



## Beyond UTSMMA and MMETROPLAN: Other Transport-Related Plans, Reports, and Position Papers, 1968-1982

KEITH GERARD DAGUIO AND MARCO STEFAN LAGMAN

**ABSTRACT.** Starting in the 1960s, traffic congestion became a staple part of Manila's history. Rapid urbanization, century-old thoroughfares, and large-scale migrations to Manila are just some of the reasons for the worsening traffic conditions. During the Marcos Era, the academe, practitioners, government agencies, and various organizations produced plans, position papers, and transport documents that sought to understand, assess, and perhaps provide possible solutions. Using data available in the libraries of University of the Philippines Diliman, this research note seeks to provide an initial survey and preliminary review of transport materials that documented and proposed solutions to the traffic congestion in the city of Manila from the 1960s until the 1980s.

**KEYWORDS.** Manila · transport history · transport planning

### INTRODUCTION

Manila, both as a colonial city and an expanding metropolis, has constantly been the subject of scholarly works. Colonial Manila's social history during the Spanish period has been studied by Camagay (1992; 1995), who described the activities of its inhabitants that influenced its development, such as the occupations of Filipino women. Wickberg (1965), Reed (1967), Alip (1974), and Chu (2013), among others, emphasized the vital role played by the migrant Chinese and their *mestizo* (mixed race) progeny in both precolonial and colonial Manila, while Doeppers (1984; 1998) discussed the origins and features of local migration to Manila from the late 1800s until the 1940s. While Manila was not necessarily their focus, economic historians Corpuz (1997) and Legarda (1998) both elaborated on its role as the center of the domestic economy and entrepôt of international trade. Moreover, studies by scholars such as Bankoff (1996; 2007),

Dery (1991), and Huetz de Lempis (2001) examined the problems that afflicted Manila during its rapid urban expansion in the latter part of the nineteenth century. These included the threat of fire and earthquakes, criminal activity, unplanned urban growth, and the degradation of its water resources and natural environment.

At the turn of the twentieth century, Manila was said to be the only urbanized settlement (Le Roy 1968) and commercial center of the country (March 1899). The American policy to maintain Manila's status, not only as the seat of Philippine politics, economy, and culture but also as the model of American colonial benevolence (Shatkin 2005/2006; Lico 2008), further fueled Manila's urban expansion. In 1941, former president Manuel L. Quezon designated Manila, Caloocan, Pasay, Makati, Mandaluyong, San Juan, Parañaque, and Quezon City as part of the larger Greater Manila Area, with Jorge B. Vargas as mayor—practically a metropolitan region—in order to simplify administrative procedures in the advent of Japanese invasion (Caruncho 2014).

The notion of a metropolitan area became more pronounced during the postwar years.<sup>1</sup> To govern contiguous localities that face interrelated issues and concerns can be considered as the most important rationale for the creation of a metropolitan region. Caoili (1999) noted that in the 1960s, the shared problems of criminality, flooding, pollution, and service provision among these contiguous areas led to the realization that these problems can only be solved through coordinated planning and management.

Traffic congestion increasingly became a problem. Sigurd Grava (1972, 1), a United Nations Development Programme consultant in the early 1970s, stated that “without public service, the metropolitan area will soon cease to be able to function. Even today, the accomplishment of any personal or business activity involving local travel is seriously delayed and hampered by intolerable traffic difficulties.” To address this emerging dilemma, numerous plans, position papers, and documents from a metropolitan perspective were made by individuals, private corporations, and government agencies that sought to describe the transport situation and provide possible solutions.

The Urban Transport Study in Manila Metropolitan Area (UTSMMA), which was prepared by the Overseas Technical Cooperation Agency (OTCA 1973), and the World Bank-funded Metro Manila Transport, Land Use, and Development Planning Project (MMETROPLAN) (DPWTC and FFA 1977) are the more

well-known Marcos era planning studies that were developed in the hope of addressing the region's transport and mobility concerns (Jose et al. 2015). Aside from UTSMMA and MMETROPLAN, there are other plans, position papers, and reports penned by academics and practitioners, the World Bank, and the Philippine government's transport-related agencies in various years from the late 1960s to the early 1980s that sought to describe and assess the mobility situation of Metro Manila while also offering suggestions on how to address such concerns.

This research note has two objectives in contributing to the history of the mass transit system in Metro Manila: a) to provide a brief survey of primary documents that could aid researchers, planners, and transport engineers in analyzing the current transport situation in Manila; and b) to present, from a historical perspective, how the government and the civil society sought to deal with the already difficult traffic situation in metropolitan Manila during the late 1960s to the middle 1980s.<sup>2</sup> The following sections proceed with select stakeholders and their proposed solutions: the academe, practitioners, the World Bank, and government agencies.<sup>3</sup>

## ACADEMICS AND PRACTITIONERS

From 1968 to 1977, several transport-related works were already published tackling the traffic problems of Manila, some of which are found in the School of Urban and Regional Planning library. "Transportation in National Development" is a thesis written by Paterno R. Santos in 1968. Grava, a renowned transport and infrastructure-planning expert, in 1972 completed a United Nations Development Programme-funded study, *Transportation Systems Metropolitan Manila Assignment Report* that sought to assess the causes and propose solutions to Metro Manila's transport woes. Five years later, and possibly in response to the emerging interest in constructing a rail-based mass transit system in Metro Manila, UP College of Engineering visiting researcher W.B. McCarter's feasibility study, *Low Cost/High Density Urban Transportation: Metro Manila* (1977), sought to determine the most practical type of rail transit for the said region's population.

Santos (1968) emphasized the important role played by railroad transport in national development. In particular, he described the vital role played by the railroad in the economic growth of the country after

the Second World War, despite the wear and tear problems of the Philippine National Railways (PNR). Grava (1972), on the other hand, provided factors that caused the worsening traffic situation in Metro Manila. These included, among others, the concentration of land uses and activities in Metro Manila and the lack of needed infrastructure. Grava proposed that Metro Manila should have an integrated transportation system made up of complementary transport modes (i.e., jeepney, bus, commuter rail, and rapid rail). He attempted to dissuade readers from singling out the jeepney as the main cause of the region's transport problems as he pointed to the overconcentration of land use and activities as the main culprit. He also advocated for the speedy establishment of a rapid transit system. Finally, McCarter (1977) focused on determining which type (i.e., heavy, light, ultralight) and configuration (i.e., elevated, underground, street-level) of mass rail transit infrastructure should be established in Metro Manila and when would be the appropriate period for its construction. Using low capital intensity, high labor use, and low level of foreign capital contribution as criteria, he argued that all the aforementioned forms of transport systems fail to satisfy such requirements and will not justify the immediate construction of a mass rail system. Alternatively, he suggested that a reasonable uptake in the number of motor vehicles (bus, jeepney, taxis) along with traffic engineering of existing road space would result in an increase in capacity sufficient to satisfy transit demand until 1990—after which a ground-level light rail system, the most cost-effective of all rail-based mass transit options, can eventually be developed along specific corridors of Metro Manila.

The Ateneo de Manila University Institute of Philippine Culture (IPC) and the UP Institute of Planning (UIP; now School of Urban and Regional Planning) studied Manila's emerging traffic crisis and suggested solutions that are somehow similar from those suggested by the above studies, particularly Grava's (1972). The IPC produced the planning and management document, *Metro Manila Today and Tomorrow* (1971) written by UP professors Jose Abueva, Sylvia Guerrero, and Gonzalo Jurado. On the other hand, from 1968 to 1971, UIP published *A Planning Strategy for Metropolitan Manila A.D. 2000: A Policy Study in Environmental Planning* (1968), *The City in the Third World* (1971a), and the *Manila Bay Metropolitan Framework Plan: Position Paper* (1971b).

The work of the IPC-affiliated scholars supported Grava's observations that Metro Manila's traffic situation is the result of,

among others, the overconcentration of activities in the metropolitan area's core. Based on public administration and transport planning concepts, Abueva, Guerrero, and Jurado (1971) offered interventions that complemented Grava's. They argued that the management of Metro Manila's problems required the establishment not only of physical but also an organizational infrastructure (i.e., metropolitan-level institutions) for the proper management and planning of the region. From a transport planning perspective, the study offered travel demand management options that alter travel behavior (i.e., staggered scheduling of class and work hours) and traffic system management to manage the capacity of Metro Manila's transport networks (i.e., rationalization of routes and schedules of bus and jeepney trips, establishment of public transport terminals, proper provisioning of on-street and off-street parking).

While the UPIP also took note of the emerging traffic problems of metropolitan Manila, their study also warned that traffic congestion and mobility problems in the region were bound to worsen due to the combination of rapid increase in population and vehicular volume, slow highway improvement, haphazard city growth, and the under-utilization of the PNR's commuter railway lines.

The UPIP studies offered a menu of programs and projects to combat the metropolitan region's traffic difficulties. UPIP (1968) suggested decentralization by encouraging and directing radial and ring-like land use development outside of the city core along major transport corridors. These areas of expansion would serve as growth poles that would divert both people and activities from the existing central business district. Such an expansion would then be supported by an integrated road, rail, air, and water transportation system wherein highways would serve as the backbone of the transport infrastructure and with an inter-city rapid rail transit serving a secondary role.

UPIP said that Metro Manila is "literally choked to death by traffic" (1971a, 98). Similar to Abueva, Guerrero, and Jurado's (1971) recommendations, UPIP (1971a) called for a metropolitan organization where its transport policies can serve as a means to guide urban development. Like their 1968 work, UPIP (1971a) was keen on dispersing economic activities from the core of the metropolis to its suburbs in the hope of shortening commuting trips and times. It is likewise biased toward maintaining a road-dominant transport system as it deems too expensive the building of what was then described as

transport innovations. It instead suggested that Metro Manila would be better off giving more attention to better transportation planning, analysis, operations, and management.

Finally, unlike their previous works, UPIP (1971b) did not provide new interventions on Metro Manila's transport situation. It only noted that traffic congestion in Metro Manila was primarily caused by a "small town transport system" that cannot adequately serve the needs of a growing metropolis (19-20). It recommended the improvement of "existing links" within the system, referring to major thoroughfares that connect the different settlements within the Metro Manila area and the Manila Bay Region. Similar to UPIP (1968), rail transport is not given much attention as it is simply noted in UPIP (1971b) that the PNR lines need selective modernization and rehabilitation without indicating which portions require upgrading.

### THE WORLD BANK

In 1976, two years after the release of UTSMMA, Sei Young Park and Inai Bradfield wrote the report *Transport Planning in the Philippines*. The report assessed the transport planning capabilities of different government institutions and their transport infrastructure programs. It offered the following suggestions on how the Philippine government can improve the traffic situation in Metro Manila: a) programs to improve planning and enforcement capabilities of all transport related government institutions, b) the creation of a national transportation study to ensure the feasibility of certain proposed infrastructure projects, c) the optimum use of existing transport facilities through improved signaling systems and traffic management and policies that would discourage the use of private vehicles, and d) road expansion and the opening of more public transportation routes to private operators.

Unlike UTSMMA which focused on the construction of rapid rail transit lines covering portions of present-day Metro Manila and its periphery, Park and Bradfield's (1976) recommendations were geared toward policies and programs that would not be too costly for the government. Aside from maximizing the capacity and performance of an already functioning transportation infrastructure, it also recommended that the Philippine government provide a level competitive field for the private sector to enter into the transportation service business to take care of the transport needs of the populace.

It should be noted that Park and Bradfield (1976), in general, were not keen on encouraging the development of rail-based transportation. This is perhaps due to the excessive amount of funds needed to implement such an undertaking, a situation that the World Bank perceived that the Philippine government could not afford at that time. Moreover, the report suggested a wait-and-see attitude with respect to the modernization of the PNR and its commuter services since such an endeavor would again require the state to commit a significant amount of public funds.

## GOVERNMENT AGENCIES

Similar to their counterparts among practitioners in the academe and the private sector, government institutions such as the National Economic Development Authority (NEDA), the former Department of Public Works, Transportation, and Communications (DPWTC), and the former Ministry of Transport and Communication (MOTC) also produced reports, projects, documents, and plans, portions of which provided assessments of Metro Manila's transportation situation as well as offered interventions.

In 1973, NEDA and the DPWTC published the *Physical Planning Strategy for the Philippines: Situation Report; Volume 8, Transportation*. The report stated that an "area's transportation system constitutes the framework around which its social, political, and economic structures are grouped and developed" and that "there is a fundamental relationship between transportation and overall development" (NEDA and DPWTC 1973, 1). It likewise provided a short history of how different modes of transportation shaped the country's economy primarily as a means for moving the country's resources. Moreover, the report considered rail-based transport secondary to road infrastructure because of the former's increasing inefficiency due to the poor maintenance of PNR facilities. The report, however, implied that the commuter train service should be expanded further in the Metropolitan Manila Area since it is an integral part of the region's overall transportation system.

In the same year, the DPWTC published the *Integrated Development of the Manila Bay Region: Overall Framework Plan* (1973). The study argued that merely improving the existing transportation system of the Manila Bay region composed of metropolitan Manila and the provinces of Batangas, Laguna, Cavite, Rizal, Bulacan, Pampanga, Bataan, and Zambales will not be able to address the projected increase in traffic

demand. It asserted that resolving the multitude of problems that go with rapid urbanization over such a wide geographic area required a systems approach. In the systems approach, independent studies must be done within each aforementioned location regarding their individual travel demands, projected population growths, and urbanization in order to effectively manage the transport system in the entire Manila Bay region. Its suggestions included the development of independent cities along the periphery of the metropolitan area that should be served by mass transit lines to decongest Metro Manila. Moreover, while traffic management and improvement of physical structures can aid in alleviating transport problems, there is a need to develop a more effective transport system that will cater to the mega region's present and future transport demand.

Among the plans and papers that were written in the 1970s and 1980s, DPWTC's (1973) is one of the few documents that emphasized the promotion of both rail and road-based infrastructure. For its proponents, the best land use pattern and transport network that can meet predicted traffic demand is a combination of dispersed land use development that is mainly dependent on rail infrastructure for its commuters' mobility needs. To support such a solution, it provided plans for surface road, urban expressway, and rail networks. Its proposed rail network consisted of five lines, with a total length of 135.1 kilometers, as well as the upgrading of 48.3 kilometers of the existing north-south PNR commuter line.

Some papers repeatedly raised concerns regarding the PNR's deteriorating state and decreasing ridership. In 1978, the Inter-Agency Technical Committee on Transport Planning (IATCTP) published the *National Transportation System Study: Volume 3; Rail Transport, Interim Report*. The report stated that the Metro Manila commuter service of the PNR was the only growth sector of the corporation in recent years and that said service could help minimize the metropolitan area's severe traffic problem and its extension should be considered. However, despite the PNR's potential to help alleviate traffic in Metro Manila, the report noted Metro Manila's dire state: "there are not many railways in the world in poorer physical condition" (IATCTP 1978, 61). Moreover, the report asserted that it would be difficult to justify PNR's existence if its physical state is not addressed.

Finally, in 1982, IATCTP produced the *National Transportation Planning Project: Final Report; Part 6, Rail Transport*. It provided a review of existing operations and potentials of the PNR, while offering short

and long term recommendations to address its problems. It echoed the reality of decreasing numbers of PNR passengers, while stating that the decrease in ridership is due to both the gradual improvements of the highways in the north and south of Manila and the commuter line's worsening service level (i.e., slower speeds, increased incidence of derailments). To address its problems, IATCTP (1982) suggested that the PNR adjust its fare or receive subsidies in order to fund interventions that could help maintain its commercial viability.

## OBSERVATIONS

Individual academics and practitioners, such as Santos (1968), Grava (1972), McCarter (1977) were in agreement that the development and maintenance of a rail-based transportation infrastructure should be an integral part of any Metropolitan Manila transportation system. The only clear difference among the individual rail proponents is that while Grava aggressively pushed for the immediate construction of a metropolitan-wide rapid mass transit rail system as early as 1972, McCarter (1977) felt that a light rail system would only be a necessary component of the transportation system by 1990. Academic institutions, on the other hand, were more intent on pushing for the establishment and development of a metropolitan-level organizational infrastructure to help plan for and manage Metro Manila's traffic woes. The IPC and UPIP, however, differed in some of their proposed transport interventions, with the former focusing on short-term, lower cost transportation system management and travel demand management schemes and the latter on long-term programs such as the decentralization of development and the creation of predominantly road-based transportation infrastructure.

The World Bank seemed to be conservative in its approach as it suggested transportation programs and interventions that were more focused on ensuring that the Philippine government gave importance to the proper timing and necessity of committing scarce resources to its transport system in metropolitan Manila. As such, the World Bank promoted inexpensive solutions that can be easily implemented, while also arguing that government transportation agencies should develop their capacity to properly assess the viability of proposed big-ticket transportation projects.

As for government agencies, all agreed that transportation is an integral part of development of Metro Manila and, thus, should be

given proper attention, planning, and funding. These agencies put premium on decentralization together with planning, which are considered essential solutions that will help alleviate the traffic problem of Metro Manila.

Finally, while having different perspectives on the cause of traffic and how to solve it, the select stakeholders that sought to understand and address Metro Manila's traffic congestion agreed on certain important points. First, the traffic congestion of Metro Manila has a drastic negative impact on the social and economic aspects of the country and should be addressed with utmost urgency. Second, Metro Manila's transportation should be planned and developed with due recognition of the transport sector's connection with the region's expansion. Lastly, while there is convergence among the aforementioned documents that rail-based transportation is an important component of a regional transportation system, there are differences among them with respect to the urgency of implementing proposed solutions, the configuration of the rail infrastructure to be constructed, and the importance of the PNR commuter service.

While this research note provided a cursory review of materials that tackled traffic congestion and proposals to address such a problem, there is still the need to dig deeper into the reasons why these stakeholders offered such plans. It is also imperative to ask how the government responded to such studies. Did they follow the advice of the so-called authorities on the subject at hand or did they rely on their own cadre of "infrastructure experts"? What were the conditions and constraints that led to decisions made by the state? Ultimately, the problem of traffic congestion, then and today, involves numerous stakeholders and perhaps an interdisciplinary approach borrowing concepts and methods from history, geography, transport engineering, and political economy might further enrich the discourse on traffic that can provide a holistic understanding of its causes and, more importantly, solutions. Addressing these aforementioned issues would lead to significant contributions in the area of planning history, which is one of the acknowledged "gray areas" in Philippine urban and regional planning literature.✿

## ACKNOWLEDGEMENT

This work was funded by the University of the Philippines System Emerging Inter-Disciplinary Research Program (OVPAE EIDR-06-008).

## NOTES

1. This was to protect its inhabitants during the Japanese invasion (Caruncho 2014).
2. It is likely that metropolitan areas became a formal geographic designation contrived by the United States government's census office during this period (Brunn, Hays-Mitchell, and Zeigler 2008).
3. The documents presented in this research note are available in the libraries of the University of the Philippines (UP) Diliman, those of Virata School of Business, School of Economics, School of Urban and Regional Planning, and the Main Library. This research note though is not an exhaustive discussion of all said plans and studies.

## REFERENCES

- Abueva, Jose, Sylvia Guerrero, and Elsa Jurado. 1972. *Metro Manila Today and Tomorrow*. Quezon City: Institute of Planning, Ateneo de Manila University.
- Alip, Eufronio. 1974. *The Chinese in Manila*. Manila: National Historical Commission.
- Bankoff, Greg. 1996. *Crime, Society, and the State in the Nineteenth Century Philippines*. Quezon City: Ateneo de Manila University Press.
- . 2007. "Fire and Quake in the Construction of Old Manila." *The Medieval History Journal* 10 (1-2): 411-27.
- Brunn, Stanley D., Maureen Hays-Mitchell, and Donald J. Zeigler, eds. 2008. *Cities of the World: World Regional Urban Development*. Lanham, Maryland: Rowman & Littlefield Publishers, Inc.
- Camagay, Ma. Luisa. 1992. *Social History of Manila 1765-1898*. Manila: Filipiniana Book Guild.
- . 1995. *Working Women of Manila in the 19th Century*. Quezon City: University of the Philippines Press.
- Caoli, Manuel. 1999. *The Origins of Metropolitan Manila: A Political and Social Analysis*. Quezon City: University of the Philippines Press.
- Caruncho, Eric. 2014. *Quezon City at 75: Resurgent & Resilient*. Quezon City: Erehwon Artworld Corporation.
- Chu, Richard. 2013. *Chinese and Chinese Mestizos of Manila*. Leiden: Brill.
- Corpuz, Onofre. 1997. *An Economic History of the Philippines*. Quezon City: University of the Philippines.
- DPWTC and FFA (Department of Public Works, Transportation, and Communications and Freeman, Fox, and Associates). 1977. *Metro Manila Transport, Land Use, and Development Planning Project: Final Report*. Quezon City: DPWTC and FFA.
- Dery, Luis. 1991. "Prostitution in Colonial Manila." *Philippine Studies* 39 (4): 479-89.
- Doepfers, Daniel. 1984. *Manila, 1900-1941: Social Change in a Late Colonial Metropolis*. Quezon City: Ateneo de Manila University Press.

- . 1998. *Population and History: The Demographic Origins of the Modern Philippines*. Quezon City: Ateneo de Manila University Press.
- DPWTC (Department of Public Works, Transportation, and Communications). 1973. *Integrated Development of the Manila Bay Region: Overall Framework Plan*. Manila: DPWTC.
- Grava, Sigurd. 1972. *Transportation Systems Metropolitan Manila Assignment Report*. Manila: Institute of Planning University of the Philippines.
- Huetz de Lempis, Xavier. 2001. "Waters in Nineteenth Century Manila." *Philippine Studies* 49 (4): 488–517.
- Jose, Ricardo, Daniel Mabazza, Jose Regin Regidor, Marco Stefan Lagman, and Jonathan Villasper. 2015. "Planning Metro Manila's Mass Transit System." The Eleventh International Conference of Eastern Asia Society for Transportation Studies. [http://www.dynamicglobalsoft.com/easts2015/program/pdf\\_files/1224.pdf](http://www.dynamicglobalsoft.com/easts2015/program/pdf_files/1224.pdf).
- Le Roy, James. 1968. *Philippine Life in Town and Country*. Manila: Limited Editions.
- Legarda, Benito. 1998. *After the Galleons: Foreign Trade, Economic Change and Entrepreneurship in the Nineteenth-Century Philippines*. Quezon City: Ateneo de Manila University Press.
- Lico, Gerard. 2008. *Arkitekturang Pilipino: A History of Architecture and Urbanism in the Philippines*. Quezon City: University of the Philippines Press.
- March, Alden. 1899. *The History and Conquest of the Philippines and Our Other Island Possessions*. Philadelphia: World Bible House.
- McCarter, W.B. 1977. *Low Cost/High Density Urban Transportation: Metro Manila*. Quezon City: University of the Philippines.
- IATCTP (Inter-Agency Technical Committee on Transport Planning). 1978. *National Transportation System Study: Volume 3; Rail Transport, Interim Report*. Manila: IATCTP.
- . 1982. *National Transportation Planning Project: Final Report; Part 6, Rail Transport*. Manila: IATCTP.
- NEDA and DPWTC (National Economic Development Authority and Department of Public Works, Transportation, and Communication). 1973. *Physical Planning Strategy for the Philippines: Situation Report; Volume 8, Transportation*. Manila: NEDA and DPWTC.
- OTCA (Overseas Technical Cooperation Agency). 1973. *Urban Transport Study in Manila Metropolitan Area: Final Report*. Manila : Planning and Project Development Office, Department of Public Works, Transportation, and Communications.
- Park, Sei-Young, and Inai Bradfield. 1976. *Transport Planning in the Philippines*. S.I.: World Bank.
- Reed, Robert. 1967. *Hispanic Urbanism in the Philippines: A Study of the Impact of Church and State*. Manila: University of Manila.
- Santos, Paterno. 1968. "Transportation in National Development." MA Thesis, University of the Philippines.
- Shatkin, Gavin. 2005/2006. "Colonial Capital, Modernist Capital, Global Capital: The Changing Political Symbolism of Urban Space in Metro Manila, the Philippines." *Pacific Affairs* 78 (4): 577–600.
- UPIP (University of the Philippines Institute of Planning). 1968. *A Planning Strategy for Metropolitan Manila A.D. 2000: A Policy Study in Environmental Planning*. Quezon City: UPIP.

- . 1971a. *The City in the Third World*. Quezon City: UPIP.
- . 1971b. *Manila Bay Metropolitan Framework Plan: Position Paper*. Quezon City: UPIP.
- Wickberg, Edgar. 1965. *The Chinese in Philippine Life*. New Haven: Yale University Press.

---

**Keith Gerard Daguio**, an MA Philippine Studies student at the University of the Philippines Diliman, was the former research assistant for “The Mass Transit System in Metro Manila: From Tranvia to MRT, 1879–2014” Project 1A. Send correspondence to the author at [kldaguio@up.edu.ph](mailto:kldaguio@up.edu.ph).

**Marco Stefan Lagman**, an assistant professor at the Department of Geography University of the Philippines Diliman, was the former project leader for “The Mass Transit System in Metro Manila: From Tranvia to MRT, 1879–2014” Project 1A. Send correspondence to the author at [lagmanmb@gmail.com](mailto:lagmanmb@gmail.com).

