost savings reaching up to **PhP 124,506,720.00**[6].

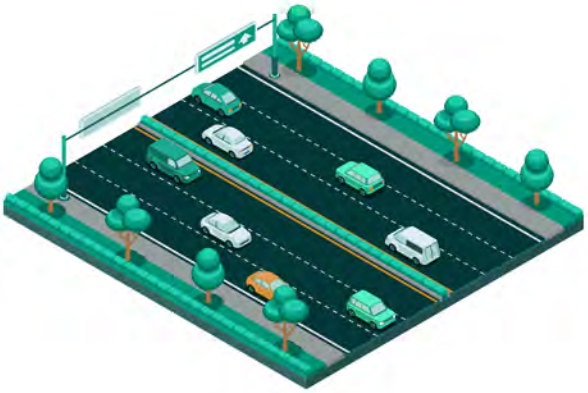
[5] US EPA Greenhouse Gas Equivalencies Calculator: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator
[6] Based on the AltMobility Study on Bikenomics, Php 0.3 per person per km cycled is saved in potential health costs. Annual health cost savings assumes an average daily travel distance of 10.8km cycled 5 times a week, 52 weeks a year.

HOW DOES PEAK HOUR BICYCLE TRAFFIC AFFECT ROAD CAPACITY COMPARED TO CARS?

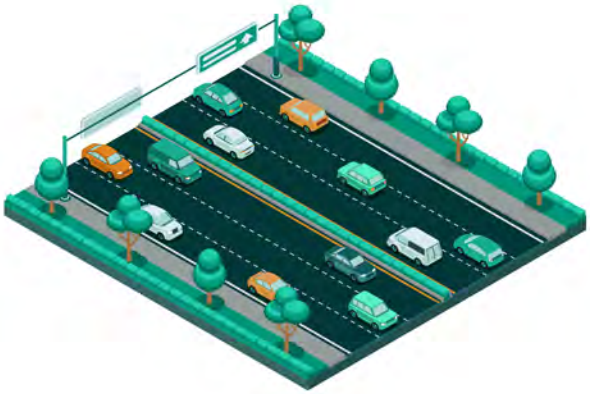
City	Peak Hour Period	Total Peak Hour Volume (bicycles / hour)	Total Peak Hour Volume in Passenger Car Units (PCU)	Volume - Capacity Ratio of Bicycle Traffic in a 2-lane urban road | LoS	Estimated Car Fuel Cost Savings (per km traveled)
San Juan City	AM	1,912.00	382.40	0.24 (B)	1.20 (F)
Pasig City	AM	4,224.50	844.90	0.53 (C)	2.64 (F)
Quezon City	AM	5,017.50	1,003.50	0.63 (C)	3.14 (F)
Baguio City	AM	412.50	82.50	0.05 (A)	0.26 (B)
Mandaluyong City	AM	3,915.50	783.10	0.49 (B)	2.45 (F)
Marikina City	AM	3,264.50	652.90	0.41 (B)	2.04 (F)
Taguig City	AM	5,257.00	1,051.40	0.66 (C)	3.29 (F)
Cebu City	AM	2,348.50	469.70	0.29 (B)	1.47 (F)
Davao City	PM	753.00	150.60	0.09 (A)	0.47 (B)
Iloilo City	AM	1,073.00	214.60	0.13 (A)	0.67 (C)
Muntinlupa City	AM	1,236.50	247.30	0.15 (A)	0.77 (D)
Naga City	PM	1,775.00	355.00	0.22 (B)	1.11 (F)
Valenzuela City	AM	4,309.50	861.90	0.54 (C)	2.69 (F)
Cagayan de Oro City	AM	399.50	79.90	0.05 (A)	0.25 (B)
Mandaue City	AM	1,786.00	357.20	0.22 (B)	1.12 (F)
Navotas City	AM	1,245.50	249.10	0.16 (A)	0.78 (D)
Manila City	AM	3,289.00	657.80	0.41 (B)	2.06 (F)

- The impact of the counted bicycle volume is compared in terms of road capacity and traffic flow. According to the Transport for London Traffic Modelling Guidelines, a bicycle occupies 20% of the capacity of a passenger car. Using the volume-capacity ratio, the ratio of observed volume (in Passenger Car Units) with the maximum carrying capacity of a typical urban 2-lane road (1,600 PCU/hr) describes the level of traffic flow and congestion of bicycles and an equivalent number of cars.

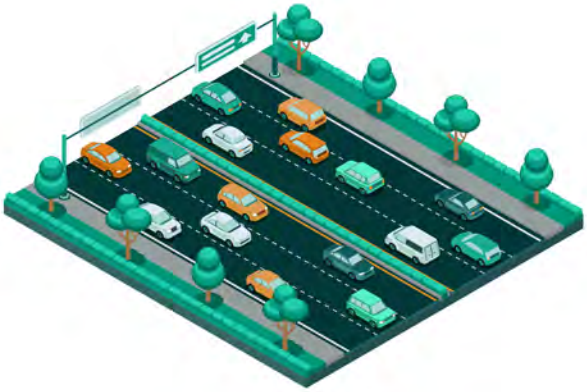
- Total peak hour bicycle trips in each city equate to free-flowing to moderate traffic flow in a typical two-lane urban road (Level A-C), while the equivalent number of trips in passenger cars reach moderate to heavy traffic (C-E) to stop-and-go traffic conditions (F). This demonstrates the positive effects of bicycles in improving traffic flow and alleviating traffic congestion by encouraging the use of bicycles for transport trips.



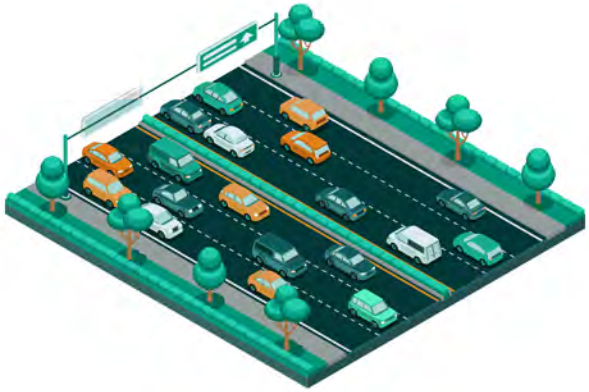
Level of Service A:
Free-flowing traffic



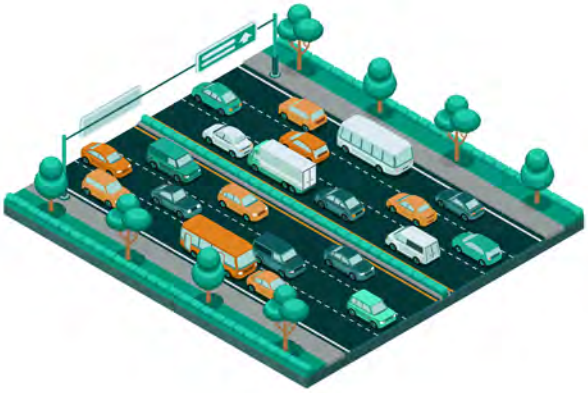
Level of Service B:
Relatively free-flowing traffic



Level of Service C:
Moderate traffic



Level of Service D:
Moderate/heavy traffic



Level of Service E:
Heavy traffic

Level of Service F:
Saturation traffic volumes, stop-and-go situations

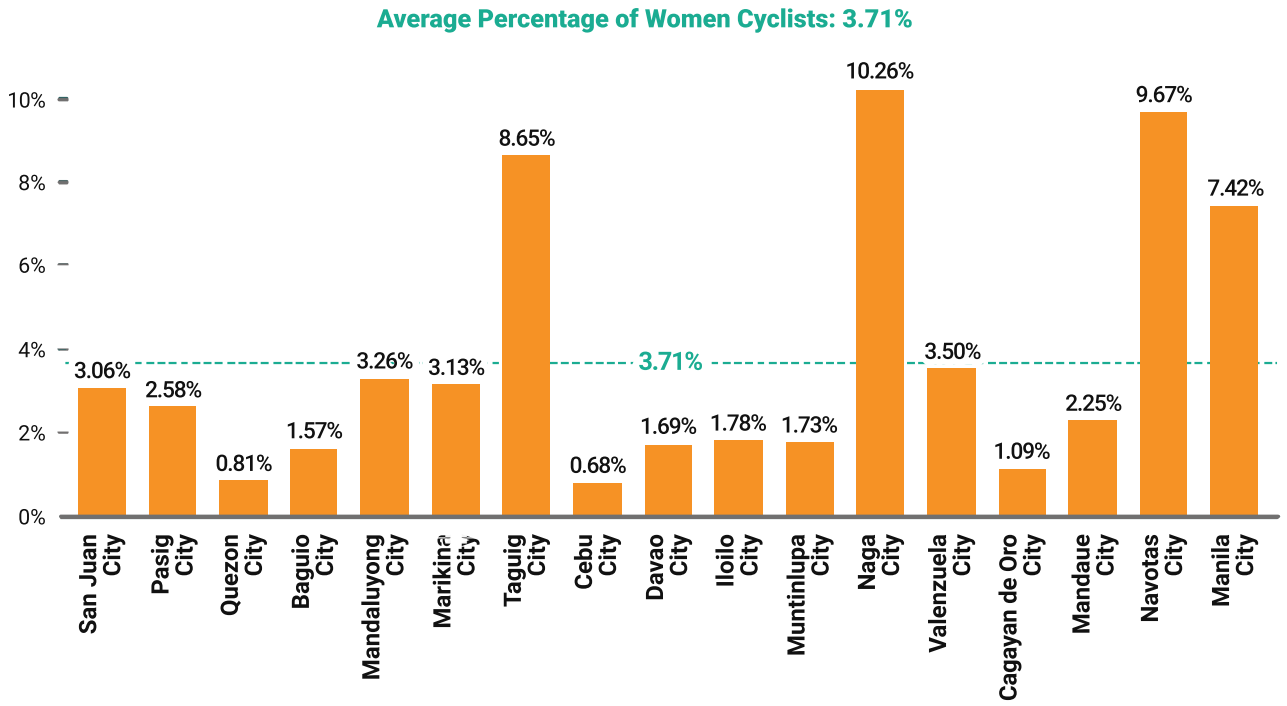
Image 2: Visual representation of traffic flow Levels of Service (LoS).

HOW DOES PEAK HOUR BICYCLE TRAFFIC UTILIZE BIKE LANES AND/OR ROAD INFRASTRUCTURE?

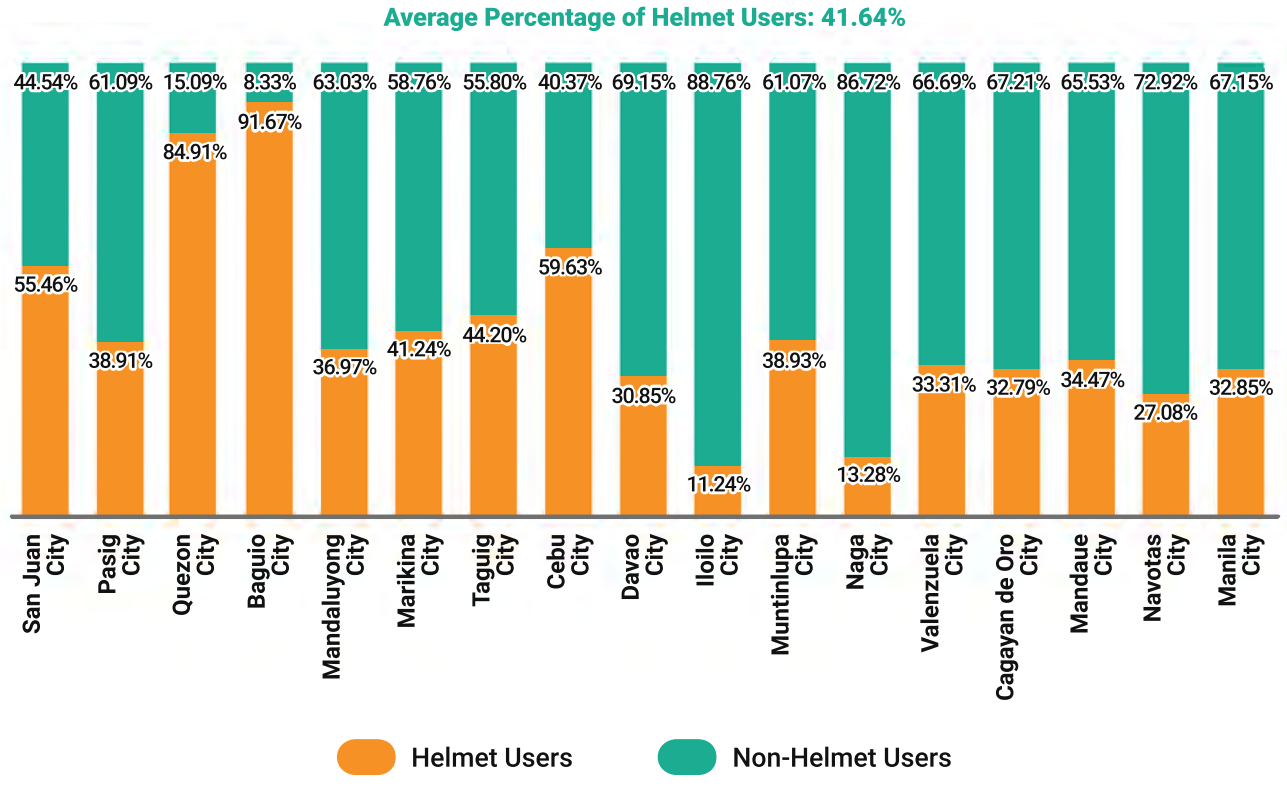
City	Peak Hour Period	Total Peak Hour Density (bicycles/kilometer)
San Juan City	AM	149.26
Pasig City	AM	329.78
Quezon City	AM	391.69
Baguio City	AM	32.20
Mandaluyong City	AM	305.66
Marikina City	AM	254.84
Taguig City	AM	410.38
Cebu City	AM	183.33
Davao City	PM	58.78
Iloilo City	AM	83.76
Muntinlupa City	AM	96.53
Naga City	PM	138.56
Valenzuela City	AM	336.42
Cagayan de Oro City	AM	31.19
Mandaue City	AM	139.42
Navotas City	AM	97.23
Manila City	AM	256.75

- A higher density of cyclists per kilometer of road or bike lane indicates higher utilization of infrastructure by cyclists. This metric may be useful in monitoring and evaluating bike lane developments and justifying further improvements and investment in bike lanes and other cycling infrastructure.

HOW MANY WOMEN CYCLISTS WERE COUNTED?



HOW MANY CYCLISTS ARE WEARING HELMETS?



SNAPSHOT OF RESULTS PER CITY

SAN JUAN CITY

Number of Locations: *9*
Date: *08 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Fair (sunny to cloudy)*

6,332
Total cyclists counted

96.87%
male cyclists

3.06%
female cyclists

0.06%
gender undetermined

55.46%
helmet users

44.54%
non-helmet users

AM RESULTS

3,824
Total cyclists counted

Ortigas Avenue corner Wilson Street
Location with highest count of cyclists

PM RESULTS

2,508
Total cyclists counted

Ortigas Avenue corner Col. Bonny Serano Avenue & Granada Street
Location with highest count of cyclists

SAN JUAN CITY 2022-2023 BIKE COUNT COMPARISON

▼15.30% Mean % Change from 2022-23 Bike Count

36.14% St.Dev. % Change from 2022-23 Bike Count

▼60.38% Minimum % Change from 2022-2023 in Ortigas Ave. cor. Wilson St.

▲26.15% Maximum % Change from 2022-2023 in Ortigas Ave. - Col. Bonny Serrano Ave. - Granda St. Intersection

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

Flow Volume:

- 1 - 105
- 105 - 210
- 210 - 315
- 315 - 420
- 420 - 525

INDEX

SJC1 Ortigas Ave. corner Col. Bonny Serrano Ave., and Granada St.

SJC2 Ortigas Ave. corner Wilson St.

SJC3 Pinaglabanan St. corner N. Domingo and P. Guevarra

SJC4 N. Domingo corner Gregoria Araneta Ave.

SJC5 P. Guevarra corner Pinaglabanan St.

SJC6 General Kalentong St. corner F. Blumentritt

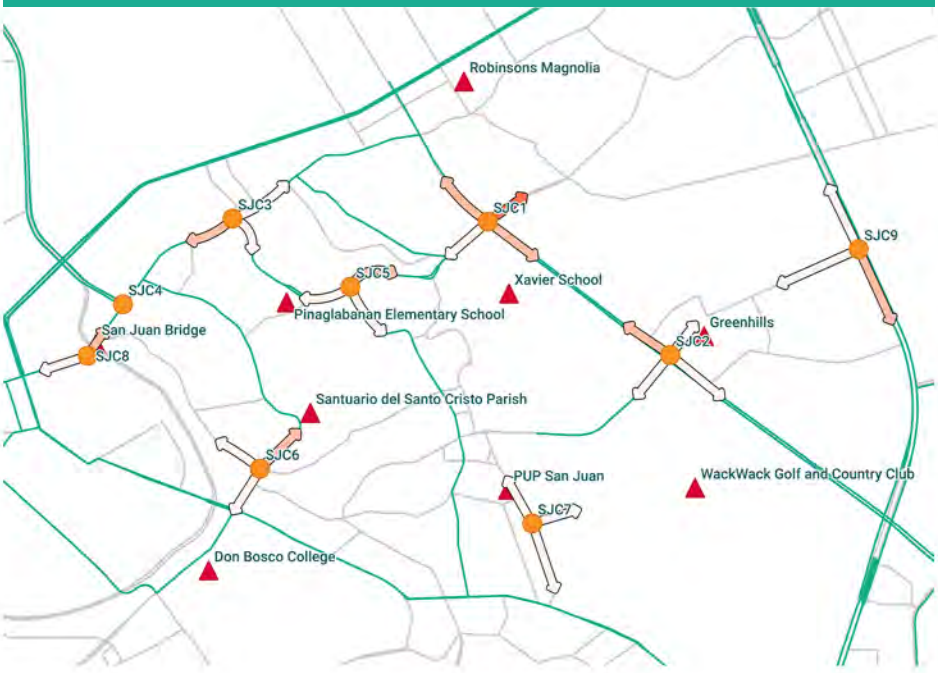
SJC7 A. Mabini St. corner Wack Wack St.

SJC8 Old San Juan Bridge corner Old Sta. Mesa St.

SJC9 EDSA corner Annapolis St.

SAN JUAN CITY A.M. BIKE TRAFFIC FLOW

SAN JUAN CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Cyclists frequently ride on the left side of Granada Street in a counterflow direction. Some cyclists use the sidewalk. This behavior is primarily observed when they intend to make a left turn onto Bonny Serrano Avenue, en route to EDSA. Notably, cyclists often ride against traffic at the intersection of Mabini and Wack Wack, where the street is designated as one-way.

PASIG CITY

Number of Locations: *10*
Date: *15 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Rainy*

14,959
Total cyclists counted

97.41%
male cyclists

2.58%
female cyclists

0.01%
gender undetermined

38.91%
helmet users

61.09%
non-helmet users

AM RESULTS

8,449
Total cyclists counted

Sandoval Avenue corner Urbano Velasco
Location with highest count of cyclists

PM RESULTS

6,510
Total cyclists counted

Sandoval Avenue corner Urbano Velasco
Location with highest count of cyclists

PASIG CITY 2022-2023 BIKE COUNT COMPARISON

▼7.11% Mean % Change from 2022-23 Bike Count

51.62% St.Dev. % Change from 2022-23 Bike Count

▼61.99% Minimum % Change from 2022-2023 in Eastbank Rd.

▲92.84% Maximum % Change from 2022- 2023 in Sandoval Ave. cor. Urbano Velasco

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

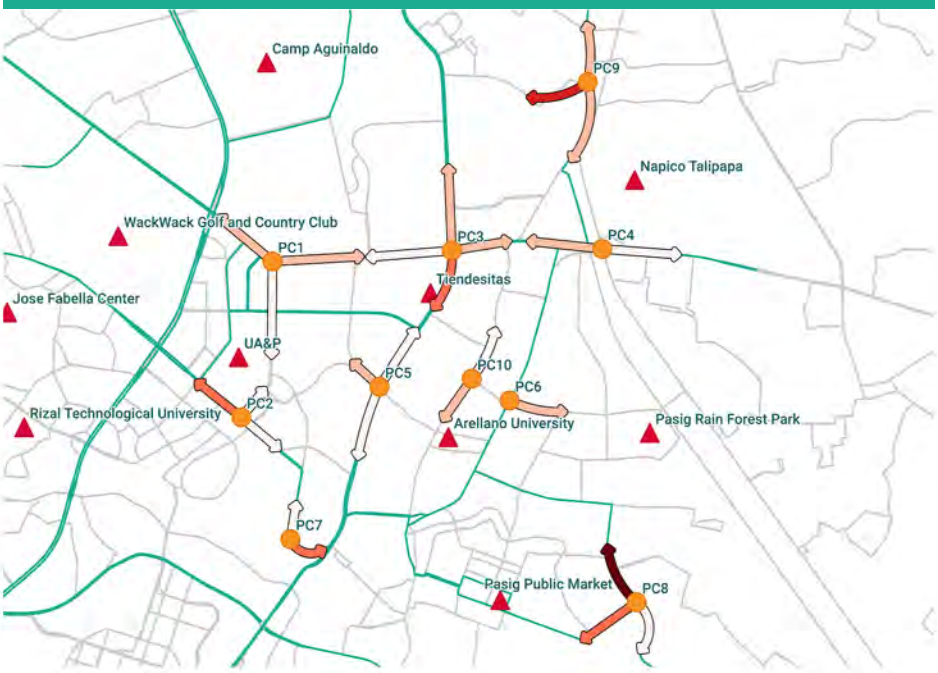
Flow Volume:

- 1 - 195
- 195 - 390
- 390 - 585
- 585 - 780
- 780 - 975

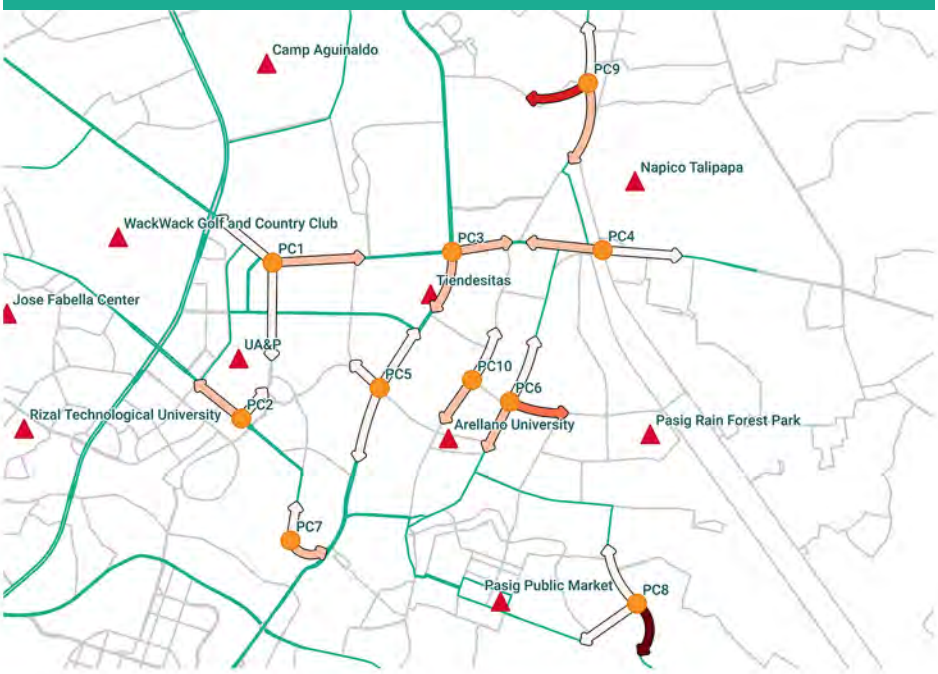
INDEX

PC1	Ortigas Ave. - Meralco Intersection
PC2	Shaw Boulevard corner Meralco Ave.
PC3	Ortigas Ave. corner C-5
PC4	Eastbank Road
PC5	C-5 corner Lanuza St.
PC6	C. Raymundo corner F. Legaspi St.
PC7	Pasig Boulevard
PC8	Sandoval Ave. corner Urbano Velasco
PC9	Amang Rodriguez corner Caruncho Ave.
PC10	Dr. Sixto Antonio Ave. corner Stella Maris Ave.

PASIG A.M. BIKE TRAFFIC FLOW



PASIG CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Intermittent rainfall was present during the morning and afternoon counts. It can be observed that there were occasional instances of tricycles and jeepneys encroaching into designated bike lanes, indicating a need for better enforcement of lane usage. Additionally, it was noted that although some riders had helmets in their possession, they opted not to wear them.

It is recommended to increase the number of volunteers stationed at each location to more than five, ensuring more accurate data collection. Furthermore, volunteers suggested that they should be strategically positioned at key intersections to enhance the accuracy of cyclist data captured.

QUEZON CITY

Number of Locations: *14*
Date: *15 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Rainy*

16,119
Total cyclists counted

99.03%
male cyclists

0.81%
female cyclists

0.16%
gender undetermined

84.91%
helmet users

15.09%
non-helmet users

AM RESULTS

10,035
Total cyclists counted

Commonwealth Avenue - PHILCOA Jollibee
Location with highest count of cyclists

PM RESULTS

6,084
Total cyclists counted

Aurora Boulevard - C-5 / Katipunan Avenue
Location with highest count of cyclists

QUEZON CITY 2022-2023 BIKE COUNT COMPARISON

▲61.52% Mean % Change from 2022-23 Bike Count

79.38% St.Dev. % Change from 2022-23 Bike Count

▼40.02% Minimum % Change from 2022-2023 in Quezon Ave. - West Ave.

▲199.09% Maximum % Change from 2022-2023 in East Ave. - BIR Rd.

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

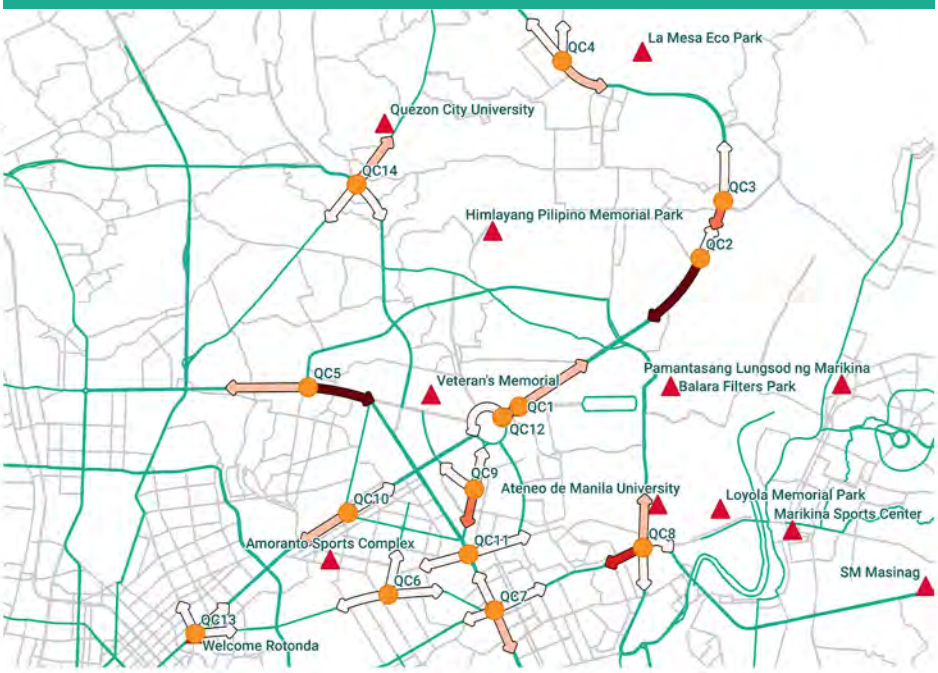
Flow Volume:

- 1 - 230
- 230 - 460
- 460 - 690
- 690 - 920
- 920 - 1150

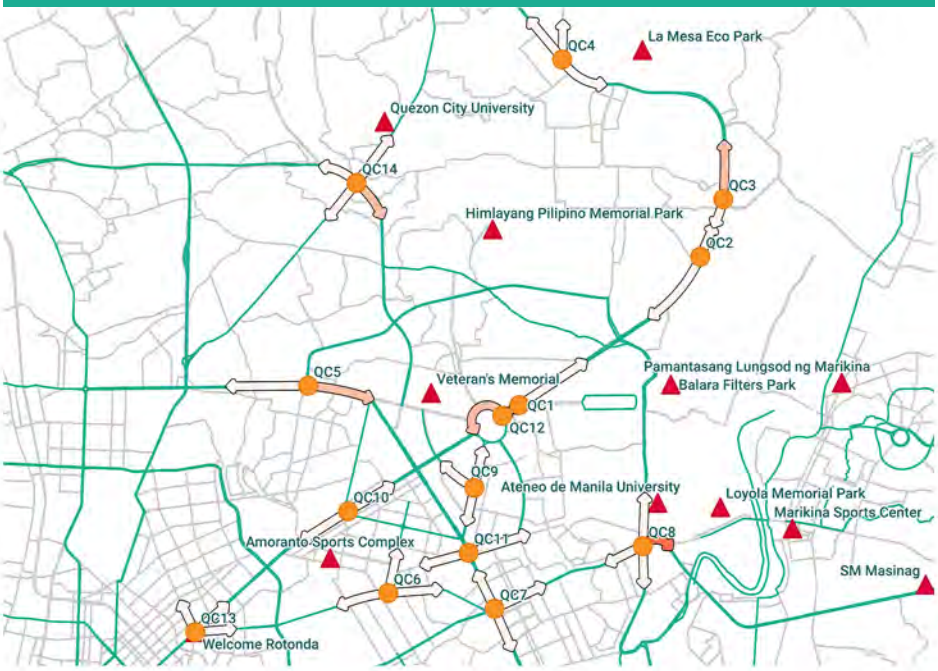
INDEX

QC1	Commonwealth Ave. - PHILCOA Jollibee
QC2	Commonwealth Ave. - Holy Spirit Drive
QC3	Commonwealth Ave. - Batasan Road
QC4	Commonwealth Ave. - Regalado Highway
QC5	Congressional Ave. - EDSA / Roosevelt Ave.
QC6	E. Rodriguez Ave.- Tomas Morato ave.
QC7	Aurora Blvd. - EDSA
QC8	Aurora Blvd. - C5 / Katipunan
QC9	East Ave. - BIR Road (Going to EDSA)
QC10	Quezon Ave. - West Ave.
QC11	EDSA - Kamias Rd.
QC12	Elliptical Rd. - Commonwealth Crossing
QC13	Welcome Rotonda
QC14	Quirino Highway - Mindanao Ave.

QUEZON CITY A.M. BIKE TRAFFIC FLOW



QUEZON CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Majority of cyclists were male and a significant number were wearing helmets. While motorists generally respect the bike lanes, occasional encroachment occurs especially when jeepneys stop on the side of the road to load or unload passengers, forcing cyclists into the mid-lane.

In 2021 and 2022, Aurora Boulevard at the intersection of EDSA recorded the highest cyclist traffic. However, we have observed a significant increase in cyclist numbers at the junctions of Aurora Boulevard with C5 and Katipunan Avenue this year. This can be attributed to the encroachment of motorcycles into the designated bike lanes along EDSA.

In E. Rodriguez, cyclists frequently opt to turn onto Tomas Morato to bypass traffic lights. Some choose to ride on the opposite side of the road to stay within the visible bike lanes due to unclear markings and obstructions, including parked vehicles and cart vendors.

A lower number of cyclists were observed in the morning, likely influenced by adverse weather conditions; it had rained earlier, which also caused delays for many volunteers arriving at their stations. The increased availability of public transportation due to the easing of COVID restrictions may have also contributed to the reduced cyclist turnout.

Congestion began to build up in all areas in the afternoon, typically half an hour before 4:00 p.m. Rainfall interrupted the flow of cyclists between 4:45 p.m. and 5:15 p.m., leading to a temporary decrease in cyclist numbers, though some still persevered through the inclement weather. As the rain subsided between 5:15 p.m. and 5:30 p.m., a notable surge in cyclist activity occurred, persisting until approximately 5:45 p.m. Additionally, it is also possible that cyclists commuting back from work favor less crowded secondary or inner routes over heavily congested main roads.

BAGUIO CITY

Number of Locations: *9*
Date: *22 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Rainy*

1,213
Total cyclists counted

98.27%
male cyclists

1.57%
female cyclists

0.16%
gender undetermined

91.67%
helmet users

8.33%
non-helmet users

AM RESULTS

825
Total cyclists counted

Loakan Entry / Exit
Location with highest count of cyclists

PM RESULTS

388
Total cyclists counted

Loakan Entry / Exit
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

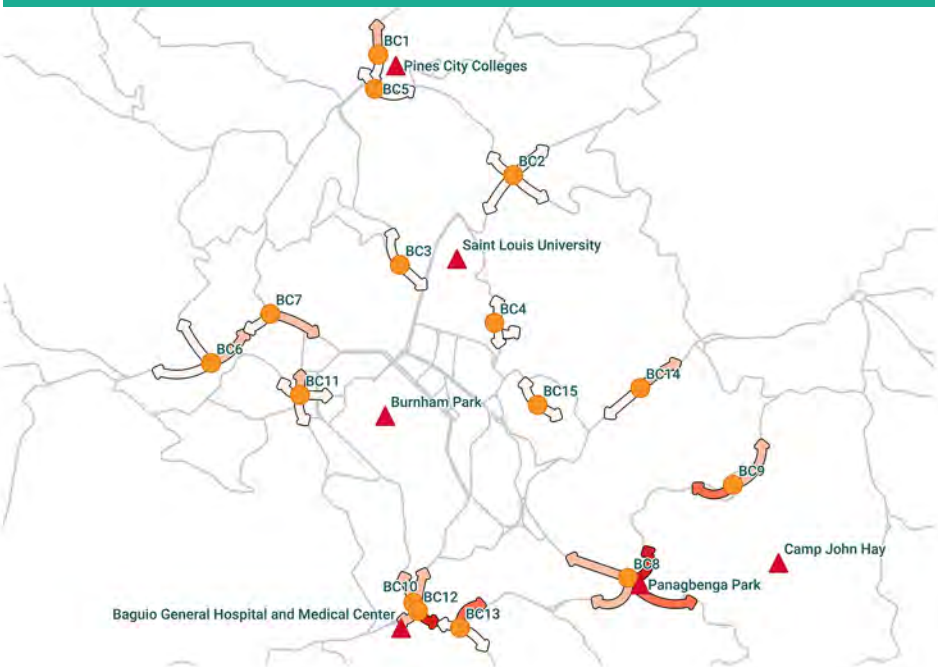
Flow Volume:

- 1 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100

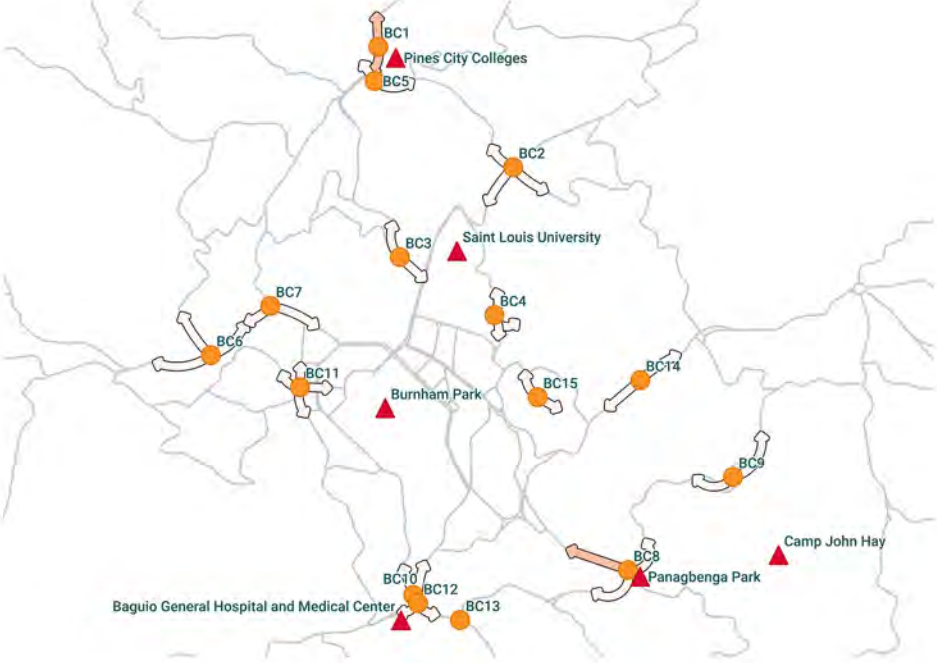
INDEX

BC1	La Trinidad Benguet (LTB) Entry / Exit
BC2	Rimando Intersection
BC3	Magsaysay Ave. Entry / Exit
BC4	M. Roxas Entry
BC5	Holy Ghost Entry / Exit
BC6	Irisan Entry
BC7	Bokawkan
BC8	Loakan Entry / Exit
BC9	Southdrive
BC10	Marcos Highway Entry / Exit
BC11	Legarda Road Palma
BC12	MCO Entry / Exit
BC13	Kennon
BC14	Leonard Wood Entry / Exit
BC15	Happy Glen Loop - BIR

BAGUIO CITY A.M. BIKE TRAFFIC FLOW



BAGUIO CITY P.M. BIKE TRAFFIC FLOW



Key Observations: The final 30 minutes of the afternoon count were marked by a significant downpour. This inclement weather condition posed challenges to the data collection process and the overall cycling environment.

Volunteers raised concerns about remarkably high levels of smoke emissions, particularly in areas with elevated roads leading uphill. This is possibly due to the increased effort required by vehicles to ascend, resulting in higher emissions. This observation underscores the importance of addressing air quality and pollution control measures in such locations, as it can have a direct impact on both cyclists and the environment.

MANDALUYONG CITY

Number of Locations: *11*
Date: *22 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Fair to Rainy*

14,034
Total cyclists counted

96.56%
male cyclists

3.26%
female cyclists

0.19%
gender undetermined

36.97%
helmet users

63.03%
non-helmet users

AM RESULTS

7,831
Total cyclists counted

Shaw Boulevard corner EDSA Crossing
Location with highest count of cyclists

PM RESULTS

6,203
Total cyclists counted

Shaw Boulevard corner EDSA Crossing
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

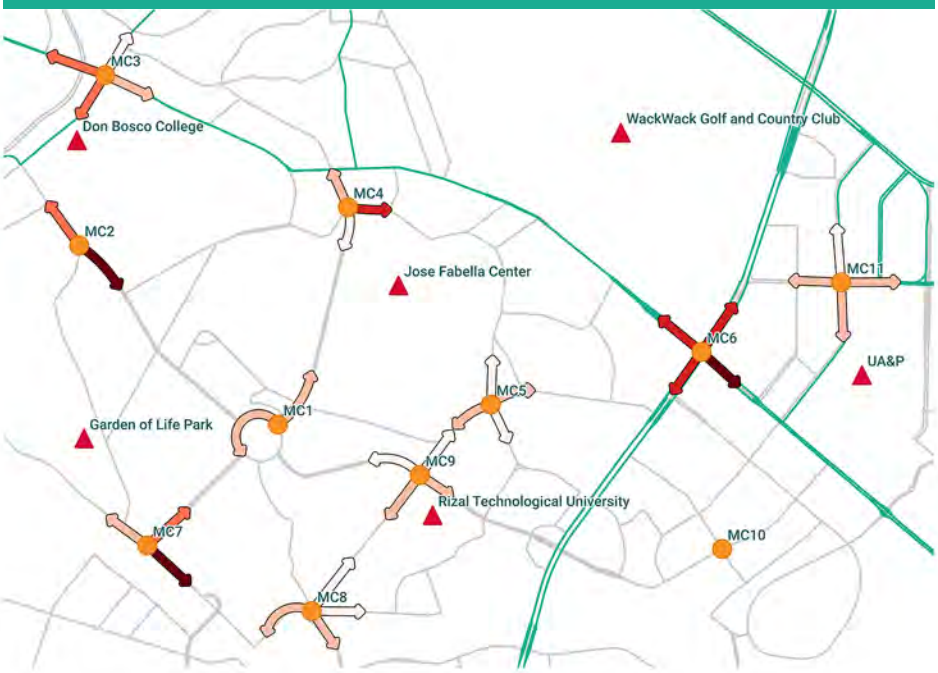
Flow Volume:

- 1 - 120
- 120 - 240
- 240 - 360
- 360 - 480
- 480 - 600

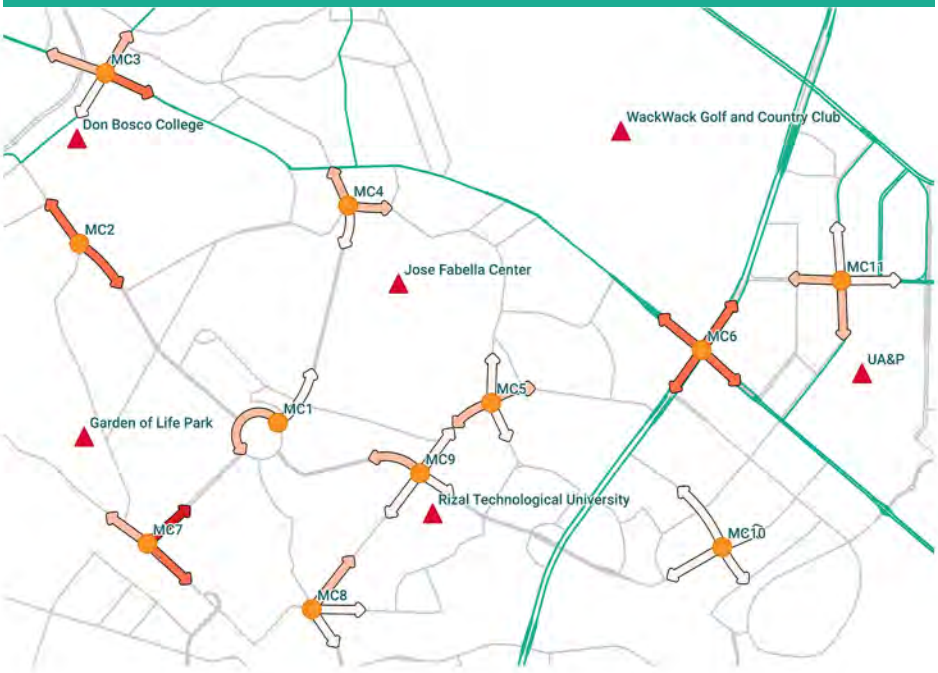
INDEX

MC1	Maysilo corner F. Martinez St.
MC2	Boni Ave. corner Aglipay St. (San Felipe)
MC3	Shaw Blvd. corner Gen. Kalentong
MC4	Nueve de Pebrero corner F. Martinez St.
MC5	DM Guevarra St. corner Nueve De Febrero St.
MC6	Shaw Blvd. corner EDSA Crossing
MC7	San Francisco St. corner Coronado St.
MC8	Pantaleon St. corner Bumatay St.
MC9	Boni Ave. corner Barangka Drive
MC10	Pioneer St. corner Reliance St.
MC 11	San Miguel St. corner Julia Vargas

MANDALUYONG CITY A.M. BIKE TRAFFIC FLOW



MANDALUYONG CITY P.M. BIKE TRAFFIC FLOW



Key Observations: While bike lanes are available in major roads in Mandaluyong, they are not frequently utilized by cyclists due to encroachment by motor vehicles. It was also observed that cyclists often opt for a shortcut towards Pioneer to reach EDSA more quickly. This route is challenging to navigate due to the absence of traffic lights and street signages, which, in turn,

contributes significantly to the heavy traffic congestion experienced from 5 PM onwards.

The majority of cyclists were commuters heading to work, and it is common to observe instances of counterflow among them, specifically along Shaw Boulevard and Boni Avenue.

MARIKINA CITY

Number of Locations: 10
Date: 22 June 2023 (Thursday)
Time: 6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.
Weather: Rainy

11,387
Total cyclists counted

96.69%
male cyclists

3.13%
female cyclists

0.18%
gender undetermined

41.24%
helmet users

58.76%
non-helmet users

AM RESULTS

6,529
Total cyclists counted

J.P. Rizal Street corner Rosal St. (Nangka)
Location with highest count of cyclists

PM RESULTS

4,858
Total cyclists counted

J.P. Rizal corner Bayan-Bayanan Ave.
Location with highest count of cyclists

MARIKINA CITY 2022-2023 BIKE COUNT COMPARISON

▼19.44% Mean % Change from 2022-23 Bike Count

19.42% St.Dev. % Change from 2022-23 Bike Count

▼35.98% Minimum % Change from 2022-2023 in A. Bonifacio Ave. cor. Riverbanks Ave.

▲8.55% Maximum % Change from 2022-2023 in Bayan-Bayanan Ave. - Gen Ordoñez Ave.

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

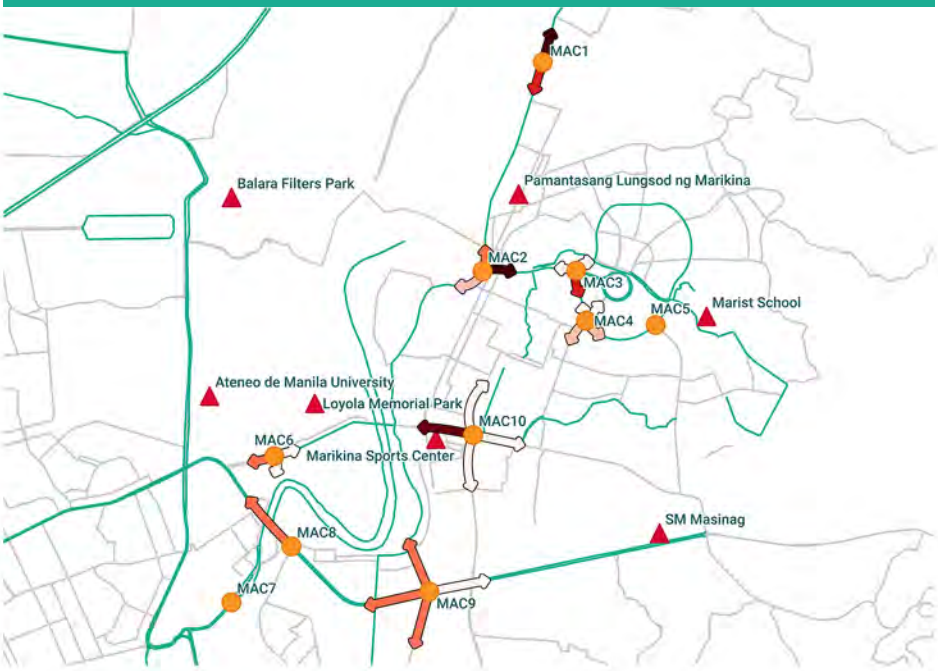
Flow Volume:

- 1 - 110
- 110 - 220
- 220 - 330
- 330 - 440
- 440 - 550
- 550+

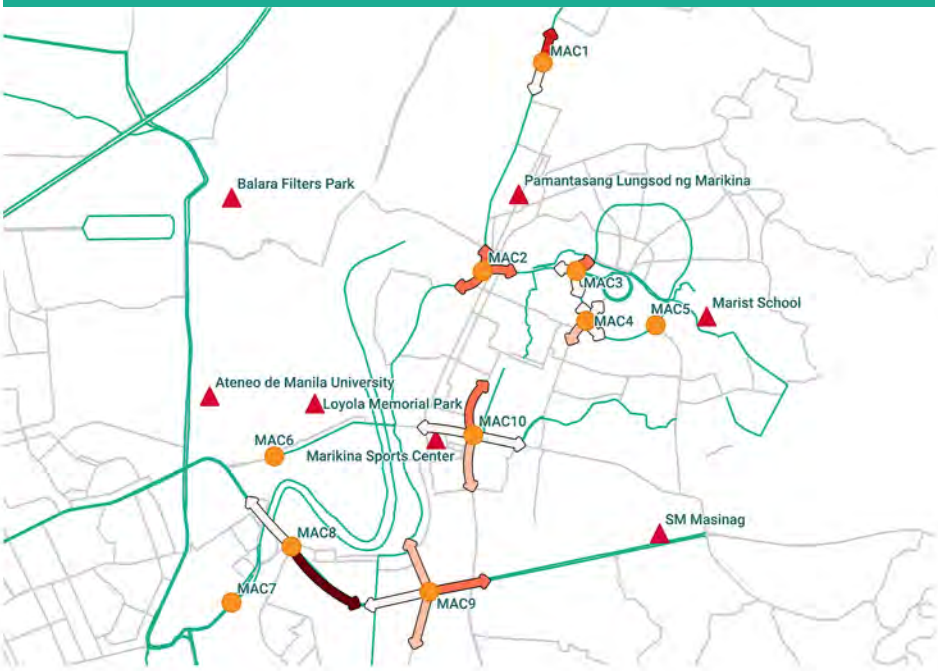
INDEX

MAC1	J.P. Rizal St. corner Rosal St. (Nangka)
MAC2	J.P. Rizal St. corner Bayan-Bayanan Ave.
MAC3	Bayan-Bayanan Ave. corner Gen. Ordoñez Ave.
MAC4	Gen. Ordoñez Ave. corner Lilac St.
MAC5	A. Bonifacio Ave. corner Riverbanks Ave.
MAC6	FVR Road
MAC7	Marcos Highway corner A. Bonifacio Ave.
MAC8	Marcos Highway in front of SM City Marikina
MAC9	Marcos Highway corner Nicanor Roxas St.
MAC10	Sumulong Highway corner Gil Fernando

MARIKINA CITY A.M. BIKE TRAFFIC FLOW



MARIKINA CITY P.M. BIKE TRAFFIC FLOW



Key Observations: During the morning count, the weather was sunny and ideal for cycling. Many cyclists in J. P. Rizal Street corner Rosal Street (Nangka) and Marcos Highway corner Nicanor St. were riding against traffic.

At the intersection of Gen. Ordoñez Avenue and Katipunan Street, the absence of traffic lights and the disappearance of pedestrian lanes posed various challenges. Vehicles passing through often block the intersection as drivers vie for priority. Meanwhile, Gen Ordoñez Street corner Katipunan Avenue leading to Sumulong is equipped with bike lanes, but the stretch leading to Ayala Marikina is narrower.

At the intersection of J. P. Rizal Street and Rosal Street (Nangka), the absence of bike lane markings due to recent asphalt overlay is evident, contrasting with the presence of bike lane markings the previous year.

Inclement weather in the afternoon, characterized by intermittent rain, deterred many volunteers from participating in the count. Consequently, several locations lacked sufficient volunteer coverage to carry out the diagram count effectively. Another notable observation in the city is that there is a higher number of cyclists riding three-wheel cargo cycles, spread out in different locations.

TAGUIG CITY

Number of Locations: *12*
Date: *22 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Fair to heavy rainfall in the afternoon*

19,593
Total cyclists counted

91.04%
male cyclists

8.65%
female cyclists

0.31%
gender undetermined

44.20%
helmet users

55.80%
non-helmet users

AM RESULTS

10,514
Total cyclists counted

Cuasay Road corner C-5 Service Road
Location with highest count of cyclists

PM RESULTS

9,079
Total cyclists counted

Cayetano Boulevard (formerly Levi Mariano) corner General Luna Street
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

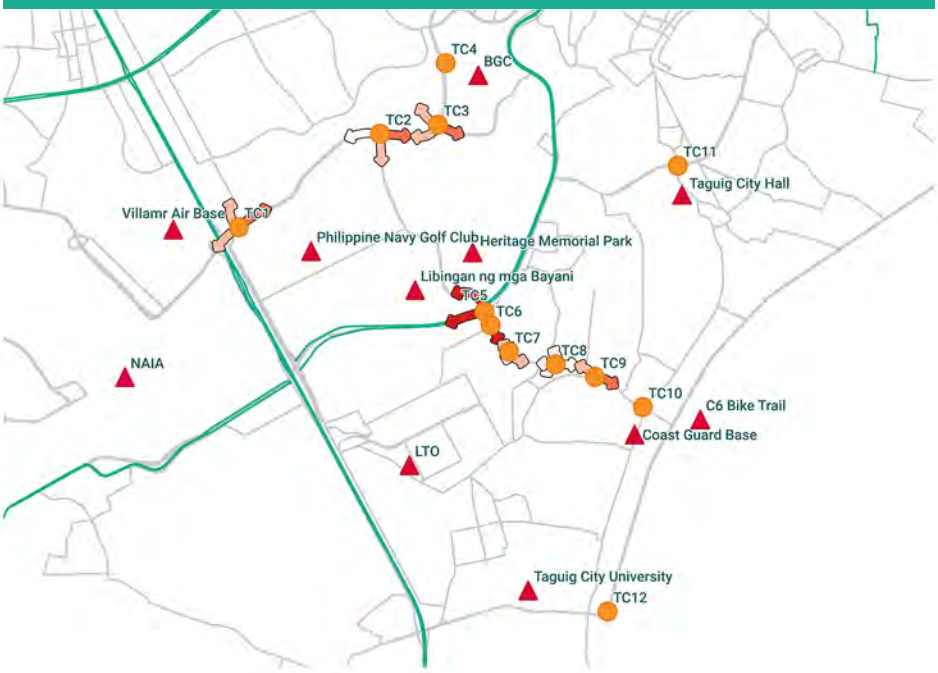
Flow Volume:

- 1 - 190
- 190 - 380
- 380 - 570
- 570 - 760
- 760 - 950

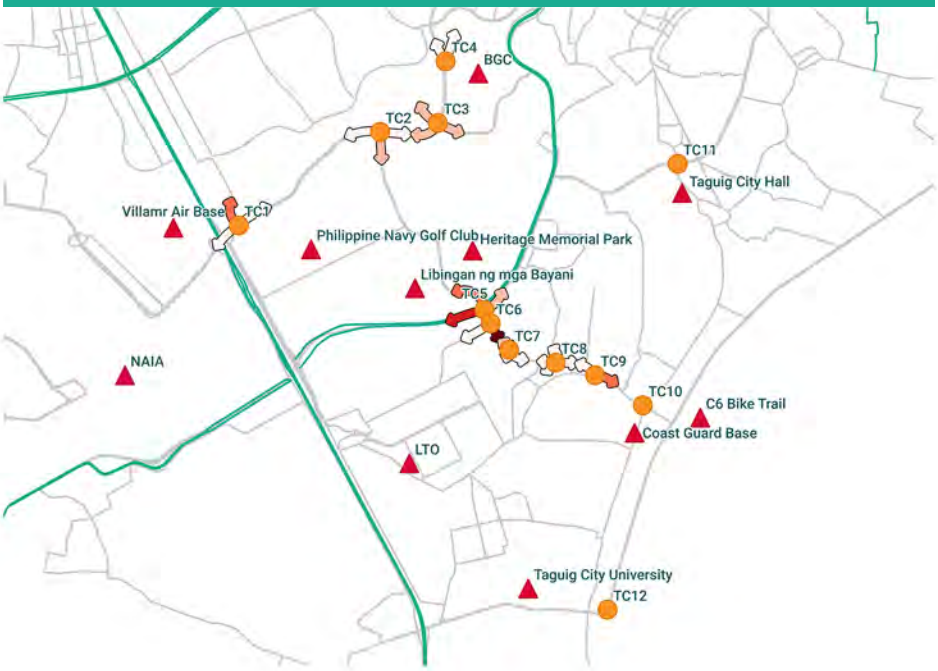
INDEX

TC1	Lawton Ave. corner Chino Roces Ave.
TC2	Lawton Ave. corner Bayani Road
TC3	Lawton Ave. corner McKinley Hill / McKinley West
TC4	Lawton Ave. corner 5th Ave.
TC5	Cuasay Road corner C-5 Service Road
TC6	Cuasay Road corner Veterans Road
TC7	Cuasay Road corner Sto. Niño
TC8	Cuasay Road corner 7th St.
TC9	Cuasay Road corner MRT Ave.
TC10	M.L. Quezon Ave. corner MRT Ave.
TC11	Cayetano Blvd. (formerly Levi Mariano) corner Gen. Luna St.
TC12	C-6 Road (Lakeshore)

TAGUIG CITY A.M. BIKE TRAFFIC FLOW



TAGUIG CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Taguig City garnered the highest number of people on bicycles counted among Metro Manila cities, primarily due to its strategic location and extensive road network connectivity. Taguig City has vital access points, including the major service roads of C-6, C-5, and Cuasay Road, which links to MRT Avenue.

Cuasay Road, in particular, acts as a pivotal conduit to key destinations such as M.L. Quezon Avenue, C6, and C5. It is considered as the main artery for residents in District 2. Cuasay Road lacks designated bicycle lanes. A discernible observation is the prevalence of motorcyclists among the majority of road users. This is quite problematic since some points in Cuasay Road narrows down to just two lanes, making it susceptible to crashes involving cyclists and motorists that usually mix in those areas.

CEBU CITY

Number of Locations: *4*
Date: *29 June 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Fair to slight rain*

6,788
Total cyclists counted

99.31%
male cyclists

0.68%
female cyclists

0.01%
gender undetermined

59.63%
helmet users

40.37%
non-helmet users

AM RESULTS

4,697
Total cyclists counted

Colon Street
Location with highest count of cyclists

PM RESULTS

2,091
Total cyclists counted

Colon Street
Location with highest count of cyclists

LEGEND

Count Locations

Flow Volume:

1 - 370

370 - 740

740 - 1,110

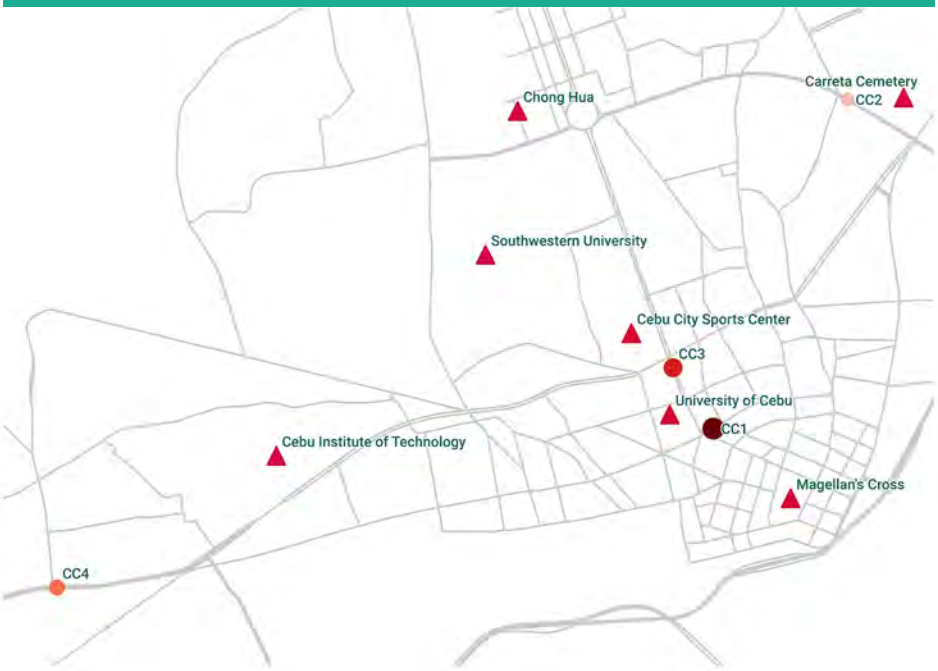
1,110 - 1,480

1,480 - 1,850

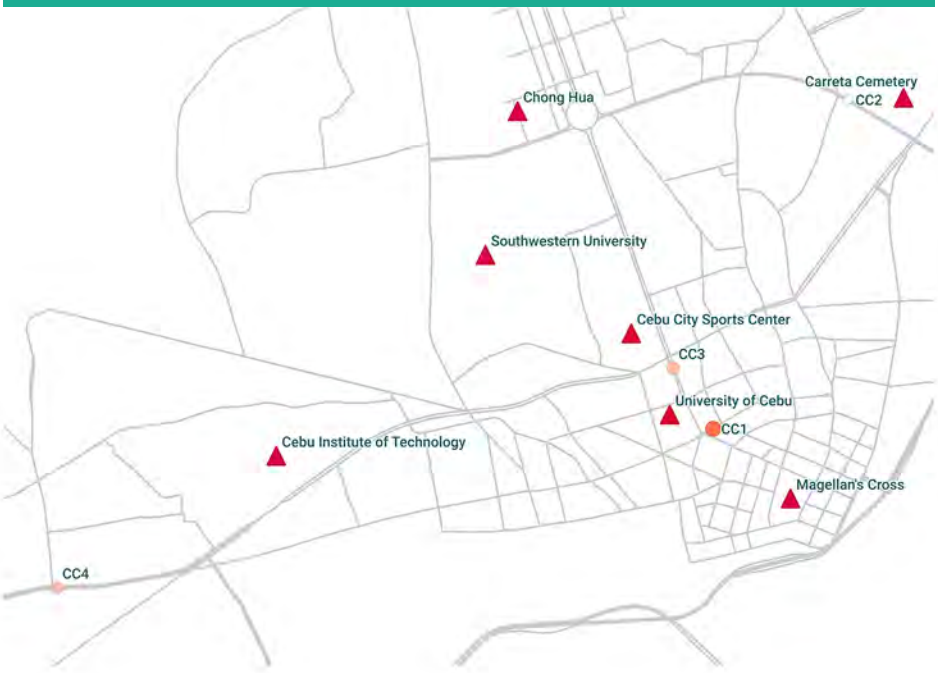
INDEX

CC1	Colon Street
CC2	General Maxilum Ave.
CC3	Osmeña Blvd.
CC4	N. Bacalso Ave.

CEBU CITY A.M. BIKE VOLUME



CEBU CITY P.M. BIKE VOLUME



Note: There is no data available for tracking movement trends in Cebu City, as our volunteers only used table count forms for their data collection.

DAVAO CITY

Number of Locations: 5
Date: 29 June 2023 (Thursday)
Time: 6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.
Weather: Cloudy

2,840
Total cyclists counted

98.31%
male cyclists

1.69%
female cyclists

0%
gender undetermined

30.85%
helmet users

69.15%
non-helmet users

AM RESULTS

1,334
Total cyclists counted

MacArthur Highway
Location with highest count of cyclists

PM RESULTS

1,506
Total cyclists counted

MacArthur Highway
Location with highest count of cyclists

DAVAO CITY 2022-2023 BIKE COUNT COMPARISON

▼13.53% Mean % Change from 2022-23 Bike Count

12.10% St.Dev. % Change from 2022-23 Bike Count

▼28.33% Minimum % Change from 2022-2023 in Quimpo Blvd.

▲0.52% Maximum % Change from 2022-2023 in Quezon Blvd.

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

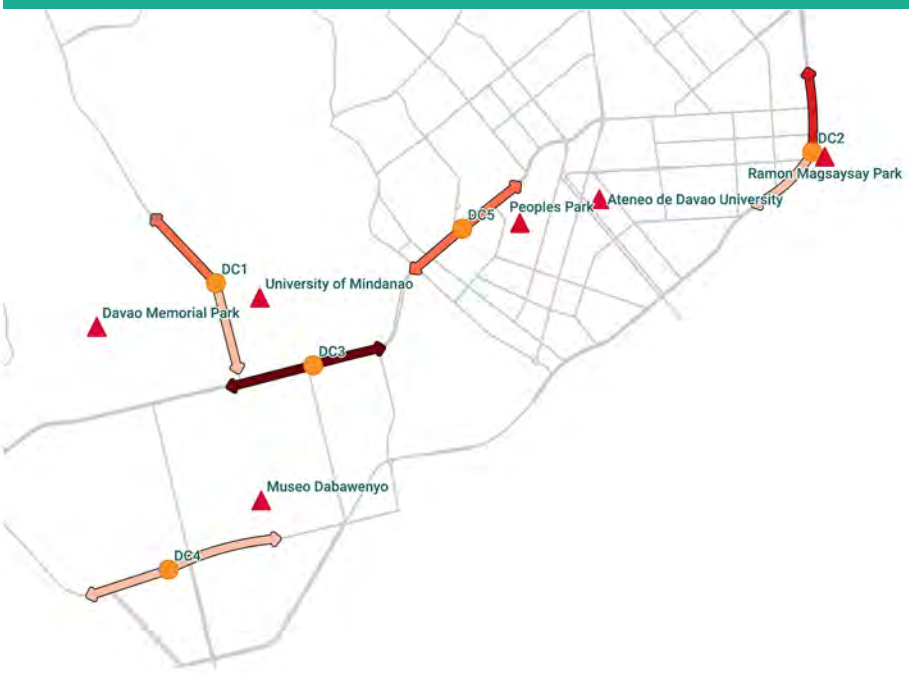
Flow Volume:

- 1 - 55
- 55 - 110
- 110 - 165
- 165 - 220
- 220 - 275

INDEX

DC1	Ma-a Road
DC2	Quezon Blvd.
DC3	MacArthur Highway
DC4	Quimpo Blvd.
DC5	Quirino Ave.

DAVAO CITY A.M. BIKE TRAFFIC FLOW



DAVAO CITY P.M. BIKE TRAFFIC FLOW

Key Observations: In the morning, it was noted that a significant number of cyclists opted not to wear helmets.

Additionally, volunteers brought attention to the gender disparity among cyclists in Davao City; they

observed that there were significantly fewer female cyclists. This gender imbalance in cycling participation could be indicative of various factors, such as infrastructure, safety concerns, or social norms, especially since most of the major roads in Davao City do not have bicycle lanes. Addressing this gender gap in cycling can be an important aspect of promoting inclusivity and diversity in active transportation, and should be considered when planning and implementing cycling initiatives in the city.

ILOILO CITY

Number of Locations: *10*
Date: *06 July 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Rainy*

4,217
Total cyclists counted

97.91% male cyclists

1.78% female cyclists

0.31% gender undetermined

11.24% helmet users

88.76% non-helmet users

AM RESULTS

2,146
Total cyclists counted

B. Aquino Avenue, Taft North
Location with highest count of cyclists

PM RESULTS

2,071
Total cyclists counted

La Paz Plaza
Location with highest count of cyclists

DAVAO CITY 2022-2023 BIKE COUNT COMPARISON

▼12.22% Mean % Change from 2022-23 Bike Count

91.88% St.Dev. % Change from 2022-23 Bike Count

▼85.98% Minimum % Change from 2022-2023 in R. Mapa St. - Onate De Leon Intersection

▲217.89% Maximum % Change from 2022-2023 in Baluarte Fishing Port Intersection

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

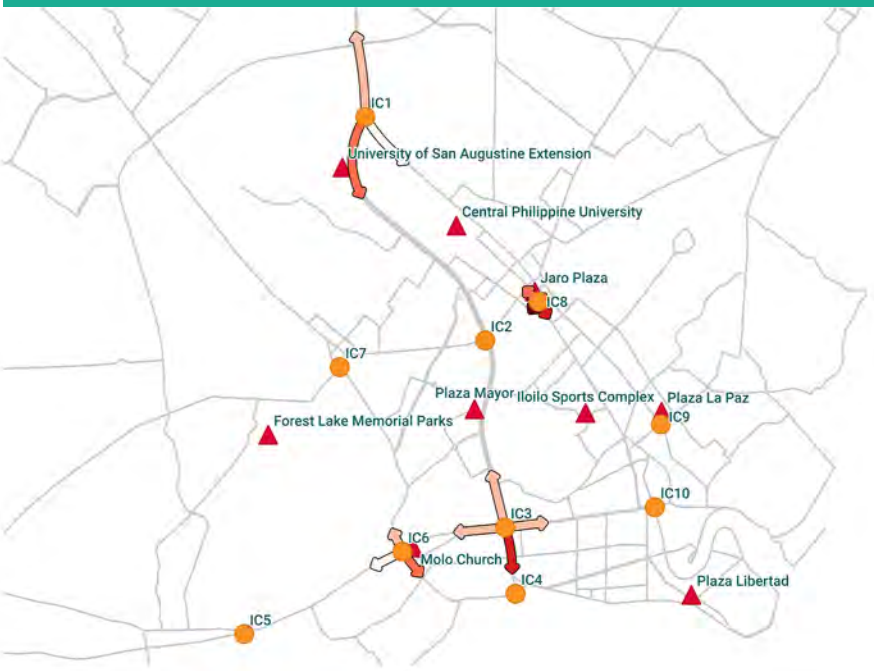
Flow Volume:

- 1 - 35
- 35 - 70
- 70 - 105
- 105 - 140
- 140 - 175

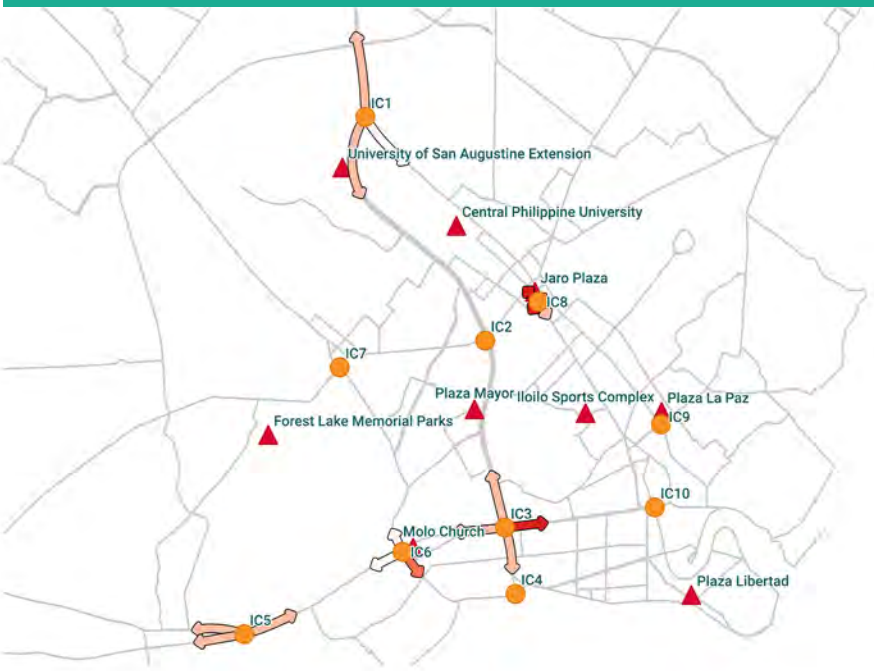
INDEX

IC1	B. Aquino Ave., Sambag
IC2	B. Aquino Ave., Taft North, El 98
IC3	B. Aquino Ave., UPV Intersection
IC4	Balwarte Fishing Port
IC5	Arevalo Dulonan Intersection
IC6	Molo Plaza Intersection
IC7	Mandurriao Plaza Intersection
IC8	Jaro Plaza Intersection
IC9	Lapaz Plaza Intersection
IC10	Muelle Lonely Bridge Intersection

ILOILO CITY A.M. BIKE TRAFFIC FLOW



ILOILO CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Sustained heavy rainfall in the area starting at 4:00 p.m. led many volunteers to seek shelter, which may have affected their counting. The inclement weather also likely discouraged many cyclists from venturing out, opting to wait until the rain subsided. This could have potentially resulted in a decreased cyclist turnout during that time.

Another limitation that surfaced during the count was the shortage of volunteers available to accurately capture the data, especially along Baluarte Fishing Port and Arevalo Dulonan.

Notably, in the area of B. Aquino Avenue Ungka Intersection, it was observed that speeding motorists were encroaching upon the bike lanes. Addressing and enforcing these violations should be a priority to ensure the safety and functionality of the bike lanes in this area.

MUNTINLUPA CITY

Number of Locations: 6
Date: 06 July 2023 (Thursday)
Time: 6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.
Weather: Sunny

4,674
Total cyclists counted

98.21%
male cyclists

1.73%
female cyclists

0.06%
gender undetermined

38.93%
helmet users

61.07%
non-helmet users

AM RESULTS

2,473
Total cyclists counted

Manila S. Road corner Bautista Street (Bayanan)
Location with highest count of cyclists

PM RESULTS

2,201
Total cyclists counted

Manila S. Road corner Bautista Street (Bayanan)
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

Flow Volume:

- 1 - 90
- 90 - 180
- 180 - 270
- 270 - 360
- 360 - 450

INDEX

MUN1 Muntinlupa Bridge Munti-San Pedro Boundary (Tunasan)

MUN2 Manila S. Rd.

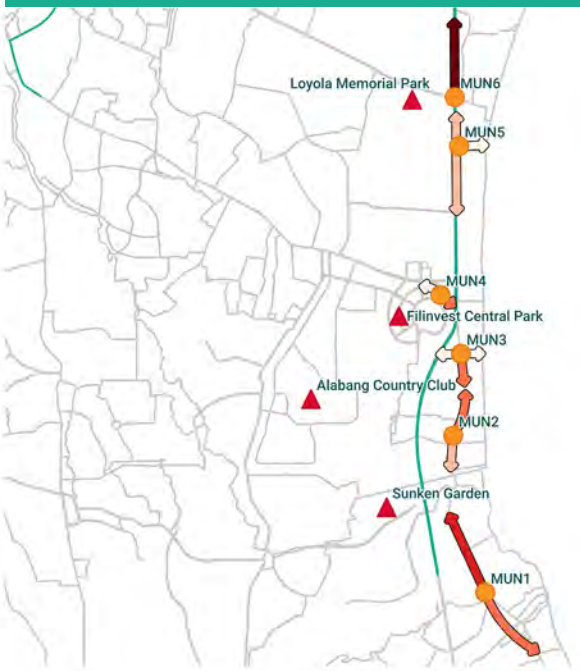
MUN3 Manila S. Rd. corner Bautista St. (Bayanan)

MUN4 South Station Corporate Ave. (Alabang)

MUN5 Concepcion St. (Buli)

MUN6 Parañaque-Sucat Rd. Sucat Interchange (Sucat)

MUNTINLUPA CITY A.M. BIKE TRAFFIC FLOW



MUNTINLUPA P.M. BIKE TRAFFIC FLOW

Key Observations: The morning count took place under sunny conditions, however there was slight rainfall during the afternoon count. Due to a shortage of volunteers, not all locations were able to record data using both of the count forms.

Among the locations, It is worth noting that only South Station and Parañaque-Sucat Road leading to West Service Road have bike lanes. The other locations currently do not have any bike infrastructure. During the count, a notable incident occurred at 6:21 a.m. due to traffic congestion at the intersection leading to Parañaque-Sucat Rd. This occurrence underscores the necessity for an increased presence of traffic officers to ensure road safety, particularly in areas prone to heavy traffic congestion. There is also the presence of blind spots, often caused by passing trucks at the intersection leading to the national road and expressways, further highlighting the need for enhanced safety measures and potentially improved road design to mitigate such risks.

NAGA CITY

Number of Locations: *13*
Date: *06 July 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Fair*

6,580
Total cyclists counted

88.40%
male cyclists

10.26%
female cyclists

1.34%
gender undetermined

13.28%
helmet users

86.72%
non-helmet users

AM RESULTS

3,030
Total cyclists counted

Bagumbayan - Liboton
Location with highest count of cyclists

PM RESULTS

3,550
Total cyclists counted

Bagumbayan - Liboton
Location with highest count of cyclists

DAVAO CITY 2022-2023 BIKE COUNT COMPARISON

▼16.10% Mean % Change from 2022-23 Bike Count

35.33% St.Dev. % Change from 2022-23 Bike Count

▼64.10% Minimum % Change from 2022-2023 in Jollibee Panganiban - SM City Naga

▲55.97% Maximum % Change from 2022-2023 in Bagumbayan - Liboton

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

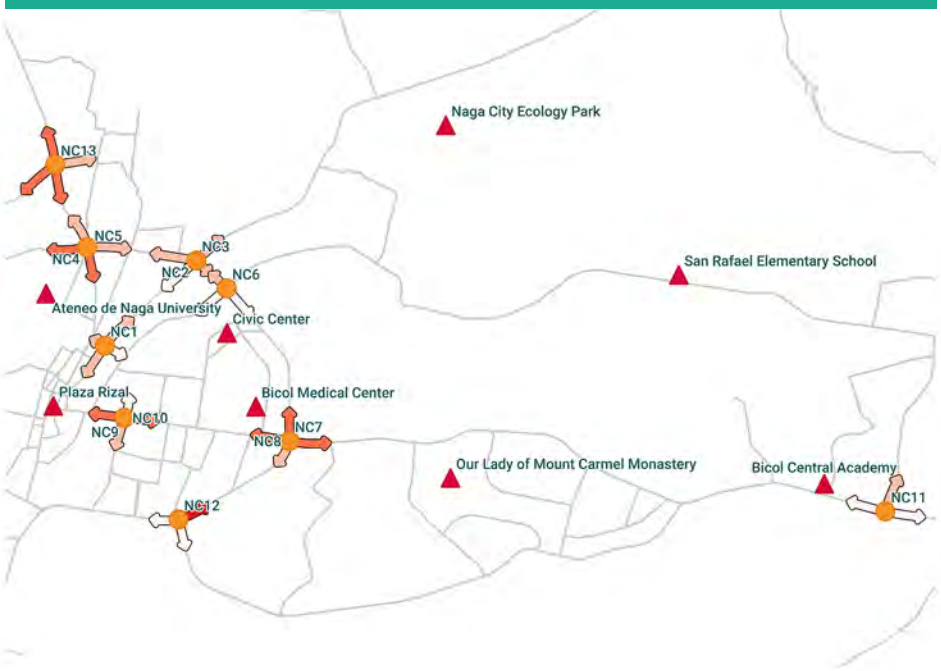
Flow Volume:

- 1 - 55
- 55 - 110
- 110 - 165
- 165 - 220
- 220 - 275

INDEX

NC1	Palasyo - USI - Centro Square
NC2	Francia - Liboton
NC3	Magsaysay - San Felipe
NC4	Bagumbayan - Queborac SkyCity
NC5	Bagumbayan - Liboton
NC6	Yellow Cab - Shell (Going to Basilica) and LRV - Avenue Square
NC7	Panganiban - Diversion Rotonda
NC8	Magsaysay - Concepcion
NC9	Jollibee Panganiban - SM City Naga
NC10	Mariners - Centro
NC11	Del Rosario - Pili Boundary
NC12	Diversion - Almeda Highway
NC13	Canaman Boundary

NAGA CITY A.M. BIKE TRAFFIC FLOW



NAGA CITY P.M. BIKE TRAFFIC FLOW

VALENZUELA CITY

Number of Locations: *8*
Date: *06 July 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Cloudy to heavy rainfall*

14,896
Total cyclists counted

96.27%
male cyclists

3.50%
female cyclists

0.23%
gender undetermined

33.31%
helmet users

66.69%
non-helmet users

AM RESULTS

8,619
Total cyclists counted

Karuhatan Road corner Manila National Road
Location with highest count of cyclists

PM RESULTS

6,277
Total cyclists counted

Rincon Road corner Manila National Road (Govt. I Malinta)
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes

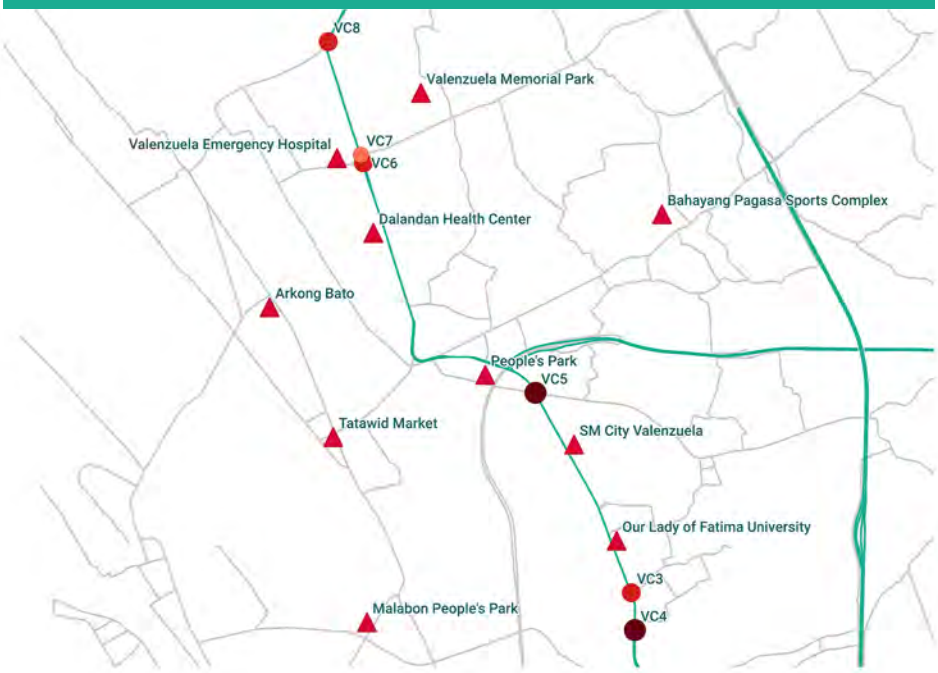
Flow Volume:

- 1 - 370
- 370 - 740
- 740 - 1,110
- 1,110 - 1,480
- 1,480 - 1,850

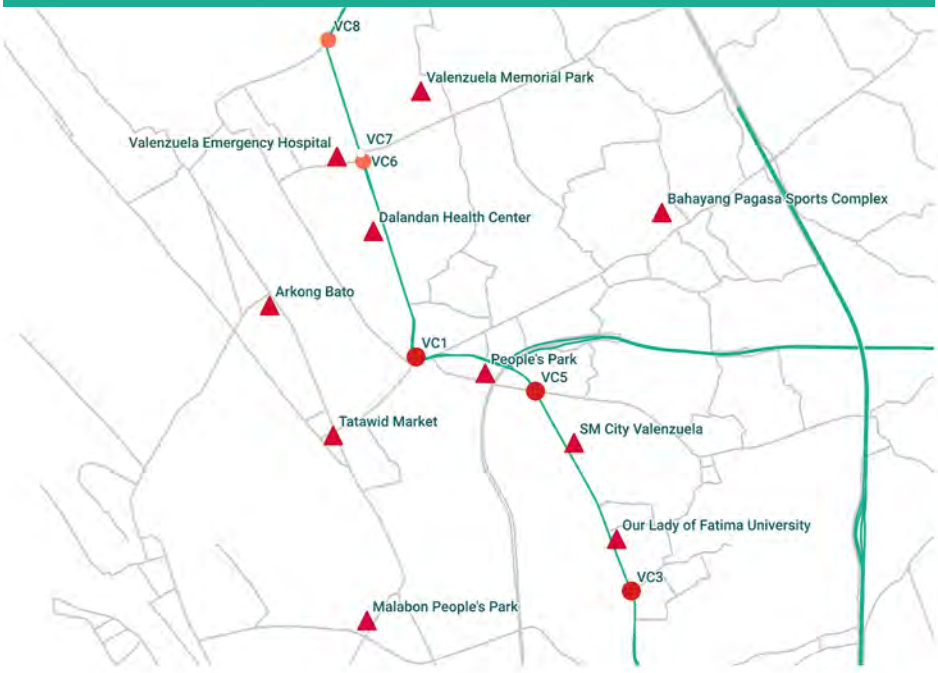
INDEX

VC1	Rincon Rd. corner Manila National Rd. (Govt. I Malinta)
VC2	A. Fernando Marulas corner MacArthur Highway
VC3	Pio Valenzuela corner McArthur Highway
VC4	Tullahan Bridge
VC5	Karuhatan Rd. corner Manila National Rd.
VC6	G. Lazaro Dalandanan
VC7	T. Santiago corner McArthur Highway
VC8	Malanday corner McArthur Highway

VALENZUELA CITY A.M. BIKE VOLUME



VALENZUELA CITY P.M. BIKE VOLUME



Key Observations: Valenzuela City faced a shortage of volunteers, resulting in a limited number of individuals who utilized diagram count forms for data collection.

Traffic enforcers were present at the bike count locations. A substantial portion of cyclists chose

not to wear helmets and most of them are bike commuters.

Rainfall was a constant factor throughout both the morning and afternoon counts; there was also an occurrence of 2-3 inch flooding in G. Lazaro Dalandanan at [time]. Despite the challenging conditions, many cyclists continued to pass through this area.

At A. Fernando Marulas corner McArthur Highway, the bike lane is frequently encroached upon by motorcycles and e-bikes, while occasionally, e-jeepneys utilize these lanes to drop off passengers. Additionally, volunteers noted that the bike lanes at T. Santiago corner McArthur Highway were in need of repainting.

There were insufficient volunteers available to address this specific area, highlighting the potential need for greater community involvement and support in maintaining and improving cycling infrastructure.

CAGAYAN DE ORO CITY

Number of Locations: *8*
Date: *13 July 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Cloudy*

1,101
Total cyclists counted

98.82%
male cyclists

1.09%
female cyclists

0.09%
gender undetermined

32.79%
helmet users

67.21%
non-helmet users

AM RESULTS

799
Total cyclists counted

CM Recto Avenue - Osmeña Street
Location with highest count of cyclists

PM RESULTS

302
Total cyclists counted

CM Recto Avenue - Osmeña Street
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

Flow Volume:

- 1 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100

INDEX

CDO1 Divisoria Velez (Tirso Neri St. & Apolinario Velez corner R.N. Abejuela)

CDO2 Rodelsa Circle - Velez St.

CDO3 Ysalina Bridge - Gaerlan St.

CDO4 Vamenta Blvd. - J.R. Borja St.

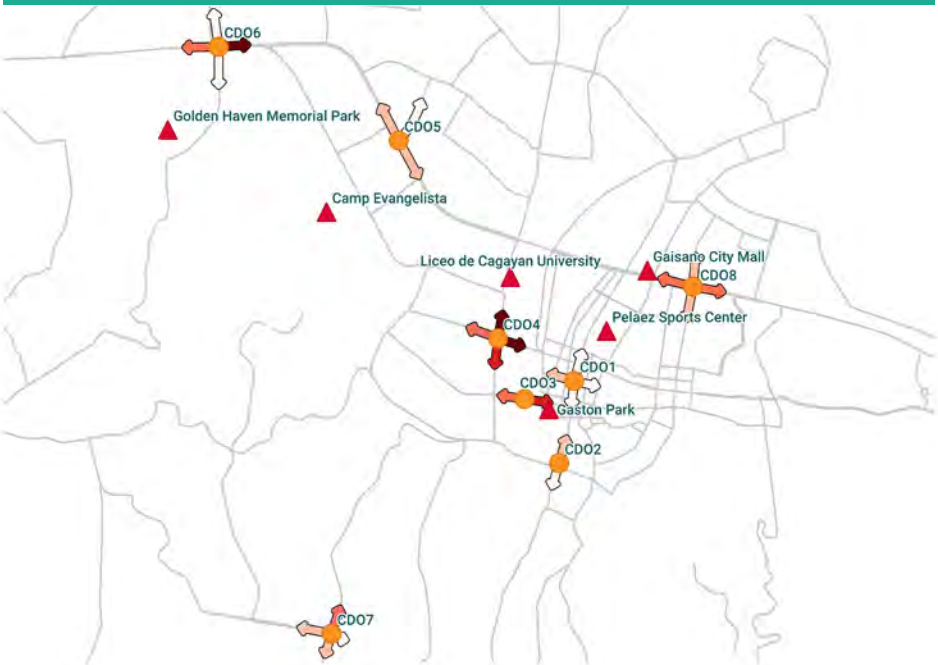
CDO5 NHA Kauswagan - National Highway

CDO6 Bulua Highway corner Macapagal Drive

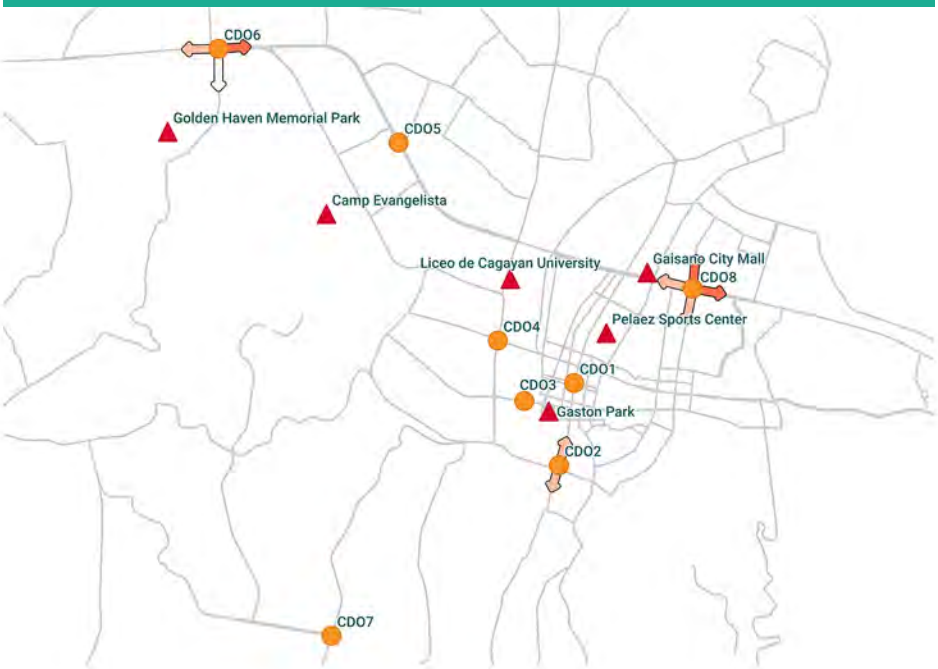
CDO7 Mastersons Ave. - P.N. Roa Ave.

CDO8 C.M. Recto Ave. - Osmeña St.

CAGAYAN DE ORO CITY A.M. BIKE TRAFFIC FLOW



CAGAYAN DE ORO CITY P.M. BIKE TRAFFIC FLOW



MANDAUE CITY

Number of Locations: 4
Date: 13 July 2023 (Thursday)
Time: 6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.
Weather: Fair

6,084
Total cyclists counted

97.19%
male cyclists

2.25%
female cyclists

0.56%
gender undetermined

34.47%
helmet users

54.04%
non-helmet users

AM RESULTS

3,572
Total cyclists counted

A.C. Cortes
Location with highest count of cyclists

PM RESULTS

2,512
Total cyclists counted

A.C. Cortes
Location with highest count of cyclists

MANDAUE CITY 2022-2023 BIKE COUNT COMPARISON

▲15.46% Mean % Change from 2022-23 Bike Count

32.54% St.Dev. % Change from 2022-23 Bike Count

▼4.43% Minimum % Change from 2022-2023 in Ouano Avenue

▲53.01% Maximum % Change from 2022-2023 in A.C. Cortes

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

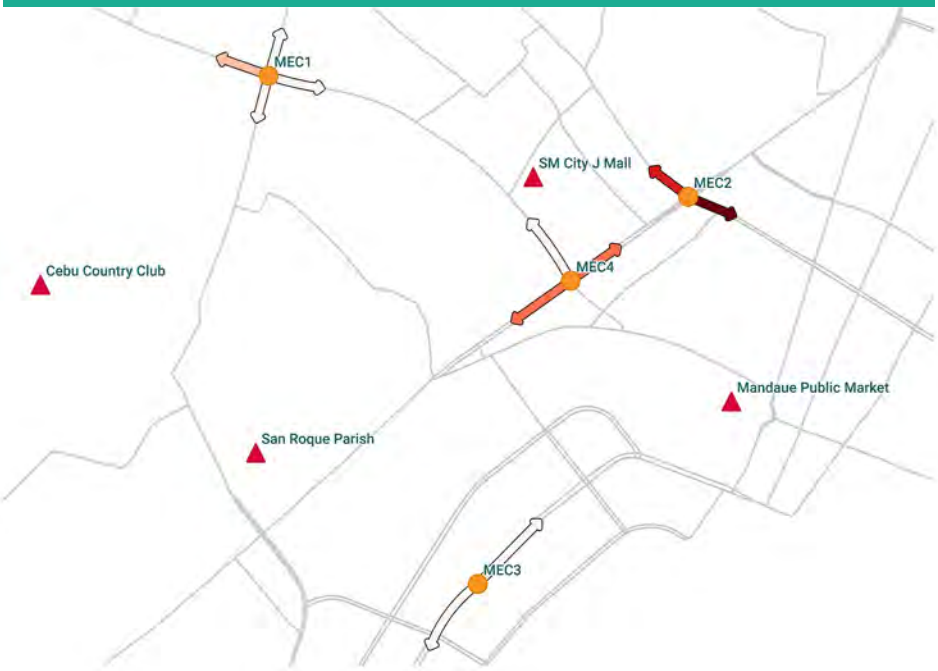
Flow Volume:

- 1 - 180
- 180 - 360
- 360 - 540
- 540 - 720
- 720 - 900

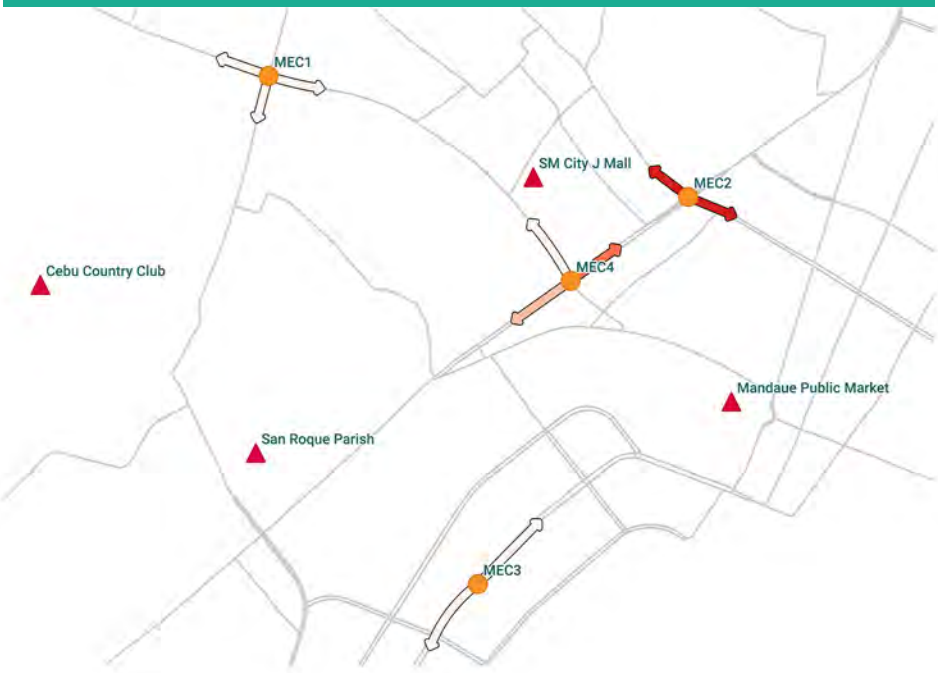
INDEX

MEC1	Banilad
MEC2	A.C. Cortes
MEC3	Ouano Avenue
MEC4	Highway Seno

MANDAUE CITY A.M. BIKE TRAFFIC FLOW



MANDAUE CITY P.M. BIKE TRAFFIC FLOW



NAVOTAS CITY

Number of Locations: *2*
Date: *13 July 2023 (Thursday)*
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Rainy*

4,945
Total cyclists counted

89.46%
male cyclists

9.67%
female cyclists

0.87%
gender undetermined

27.08%
helmet users

72.92%
non-helmet users

AM RESULTS

2,491
Total cyclists counted

R-10 corner Daungan Street and Lapu-Lapu Street
Location with highest count of cyclists

PM RESULTS

2,454
Total cyclists counted

R-10 corner Daungan Street and Lapu-Lapu Street
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

Flow Volume:

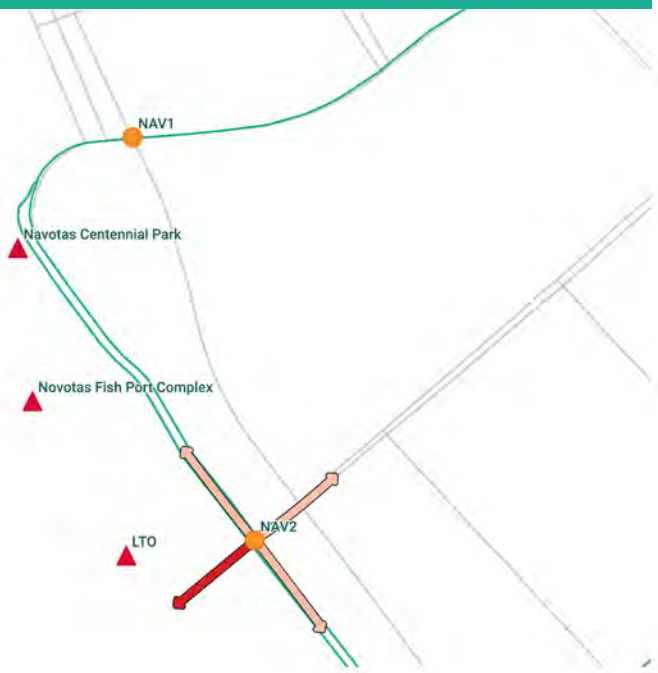
- 1 - 180
- 180 - 360
- 360 - 540
- 540 - 720
- 720 - 900

INDEX

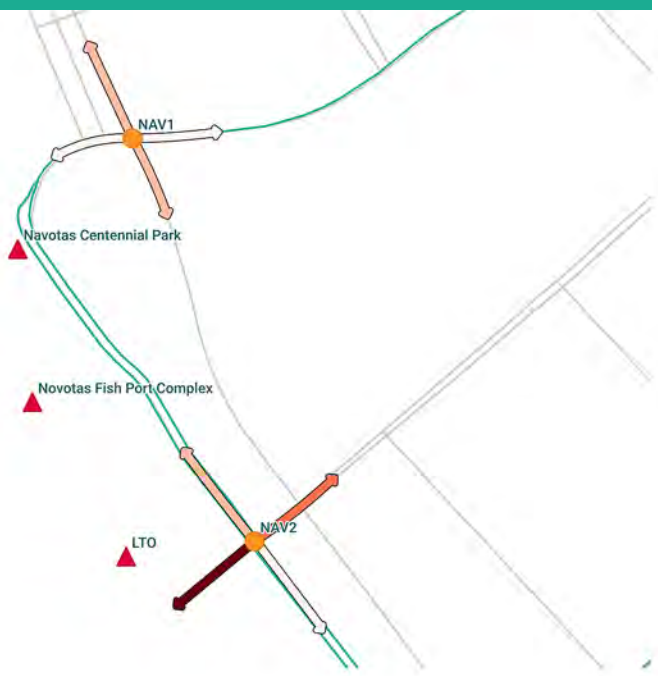
NAV1 M. Naval corner C-4

NAV2 R-10 corner Daungan St. and Lapu-Lapu St. (in frot of Navotas Fishport Complex)

NAVOTAS CITY A.M. BIKE TRAFFIC FLOW



NAVOTAS CITY P.M. BIKE TRAFFIC FLOW



Key Observations: Due to limited volunteer turnout, the bike counts were only able to cover two locations within Navotas City. Intermittent rainfall throughout the day was observed, but there was still a substantial number of cyclists using their bicycles for short-distance trips, with many choosing not to wear helmets. However, most commuting cyclists heading towards R-10 highway

highway or the southern part of the city, including Manila, who are traveling longer distances were wearing helmets.

One distinct aspect of Navotas City is the prevalent use of pedicabs, which serve as the primary first-to-last mile transport for most residents. Many pedicab services are in operation, facilitating transportation to and from the fishport in R-10 corner Daungan St., and Lapu-Lapu St.,where the Navotas Fish Port is located.

The presence of numerous trucks also raises concerns about cyclist safety along R-10 road. Given the absence of protected bike lanes, cycling in this zone may be perceived as unsafe. However, it's worth noting that cyclists in Navotas City generally adhere to traffic signs, and there are traffic patrollers present in the area to help manage road safety.

MANILA CITY

Number of Locations: *12*
Date: *29 June 2023 (Thursday, Locations MAN1-MAN4)*
20 July 2023 (Thursday, Locations MAN5-MAN12)
Time: *6:00 a.m. - 8:00 a.m. and 4:00 p.m. - 6:00 p.m.*
Weather: *Cloudy to rainy*

12,038
Total cyclists counted

91.45%
male cyclists

7.42%
female cyclists

1.31%
gender undetermined

32.85%
helmet users

67.15%
non-helmet users

AM RESULTS

6,578
Total cyclists counted

Hermosa Street corner Abad Santos Avenue
Location with highest count of cyclists

PM RESULTS

5,460
Total cyclists counted

Magsaysay Boulevard corner Stop & Shop
Location with highest count of cyclists

LEGEND

- Count Locations
- Bike Lanes
- Landmarks

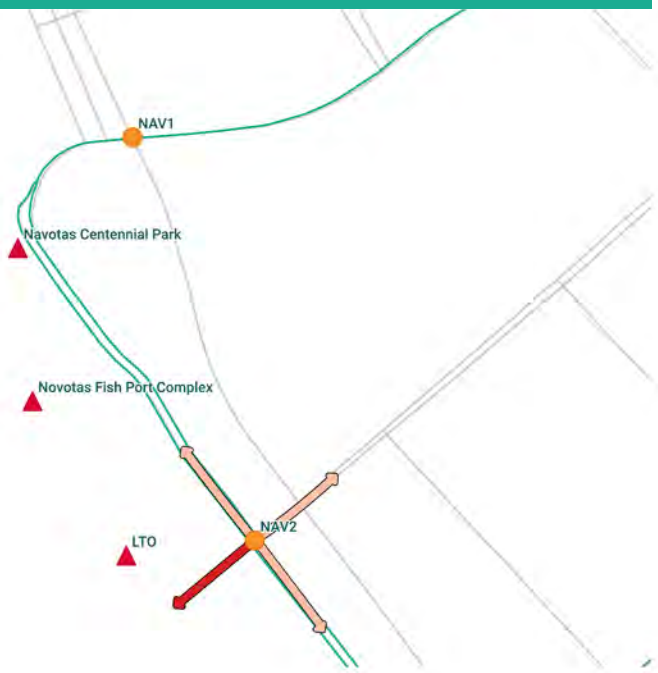
Flow Volume:

- 1 - 90
- 90 - 180
- 180 - 270
- 270 - 360
- 360 - 450

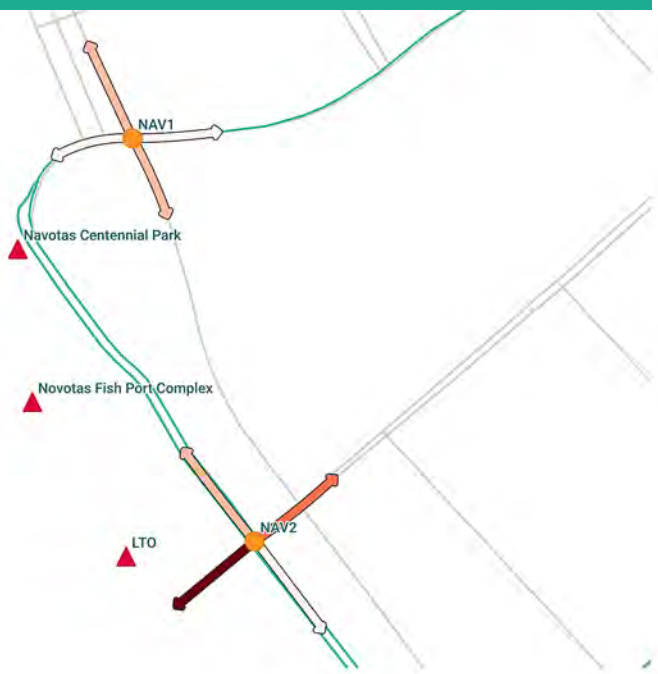
INDEX

MAN1	Magsaysay Blvd. corner V. Mapa
MAN2	Magsaysay Blvd. corner Stop & Shop
MAN3	Baltao Intersection
MAN4	Anonas St. corner Teresa
MAN5	R-10 Delpan
MAN6	Capulong St. corner Velasquez St.
MAN7	Vito Cruz corner Taft Ave.
MAN8	Recto Ave.
MAN9	Pritil St.
MAN10	Ayala Blvd. (Ayala Bridge)
MAN11	Dapitan St. corner Blumentritt Rd.
MAN12	Rival Ave. corner Blumentritt

MANILA CITY A.M. BIKE TRAFFIC FLOW



MANILA CITY P.M. BIKE TRAFFIC FLOW



Key Observations: The count in Manila City was done in two separate days. The initial count, executed by the Polytechnic University of the Philippines (PUP) on June 29, covered several strategic locations including Magsaysay Blvd corner V. Mapa, Magsaysay Blvd corner Stop & Shop, Baltao Intersection, and Anonas Street corner Teresa. These locations were selected for their

proximity to the university and were surveyed by PUP students.

The subsequent count, conducted on July 20, engaged citizen volunteers and personnel from the Manila City government. This effort encompassed key areas, including R-10 Delpan, the intersection of Capulong St. and Velasquez St., Vito Cruz corner Taft Ave., Recto Ave., Pritil St., Ayala Blvd. (Ayala Bridge), the intersection of Dapitan St. and Blumentritt Rd., as well as Rival Ave. corner Blumentritt.

Upon initial observation, it is evident that many cyclists in Manila City are bike commuters. A significant portion of cyclists opt not to wear helmets despite having them available, while some cyclists do not use helmets at all. This suggests that many of the bikers in Manila undertake relatively long journeys, possibly for work or other essential activities.

Across all locations in the city, there is a recurring issue of other vehicles and motorists occasionally misusing bike lanes as loading and unloading zones, disrupting the intended use of these lanes and compromising cyclist safety.

Bike lanes in the city are either nonexistent or are in poor condition, including sustained road damage. These subpar bike lanes can pose challenges for cyclists, emphasizing the need for improved infrastructure to promote safe and efficient cycling in Manila City.

There is ongoing road construction along Vito Cruz, but there is a shortage of warning signage to alert commuters and cyclists to these construction zones. There are also numerous road damages and manholes that are dangerous to road users, particularly cyclists. The area's susceptibility to flooding further compounds the safety hazards.

In Magsaysay Blvd., there are bike lanes present with the exception of the route leading to Stop & Shop. However, these lanes are not being fully utilized by cyclists, primarily due to other public utility vehicles (PUVs) occupying them to cater to passengers, since there is no designated loading and unloading zone. Most cyclists in this area are male.

Traffic tends to intensify after 5:00 p.m., creating challenges for cyclists since motorists tend to occupy the lanes; in lighter traffic conditions, some cyclists opt to ride in the middle of the road because it's easier for them to avoid illegally parked private motorists. Most of the cyclists here are delivery riders, and majority of them do not wear helmets.

Road conditions at the intersection of Capulong St. and Velasquez St. are notably hazardous for both cyclists and pedestrians. The absence of a stoplight, coupled with the lack of a dedicated bike lane, creates conditions where road crashes are a real and immediate concern.

In the vicinity of Recto Ave., the absence of a dedicated bike lane poses challenges for cyclists. To avoid the dangers posed by speeding trucks, some cyclists resort to using the sidewalk. Notably, the majority of cyclists in this area comprise seniors, food delivery riders, and pedicab drivers, indicating a diverse mix of cyclists sharing the road with vehicular traffic.

SUMMARY AND RECOMMEDATIONS

KEY OBSERVATIONS SUMMARY

Analysis of the bike count data shows varying results regarding the increase or decrease of cycling activity in 2023 compared to 2022. Notable increases in the number of cyclists have been identified in Quezon City and Mandaue City, which can be attributed to their continued development of their bike lane infrastructure, active transport policy, and enforcement.

There has been a decline in the number of cyclists compared to last year's count, particularly in Cebu City, Iloilo City, Marikina City, Pasig City, San Juan City, Baguio City, Naga City, and Davao City. This decline can be attributed to several factors:

1. **Increase in Public Transport Usage**

   During the height of the COVID-19 pandemic, cycling emerged as a popular choice for many Filipinos seeking a safer way to travel, to lessen exposure from others and reduce the risk of virus transmission. However, as restrictions eased this year, many commuters reverted back to public transport.

2. **Unsafe Road Conditions**

   Safety concerns on our roads continue to persist as a glaring issue, particularly when it comes to the state of the bike lanes which, in most cases, are not being maintained properly. For example, despite the existence of painted bike lanes at critical locations such as EDSA corner Aurora Boulevard in Quezon City and A. Fernando Marulas corner McArthur Highway in Valenzuela City, these dedicated lanes have been encroached upon by motorists and painted bike lanes such as in J. P. Rizal Street in Marikina City, has significantly faded.

3. **Adverse Weather Conditions**

   The bike counts were conducted during the rainy season, from June to July. Consistent rainfall during the counts posed several challenges, such as volunteers arriving late to their stations or being unable to complete their tasks within the allotted 2-hour window. The inclement weather conditions may have influenced commuting cyclists to adapt their schedules, possibly leading them to ride outside of the typical peak hours as they waited for the rain to subside.

4. **Cyclists counted are still mostly men**

   Our data underscores a consistent trend—in each city, there are notably more men cycling than women. There is also a notable decline in the number of women cyclists in all 17 cities, with the

average representation of women cyclists at a mere 3.92%.

Safety remains a paramount concern for cyclists. In particular, fear of road crashes, harassment, or feeling vulnerable on the road may deter women from choosing cycling as their preferred mode of transportation, especially since there is a lesser presence of bike lanes of secure and adequate bike facilities such as bike lanes and bike parking.

Notably, Naga City stands out with the highest percentage of women cyclists at 10.26%. This outlier could be attributed to the city's unique urban layout, where essential destinations are centrally located and in close proximity. This spatial arrangement encourages shorter trips, making cycling a more convenient and appealing option for women who may have multiple daily responsibilities. Navotas City and Manila City follow closely behind, with average percentages of women cyclists at 9.67% and 9.32%, respectively. These cities have available pedicabs services that are often utilized for short-distance travel.

RECOMMENDATIONS FOR LOCAL CITY GOVERNMENTS AND POLICYMAKERS

This paper presents data to support bike policy development and infrastructure investments. The data presented includes bicycle volumes in several locations, gender distribution of cyclists, movement, and helmet use. These are relevant to understanding the bicycle transport sector in each city, and in turn to plan and/or evaluate programs, projects, and activities geared towards promoting cycling.

However, the data in this paper does not show a complete picture of bicycle transport in each city covered, due to limitations in methodology and logistical challenges during the counts. To better understand transport cycling in cities and its policy and infrastructure requirements, we recommend that local government units and other concerned government agencies consider the following:

1. Implement consistent and long-term bike counts.

Implementing a regular counting program is crucial in order to accurately estimate the annual average daily traffic of cyclists, which can serve as historical data to be used in evaluating the success of cycling infrastructure and policies. The methodology and results of this study may be used to guide the planning and design of long-term bike counts.

2. **Integrate bike counts with standard traffic volume counts.**

Bicycle transport in a city is better understood in its modal share in comparison to other modes of transport. Undertaking standard manual 16-24 hour volume counts that include bicycles will offer highly-usable data both for policymaking and technical traffic engineering purposes. Additionally, the use of more advanced technology, including digital and automatic counters (including video and CCTV-based counters) as well as Artificial Intelligence or AI-based counting and analysis methods, may be explored as alternatives to manpower-heavy manual counting methods.

3. **Develop more studies on cycling and active transport in aid of infrastructure and policy development.**

a. **Gender gap**

This study highlighted the significant gender gap between male and female cyclists. There is an urgent need to determine underlying factors affecting the gender gap in cycling and to implement appropriate measures to address it.

b. **Helmet use**

This study highlighted the variations in helmet use across different cities with different local policies regarding helmet use. The effectiveness of helmet-related policies can be studied by correlating helmet use to overall bike counts, frequency of violations and violator demographic data (if applicable), and road crash injury and fatality datasets. Furthermore, it is crucial to consider the unique situational contexts of these cities. For example, despite the absence of a helmet ordinance, Baguio City boasts helmet usage rates exceeding 50%, a phenomenon likely linked to the city's distinctive topography. This underscores the significance of exploring correlations among various factors. An in-depth analysis of this matter is imperative to attain a deeper understanding.

c. **Travel characteristics**

Origin and destination, route choice, trip distance, elevation gain, and travel time are examples of travel characteristics important in planning for bike lane networks and end-of-trip facilities like bike parking. More comprehensive travel characteristics data will also result in more accurate data on GHG emission savings and fuel and health cost savings.

d. **Before and after analysis of infrastructure and policy**

Bike counts serve as an effective monitoring and evaluation tool to measure the effectiveness of implemented cycling infrastructure or policy. Metrics such as the utilization of bike lanes and bike parking facilities can be used as a basis for continued investment into improving existing infrastructure and facilities. High utilization can indicate effective design of bike lanes and infrastructure, while low utilization should be seen as an indicator of improvements needed to be implemented.


obility
AWARDS
bilang
siklista

REFERENCES

AltMobility PH. (2022). Bikenomics: Health, *BIKENOMICS: Assessing the Value of Cycling in the Philippines* (pp. 20-22).

Department of Public Works and Highways. (2013). *Department Order No. 22, Series of 2013*. Retrieved from https://www.dpwh.gov.ph/dpwh/sites/default/files/issuances/DO_022_S2013.pdf

Ding, D., Lawson, K.D., Kolbe-Alexander, T.L., Finkelstein, E.A., Katzmaryzk, P.T., van Mechelen, W., & Pratt, M. (2016). The economic burden of physical inactivity: a global analysis of major non-communicable diseases, Lancet 2016, 388: 1311-24.

Exchange Rates(.org.uk). (2023). *'US Dollar to Philippine Peso Spot Exchange Rates for 2023'*. Retrieved from https://www.exchangerates.org.uk/USD-PHP-spot-exchange-rates-history-2023.html#:~:text=Average%20exchange%20rate%20in%202023%3A%2055.2046%20PHP.

Institute for Climate and Sustainable Cities. (2019). *#PHmobility: Active mobility survey in Metro Manila.*

Kovácsová, N., de Winter, J.C.F., Schwab, A.L., Christoph, M., Twisk, D.A.M., & Hagenzieker, M.P. (2016). Riding performance on a conventional bicycle and a pedelec in low speed exercises: Objective and subjective evaluation of middle-aged and older persons, Transportation Research Part F, 42, 28-43.

Sigua, R.G. (2008). *Fundamentals of Traffic Engineering*. Quezon City: The University of the Philippines Press.

Statista. (2023). *'Monthly gasoline prices in the Philippines from January 2019 to April 2023'*. Retrieved from https://www.statista.com/statistics/1250974/philippines-monthly-gasoline-prices/

Statista. (2023). *'Philippines: Inflation rate from 1987-2028'*. Retrieved from https://www.statista.com/statistics/578717/inflation-rate-in-philippines/

Transport for London. (2021). Passenger Car Unit, *Traffic Modelling Guidelines* (pp. 118-119).

Transportation Research Board. (2010). *Highway Capacity Manual 2010*. Washington, DC.

United States Environmental Protection Agency. (2023). *Tailpipe Greenhouse Gas Emissions from a Typical Passenger Vehicle*.

ANNEXES

ANNEX 1: BIKE COUNT FORM

TABLE COUNT FORM			
LOCATION:	DATE:	TIME START::	NOTES:
TOTAL NO. OF CYCLISTS COUNTED:	WEATHER:	TIME END:	

Time Interval	MALE		FEMALE		NOT DETERMINED	
	With Helmet	No Helmet	With Helmet	No Helmet	With Helmet	No Helmet
00:00-00:15						
00:15-00:30						
00:30-00:45						
00:45-01:00						
01:00-01:15						
01:15-01:30						
01:30-01:45						
01:45-02:00						

Image 1: Table Count Form

DIAGRAM COUNT FORM
LOCATION:
DATE:
START TIME:
END TIME:
DIRECTION OF COUNT:
WEATHER:
NAME:
TOTAL COUNT:
NOTES:

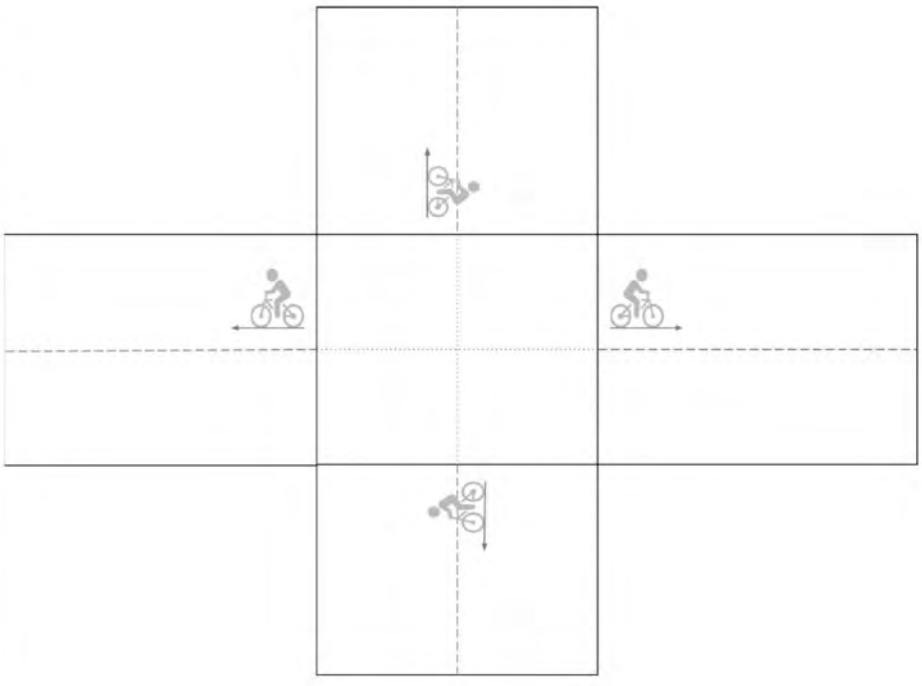


Image 2: Diagram Count Form for Intersections

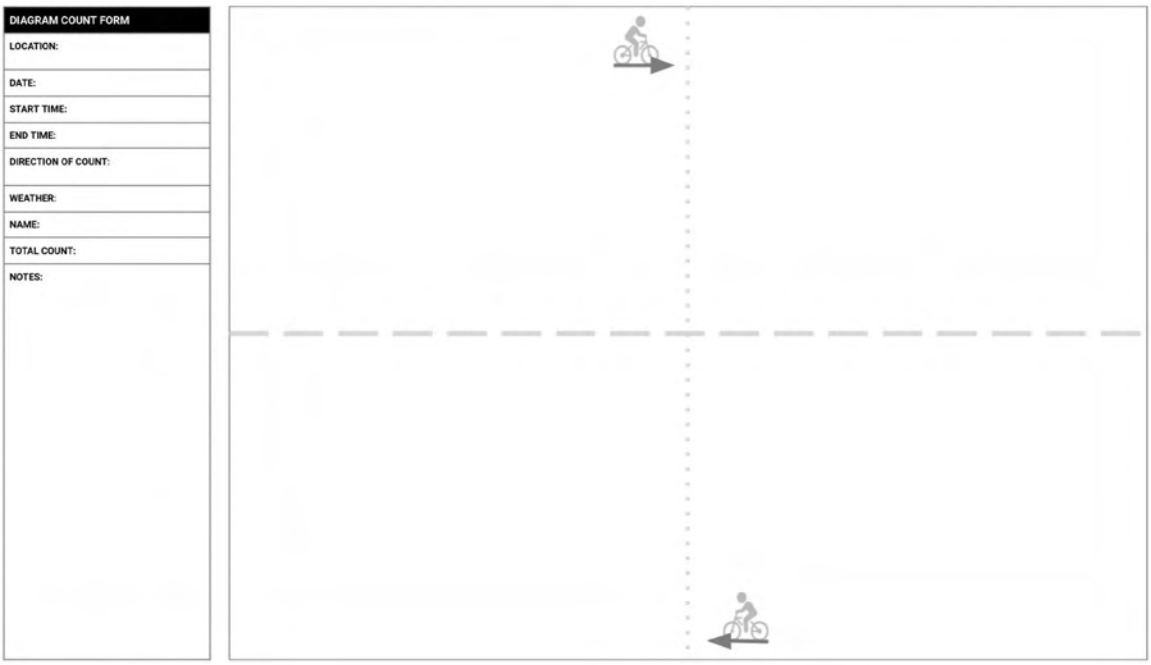


Image 3: Diagram Count Form for Straight Roads

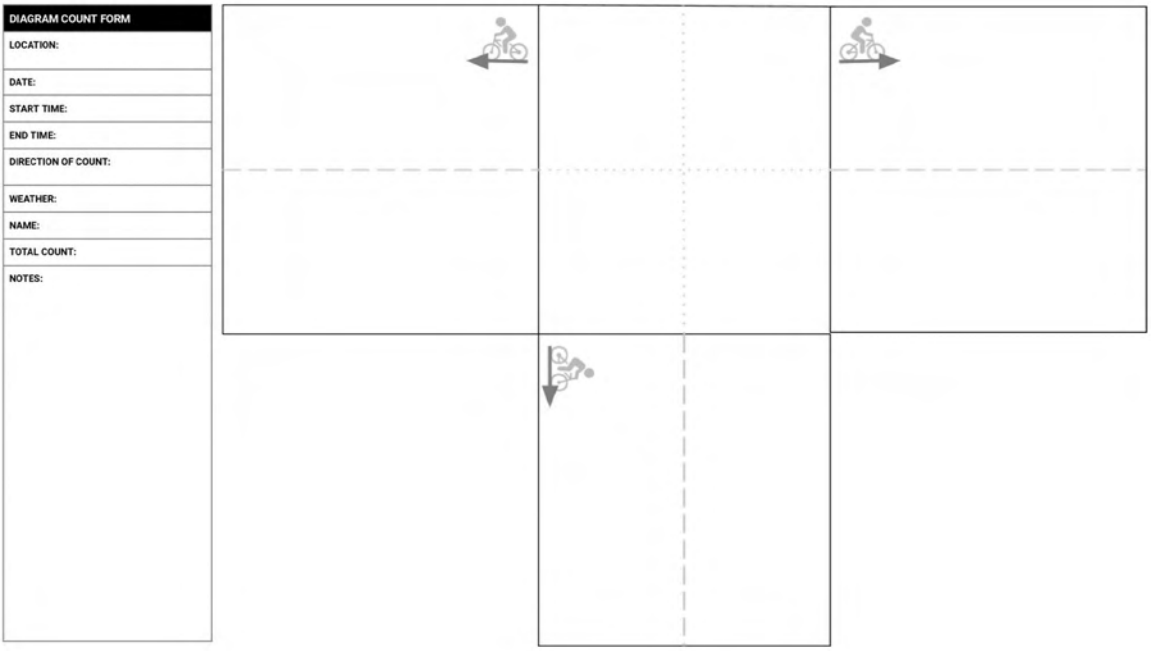
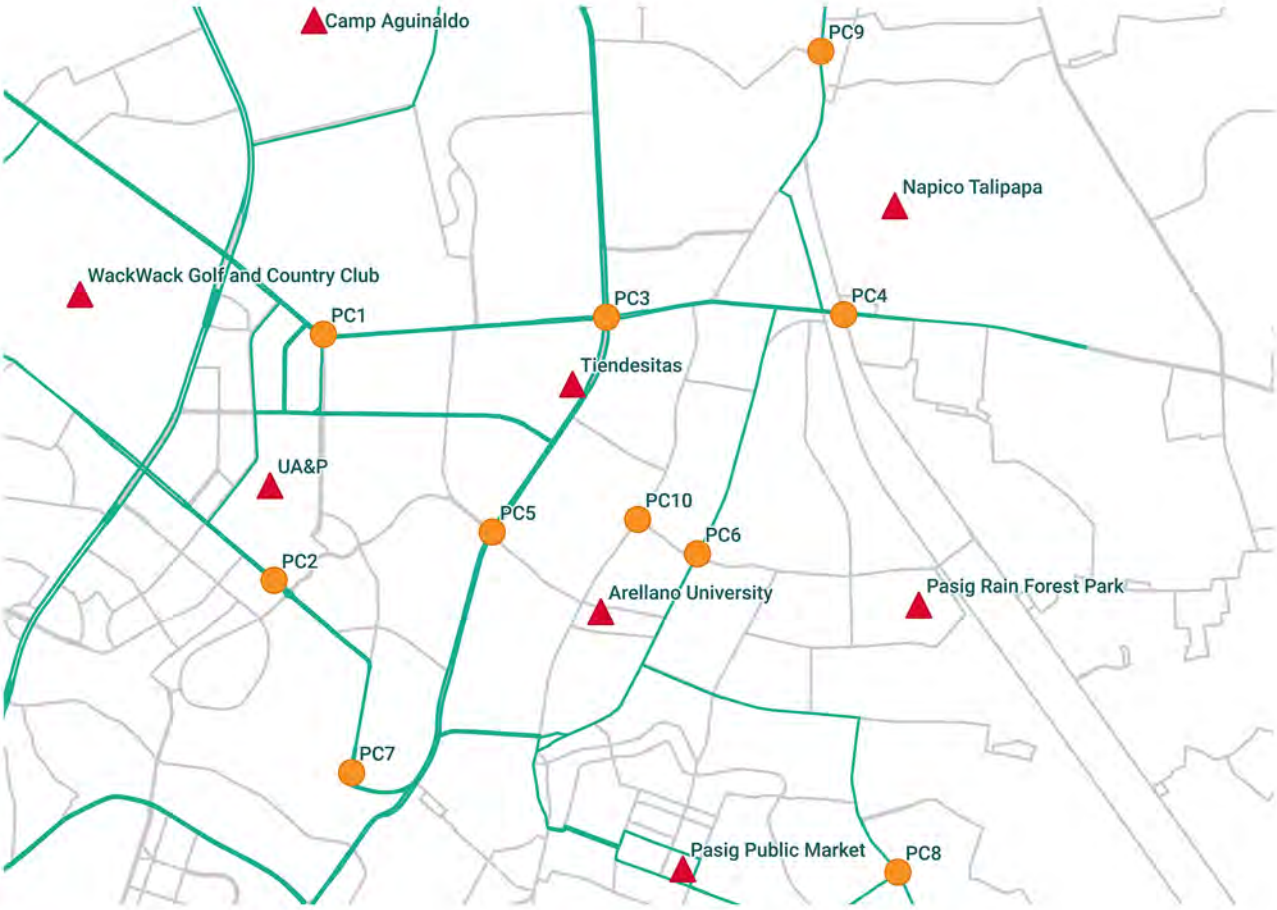


Image 4: Diagram Count Form for T-Junctions

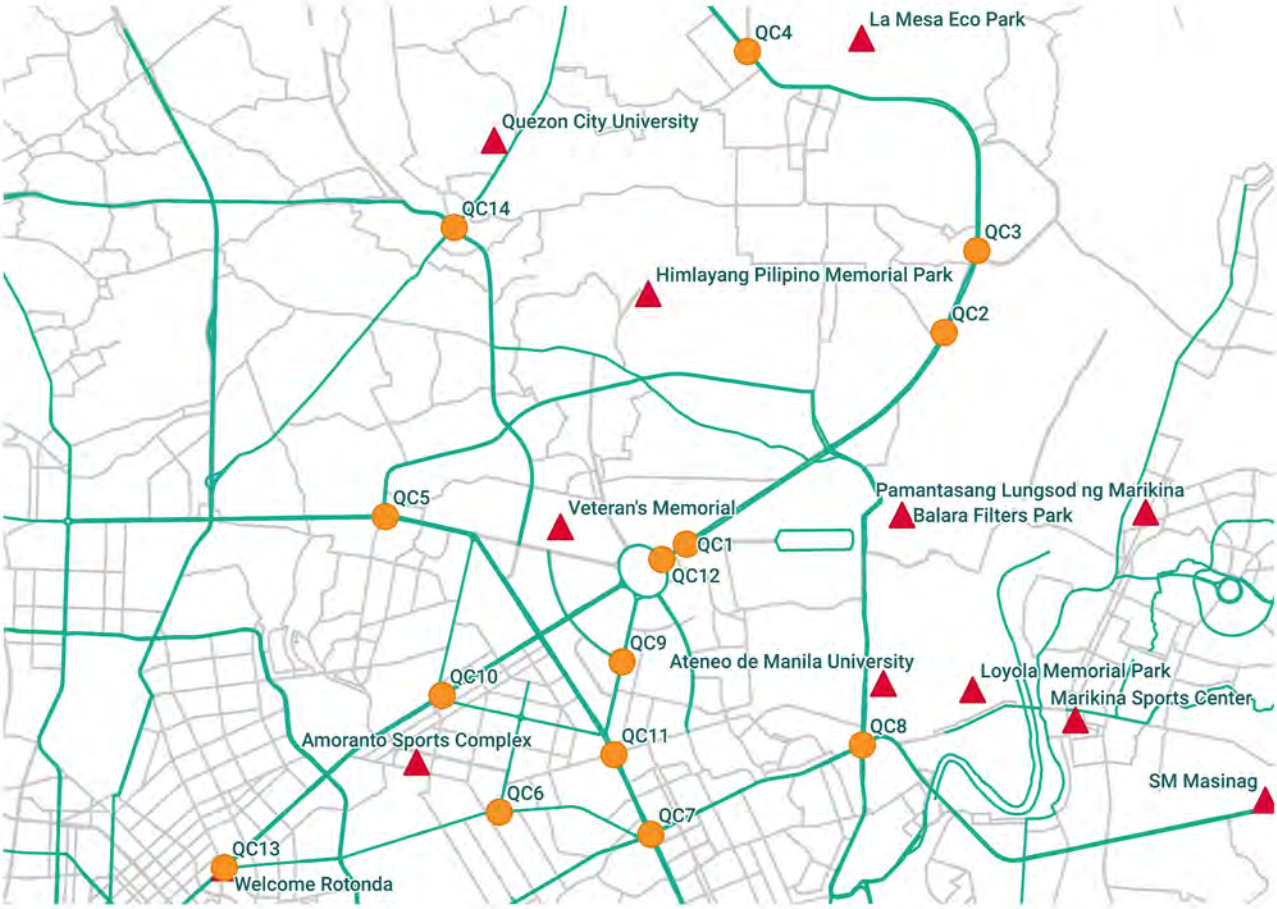
ANNEX 2: COUNT LOCATIONS

San Juan City		
#	Location	Location Type
1	Ortigas Ave corner Col. Bonny Serrano Ave, and Granada St.	Intersection
2	Ortigas Ave corner Wilson St	Intersection
3	Pinaglabanan St. corner N. Domingo and P. Guevarra	T-junction
4	N. Domingo St. corner Gregoria Araneta Ave	T-Junction
5	P. Guevarra cor. Pinaglabanan St.	T-junction
6	General Kalentong St. corner F. Blumentritt	Screenline
7	A. Mabini St. corner Wack Wack St.	T-Junction
8	Old San Juan Bridge corner Old Sta. Mesa St.	Screenline
9	EDSA corner Annapolis St.	T-Junction

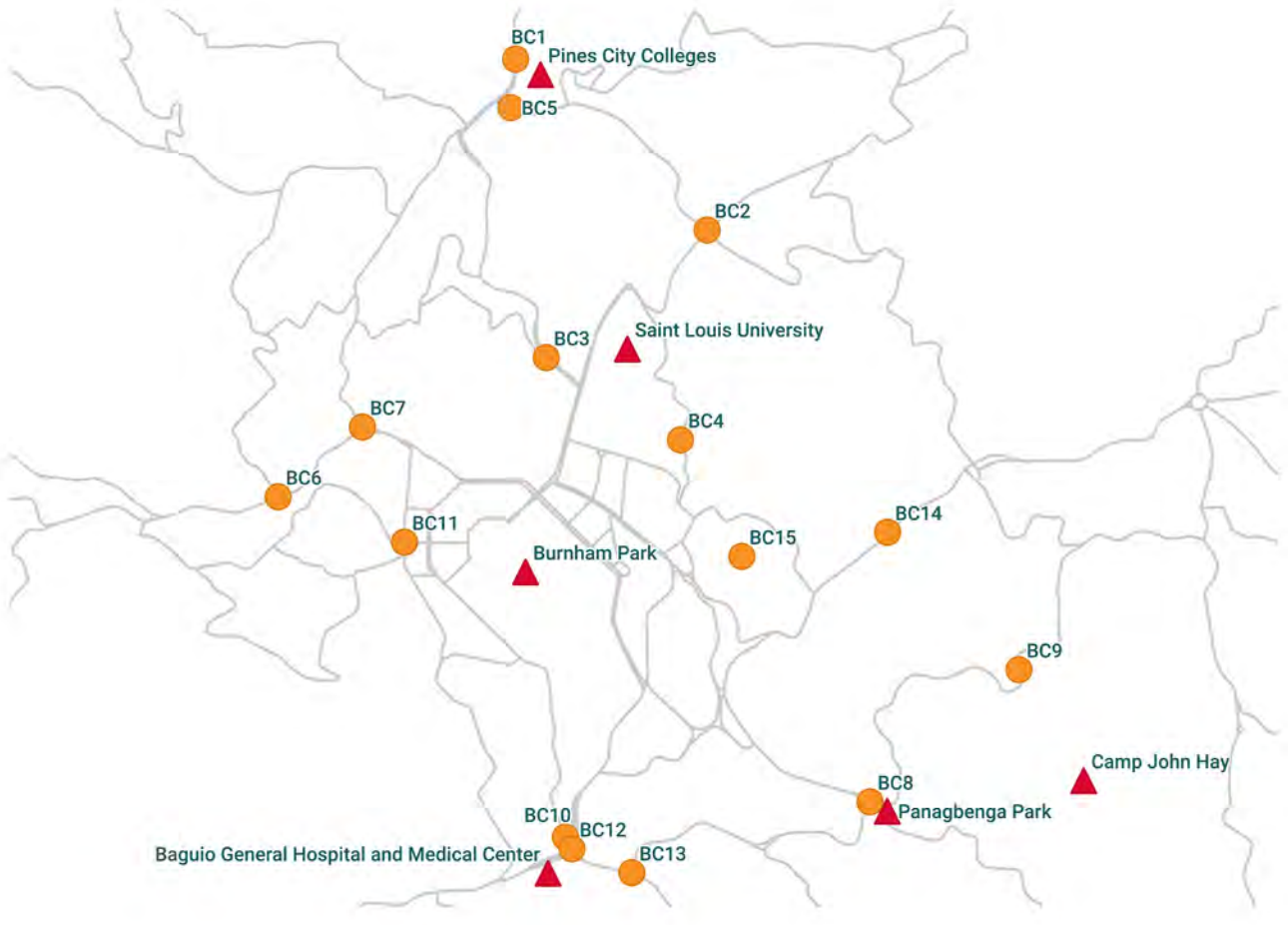
Pasig City		
#	Location	Location Type
1	Ortigas Ave - Meralco Intersection	Intersection
2	Shaw boulevard corner Meralco Ave	T-junction
3	Ortigas Ave corner C-5	Intersection
4	Eastbank Road	Screenline
5	C-5 corner Lanuza St.	T-Junction
6	C. Raymundo Ave corner F. Legaspi St.	T-junction
7	Pasig Boulevard	Screenline
8	Sandoval Ave corner Urbano Velasco	T-junction
9	Amang Rodriguez corner Caruncho Ave	T-junction
10	Dr. Sixto Antonio Ave corner Stella Maris Ave	T-junction



Quezon City		
#	Location	Location Type
1	Commonwealth Avenue - PHILCOA Jollibee	Screenline
2	Commonwealth Avenue - Holy Spirit Drive	Screenline
3	Commonwealth Avenue - Batasan Road	Screenline
4	Commonwealth Avenue - Regalado Highway	Screenline
5	Congressional Avenue - EDSA / Roosevelt Avenue	Screenline
6	E Rodriguez Avenue - Tomas Morato Avenue	T-junction
7	Aurora Boulevard - EDSA	Intersection
8	Aurora Boulevard - C5 / Katipunan	Intersection
9	East Avenue - BIR Road (Going to EDSA)	T-junction
10	Quezon Avenue - West Avenue	Screenline
11	EDSA-Kamias Rd	Screenline
12	Elliptical Rd-Commonwealth crossing	Screenline
13	Welcome Rotonda	Roundabout
14	Quirino Hwy-Mindanao Ave	Intersection

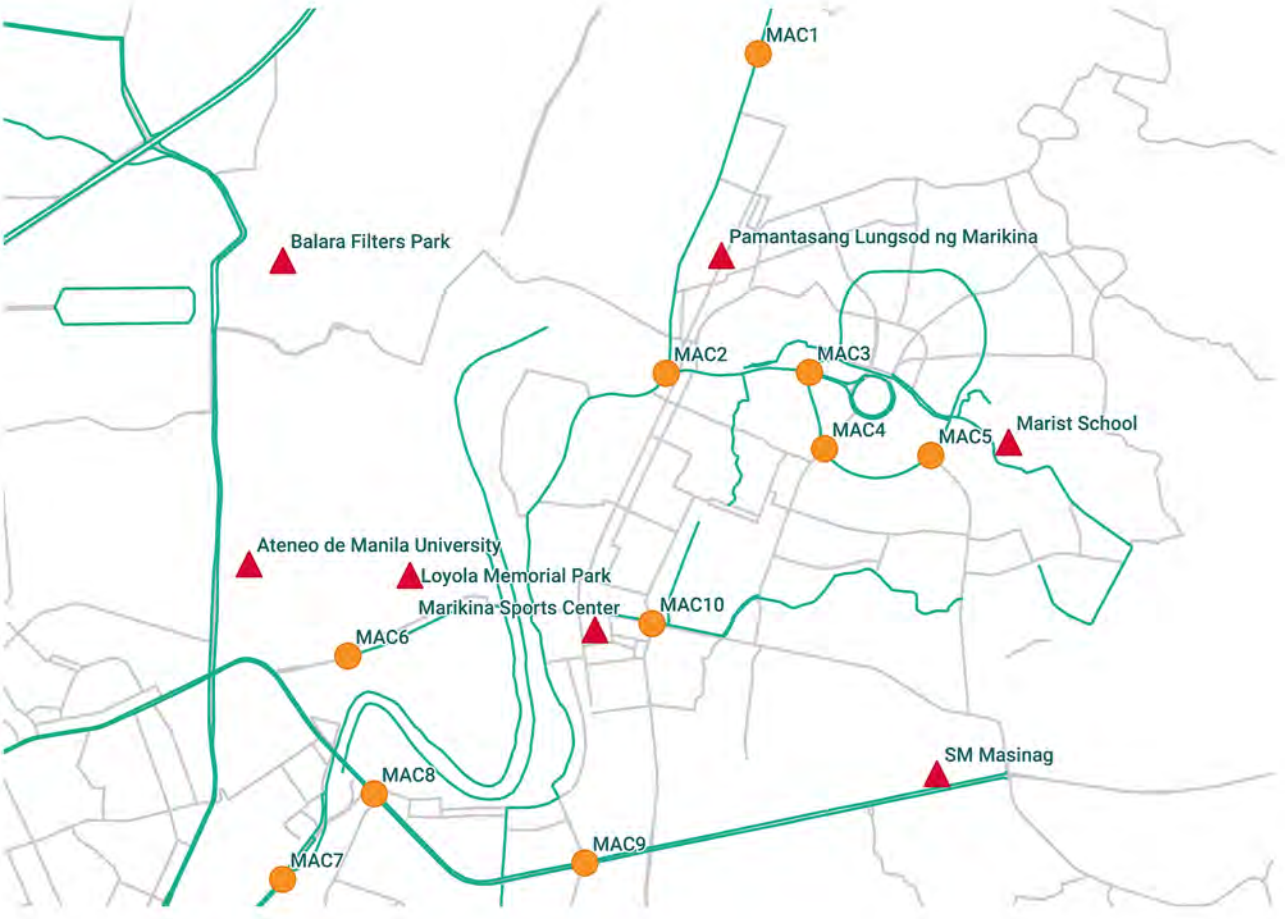


Baguio City		
#	Location	Location Type
1	La Trinidad Benguet (LTB) Entry/Exit	Straight
2	Rimando Intersection (NEW)	Intersection
3	Magsaysay Avenue Entry/Exit (NEW)	Straight
4	Holy Ghost Entry/Exit (NEW)	Straight
5	M. Roxas Entry/Exit	Straight
6	Irisan Entry/Exit	Straight
7	Bokawkan (NEW)	Straight
8	Loakan Entry/Exit	Intersection
9	Southdrive (NEW)	Intersection/Rotunda
10	Marcos Highway Entry/Exit	Straight
11	Legarda Road Palma	T-Junction
12	MCO Entry/Exit	Intersection/Rotunda
13	Kennon	T-Junction
14	Leonard Wood Entry/Exit (NEW)	Straight
15	Happy Glen Loop-BIR	Straight

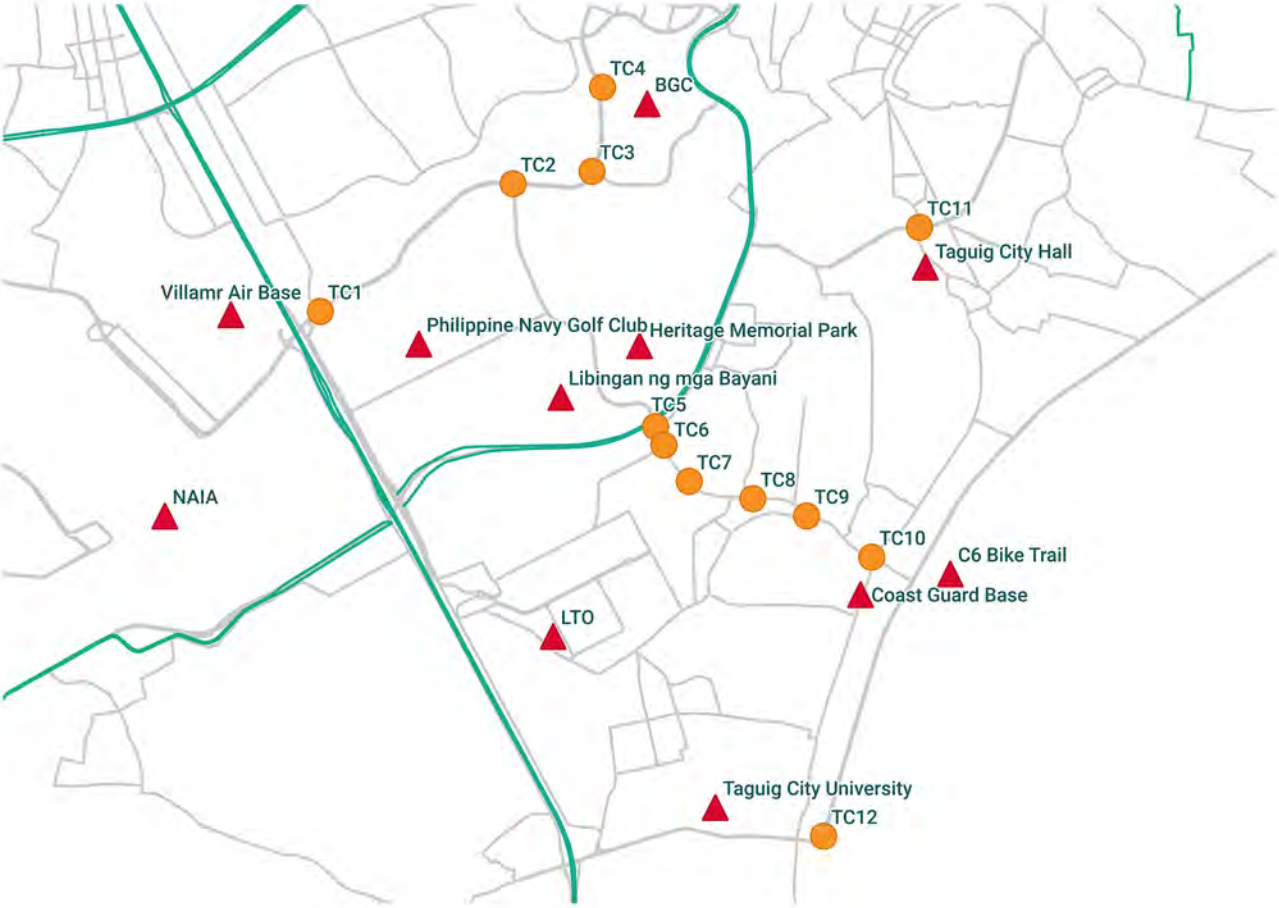


Mandaluyong City		
#	Location	Location Type
1	Maysilo corner F. Martinez St.	T-Junction
2	Boni Ave. corner Aglipay St. (San Felipe)	Straight
3	Shaw Blvd. corner Gen. Kalentong	Intersection
4	Nueve de Pebrero corner F. Martinez St.	Intersection
5	DM Guevarra St. corner Nueve De Febrero St.	T-Junction
6	Shaw Blvd. corner EDSA Crossing	Intersection
7	San Francisco St. corner Coronado St.	T-Junction
8	Pantaleon St. corner Bumatay St.	Intersection
9	Boni Ave. corner Barangka Drive	Intersection
10	Pioneer St. corner Reliance St.	Intersection
11	San Miguel St. corner Julia Vargas	Intersection

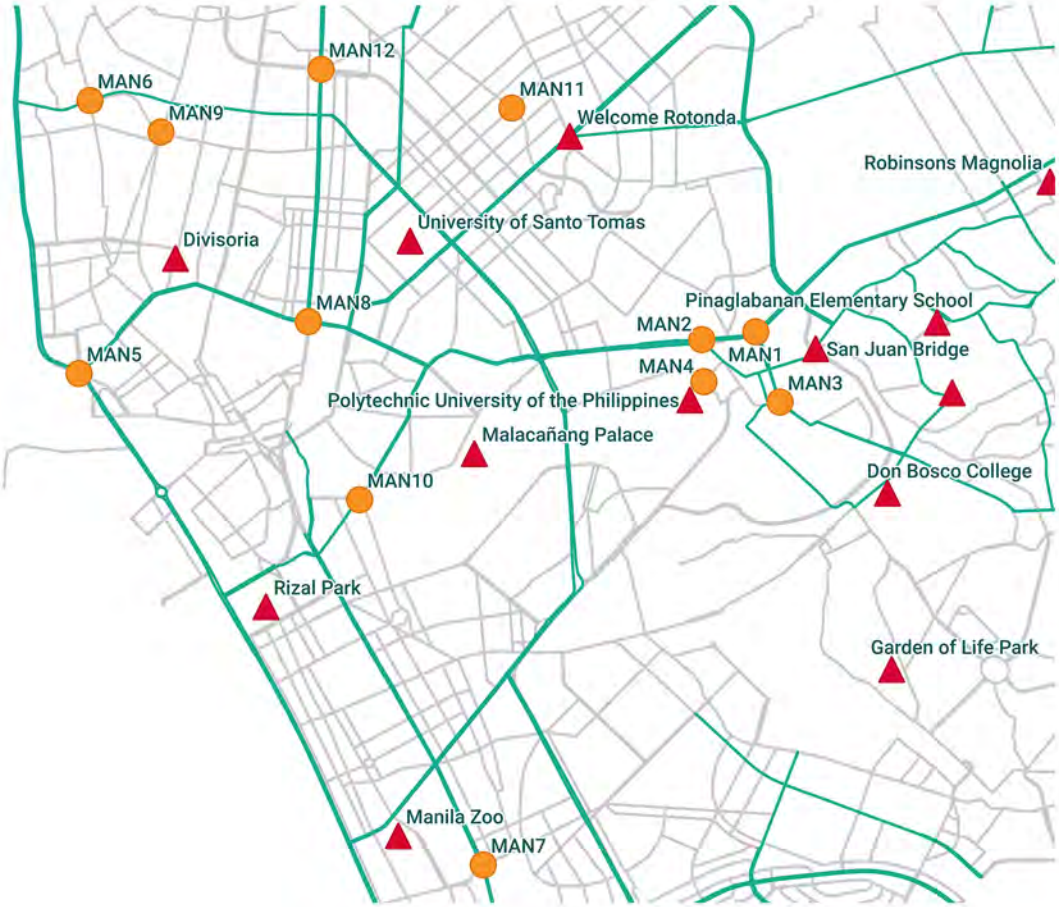
Marikina City		
#	Location	Location Type
1	J P Rizal Street corner Rosal St. (Nangka)	Screenline
2	J P Rizal Street corner Bayan-Bayanan Avenue	T-junction
3	Bayan-Bayanan Avenue corner Gen Ordoñez Avenue	Intersection
4	Gen Ordoñez Avenue corner Katipunan Street	Intersection
5	Gen Ordoñez Avenue corner Lilac Street	T-junction
6	A Bonifacio Avenue corner Riverbanks Avenue	T-junction
7	FVR Road	Screenline
8	Marcos Highway in front of SM City Marikina	Screenline
9	Marcos Highway corner Nicanor Roxas St	T-Junction
10	Sumulong Highway corner Gil Fernando	Intersection



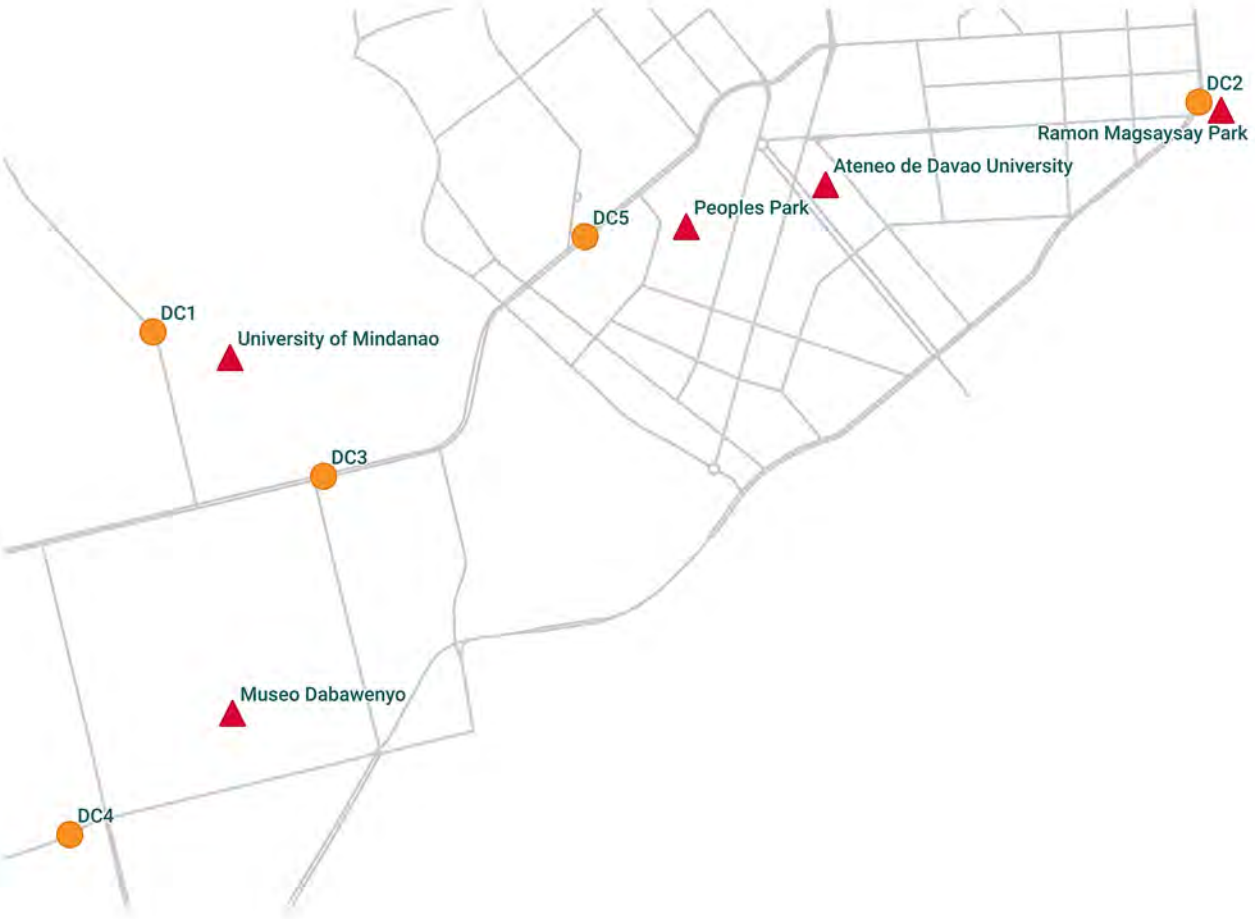
Taguig City		
#	Location	Location Type
1	Lawton Ave corner Chino Roces Ave	T-junction
2	Lawton Ave corner Bayani Road	T-junction
3	Lawton Ave corner McKinley Hill/McKinley West	Intersection
4	Lawton Ave corner 5th Avenue	Y-Junction
5	Cuasay Road corner C-5 Service Road	Intersection
6	Cuasay Road corner Veterans Road	T-junction
7	Cuasay Road corner Sto. Niño	Intersection
8	Cuasay Road corner 7th St.	Intersection
9	Cuasay Road corner MRT Ave.	T-junction
10	M.L. Quezon Ave corner MRT Ave.	Intersection
11	Cayetano Blvd (formerly Levi Mariano) corner Gen. Luna St	Intersection
12	C-6 Road (Lakeshore)	Screenline



Manila City		
#	Location	Location Type
1	Magsaysay Blvd corner V. Mapa	T-Junction
2	Magsaysay Blvd corner Stop & Shop	T-Junction
3	Baltao Intersection	Intersection
4	Anonas Street corner Teresa	Intersection
5	R-10 Delpan	Intersection
6	Capulong St. corner Velasquez St.	Intersection
7	Vito Cruz corner Taft Ave.	Intersection
8	Recto Ave.	Intersection
9	Pritil St.	Intersection
10	Ayala Blvd. (Ayala Bridge)	Straight
11	Dapitan St. corner Blumentritt Rd.	Intersection
12	Rival Ave. corner Blumentritt	T-Junction

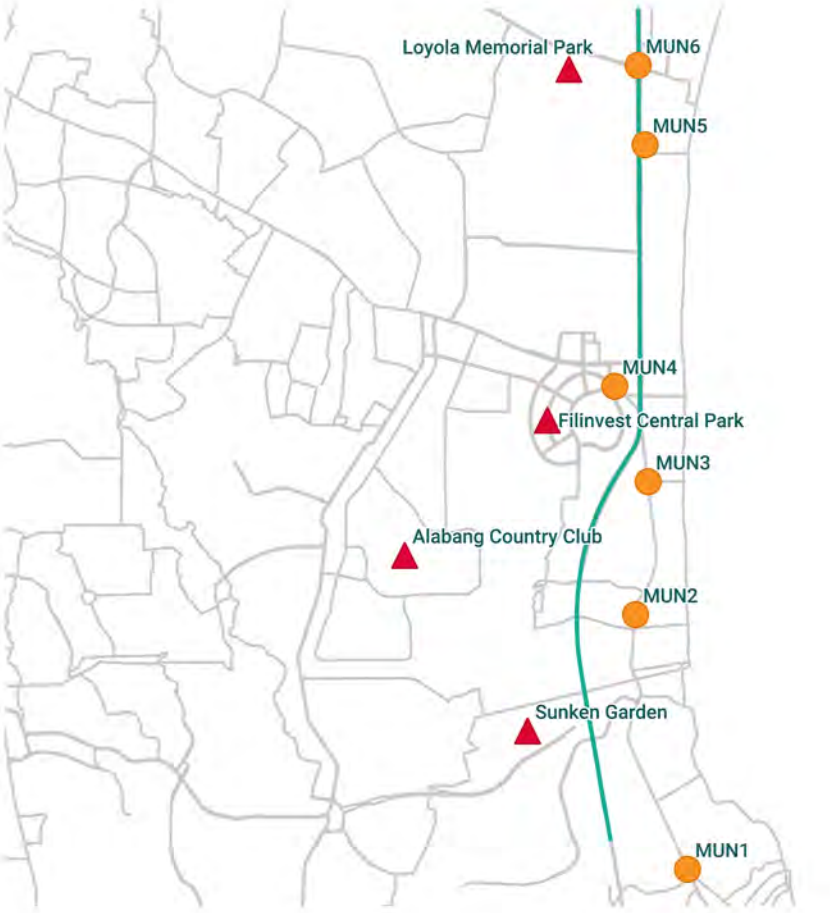


Davao City		
#	Location	Location Type
1	Ma-a Road	Screenline
2	Quezon Boulevard	Screenline
3	MacArthur Highway	Intersection
4	Quimpo Boulevard	Screenline
5	Quirino Avenue	Screenline

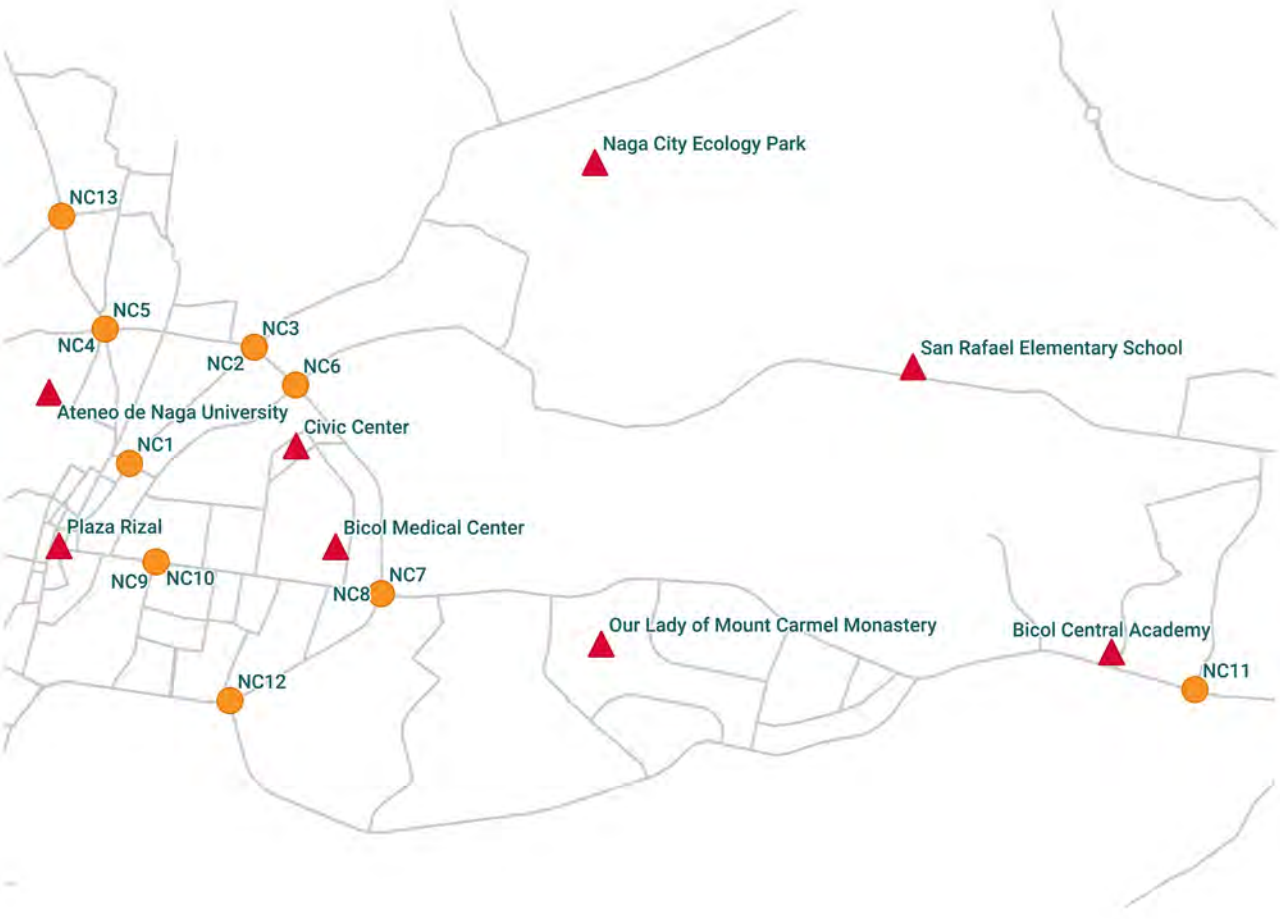


Iloilo City		
#	Location	Location Type
1	B. Aquino Avenue Ungka Intersection	Intersection
2	B. Aquino Avenue, Taft North	Intersection
3	B. Aquino UPV	Intersection
4	Baluarte Fishing Port	T-Junction
5	Arevalo Dulonan	Intersection
6	Molo Plaza	Straight
7	Mandurriao Plaza	Intersection
8	Jaro Plaza	Intersection
9	La Paz Plaza	Intersection
10	Muelle Loney	Intersection

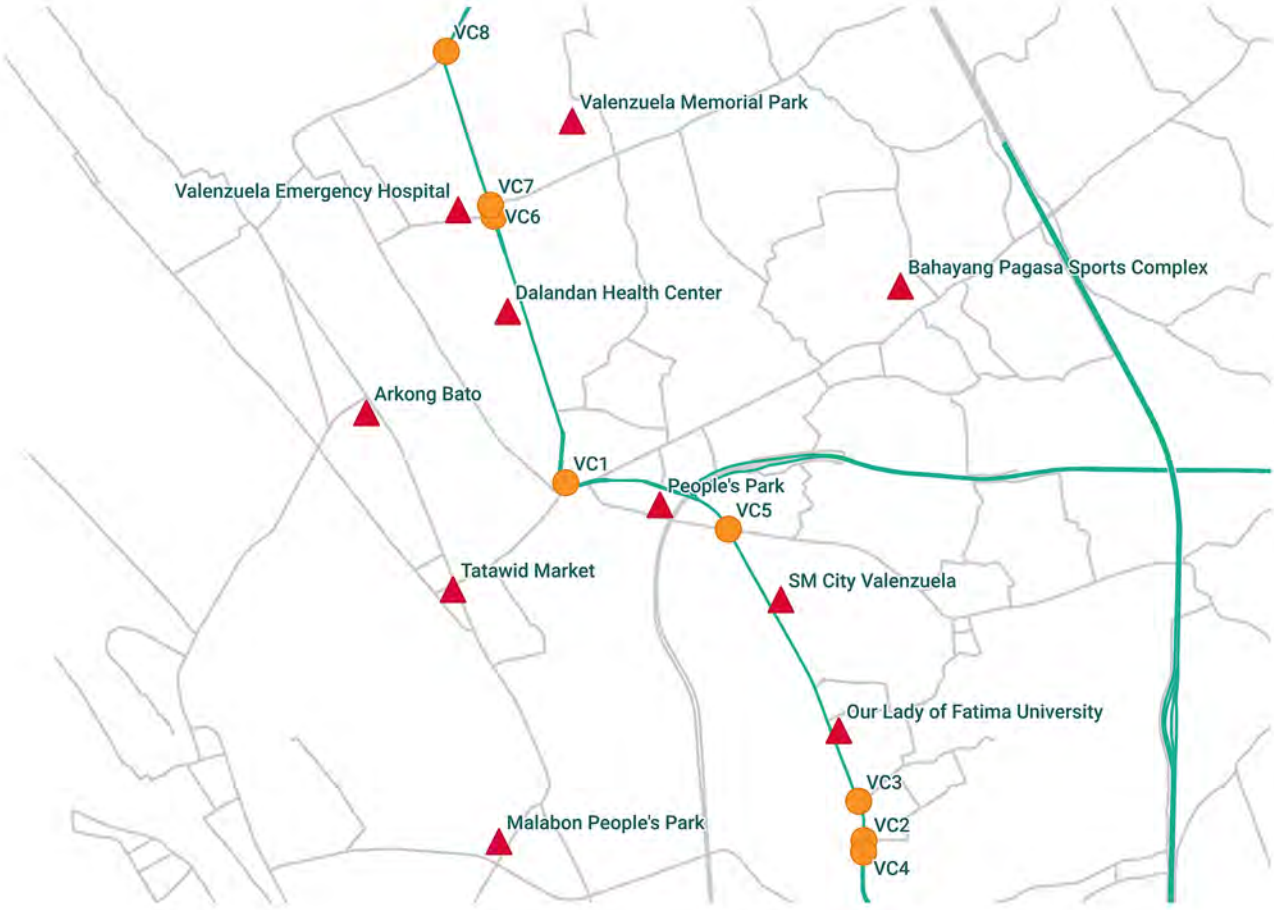
Muntinlupa City		
#	Location	Location Type
1	Muntinlupa Bridge Munti-San Pedro Boundary (Tunasan)	Straight
2	Manila S. Rd	Straight
3	Manila S. Rd corner Bautista St. (Bayanan)	T-Junction
4	South Station Corporate Ave. (Alabang)	Straight
5	Concepcion St. (Buli)	T-Junction
6	Paranaque-Sucat Rd. Sucat Interchange (Sucat)	Straight



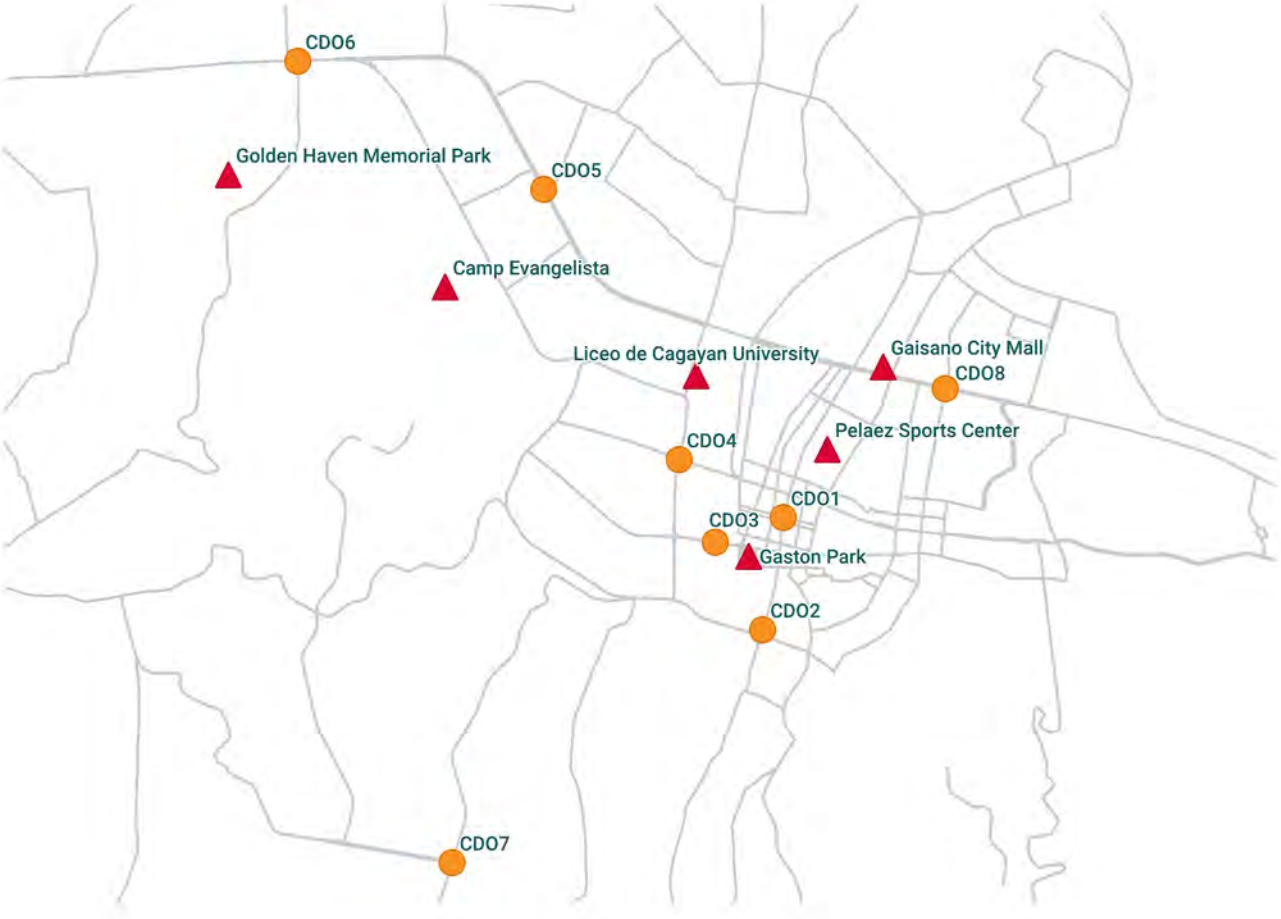
Naga City		
#	Location	Location Type
1	Palasyo-USI-Centro Square	Intersection
2	Francia-Liboton	Intersection
3	Magsaysay - San Felipe	Intersection
4	Bagumbayan-Queborac SkyCity	Intersection
5	Bagumbayan - Liboton	Intersection
6	Yellow Cab-Shell(Going to Basilica) and LRV-Avenue Square	Intersection
7	Panganiban-Diversion Rotonda	Rotonda
8	Magsaysay-Concepcion	Intersection
9	Jollibee Panganiban - SM City Naga	Intersection
10	Mariners-Centro	Intersection
11	Del Rosario-Pili Boundary	T-Junction
12	Diversion - Almeda Highway	T-Junction
13	Canaman Boundary	Intersection



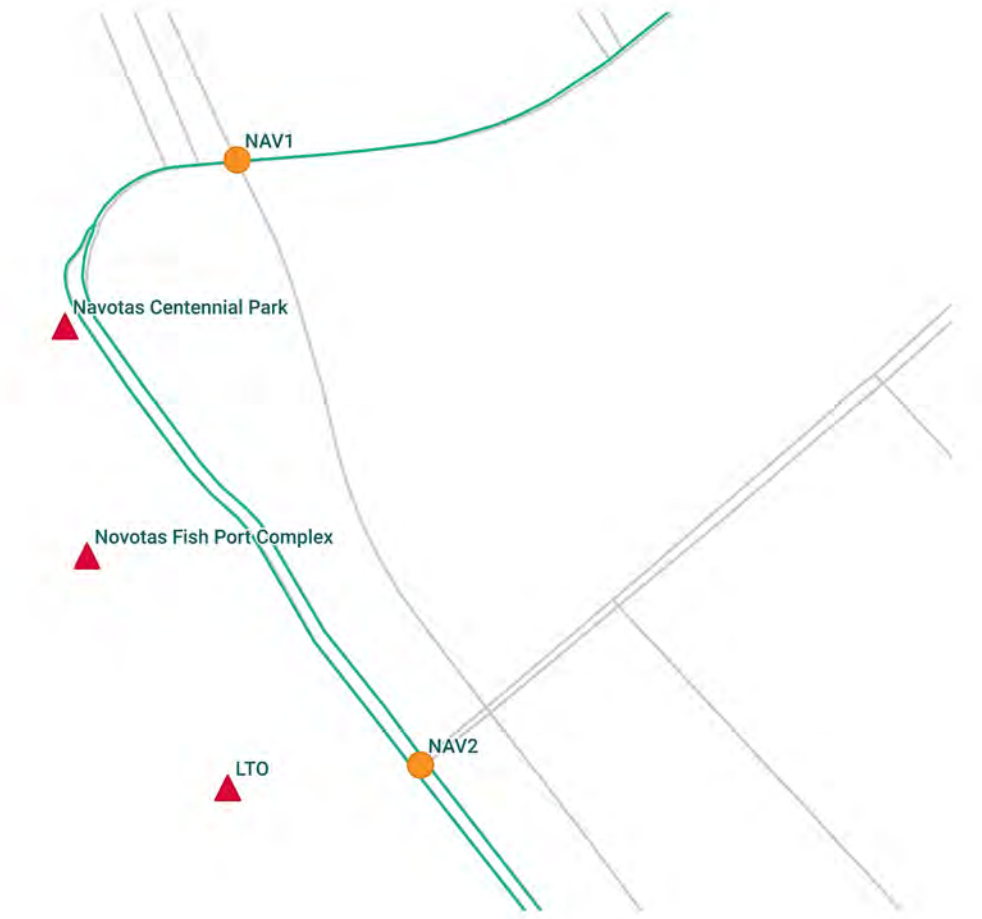
Valenzuela City		
#	Location	Location Type
1	Rincon Rd. corner Manila National Rd. (Govt. I Malinta)	T-Junction
2	A. Fernando Marulas corner McArthur Hway	T-Junction
3	Pio Valenzuela corner McArthur Hway	T-Junction
4	Tullahan Bridge	Straight
5	Karuhatan Rd. corner Manila National Rd.	T-Junction
6	G. Lazaro Dalandanan	T-Junction
7	T. Santiago corner McArthur Hway	T-Junction



Cagayan de Oro City		
#	Location	Location Type
1	Divisoria Velez (Tirso Neri St. & Apolinario Velez corner R.N Abejuela)	Intersection
2	Rodelsa Circle -Velez St.	Straight
3	Ysalina Bridge - Gaerlan St.	Straight
4	Vamenta Blvd. - JR. Borja St.	Intersection
5	NHA Kauswagan - National Highway	T-Junction
6	Bulua Highway corner Macapagal Drive	Intersection
7	Mastersons Ave. - PN Roa Ave.	T-Junction
8	CM Recto Ave. - Osmena St.	Intersection

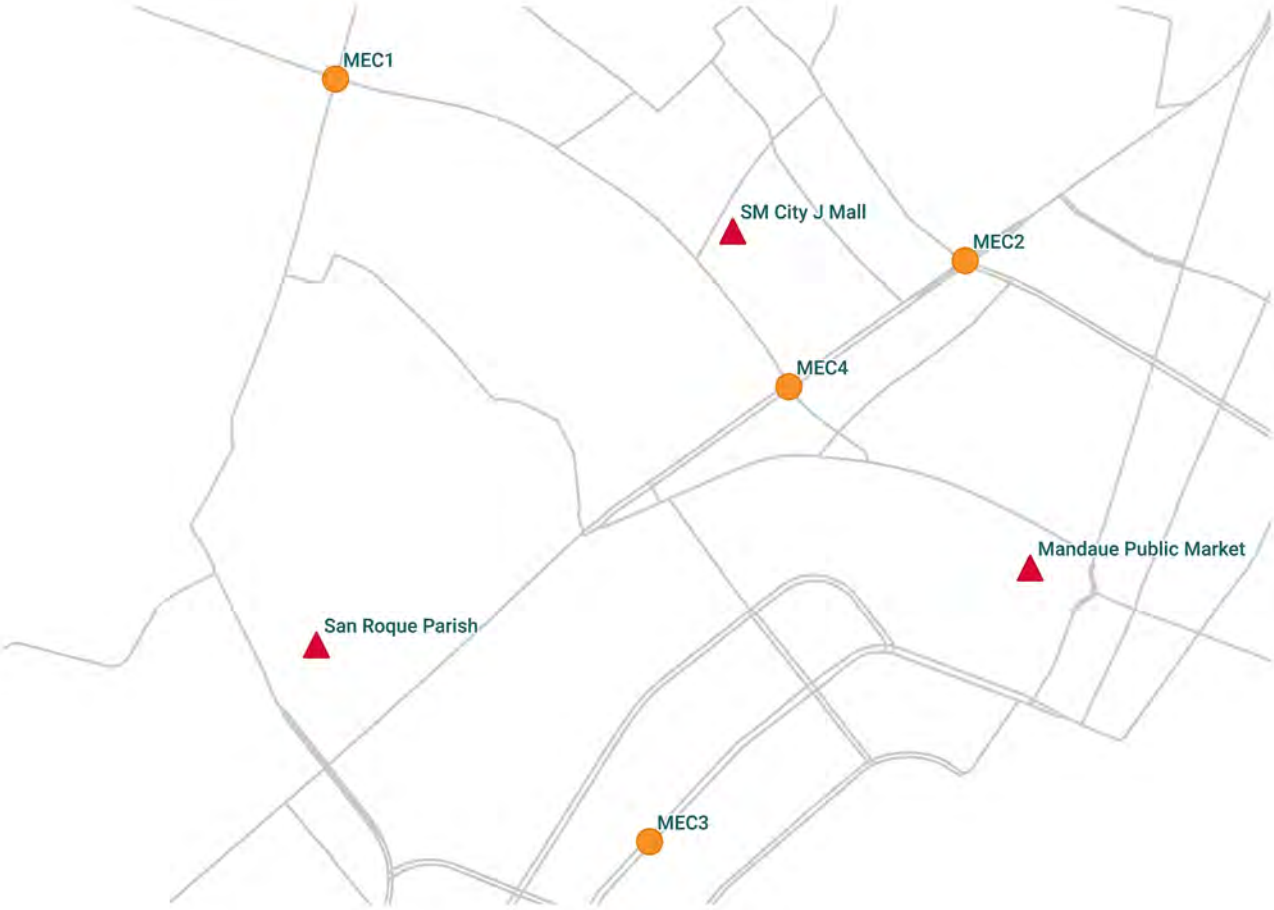


Navotas City		
#	Location	Location Type
1	M-Naval corner C-4	Intersection
2	R-10 corner Daungan St. and Lapu-Lapu St.	Intersection



Cebu City		
#	Location	Location Type
1	Colon Street	Intersection
2	General Maxilum Avenue	Intersection
3	Osemna Boulevard	Intersection
4	N. Bacalso Avenue	Intersection

Mandaue City		
#	Location	Location Type
1	Banilad St.	Straight
2	AC Cortes	Intersection
3	MC Briones	Straight
4	Ouano Avenue	Straight



ANNEX 3: CONTRIBUTORS (VOLUNTEERS)

The Mobility Awards extends its heartfelt gratitude to the individuals who have generously devoted their time and effort to conduct bicycle counts within their respective cities:

San Juan City

Andrea Mauricio
Angeli Carl Langit
Antonio Danilo
Ariel Capistrano
Ariez Capistrano
Charles Reamon
Cheryl B. Borromeo
Christianne Riche Channelle
Christopher Jay Mascariñas
Douglas A. Castor
Eden V. Calaminos
Eliazar L. Montes
Eric L. Borromeo
Eriphil Mateo
Frederick Ledda Combenido
Gal Mercado
Gilbert Maximo
Grace Marquez
Jasper V Arabi
Jhun Montes
Judith Simon Vizon
Julius I. Balanay
Julius Macapinlac
Jun Pascual
Karis Corpus
Katherine D. Carballo
Lara Melissa Cerilo
Lorena T. Beltran
Margoux Margareth Alviar
Maria Lourdes Sarmiento
Marian Jane Alumbro-Menchavez
Marie Paz
Mark Anthony T. Padil
Medel Eduarte
Mernalen Marquinez
Michael Lawrence L. Duran
Orlie C. Beltran
Paul De Silva
Ramon Domino
Regine Tejada
Reynaldo Silvestre
Rodel R. Setosta
Rolando Javeloza
Rolando Santos
Rommel Narvaez
Rubielyn Campomanes
Samuelito Sabado
Shara Aguirre
Stanley Olata
Steve Manzano
Walter Yutuc
Wendel Villegas Sr
Wilfred Ilaya
Wilfredo R. Cruz

Pasig City

Adelaida Estioco
Aileen Santiago
Allan Angeles
Allan Tan
Anna Tolentino
Aries Pascua
Bianca Fae Saladino
Bonnie Pascual
Carina Salutan
Carleen Reyes
Chezsana Gatchalian
Christine Paula Bernasor
Clifford Villas
Cris Miraran
Dennis Ferrer
Edmundo V. Sales
Edralin Santos
Eduardo Intela
Eliazar L. Montes
Elmar T. Fuentes Jr
Ernani Enrico Loreto
Fermin Danny Villa
Frederick Combenido
Gal Mercado
Hendrix Villacorte
Irene Reyes
Jeiel Aranal
Jenielyn Sulayao
Jennaleigh Angala
Jhun Montes
Jiyeong Lim
Joel Galias
Jonamie P. Gonzales
Jose Aquino Peña
Joseph Matthew Dinglasan Estrella
Katherine D. Carballo
Kenneth William Estimo
Kith Paul C. Rodrigo
Krystel Domingo
Magnolia Ancheta
Maria Lourdes Sarmiento
Maricar Villanueva
Marilou Gellido
Marites Adante
Mark Robin Macawile
Mary Ann Ferrer
Mary Grace Pastor
Mernalen Marquinez
Myla Buenaventura
Nestor A. Habelito
Niccolo Prepotente
Nick Ferreras
Oscar Nava
Pablo Almazora Jr
Peter Cas Caasi
Rebecca Puso
Regine Tejada
Reilene Abion
Reynan Solomon
Rio Rose Ferrera
Ritchie S. Credito
Riza Delos Santos
Roan Vincent A. Junio
Roel John Aquino
Val Binero
Walter Yutuc
Wilhmar Lucaa
Wilson
Yosalia Diaz
Youngseo Park (Aspyn)

Quezon City

Alexis Bon
Allan Losmelendrez
Ana Raquel G. Rioflorido
Andrew Pinlac
Andrey Manabo
Angeli Carl Langit
Anica Zalazar
Ayra
Bernard Cortez
Christian E. Agne
Christopher Cruz
Clarisa Mendoza
Daniel Austria
David Brian Valladolid
David Regacho
Davs Austria
Dhan Navasquez
Dino S. Peralta
Douglas Castor
Elena Pinlac
Eliazar L. Montes
Erandy A. Cator
Ernison Sobritchea
Fhely Alawin
Florince
Frederick Ledda Combenido
Gabriel Peralta
Gabrielle Franz L. Francisco
Gal Mercado
Geronimo A. Cuadra
Heinrick Saringan
Homer Dugenia
Ian Glee Canzon
Jayson Madrelejos
Jenny Rose
Jeza Rodriguez
Jhun Montes
Jilbrix Kyle Magno
John Nicolas P. Montalvo
Johncarlo R Cuadra
Jonest Rovy Obrique
Joseph Eusebio Ayunon
Karen Escalabanan
Karl Marlo Gonzales
Kenneth William Estimo
Lloyd Denniel Preña
Ma. Theresa Despabiladeras
Marcelino I. Padillo Jr.
Margie ReyesMaria Concepcion
Songalia Calawod
Marian Jane Alumbro-Menchavez
Marivic
Mary Ann Gervacio
Mary Jane Gregorio
Maryel Rugas
Melanie B. Suico
Melody Rodeo
Mia Francisco
Micah Verzola
Niccolo Prepotente
Nick F.
Nicole Anne Cobarrubias
Patricia Genevieve Delos Santos
Perlin E. Bon
Phoenix Nicanor
Raymundo Willama
Reynald M. Lago
Richard B. De Villena
Richard James Mendoza
Nicole Anne Cobarrubias
Patricia Genevieve Delos Santos
Perlin E. Bon
Phoenix Nicanor
Raymundo Willama
Reynald M. Lago
Richard B. De Villena
Richard James Mendoza
Ringo Danao
Rodel
Rubielyn Campomanes
Saymart B. Suico
Stheven Charles Difuntorum
Susana Tabianan
Van Arnon P Pascual
Walter Yutuc
Wiljohn B. Suico
William L. Cabahit
Wolfgang Andem
Yolanda B. Narral

Marikina City

Angelo Lino D. Reynes
Anthony Diaz
Ariel Capistrano
Ariez Capistrano
Arnel Manangat
Benjo Banabe
Bernard G. Cortez
Bonifacio Sol Rabino Jr.
Boy Panaligan
Carl Efrhien Aujero
Christopher C. Isaac
Clarisa Mendoza
Cris Taduran Pecundo
Cristina U. Samson
Edgardo Dolz
Eliazar L. Montes
Eric Q. Abando
Felisita Sales Alawin
Frederick Combenido
Gabrielle Abrahan
Gal Mercado
Garhly Glovo
Hilario Centeno
Honesto V.Ranada
Jhoedelyn Bautista
Jhun Montes
Joseph Embile Gascon
Kath Gasmen
Larry Remolano
Lars Cabria
Lemule Lawan
Loreto Regorgo
Manuel A Villanueva
Marc Reyes
Marcelino Padillo Jr.
Maria Alelie Tunay
Marvito Bentillo
Mhark Jaso
Michael Anthony Reyes Dolz
Olive Cruz
Ompong Solidarios
Patrick James Lumanta
Patrick John C. Cirilo
Peter Mallonga
Pioben B. Basabe
Ramiro AndreS
Ray Samson
Raymond Manangat
Relly Estanislao
Renald Santos
Renato M. Robles
Richard De Villena
Ronald Corpuz
Rosali Salamida
Rowena Buenaventura Sapun
Teodolo Mantizon
Vladimir Chavez Hugo
Walter Yutuc

Taguig City

Armando Dayao
Christian Ongay
Christin Maltu
John Andrew Bernabe
John Rey Deliva
Jovito Bautista
Kenneth Marcelo
Kenneth Marcelo
Richard Valler
Ruel Arroza
William Once
Yves De Leon
Jonathan Quilatan
Jonathan Quilatan
Angelo Ramirez
Angelo Ramirez
Benigno Catando
Christian Maltu
Edgardo Dy
Eduard Cruz
Efrel Bais
Fernando Tolosa
John Andrew Bernabe
John Rey Bernabe
Jonathan Fajardo
Niño Fajardo
Richard Dellosa
Roberto Remillo
Ronnel Rossal
Sidrick Sergio
Victor Dio
Yves De Leon
Custodio Raz
Donald Ferrer
Eleonor Salde Gulle
Eliazar L. Montes
Gio Paolo Espital
Karl Darwin Legaspi
Karl Darwin Legaspi
Lorna Torralba
Mariel Jose
Melchor Christopher Quinto
Nonato Norman
Pearl Iris L. Clemente
Renzo Acibes
Reynaldo Sorio Brito
Rodel D. Aguilar
Romeo Tan Jr.
Sandre Lee Roque
Sherwin Sinola
Sunshine Barber Torillo

Polytechnic University of the Philippines

Alliah Louise Bautista
Alyanna Romina Santos
Angelo Hufancia
Apple Joy Buen
Catherine Cortez
Darlene Loren Tomenio
Denisse Monica Dalangin
Dharlyn Grace Beldia
Diosdado Franco
Francia Bacula
Gerald Lorono
Jason Benedict Alvaran
Jescy Paulo
Jimmy M. Fernando
Joey T. Danting
John Cerid Rellama
Kristal Joy Andres
Maria Rocer Manapul
Marvick Joshua Cipriano
Monarc Ibasan
Nicolas Mallari
Nonanetter Dorin
Patricia Mae Pilarca
Precious Grace Manucom
Richardo Ramos
Rimando Felicia
Rovelina Bucao-Jacolbia
Roz Ann Alojado
Ryan Latim
Sean Kyle De Leon
Shane Brian Dorol
Stanley Gullab
Suyen Li Camba
Viencares Gacgacao
Werllie Bueno

University of Mindanao (Davao City)

Adrian Josh O. Peña
Aileen Mae Mundas
Anthony Estimera
Audrin Cesar M. Luyao
Bernhesel Rosello
Camilo P. Quibod
Cheryl-Lyn P. Tobio
Clark Ken G. Cutamora
Donna Bell P. Bugas
Emmanuel Marx L. Cuizon
Ezekielah Feliz V. Recentes
Francis Jon S. Locsin
Geralene G. Atchas
Grazel Blaize P. Abing
Iluminado Quinto
Jamaica Zyrene Ansale
Jescel Mae S. Epili
Jhanna Grace C. Bisnar
John Paulo M. Aguado
Justin Paul Hibionada
Leonardo C. Comargo
Shayne Caryl Furog

Iloilo City

Alain Aurelio
Alan Arangis
Ann Jennet Hitones
Arcy Subibi
Arnold Sabio
Christopher Jurilla
Desie Jan Magbanua
Emelinda Armada
Emmanuel Songheng, Jr.
Evangeline Galfo
Franze Stephan Roy
Johann Mayer
Jan Michael Lesaca
Joshua Rey Recanas
Karen Mae Cabrera
Karl Ace Villavicencio
Lauro Palmares, III
Leon Alexander Brotario
Maria Elwyana Jara Isulat
Mark Aresteo Esquera
Marvin Recanas
Mikhail Sorilla
Nadelle Tad-Y
Ramel Babac
Rene Rillo
Reynald Mendoza Garcia
Roberto Dumanil
Rowell Rodriguez
Sanni Cerbo
Sweet Marvelous Senodo
Thomas Demonteverde
Tyrone Bartolome
Vincent Rey Recanas

Muntinlupa City

Albert Candy
Arciaga Errol
Armani Chanel Engles
Arnulfo Arciaga
Ceasar Mark Entila
Cesar Entila
Chelsie Jumawan
Christopher Claude
Daisy Mae Birog
Elizabeth Dasal
Errickson Murillo
Ferdinand Lopez
Fraga Jerry
Fritz Gerald Ojeda
Gerry Dullavin
Isaiah Zachary Engles
James Warren N. Figueroa
Japhet Jaire Jahn Panang
Jayson Villeza
Jefferson Cabalquinto
Jerome Antonio Pimentel
Joey P. Cal Jr.
Jonathan Gonzales
Jozzel Caguing
KC Solomon
Kendrick Faronilo
Kent
Lane Sawc
Lane Sawc
Leilani Gutierrez
Maricel Meneses
Mitchel Balana
Nerio Busis
Pablito Del Rosario Billiones
Radley Navarra
Reynaldo Silvestre
Rina Marie Fiestada
Robert Seraspe
Rochester Mapalad
Rodel Aguilar
Rodulfo Calalang
Rosendo Vibora
Rowell Patuga
Ryan Torres
Samuel Reyes Valenzuela
Vhonne Ashley Barrios
Yecil Mae Bausa

Naga City

John Paul Sabater
Elvin Corpuz
Paul Delos Santos
Alyssa Labrador
Saludar, Paulo
Joross Dela Torre
John Roxas
Moroda, Carlo
Puro, Mike Andrei
Natahiel Banas
Jurvert Roxas

Baguio City

Aldrin Dacanay
Allan Manalastas
Arnel Trinidad
Asha Vallador
Benjamin Fernandez Soriano
Bladimir N. Pelera
Bonifacio J Barros
Brent M. Cabbigat
Budz Lazaro
Camille Wacnagan
Charleston Lagadan Cobcobo
Chase Domingo
Chris Pagulayan
Djiennivi Orsal
Elvis Gonnad
Emhely Eriel Palor
Esmeraldo Delizo Orsal
Eugene Valbuena
Frederick
James M Guzmana
Jarex Tabangin
Jemart E Apa-An
Chase Domingo
Chris Pagulayan
Djiennivi Orsal
Elvis Gonnad
Emhely Eriel Palor
Esmeraldo Delizo Orsal
Eugene Valbuena
Frederick
James M Guzmana
Jarex Tabangin
Jemart E Apa-An

Jemwell S. Ong
Jhazeel Cereno
Jhelyn Pantaleon
Joebel Gurang
Johanna Andrada
Jose Olarte III
Joseph Trinidad
Josephine Rance
Joshua Carantes
Lawrence Aviles
Leenard Paguio
Lhoyd P. Lagmay
Louie Kris Lipit
Louie Kris Lipit
Lovely Hope M. Donio
Luis Estepa
Marcel Badua
Matthew Von-Arbie B. Buhayo
Maybelle Reglos
Melquiades (Mhel) A. Pacada
Mheeka Rose G'Lyn Orsal
Migz On-Onod
Mike Atijera
Milagros B Pascua
Napoleon P. Villasper Ii
Neil Clark Ongchangco
Neil Patrick Tayoan
Nicko Corpuz
Paul Rillorta
Pedrona Jaden Chreon
Peter P. Deaño
Richard Bulong
Roel Cereno
Samson Atijera
Sandra Bulong
Tito Quinsayas Sr.
Wayne Emmerald Quitaleg

Valenzuela City

Airene David
Aldrin Sepagan Obis
Analiza P. Alolor
Anthony Arcilla
Cadz G. Guanseng
Calinica De Guzman
Charisma San Juan
Clarissa Mendoza
Corazon Salugao
Danilo B Iumadilla jr
Dhan Joshua Navasquez
Dhan Joshua Navasquez
Dolbenz D. Caburnay
Edilijohn Isiah Dela Cruz
Edwin Alolor
Eliazer Montes
Eva Malunhao
Frederick Combenido
Gal Mercado
Genaro Viado Santos
Gerick Griffin S. Galgo
German Endona Jr.
Janelle Pascual
Jazline Dela Cruz
Jazline Dela Cruz
Jhun Montes
John Henry G. Pascual
Jonathan Pascual
Josephine Ancheta
Kaila Marie Arguelles
Kaila Marie Arguelles
Lanie Cuniano Pascual
Ma. Maricel M.Osmillo
Ma.Corazon Salugao it
Manuel Dangla
Marc Clarence A. Sangcap
Mari Clarenze Alolor
Maria Criselda Puertas
Alejandro
Maricar Dela Cruz
Maricar dela Cruz
Mylene Mesina
Ner Santos
Nezalyn Rulona
Rejie Salazar
Reymart Francisco Reyes
Rhodora Segovia
Rick Arcilla
Rowena P. Jumao-as
Sally Nivera
Sonny Ramos
Sun Roland Violenta
Walter Yutuc
Ysabelle Palima
Ysabelle Palima

Cagayan De Oro City

Abigail Marie B. Perocho
Alejo Olano Iii
Elizarde Gabayan
Gil Pacturan
Ian Brylle G. Callo
Ivan B. Dugenio
Jacob Jose P. Fuentes Iii
Jan Rupert I. Alfeche
Jasper Jacildo
Joeric L. Saladas
Johanna Faye O. Gilles
Jojo Saladas
Jonathan Pascua
Ma. Cristina Sabanpan-Butron
Madina D. Bucay
Meganne G. Ladao
Melrose Rae T. Inso
Milbert Tata Montebon
Richard Badlisan
Rodrigo A. Mabelo Jr
Saniell Niño B. Waminal
Trisha Joy P. Aniversario
Willes Niño S. Hong

Navotas City

Maricar Dela Cruz
Corazon Salugao
Ron Bersabal
Sally Nevera
Eva Manluhao
Reynaldo Silvestre
Ronaldo Atadero
Marcelino Padillo Jr
Fread De Mesa
Johnny Guarin
Jonas Almendrala

Manila City

Adrian Reyes
Allan S. Laconico
Alyssa Darunday
Angelica Kate Valencia
Artadi M. De Castro
Charles Jefferson D. Crisostomo
Cheng Hai Chung
Christian Garcia
Corazon Macalalad
Daysilyn De Paula
Delia C. Vitug
Desa Grace S. Salapantan
Dhan Navasquez
Earl Jerald Mirador
Edwanrd John O. Quintana
Eva Malunhao
Evander C. Monsanto
Gemmalyn B. Sarmiento
Gerald Brylle C. Samonte
Guevarra, Mariel Ann
Harvy D. Magante
Honey Lee M Ferrer
Jacildo, juliana
James Warren M. Oconer
Jan Angel Carreon
Jay M. Payabyab
Jean-Kassel Reyes
Jefferson T. Tee
Jeffrey G. Martin
Jennielyn Rose Y. Aggalut
Jenny P. Singsing
Jerico N. Florentino
Jerome Rodriguez
Jhuvan joves
Jimbert D. Gallano
Jimmuel Buendia
Joebeth Manuel
Joel D. Pagal
John Arnold Noda
John Carlo D.V. Rogacion
John Carlo D.V. Rogacion
John Christian Santos
John Lloyd R. De Vera
John Paul Oledan
John Reynold Asamata
John Rick Dela Cruz
Jon Bonifacio
Jose Lening
Julius Balanay
Jun Jun Kasir
Kabigting, grezalyn
Lenie Jane Y. Neri
Ma. Corazon Salugao
Maizen Genesis P. Galvez
Maria Chinly T. Enriquez
Maricar dela Cruz
Marion Camille Sumang
Mark John V. Resurrection
Marvin G. Sarmiento
Mhaylyn B. Layog
Michaella Jae Buen
Mikaela G. Esguerra
Nina Thalia Balais
Paolo Reyes Tumbokon
Princess Gaad
Ramon Domino
Raynold Agamata
Regine Alegre
Renzel Ian C. Alega
Rheinylyn D. Rizo
Richard L. Dichoso
Rochel S. Luason
Roland Santos
Ron Bersabal
Ronanjay Garcia
Roselle A. Garcia
Rycel Kyla Tirona
Sally Nevera
Stephanie J. Adanza
Trishia Bomitivo
Veneza Flores
Zaravel Gonzaga

Mandaue City

Alberto Jr. Mara Mara Cuizon
Alex Arda Lugto
Allan Borromeo Pasahol
Ana Maria Salarde Dela Cruz
Annalisa Rojo
Arnold Malig-O
Athena Duran
Beverly Albano
Camilo Villar Cristabas
Celedonia Daniot Tariman
Charlene Canete
Cherry Gabas Taborada
Chris Mathew Jugan
Cristian Delostrico Gerona
Efren Jr. Galindo Ricaza
Ernesto Jr. Llenes Del Castillo
Ezra Ngopangop Tid-Ong
Hyll Retuya
Ian Desamparado Desuyo
Jonathan Israel Cabatingan
Jorge Morgan Albano
Jose Rodelio Niala Empic
Lorenzo Jr. Soco Jugan
Mark Ivor Pranillos Cortes
Marlo Ocleasa
Mc Gregor Zafra Ejares
Michael Anthony Cruz
Name
Patricia Tabuac
Robert Cinchez Maani
Rolando Templado
Rommel Judilla Mayol
Ronald Ouano Bercede
Ronie Ananag Buhawe
Rumil Trangia Aquilla
Sarah Bihag Wenceslao
Sherwin Ramirez Macalipay
Vince Neil Cabando Prada
Wolfram Ordano Jumaquin

ANNEX 5: DEFINITIONS AND KEY ASSUMPTIONS FOR BIKE COUNT DATA ANALYSIS

Unit	Definition	Assumptions
Total Number of Cyclists	Total number of cycling-trips counted per city across all locations over a peak four-hour period.	
Equivalent Number of Cars/Motorcycles on the road	Number of passenger car/motorcycle trips if all cyclists counted changed their trip mode to a car/motorcycle.	One cycling trip is equivalent to one single occupant passenger car/ motorcycle trip, given the individual nature of transport cycling trips.
Estimated CO_2 emissions saved	Carbon dioxide tailpipe emissions avoided from an equivalent number of passenger car trips per kilometer traveled.	A tailpipe emission factor of a typical passenger vehicle of 400 grams of CO_2/mile (248.55 g CO_2/km) traveled was used based on a U.S. Environmental Protection Agency (EPA) Fact Sheet, with quantities converted to standard metric units.
Estimated fuel cost savings	Monetary savings from fuel expenses avoided by an equivalent number of passenger car trips per kilometer traveled.	Average fuel consumption values were assumed from the following common vehicles: Toyota Vios = 0.065 L/km Yamaha NMax = 0.022 L/km Average Gasoline Price for 2023 = 55.2046 PhP/L
Estimated health cost savings	Monetary savings associated with health costs avoided due to improved physical fitness from cycling activity.	Health cost calculation methodology was adapted from the "Bikenomics: Assessing the Value of Cycling in the Philippines" (AltMobility PH, 2022) which states PhP 0.30 potential health cost savings per kilometer of cycling activity, with values adjusted for inflation.
Estimated Road Capacity of Bicycle Traffic	Standard highway capacity taken by bicycle traffic in terms of Passenger Car Units (PCU) which are standardized highway capacity units considering the typical size of a car.	A PCU value of 0.2 was assigned for pedal cycle traffic according to the Transport for London Traffic Modelling Guidelines.

Unit	Definition	Assumptions
Peak Hour Period	Time of day where measured number of cyclists is higher; either the morning (AM) or afternoon (PM) peak hour periods.	The daily peak hour period is assumed to fall either within 6:00 a.m. - 8:00 a.m. or 4:00 p.m. - 6:00 p.m
Total Peak Hour Bicycle Volume	Total bicycle traffic counted in all locations per city in terms of cyclists per hour during the Peak Hour Period.	Estimated Total Peak Hour Volume is the Number of Cyclists counted during the Peak Hour Period divided by 2 to get the average hourly volume.
Volume-Capacity Ratio of Bicycle Traffic	The ratio of Bicycle Volume with the standard maximum Road Capacity Volume serving as a measure of road utilization and traffic congestion.	The Capacity of an urban two-lane carriageway was used with an hourly PCU capacity of 1,600, based on the DPWH standard guidelines following US Highway Capacity Manual guidelines.
Level of Service (LoS)	Qualitative performance measure of traffic flow as a measure of road utilization and traffic congestion. Levels of Service range from "A" denoting free-flowing traffic, up to "F" denoting forced traffic flow or stop-and-go traffic.	LoS definitions are based on the DPWH standard guidelines following US Highway Capacity Manual guidelines.
Total Peak Hour Density	Total bicycle traffic counted in all locations per city in terms of cyclists per kilometer during the Peak Hour Period.	Density = Volume (cycles/hour) / Speed (kilometers/hour) An average bicycle speed of 12.81 kph was used to characterize typical bicycle commuting speeds (Kovácsová et.al., 2016)

LoS Level	VCR
A	< 0.20
B	0.21 - 0.50
C	0.51 - 0.70
D	0.71 - 0.85
E	0.86 - 1.00
F	> 1.00


G. Lazaro ST


obility
AWARDS
bilang
siklista