

ADOPTING THE 15-MINUTE CITY APPROACH IN DESIGNING A POSTCOVID RECOVERY STRATEGY IN THE PHILIPPINES TO PROMOTE SAFER AND SMARTER CITIES

Marion Micah R. Tinio, EnP.

TABLE OF CONTENTS

INTRODUCTION AND PROJECT BACKGROUND	1
OVERVIEW OF THE 15-MINUTE CITY CONCEPT	1
PROJECT OBJECTIVES	1
NEED FOR 15-MINUTE CITIES IN THE PHILIPPINES	2
CORE PRINCIPLES OF THE 15-MINUTE CITY CONCEPT	2
BENEFITS OF 15-MINUTE CITIES FOR REHABILITATION AND RECOVERY FROM COV 19 PANDEMIC	/ ID- 2
FEATURES OF GLOBAL 15-MINUTE CITIES AND COMPARISONS WITH PHILIPPINE CONTEXT	2
INCREASING PROXIMITY OF GOODS AND SERVICES	3
ENSURING DIVERSITY OF PHYSICAL AND SOCIAL ASPECTS OF THE CITY	8
OPTIMIZING DENSITY FOR SOCIAL RELATIONSHIPS	8
MAKING SERVICES MORE UBIQUITOUS	9
CASE STUDY: VALENZUELA CITY	10
EXISTING AND PLANNED ELEMENTS IN VALENZUELA CITY THAT MATCH THE 15N CONCEPT	/IC
DISIPLINA VILLAGES : THE "COMPLETE NEIGHBORHOODS"	12
PEDESTRIANIZATION OF FATIMA AVENUE	13
DIGITIZATION EFFORTS FOR EMPLOYMENT AND BUSINESS	13
DIVERSITY OF PARKS IN VALENZUELA CITY	13
CHALLENGES FOR VALENZUELA CITY	14
HIGH FLOOD RISK	14
MULTIPLE USERS OF THOROUGHFARES	15
CHALLENGES IN TRANSFORMING PHILIPPINE CITIES INTO 15-MINUTE CITIES	16
LOW FUNDING ALLOCATION FOR ROAD-BASED PUBLIC TRANSPORT	16
LOW POTENTIAL FOR TELEWORK OF MOST JOB POSITIONS AND INDUSTRIES	16
UNPROTECTED BICYCLE LANES	16
TRADITIONAL ZONING PARADIGM	16
THREATS OF GENTRIFICATION	16
OPPORTUNITIES TO LEVERAGE FOR CREATING 15-MINUTE CITIES	16
FULL DEVOLUTION EXECUTIVE ORDER	17
SMART CITY DEVELOPMENT PROGRAM	17
GREEN-GREEN PROGRAM OF DBM	17
HISTORICAL AND CULTURAL VILLAGE-MAKING	17
SHIFTING POLICY IN HOUSING	17
EXISTING POLICIES FOR FLEXIBLE WORK ARRANGEMENTS	18

EXISTING STANDARDS FOR LOCAL GOVERNMENT PLANNING	18
POTENTIAL PARTNERS FOR CREATING PHILIPPINE 15MCS	18
ACTIVE MOBILITY AND PUBLIC TRANSPORTATION	19
HOUSING AND LOCAL ECONOMIC DEVELOPMENT	19
PUBLIC GREEN SPACES, CULTURE AND ENTERTAINMENT	19
POLICY ROADMAP FOR CREATING PHILIPPINE 15MCS AND EXISTING COMPONENTS FROM PHILIPPINE CITIES	20
CREATING COMPLETE NEIGHBORHOODS	20
ENSURING EVERYONE HAS A PLACE	20
DEVELOPING PEOPLE-CENTERED STREETS AND MOBILITY	21
CREATING CONNECTED PLACES	22
RECOMMENDED PRIORITY PROGRAMS AND ACTIVITIES FOR FNF PHILIPPINES IN PURSUIT OF PHILIPPINE 15-MINUTE CITIES	22
TECHNICAL ASSISTANCE FOR CITIES IN COMPLETING MANDATED PLANS AND INVENTORIES	22
TECHNICAL ASSISTANCE FOR BARANGAYS IN PERFORMING DEVOLVED RESPONSIBILITIES RELEVANT TO PROMOTING WALKING AND CYCLING	23
HELP CITIES CREATE BUSINESS AND ENFORCEMENT PLANS FOR PEDESTRIANIZED AND CAR-FREE STREETS	23
CONCLUSION	23
APPLICABILITY OF THE 15MC CONCEPT TO PHILIPPINE CITIES	23
OPPORTUNITIES AND CHALLENGES FOR CREATING PHILIPPINE 15MCS TOWARDS COVID-19 REHABILITATION AND RECOVERY	24
RECOMMENDED ROLE OF FNF PHILIPPINES	24
REFERENCES	24

LIST OF TABLES

- Table 1. Common benefits of 15-minute cities
- Table 2 Summary of global 15 MCs features per core principle
- Table 3. Application of 15MC concepts in C40 Cities and corresponding highlights in the Philippines
- Table 4. Cycling-related programs of 15-minute cities
- Table 5. Selected programs of Valenzuela City and relevance to 15-minute city
- Table 6. Selected Standards in Philippine Planning Guides for Recreational Facilities
- Table 7. Recommended Distances of Social Services from Commercial Areas

LIST OF FIGURES

- Figure 1. Satellite and street views of the Disiplina Village in Barangay Ugong, Valenzuela City
- Figure 2. Fatima Avenue, its surrounding neighborhoods and MacArthur Highway
- Figure 3. Selected parks in Valenzuela City.
- Figure 4. Flood susceptibility of Valenzuela City
- Figure 5. Teresa Street in Sta. Mesa, Manila

OVERVIEW OF THE 15-MINUTE CITY CONCEPT

The 15-minute city (15MC) concept is a proximity-based planning intervention originally introduced by Professor Carlos Moreno (Moreno et al., 2021). The goal of the concept is to create cities where goods and services are accessible for everyone within 15 minutes from their homes through walking, cycling or public transportation.

Cities are adopting the 15MC concept or similar proximity-based planning paradigms because of their environmental, social, and economic advantages (Table 1). 15MCs discourage vehicular dependence, which have economic and environmental co-benefits. Critics of the 15MC concept highlight its inability to address social and environmental inequity and unfit over suburban cities.

Table 1. Common benefits of 15-minute cities

Sector	Benefits
Environmental	 → more open and green spaces → improved air quality → reduced noise pollution → reduced greenhouse gas emissions → more appropriate use of spaces
Social	 → opportunities for social interaction → health benefits of walking and cycling → spaces for child-friendly zones and facilities → easier access to social functions: living, working, education, healthcare, commerce and recreation → improved road safety → opportunities for participation in urban design
Economic	 → reduced travel times and costs → lower fuel consumption for public transportation → vitalization of local commercial areas → increase in property values → opportunities for startup businesses → lower cost of accessing goods and services

PROJECT OBJECTIVES

The scoping study aims to explore the applicability of the 15-minute city (15MC) concept to Philippine cities. The study has six specific objectives:

- 1. Identify the features of the 15MC that can be localized in Philippine cities, specifically for highly urbanized cities hardly hit by COVID-19;
- 2. Identify local government units in the Philippines which would be viable pilot areas for the adoption of the 15MC concept;
- 3. Assess opportunities and challenges in integrating this urban planning concept in the post-COVID 19 recovery strategies of Philippine cities;

- 4. Identify the actors and organizations that can be possible partners in advocating for 15MC in the Philippines;
- 5. Recommend tools, strategies, and policy recommendations which can be used to promote the 15MC concept and help advocate for safer and smarter cities in the future; and
- 6. Assess the results of the scoping study to align with and expand the future programs, plans, and activities of Friedrich Naumann Foundation in the Philippines

The scoping study was completed through desk research and literature review. A cycle-through was performed on portions of Valenzuela City, particularly on Fatima Avenue.

NEED FOR 15-MINUTE CITIES IN THE PHILIPPINES

CORE PRINCIPLES OF THE 15-MINUTE CITY CONCEPT

The 15-minute city concept is founded on four core principles: proximity, diversity, density and ubiquity. Moreno et al., (2021) defined these principles as follows:

- Proximity residents are able to access services and amenities quickly, without spending money on travel and without spending unwarranted time in traffic
- Density optimal population for social relationships and resource consumption; closely-knitted city with mixed building models
- Diversity mixed-use neighborhoods with diverse cultures from different backgrounds
- Ubiquity technology reduces the cost of living in cities

BENEFITS OF 15-MINUTE CITIES FOR REHABILITATION AND RECOVERY FROM COVID-19 PANDEMIC

The main goal of the 15-minute city concept is to make goods and services accessible to all within a 15-minute radius. With accessible goods and services, human activities will continue despite the implementation of lockdowns and limited mobility in case of another pandemic, or a separate disaster. Moreno et al., (2021) lists six social functions that 15MC helps to realize: living, working, healthcare, education, commerce, and recreation.

Philippine cities are especially challenged in accessing the "working" social function. Aspiring Philippine 15MCs must focus on making "working" more accessible and ubiquitous, as it may be the social function lacking for proximity-based Philippine cities (Doctrine.com, 2021).

In terms of living, resettlement sites are shifting towards rental housing projects and are considering community development. Rental housing addresses the problem of limited and expensive land in metropolitan centers. A community development approach to resettlement ensures that social services are present in new locations before informal settler families move. Creating walkable and bikeable cities is building for climate change mitigation. Reducing private car use in short trips contributes to reducing greenhouse gas emissions.

FEATURES OF GLOBAL 15-MINUTE CITIES AND COMPARISONS WITH PHILIPPINE CONTEXT

The following sections highlight features of international cities that can be localized in Philippine cities aligned with the four principles. Table 2 highlights how 15-minute city initiatives of international cities correspond to the four principles. Table 3 presents selected 15-minute city components and similar situations in the Philippines.

INCREASING PROXIMITY OF GOODS AND SERVICES

Bicycle facilities and infrastructure are fundamental components of international 15MCs (Table 4). The 2035 Comprehensive Plan of Portland hopes to generate healthy connected centers where 80% of residents can easily walk or cycle to reach their non-work related needs.

Cities formulated studies to increase the proximity of goods and services. Portland created accessibility hotspot maps to prioritize investment in areas with disadvantages in accessing goods and services. Melbourne's "Local Liveability Study" provides insights for improving existing city infrastructure by demonstrating how the city residents meet their daily needs.

Table 2. Summary of global 15 MCs features per core principle

	I	I I I I I I I I I I I I I I I I I I I		
City/15 MC Principle	Proximity	Diversity	Density	Ubiquity
Paris	 → School as "capital" of the neighborhood → Transforming parking into bike lanes, green spaces and playgrounds 	 → Target of 30% social housing composition by 2030 → Proposals of residents are funded by 5% of city investment budget 		→ Connecting local business with start- ups to boost digital skills
Portland	→ Investment in bike-sharing program	→ "Anti-displacement" Action Plan	→ Accessibility "hotspot" maps	
Melbourne	 → 20-minute pilot program → Community-garden development and green corridors 	→ Places for People Study		
Barcelona			→ Superblocks	
Milan	→ Lowering maximum speed limit from 50kph to 30kph	→ "Open squares" program for converting car parks and roads into public spaces		 → Citizen's Digital File for online citizen services → Remote working subsidies
Bogota	→ Children's priority zones	→ Residents' participation in avenue redesign	→ Vital neighborhoods program	→ Streetmix platform: open platform for citizens to propose street redesigns
Buenos Aires	 → Green space within 400 meters of residents by 2025 → Local community recycling points → Health center 15 minutes from home 		→ Transforming CBD from financial center into multifunctional center	

Reference: C40 Cities Benchmark

Table 3. Application of 15MC concepts in C40 Cities and corresponding highlights in the Philippines

Consent Deleted to 1EMC	Implementing cities						Lliabliabta in Philippina sitias	
Concept Related to 15MC	Paris	Portland	Melbourne	Barcelon a	Mila n	Bogota	Buenos Aires	Highlights in Philippine cities
1. School as the "capital" of the neighborhood; Children's priority zones								 → Communities have local schools, health centers and markets, often located near community (barangay) halls. → Child-friendly zones already implemented by Quezon City.
Bike lanes and cycling infrastructure								 → Bike lane network of 32 km, including the 9-km lloilo City Esplanade. → Bike lane infrastructure is mandated in new government policies related to infrastructure.
3. Baseline studies		accessibility "hot spot" maps	livability study					→ The CLUP Guidebook prescribes standards for park-to-population ratio and distances of commercial areas to residential zones and social services.

4. "Anti-displacement" Action Plan								→ The Department of Human Settlements and Urban Development was created as the primary national government entity responsible for the management of housing, human settlement and urban development. Local governments are responsible for providing resettlement sites for settlers removed from danger zones, right-of-way sites, and government infrastructure projects (RA 11201, RA 10752, RA 7279)
Concept Related to 15MC		Im	nplementing citie	es (C40 Cities	s bench	mark)		Highlights in Philippine cities
Seriesper related to 15ms								riigriiigrite irri riiiippirie ettiee
	Paris	Portland	Melbourne	Barcelon a	Mila n	Bogota	Buenos Aires	
5. Participatory planning and budgeting processes	Paris	Portland	Melbourne			Bogota	Buenos Aires	→ Different national government agencies require various forms of public participation in the formulation of plans.
planning and budgeting	Paris	Portland	Melbourne			Bogota	Buenos Aires	agencies require various forms of public participation in the formulation

8. Local business and economy development			→ The Anti-Red Tape Authority was created in 2018 to monitor the implementation of the Ease of Doing Business Law and help streamline government processes, including business permitting. Per the ARTA, 32% of Philippine local government units are implementing automated business registration processes as of 2022.
9. Remote work			→ Work-from-home arrangements can be implemented by heads of agencies in private and government offices.

Reference: C40 Cities Benchmark

Spatial planning is also integrated into 15-minute city policies. In Paris, schools are treated as the "capital" of the neighborhood, opening them after school for cultural activities. Parking spaces were also transformed into bike lanes, green spaces and playgrounds. Buenos Aires targets that green spaces will be within 400 meters of all residents by 2025. Additionally, Buenos Aires also aims to locate health centers within 15 minutes of public transport from homes.

Table 4. Cycling-related programs of 15-minute cities

City	Highlights of cycling-related programs
Paris	→ Transform parking spaces into bike lanes, green spaces and playgrounds
Portland	 → 2030 goal: 80% of residents can walk or cycle to their basic, non-work related needs → Bike-share program
Melbourne	 → Movement and Place Framework: people-centered transport planning → Bike-repair facilities as part of 20-minute pilot program
Barcelona	→ Inner blocks of "superblocks" are limited to modes with speeds 10kph
Milan	→ Main routes are integrated with bike lanes and restricted speed zones
Bogota	→ 76 kilometers of temporary bike lanes during pandemic, many of which are being made permanent
Buenos Aires	→ Bike-sharing system with 200 stations that are available 24/7

Source: C40 Cities

ENSURING DIVERSITY OF PHYSICAL AND SOCIAL ASPECTS OF THE CITY

15-minute cities create policies to ensure that different users of the city can perform social functions. Bogota identified children's priority zones, transforming the streets around childcare centers by introducing traffic-reduction measures, pop-up parks, and street furniture improvements. Milan also reduced the maximum speed limit in its urban traffic network from 50kph to 30 kph, pointing to benefits of accident reduction and improved road safety.

Urban redesign projects threaten the displacement of low-income and vulnerable populations. To ensure diversity in their city, Portland has an "Anti-displacement" Action Plan that aims to reduce the impacts of involuntary displacement because of rising prices and gentrification. Paris also introduced rent controls so that by 2030, 30% of its total available housing will be social housing.

Public participation in planning, budgeting and redesign are critical features of international cities pursuing the 15MC concept. Residents participated in the redesign of major avenues in Bogota. Paris allocates 5% of its city investment budget for proposals sourced from residents.

OPTIMIZING DENSITY FOR SOCIAL RELATIONSHIPS

International 15MCs address the density dimension by developing spaces to increase social interactions. The "superblocks" project in Barcelona, created by grouping blocks and restricting vehicular traffic in the inner blocks, have increased green areas from around 9,700 sqm to 18,600 sqm. It also increased the number of ground-level commercial establishments by 31%. Paris also expects to develop into a dense city in terms of use instead of square meters by creating multipurpose spaces.

MAKING SERVICES MORE UBIQUITOUS

Cities also transform access to goods and services digitally to make them available anywhere. Milan implements the Citizen's Digital File, which contains personal information of residents for online citizen services. Milan also increased subsidies to support remote work. Public participation is also made ubiquitous by Bogota through its Streetmix platform, an open platform where citizens propose street redesigns.

EXISTING AND PLANNED ELEMENTS IN VALENZUELA CITY THAT MATCH THE 15MC CONCEPT

Table 5 demonstrates how selected programs of Valenzuela City correspond to the four core principles of the 15-minute city concept.

Table 5. Selected programs of Valenzuela City and relevance to 15-minute city

	able 5. Selected programs	s or valenzuela City and re	elevance to 15-minute city	/
Program	Proximity	Diversity	Density	Ubiquity
Disiplina Villages as "complete neighborhoods"	 → Access to goods and services within Villages → Nearby parks were closed because of foot traffic → The nearest main road is a five-minute walk away. 	→ In-city housing resettlement for low- income families	→ The three Disiplina Villages house at least 5,400 families of formerly informal settlers. → A fourth one in Arkong Bato will accommodat e at least 720 informal settler families.	
Network of parks and open spaces		→ Different types of parks: family, sports and historical		
Bike lane networks with good signages and pedestrian streets	→ Pedestrian crossings have signages that ensure priority	→ PUV stops are also integrated into the cycling policies		
Pedestrianization of Fatima Avenue	→ Fatima Avenue connects residential communities, schools, a church, and a museum to the MacArthur Highway.		Food businesses are present. Social events are also conducted to promote the Avenue.	

Program	Proximity	Diversity	Density	Ubiquity
Online Job Portal for Local Employers (valenzuelatrabaho.go v.ph)	→ Listed employers are located in Valenzuela City			→ 490 employers (as of July 21, 2022) located in Valenzuela City across 11 job categories
Digitization efforts of government services (Multiple awardee of Most Business- Friendly City")				 → Social media pages include CCTV videos for flooding → Online business permitting integrated into the zoning process

DISIPLINA VILLAGES: THE "COMPLETE NEIGHBORHOODS"

The Disiplina Villages are in-city resettlement communities in three barangays of Valenzuela City. Housing at least 5,400 informal settler families from danger zones, the villages have components of "complete neighborhoods." The Villages have nearby schools, health centers, city hall annexes, community vegetable farms, transport terminals, markets and recreational spaces (Figure 1). A fourth Disiplina Village is being developed in Barangay Arkong Bato.

During the pandemic, however, parks and open spaces in the Villages were closed to limit the spread of the virus. Future interventions should consider how to limit the operation of parks and open spaces to become usable for residents as mental rest places. Also, PD 957 requires that subdivision parks and playgrounds occupy "not less than 100 sqm" for projects covering one hectare or more.



 $\label{thm:continuous} \textbf{Figure 1. Satellite} \ \textbf{and} \ \textbf{street} \ \textbf{views} \ \textbf{of} \ \textbf{the Disiplina Village} \ \textbf{in Barangay Ugong, Valenzuela City}.$

PEDESTRIANIZATION OF FATIMA AVENUE

Fatima Avenue is a link between residential areas and MacArthur highway. Pedestrianizing the Avenue helps increase its walkability and the accessibility of the major thoroughfare MacArthur highway (Figure 2). Multiple use of the avenue for food bazaars and social events also provide residents with opportunities for social interactions. Increased social interactions have physical, mental, and psychological health benefits.

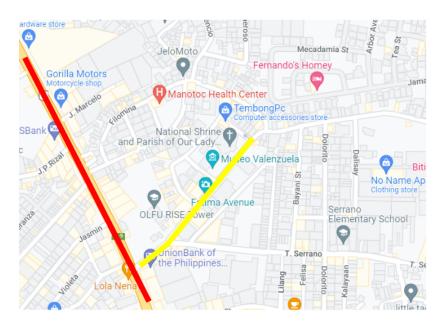


Figure 2. Fatima Avenue (yellow), its surrounding neighborhoods and MacArthur Highway (red).

DIGITIZATION EFFORTS FOR EMPLOYMENT AND BUSINESS

Valenzuela City hosts a job portal online, which as of July 21, 2022 has 228 job postings from 490 employers. Companies listed in the job portal are located within Valenzuela City. This promotes localization of the work aspect of the 15-minute city concept. Most of the job postings are also clerical in nature which means they can be done from home. If companies have data privacy issues, the localization of the job opportunity helps employees work near their residences.

Valenzuela City has been given multiple "Most Business Friendly-City" awards by the Philippine Chamber of Commerce and Industry (Valenzuela City Public Information Office). Their online business permitting is also integrated into the zoning process. An updated database of local businesses helps monitor not only compliance to zoning but also open the potential for other planning innovations such as clustering of services.

DIVERSITY OF PARKS IN VALENZUELA CITY

Valenzuela City has parks with different purposes, besides other leisure and cultural locations (Figure 3). This diversity of purposes is aligned with the physical aspect of the 15-minute city concept. Furthermore, linear park development is being planned with the management of the North Luzon Expressway.



Figure 3. Selected parks in Valenzuela City. (Valenzuela City Facebook Page)

CHALLENGES FOR VALENZUELA CITY

HIGH FLOOD RISK

Of the total land area of Valenzuela City, 16% and 24% are at very high and high susceptibility to flooding, respectively (Figure 4). The three Disiplina Villages, however, have low susceptibility to flooding. Valenzuela City must use climate and disaster risk assessments to ensure that future resettlement and redesign projects have low flood risks.

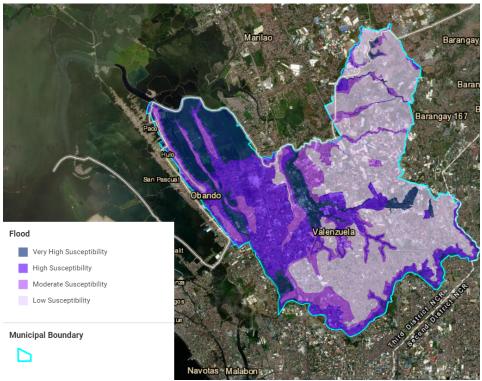


Figure 4. Flood susceptibility of Valenzuela City (GeoRiskPH)

MULTIPLE USERS OF THOROUGHFARES

Even with good signages for cyclists and pedestrians, the absence of protected bike infrastructure puts cyclists in danger when using the roads with trucks, trailers, jeepneys, buses and motorcycles. For example, a segment of McArthur Highway traverses the City. McArthur Highway is a route for motorists, buses, trucks and trailers going to northern Luzon.

LOW FUNDING ALLOCATION FOR ROAD-BASED PUBLIC TRANSPORT

Suzara et al., (2021) cites that between 2010 and 2021 only 1% of the total road based infrastructure budget was allocated for road based public transport. This shows that road based public transport has not been a priority. Private vehicle registration also grew by almost 12% annually between 2010 and 2019.

LOW POTENTIAL FOR TELEWORK OF MOST JOB POSITIONS AND INDUSTRIES

Work from home arrangements can promote the proximity and ubiquity of job opportunities. However only 4-6% of Filipino employed workers are in occupations where all tasks are "teleworkable" (Generalao, 2021). Around 43% of Filipino employed workers are in occupations where all tasks are "non-teleworkable," construction, agriculture and mining industries were found to have the lowest average telework potential. These statistics underscore the importance of local job opportunities. Having in-city jobs that are accessible to residential communities will prevent lost productivity and time.

UNPROTECTED BICYCLE LANES

Many cities implemented bicycle lanes as temporary infrastructure change during the peak of the COVID-19 pandemic, a policy that Moreno et al., (2021) highlight as a pursuit of the 15MC. In Metro Manila, Philippines, pop-up bicycle lanes were initiated by advocacy groups before governments adopted these as policy directions. Although national policy integrates bicycle lanes along national roads, physical separation of bicycle lanes is not required. Painted bicycle lanes that allow entry of vehicles and motorcycles are prevalent.

TRADITIONAL ZONING PARADIGM

C40 Cities proposes the adoption of form-based coding as a strategy for creating 15-minute cities. Form-based codes promote "place-based urbanism and planning (Evangelopoulos and Nuworsoo, 2016)" through creating zones of urban intensity. Form-based coding is compatible with the Filipino culture of multiple-use buildings and housing. Strict residential zoning necessitates securing locational clearances for home offices of startups and individual professionals.

In the Philippines, form-based zoning is listed as a zoning strategy in HLURB (2014). However, the Model Zoning Ordinance prescribed by the same follows the use-based zoning paradigm. Since local governments are still slow to update their zoning ordinances because of issues related to technical capacity and politics, the adoption of form-based codes may be hindered by similar cases of technical capacity and politics.

THREATS OF GENTRIFICATION

A critique of the 15-minute city concept emphasizes that it fails to address the threat of gentrification and, in the US context, historical urban inequity and segregation (O'Sullivan, 2021). Gentrification has been occurring in Metro Manila because of "uneven development" and displacement in housing informal settlers (Choi, 2014). "Quiet residential neighborhoods", like Barangay Poblacion in Makati City (Yamsuan, 2018), can become noisy for residents when commercialized. The walkable Bonifacio Global City benefits residents, but is seen as disconnected from outside transportation systems used by people who work inside it (Maramara 2022). Creating "Philippine 15MCs" must ensure that design and planning will include all ages and income groups.

OPPORTUNITIES TO LEVERAGE FOR CREATING 15-MINUTE CITIES

Philippine cities can leverage the following opportunities for creating 15-minute city planning interventions.

FULL DEVOLUTION EXECUTIVE ORDER

With the full devolution taking place, local government units have difficulty in managing the different responsibilities and services that have been downloaded into them. Additional share in the National Tax Allotment means more financing capability for projects that were previously not prioritized because of low profitability compared to road and infrastructure projects. Abante et al., (2022) proposed directions for supporting road-based public transportation, particularly with the special provisions for active transport in the 2022 General Appropriations Act.

SMART CITY DEVELOPMENT PROGRAM

Smart city development is an emerging thrust in the Philippines, as evidenced by 80 smart city projects listed in ARUP (2021). The open data aspect of smart city development can address the shortcoming of the 15MC concept in terms of inclusivity. Participatory planning can be more informed with open data platforms, both local and national in scale.

GREEN-GREEN PROGRAM OF DBM

The Green-Green Program of the Department of Budget and Management (DBM) aims to support the whole government units in creating more public parks and open spaces. As of late the Green-Green-Green Program has supported the following cities in their respective public park development projects. Valenzuela City owned polo park was upgraded with support from the Green-Green Program. With the complex and expensive process of obtaining right of way and eminent domain in the Philippines, pocket park development has been proposed particularly in densely arranged cities of Manila.

The Foundation can specifically target barangays in Metro Manila that need technical assistance for financing pocket green space development projects, as public spaces and parks are not always green as found by a study of Gonzales and Magnaye (2017) in Manila City.

HISTORICAL AND CULTURAL VILLAGE-MAKING

The Spanish influence in Philippine cities is obvious in the central role of the church and town hall. Even with the American influence of car-dependent planning, barangays that compose Philippine cities are arranged with the barangay hall and parish church central to other uses. Philippine cities arranged in this manner can focus on enhancing the walkability of the network first, as the spatial arrangement already caters to proximity-based needs. Because of the devolution of basic services and facilities to barangays, markets, schools and health centers are located within communities. The sari-sari store also represents hyperlocal commerce that is endemic to the culture of the Filipino. In the absence of green spaces and social venues, the neighborhood store becomes the social gathering place.

SHIFTING POLICY IN HOUSING

Housing projects of the government are also integrating the cultural and economic features of 15-minute cities. Payot (2019) cites the cultural and economic inadequacy of housing resettlement projects, manifested in families incrementally extending the given 20-square meter houses to as much as 72 square meters, maximizing the lot size available. One reason is to add livelihood opportunities like carpentry shops or retail stores, which is aligned with the vision of the 15MC to provide accessible goods services within communities (i.e., the proximity principle). In-city relocation allows poor households to live near places of work and social services.

EXISTING POLICIES FOR FLEXIBLE WORK ARRANGEMENTS

The Telecommuting Law passed in 2018 provided for private employers to offer telecommuting programs on a voluntary basis. Telecommuting employees shall receive the same treatment as "comparable employees" in terms of pay, rest days, workload, training, and other collectible rights. Flexible work arrangements for government employees "at the discretion of the head of agency" also took effect on June 15, 2022 through Civil Service Commission CSC Resolution 2200209.

Generalao (2021) found that 6% or 2.4 million workers in the Philippines are employed in occupations that have full telework potential. The Foundation can engage government and private heads of agencies to promote remote working in as many industries and job positions as possible. Management workshops can help heads of agencies build capacity for implementing flexible working arrangements.

EXISTING STANDARDS FOR LOCAL GOVERNMENT PLANNING

The Guidebook for Comprehensive Land Use Planning (HLURB, 2014) prescribes standards that can help start increasing the proximity of goods and services in Philippine cities. These include park-to-population ratio (Table 6) and recommended distances of commercial areas from social services (Table 7). In this regard, the Foundation can promote the adoption of minimum distances from open spaces.

Table 6. Selected Standards in Philippine Planning Guides for Recreational Facilities

Recreational Facilities	Standard	
City/Municipal Park	500 sqm per 1,000 population	
Playfield/athletic field	0.5 hectares per 1,000 population	
Subdivision parks and playgrounds	not less than 100 sqm for projects one hectare or more	

References: HLURB (2014), PD 957 IRR

Table 7. Recommended Distances of Social Services from Commercial Areas

Situation	Recommended distance or travel time
From residential zones to neighborhood center	750 m; 15 minutes on foot
From residential zones to Minor CBD	12 km; 15-30 minutes travel by public transport
From residential zones to Major CBD	45 minutes to one hour travel by public or private transport
From education center	15 minutes by public transport
From health center	10 to 20 minutes travel time
From police station	5 minutes travel time
From fire station	3-5 minutes travel time
From garbage disposal area	15-20 minutes travel time of garbage truck

Reference: HLURB (2014)

POTENTIAL PARTNERS FOR CREATING PHILIPPINE 15MCS

The following are actors and organizations that can be partners of the foundation in advocating for proximity-based planning.

ACTIVE MOBILITY AND PUBLIC TRANSPORTATION

Move As One Coalition - The Move As One Coalition "champions a shared vision of a safer, more inclusive public transport system in the Philippines." The Coalition hosts online webinars and participates in public lobbying. Alt MobilityPH, a non-profit organization member of the Coalition, also works with legislators on transport-related bills, e.g., the "Magna Carta for Dignified Commuting."

Jeepney and Tricycle Operators and Drivers Associations - Associations of operators and drivers in different jeepney and tricycle routes can be engaged to determine social safeguards required when 15-minute city projects are implemented. Promoting cycling and walking may affect ridership and routing of jeepneys and tricycles. Also, engagement with these associations can encourage positive values towards road sharing with bicycles and pedestrians.

HOUSING AND LOCAL ECONOMIC DEVELOPMENT

Local Economic Development and Investment Promotions Office - The LEDIPO is a local government office for "facilitation, preparation, coordination and execution of local economic development and investment promotion policies, programs, projects, and activities. It assists in the promotion and development of MSMEs in the locality, including business permitting and joint venture partnerships (DILG MC 2020-167).

Public Employment Service Office - The PESO is a local employment service mandated by law to "facilitate exchange of labor market information between job seekers and employers (RA 8759, as amended)." In Valenzuela City, the PESO is a partner in the management of the city online job portal. The Foundation can help local PESOs develop and sustain their local online job portals to match local employers with city residents, especially for "non-teleworkable" job opportunities like those in the construction industry.

Associations of Housing Developers - Three major groups are partners of the Department of Human Settlements and Urban Development in housing development: the Subdivision and Housing Developers Association, the Chamber of Real Estate Builders' Associations, and the Organization of Socialized Housing Developers of the Philippines. The Foundation can consult these groups about local housing development activities.

PUBLIC GREEN SPACES, CULTURE AND ENTERTAINMENT

Philippine Association of Landscape Architects (PALA) - The PALA is the national organization of Landscape Architects in the Philippines. It facilitates participatory landscape design workshops. These workshops can initiate the development of more open and green spaces in Philippine 15MCs.

Philippine Institute of Environmental Planners (PIEP) - The PIEP is the professional organization of Environmental Planners in the Philippines. Engaging the PIEP can provide the Foundation with access to a network of Philippine local planners, particularly those in local government positions.

Renacimiento Manila - Renacimiento Manila is a private organization that advocates for heritage-rooted urban renewal. It partners with different organizations to create digital models of heritage sites in the City of Manila. Engaging the organization helps the Foundation bring the cultural and historical attributes of cities in creating 15-minute cities.

Alliance for Safe, Sustainable and Resilient Environments - ASSURE is composed of architects, engineers, environmental planners, and other professionals who work in post-disaster reconstruction and rehabilitation. ASSURE published the Public Parks, Open and Green Spaces Guidebook, a planning and development guide for LGUs and real estate developers. Engaging ASSURE can help the Foundation provide project development assistance to barangays for open and green spaces.

Grupo Kalinangan - is a non-profit organization working on heritage mapping. They launched an online Philippine Heritage Map in 2016 and has documented more than 10,000 cultural properties in the Philippines as of December 2019. The Foundation can support the group in sustaining the online heritage map.

POLICY ROADMAP FOR CREATING PHILIPPINE 15MCS AND EXISTING COMPONENTS FROM PHILIPPINE CITIES

C40 Cities published a menu of policy actions for creating 15MCs. These policy actions were contextualized in the Philippine situation.

CREATING COMPLETE NEIGHBORHOODS

Context - Philippine cities are spatially arranged with local government halls, educational institutions until the secondary education level, and health centers. The standards and recommendations in the Comprehensive Land Use Planning Guidebook (HLURB 2014) require monitoring and evaluation through different levels of government. Cities have general supervision powers over barangays, so to pursue 15-minute cities, city governments must use this power responsibly. LGUs are also mandated to update their Community-Based Monitoring Systems (CBMS) and Climate and Disaster Risk Assessment (CDRA) databases. These databases are ideally the sources for information in updating their mandated local plans for land use, development, and disaster management. The update of these databases, however, is tedious and not yet streamlined.

C40 Prescribed steps

- 1. Establish a baseline of existing amenities within each neighborhood.
- 2. Increase compactness and promote mixed-use building and neighborhoods
- 3. Activate ground floors to create pleasant, safe streets for pedestrians and to support the local economy.
- 4. Bring priority services, amenities and parks to every neighbourhood, focusing first on the most underserved areas.
- 5. Promote the flexible use of spaces and buildings throughout the day and week
- 6. Encourage temporary uses to help neighbourhoods thrive, evolve and build a stronger identity.

Recommended programs

- Technical assistance for cities in completing mandated plans and inventories, specifically integrated business permitting and zoning databases and inventory of idle and underused lands and property
- Host events that temporarily prohibit motorized traffic in roads

Possible partner organizations -

- o Local business permitting and licensing offices
- o Business groups and local chambers of commerce
- Philippine Disaster Resilience Foundation

ENSURING EVERYONE HAS A PLACE

Context - Public participation is already required in the land use and development planning processes of Philippine cities. At least a fourth of the membership of city development councils are required to comprise non-government organizations. Families affected by right-of-way acquisition and planned government projects are also protected by provisions of different laws as early as the year 1992 (RA 7279). Also, the housing policy of the government is gradually shifting towards in-city and near-city relocation. Community development is still an issue in housing projects: social services and livelihood opportunities are often missing in resettlement sites.

C40 Prescribed steps -

- 1. Engage a diverse mix of residents and stakeholders in developing and implementing the city's strategy
- 2. Avoid displacement and ensure that 15-minute neighbourhoods are home to a diverse mix of people
- 3. Ensure that 15-minute neighbourhoods offer diverse, community-building amenities for everyone

Recommended programs -

- Stakeholder workshops for monitoring and evaluating social safeguards in local shelter plans and implemented housing projects
- Assist the Department of Human Settlements and Urban Development in monitoring the compliance of housing projects with the balanced housing provisions of the law

Possible partner organizations -

- Associations of housing developers
- Subdivision and Housing Developers Association
- o Organization of Socialized Housing Developers in the Philippines
- o Chamber of Real Estate Builders' Associations
- o Department of Human Settlements and Urban Development

DEVELOPING PEOPLE-CENTERED STREETS AND MOBILITY

Context - Mobility reform is manifested in the various national government policies that require active and public transport prioritization (Abante et al., 2022). Philippine cities also host car-free days and close major roads for weekend festivals. The Green-Green Program of the Department of Budget and Management also provides funding assistance to cities for developing public open spaces. It was estimated to add around 628,000 sqm of new public open spaces (DBM 2019).

C40 Prescribed steps -

- 1. Inject life into streets by reclaiming space for social, community-building and productive uses
- 2. Green the streets and expand green public space in every neighbourhood
- 3. Design streets, including neighbourhood streets, for active travel by all
- 4. Develop and adapt initiatives to enable walking and cycling in every neighbourhood

Recommended programs -

- o Barangay-scale inventory of possible locations of pocket and regular green park developments
- o Workshops on developing project proposals for protected bike lanes and sidewalk widening
- Training programs for business owners in developing business plans that support walking and cycling

Partner organizations -

- o Move as One Coalition
- o Philippine Institute of Environmental Planners
- o Philippine Association of Landscape Architects
- o Bureau of Local Government Finance
- Jeepney and Tricycle Operators and Drivers Associations

CREATING CONNECTED PLACES

Context - Public transportation in Metro Manila is secondary to private transportation in terms of government funding and priority. Existing capacity and infrastructure are insufficient for the working public. Service contracting of public vehicles helped commuters, but drivers and operators were disadvantaged because of delayed payments. The dedicated bus lane in Epifanio de los Santos Avenue (EDSA), a major thoroughfare in Metro Manila, complements the train line that was located first; however, accessibility of stations of both the bus and train lines is being critiqued.

On digital connection, the Department of Information, Communications and Technology (DICT)'s Free Wi-Fi for All program is reported to be available in 4,518 locations nationwide (DICT). The Anti-Red Tape Authority also launched the GoSmartApp in 2021, which aims to help local government units automate their government processes and services.

C40 Prescribed steps -

- 1. Develop the accessibility and affordability of public transit for longer trips
- 2. Develop digital infrastructure to ensure everyone has internet access
- 3. Digitalize city services to reduce unnecessary and unwanted trips

Recommended programs -

- Conduct coaching programs for local public transport planning
- Help LGUs develop and promote digital government services within an an open and collaborative local data platform
- Host learning sessions for remote freelancing and online business startups
- Set-up programs to provide internet devices to disadvantaged communities and population, especially students and workers

Partner organizations -

- Move As One Coalition
- Department of Information and Communications Technology
- SmartCT
- o DOST-PCIEERD
- Child Hope
- o Finance technology companies (e.g., Maya, GCash)

RECOMMENDED PRIORITY PROGRAMS AND ACTIVITIES FOR FNF PHILIPPINES IN PURSUIT OF PHILIPPINE 15-MINUTE CITIES

TECHNICAL ASSISTANCE FOR CITIES IN COMPLETING MANDATED PLANS AND INVENTORIES

The Foundation can assist local government units in formulating and updating Comprehensive Land Use Plans, Comprehensive Development Plans, Local Public Transport Route Plans, and Local Shelter Plans. Updating these

plans will provide Philippine cities with baseline information for proximity-based planning. Land banking and transitoriented development are already integrated into the different policy frameworks of the NEDA, DHSUD and DoTr. With the devolution of more powers and responsibilities to Philippine cities, the Foundation can use previous studies on bicycle benefits to advocate for the integration of these considerations into local plans.

TECHNICAL ASSISTANCE FOR BARANGAYS IN PERFORMING DEVOLVED RESPONSIBILITIES RELEVANT TO PROMOTING WALKING AND CYCLING

The Foundation can assist barangays and youth councils in developing projects that will encourage walking and cycling. With full devolution in effect, barangays are responsible for, among others, developing satellite markets, providing information, reading, and day care centers, beautification of facilities, road clearing operations, and construction of plazas and multi-purpose halls (DBM-DILG JMC 2021-1; DILG MC 2022-85). Also, temporary closures of local roads for pedestrianization or public markets can be initiated by barangays. Youth councils also have separate funding that can be used for youth development projects.

HELP CITIES CREATE BUSINESS AND ENFORCEMENT PLANS FOR PEDESTRIANIZED AND CAR-FREE STREETS

The Foundation can help sustain pedestrianization efforts by helping cities sustain the economic benefits. Like the Fatima Avenue in Valenzuela City, the Teresa Street in Manila was a pedestrianized street inaugurated in 2005 (PhilStar). However, at present, no trace of the pedestrianization effort can be seen in Figure 5. Through helping residents and businesses realize the financial benefits of implementing pedestrian-only traffic in Fatima Avenue, a similar situation like that of Teresa Street may be prevented.



Specific workshops with businesses and local government units

The Foundation can act as a mediator between local government units and businesses in determining actions towards developing hyperlocal economic opportunities. The steps proposed by C40 Cities for can be the topics of discussion for learning sessions (see Policy Roadmap section).

CONCLUSION

APPLICABILITY OF THE 15MC CONCEPT TO PHILIPPINE CITIES

The 15-minute city concept is applicable to Philippine cities because of the following advantages:

- Spatial arrangement of Philippine cities and villages are central to the town or barangay hall.
- Hyperlocal stores are already present in the form of the "sari-sari" stores (variety stores). These also function as social spaces in dense residential communities.
- Smart city development policy of the PH Government can be leveraged.
- Participatory planning and budgeting is already a mandated process in national and local governments.

However, major challenges in applying the 15-minute city concept to Philippine cities include:

- Outdated zoning traditions and priority for car infrastructure
- Problems with capacity and consistency of public transportation
- Employment in occupations where all tasks are "non-teleworkable"
- Threats of gentrification

To pursue proximity-based planning, Philippine cities can prioritize the adoption of the following "15-minute city" components:

- Clear sidewalks and protected lanes for non-motorized transport
- Accessibility hot spot map
- Protecting existing bicycle and pedestrian infrastructure
- Driver and resident education campaigns on walkability and cycling integration
- Integrated governance platforms, including business permitting and local job portals

OPPORTUNITIES AND CHALLENGES FOR CREATING PHILIPPINE 15MCS TOWARDS COVID-19 REHABILITATION AND RECOVERY

The primary opportunity for creating Philippine 15MCs is the full devolution of services. With additional funding, Philippine cities can finance projects towards proximity-based development. According to priority, these are: pedestrian and pedestrianized paths; protected bicycle lanes; business development assistance for startups and microto-small enterprises; public transportation support; and, pocket and regular green spaces and parks.

The primary challenge for creating Philippine 15MCs is the priority for car-related infrastructure and planning. Continuing with prioritizing expressways and road widening projects while disregarding public transportation funding will worsen the transportation problem for the higher proportion of the commuting public. Transportation policy relates to land use policy: car-related infrastructure decreases the available land for other uses such as green spaces and is incompatible with densification of cities.

RECOMMENDED ROLE OF FNF PHILIPPINES

Considering the results of the scoping study, it is recommended that FNF Philippines assumes the role of learning provider and policy advocate for 15-minute cities. With increased funding and responsibilities for local government units, the Foundation can prioritize educating leaders at the barangay and municipal levels on the incentives of adopting "15-minute city" components. For the private sector, the Foundation can serve businesses affected by "15-minute city" interventions through learning sessions so that these interventions are sustained and inclusive.

REFERENCES

JOURNALS

Choi, N.. (2014). Metro Manila through the gentrification lens: Disparities in urban planning and displacement risks. Urban Studies. 53. 10.1177/0042098014543032.

Gonzales L. and Magnaye D. (2017). Measuring the Urban Biodiversity of Green Spaces in a Highly Urbanizing Environment and Its Implications for Human Settlement Resiliency Planning: The Case of Manila City, Philippines. Procedia Environmental Sciences 37, 83-100. https://doi.org/10.1016/j.proenv.2017.03.024

Evangelopoulos, E. and Nuworsoo, C. (2016). Form-based codes: An Overview of the literature. Focus: Vol. 13: Iss. 1, Article 17. http://digitalcommons.calpoly.edu/focus/vol13/iss1/17

Generalao, I. (2021). Measuring the telework potential of jobs: evidence from the International Standard Classification of Occupations. The Philippine Review of Economics, 58; 92-127. DOI:10.37907/5ERP1202JD

Moreno, C., Allam Z, Chabaud D, Gall C, and Pratlong F. (2021). Introducing the "15-Minute City": Sustainability, Resilience and Place Identity in Future Post-Pandemic Cities. Smart Cities 2021, 4, 93–111. https://doi.org/10.3390/smartcities4010006

WEBSITE ARTICLES

Abante, K., Bendana, R., Comia, R. (2022). Mobility Policies and Budgets in the Philippines: A Guidebook for Advocates in 2022

 $\underline{https://www.researchgate.net/publication/358799049_Mobility_Policies_and_Budgets_in_the_Philippines_A_Guideboo_k_for_Advocates_in_2022$

Anti-Red Tape Authority Office of the President. (n.d.). Accomplishment Report 2018-2022. Anti-Red Tape Authority. Retrieved August 7, 2022, from https://arta.gov.ph/about/accomplishment-report/

ARTA to harmonize existing EODB platforms of the government into a single platform - Anti-Red Tape Authority. (2021, March 18). Anti-Red Tape Authority -. https://arta.gov.ph/press-releases/arta-to-harmonize-existing-eodb-platforms-of-the-government-into-a-single-platform/

ARUP. 2021. Smart City Handbook The Philippines. British Embassy Manila. Retrieved from https://bit.ly/PHsmartcityUKABC

C40 Cities. Benchmark - 15-minute cities. https://www.c40knowledgehub.org/s/article/Benchmark-15-minute-cities

C40 Cities. How to create "complete" neighbourshoods. https://www.c40knowledgehub.org/s/article/15-minute-cities-How-to-create-complete-neighbourhoods

C40 Cities. How to ensure a place for everyone. https://www.c40knowledgehub.org/s/article/15-minute-cities-How-to-ensure-a-place-for-everyone

C40 Cities. How to develop people-centered streets and mobility. https://www.c40knowledgehub.org/s/article/15-minute-cities-How-to-develop-people-centred-streets-and-mobility

C40 Cities. How to create connected places. https://www.c40knowledgehub.org/s/article/15-minute-cities-How-to-create-connected-places

doctrine.com (2021). Didn't we already have 15-minute cities and towns in the Philippines? https://doctrine.com/2021/04/07/didnt-we-already-have-15-minute-cities-and-towns-in-the-philippines/

Filipino Transformers and promoting the right to adequate housing. (2019, October 29). Making Cities Work. Retrieved August 6, 2022, from https://www.makingcitieswork.net/post/filipino-transformers-and-promoting-the-right-to-adequate-housing

Hotspots - Free Wi-Fi for All. (n.d.). Free Wi-Fi for All. Retrieved August 6, 2022, from https://freepublicwifi.gov.ph/livehotspots/

Introducing Spotlight On: 15-minute cities. (n.d.). C40 Knowledge Hub. Retrieved August 6, 2022, from https://www.c40knowledgehub.org/s/article/Introducing-Spotlight-On-15-minute-cities?language=en_US

LGUs to automate business registration processes in the new normal. (2021, April 14). DICT. Retrieved August 7, 2022, from https://dict.gov.ph/lgus-to-automate-business-registration-processes-in-the-new-normal/

O'Sullivan, F. (2021, March 2). The Downsides of a 15-Minute City. Bloomberg.com. Retrieved August 6, 2022, from https://www.bloomberg.com/news/articles/2021-03-02/the-downsides-of-a-15-minute-city

Porciuncula, A. R. (2020, December 15). ValenzuelAko Mobile | News. ValenzuelAko Mobile | News. Retrieved August 6, 2022, from https://www.valenzuela.gov.ph/article/news/13677

Suzara, Z., Abante K., Chang, K., Encarnacion A., Naval, G., Rojo, C., Daos, J., Osorio, J., Tanganco., L. (2021). Move People, Not Just Cars: Correcting the systematic underfunding in national road-based public transport in the Philippines (2010-2021). DOI: 10.13140/RG.2.2.29216.51208

Residents, students laud Teresa pedestrianization. (2005, May 28). PhilStar Global. Retrieved August 6, 2022, from https://www.philstar.com/metro/2005/05/28/279408/residents-students-laud-teresa-pedestrianization

Why Poblacion's gentrification is problematic. (2018, Aug 1). NoliSoli.ph. Retrieved August 31, 2022, from https://nolisoli.ph/46939/poblacion-downside-progress/

Here's Why Some Netizens Think BGC is the 'Worst District in Metro Manila. (2022, Jun 24). 8List.ph. Retrieved August 31, 2022, from https://www.8list.ph/bgc-worst-city-district-in-metro-manila/

GOVERNMENT WEB PAGES

GeoRiskPH https://www.georisk.gov.ph/

Valenzuela Trabaho - Hanap. Apply. Trabaho. http://valenzuelatrabaho.gov.ph

Valenzuela City Facebook Page https://www.facebook.com/ValenzuelaCityGov

OTHERS

Department of Budget Management & Diaz, R. H. (n.d.). Green Green Green [Local Government Support Fund - Assistance to Cities Program]. Philippines. http://icsc.ngo/wp-content/uploads/2019/05/RTD_FindingtheRightBalance_Rainer_GreenGreen.pdf

Department of Budget and Management & Department of Interior and Local Government. Join Memorandum Circular No.2021-1

Department of Interior and Local Government. Memorandum Circular No. 2020-167

Department of Interior and Local Government. Memorandum Circular No. 2022-85

Housing and Land Use Regulatory Board. Comprehensive Land Use Planning Guidebook 2014.

Philippine Republic Act No. 7279. Urban Development and Housing Act of 1992

Philippine Republic Act No. 8759. Public Service Employment Act of 1999

Presidential Decree 957 Implementing Rules and Regulations