



**REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF PUBLIC WORKS AND  
HIGHWAYS**

**PASIG-MARIKINA RIVER CHANNEL  
IMPROVEMENT PROJECT  
(PHASE IV)**

**RESETTLEMENT ACTION PLAN  
FOR MARIKINA RIVER**

**IN ACCORDANCE WITH THE  
JICA RESETTLEMENT GUIDELINES/POLICIES  
FOR SOCIAL CONSIDERATIONS**

**October 2018**

**UPDATED RESETTLEMENT ACTION PLAN (RAP) FOR MARIKINA RIVER  
(PMRCIP PHASE IV)**

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## ACRONYMS AND ABBREVIATIONS

BIR	Bureau of Internal Revenue
BPO	Business Processing Outsourcing
C/T	Census of Households and House Tagging
CDA	Cooperative Development Authority
CSWD	City Social Welfare and Development Office
DENR	Department of Environment and Natural Resources
DILG	Department of Interior and Local Government
DOLE	Department of Labor and Employment
DPWH	Department of Public Works and Highways
DSWD	Department of Social Welfare and Development
DTI	Department of Trade and Industry
EMA	External Monitoring Agent
EO	Executive Order
ESSD	Environment and Social Safeguards Department
FMV	Fair Market Value
FSSI	Foundation for Sustainable Society
GSIS	Government Service Insurance System
HDMF	Home Development Mutual Fund
HH	Household
ICP	Inter-agency Consultation Proceedings
IMA	Internal Monitoring Agent
ISF-	NTWG Informal Settler Families-National Technical Working Group
ISFs	Informal Settler Families
ITR	Income Tax Return
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
LARRIPP	Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy
LGUs	Local Government Units
LHB	Local Housing Board
LIAC	Local Inter-Agency Committee
LPG	Liquefied Petroleum Gas
MCGS	Marikina Control Gate Structure
MERALCO	Manila Electric Company
MFCP	Major Flood Control Projects
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NGOs	Non-government Organizations
NHA	National Housing Authority
NHCS	Napindan Hydraulic Control Structure

NSO	National Statistics Office
ODA	Official Development Assistance
OP	Operational Policy
OSY	Out-of-school Youth
PAHs	Project Affected Households
PAPs	Project-Affected Persons
PCUP	Presidential Commission on the Urban Poor
PD	Presidential Decree
PESO	Public Employment Service Office
PIE	Post Implementation Evaluation
PLDT	Philippine Long Distance Telephone Company
PMO	Project Management Office
PMRCIP	Pasig-Marikina River Channel Improvement Project
POs	People's Organization
RA	Republic Act
RAP	Resettlement Action Plan
RFO	Rent Free Occupant
RHU	Resettlement and Housing Unit
RIC	Resettlement Implementation Committee
ROW	Right of way
SAPROF	Special Assistance for Project Formulation
SC	Supreme Court
SES	Socio-Economic Survey
SHFC	Sustainable Housing Foundation
SSS	Social Security System
STEP	Special Term for Economic Partnership
TESDA	Technical Education and Skills Development Authority
TWG	Technical Working Group
UDHA	Urban Development and Housing Act
UPAO	Urban Poor Affairs Office
UPMO-FCMC	Unified Project Management Office-Flood Control Management Cluster
USD	United States of America Dollar
WB	World Bank

## EXECUTIVE SUMMARY

### 1. INTRODUCTION

#### 1.1 Background of Pasig-Marikina River Channel Improvement Project (PMRCIP)

The Pasig-Marikina River Channel Improvement Project (PMRCIP) is part of the Master Plan for Flood Control aimed to mitigate flood risks in Metro Manila and thereby contribute to the sustainable urban economic development of the National Capital Region and neighboring provinces.

Specifically, Pasig-Marikina River Channel Improvement Project (PMRCIP) aims to:

- a. mitigate the massive flooding caused by the overflowing of Pasig-Marikina River resulting in severe damages to lives, livestock, properties and infrastructure and alleviate the living and sanitary conditions in Metro Manila.
- b. create a more dynamic economy by providing a flood-free urban center as an important strategy for furthering national development.
- c. rehabilitate and enhance the ecological and aesthetic value of Pasig-Marikina River by arresting the progressive deterioration of the environment, health and sanitation in Metro Manila.

PMRCIP is being implemented in phases by the Government of the Philippines (GOP) through the Department of Public Works and Highways-Unified Project Management Office for Flood Control Management Cluster (DPWH-UPMO-FCMC) with financial assistance from the Japan Official Development Assistance (ODA). PMRCIP Phase II and Phase III were carried out between 2007 and 2018 with Japanese Special Term for Economic Partnership (STEP) Loan. It involved the construction of 16.4 km of channel improvement works along Pasig River from Delpan Bridge to Napindan Channel in Upper Pasig River.

Phase III was completed in March 2018, including rehabilitation of 16.4 km protection works along Pasig River between Delpan Bridge and Napindan Channel as well as dredging and construction of dikes and sluiceways along 5.4 km of Lower Marikina River from Napindan Channel to downstream of Mangahan Floodway.

Preparatory Study for PMRCIP Phase IV was completed in August 2015 to continue flood protection works along 8.0 km of Middle Marikina River from downstream of Mangahan Floodway to Marikina Bridge including the Marikina Control Gate Structure (MCGS). Simultaneously, Detailed Design for Phase V was also completed for the 5.8 km stretch of Upper Marikina River from Marikina Bridge up to San Mateo-Batasan Bridge.

The preparatory study for Phase IV and the detailed design for Phase V is part of Supplemental Agreement No. 1 to the contract for Consulting Services for Assistance in the Procurement of Civil Works and Construction Supervision of the PMRCIP Phase III-Japan International Cooperation Agency Loan (JICA Loan PH-P252).

The overall project area of Pasig-Marikina River Channel Improvement Project (PMRCIP) is the Pasig-Marikina River Basin, which has a total drainage area of 635 km<sup>2</sup>. Phase IV covers the sections of lower and middle Marikina River within the administrative jurisdiction of the Local Governments Units (LGUs) of Pasig City, Quezon City, and Marikina City in Metro Manila (Figure 1.1.1).

#### 1.2 Definitive Plan of PMRCIP Phase IV

The main civil works under Phase IV includes the following:

- 1) River channel widening, revetment dikes and dredging. A design riverbed width of 90 m is expected to convey the design flood discharge of 2,900 m<sup>3</sup>/s
- 2) Installation of Drainage facilities
- 3) Construction of Marikina Control Gate Structure (MCGS)
- 4) Construction of Cainta and Taytay Floodgates

The main civil works of the Project are dredging/excavation and embankment, construction of SSP revetment and floodgates, slope protection works and drainage structure installation. The project is proposed for implementation in 2021-2028.

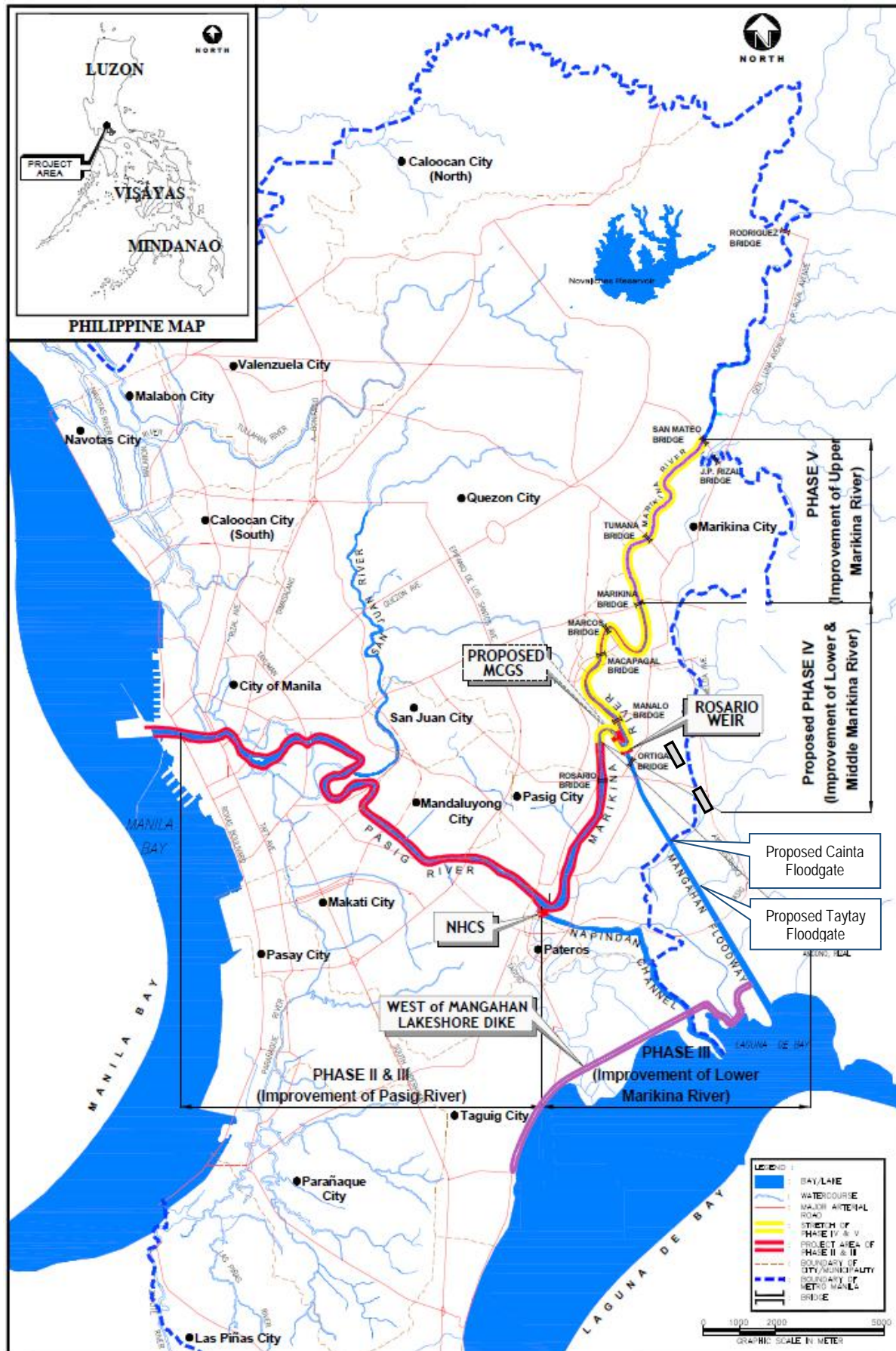


Figure S1.1 Location Map of Pasig-Marikina River Channel Improvement Project (PMRCIP)

### **1.3 Objective, Scope and Methodology of the Resettlement Action Plan (RAP)**

#### **1.3.1 Objectives**

The overriding goal of this RAP is to ensure that the social and economic bases of project-affected persons (PAPs) are at least restored, if not improved, after the project.

Specifically, the RAP has the following objectives:

- To identify, enumerate and profile the Project Affected Persons (PAPs);
- To assess the potential adverse impacts of the Project on the social and economic bases of these PAPs;
- To enumerate real properties and assets (lands, houses, trees, crops and other improvements), including social structures and public facilities that will be affected in part or in full.
- To assess the fair market value of these properties and assets and determine the fair compensation and entitlement for these losses. Regardless of tenure status these private and public properties shall not be taken for the Project's use without just compensation at replacement cost;
- To identify ways to bridge the gap between the JICA/WB /LARRIPP policies and guidelines and to formulate the most appropriate and viable resettlement policy that is socially acceptable to the stakeholders, particularly the concerned local government units (LGUs) and the PAPs;
- To present viable options and strategies to ensure proper and humane resettlement of the PAPs in a timely manner;
- To conduct reiterative communication, consultation and coordination with PAPs, affected communities, local government units (LGUs), government housing agencies and other stakeholders to ensure meaningful dialogue, participation and equity in the benefits of the project;
- To identify potential resettlement sites and formulate a menu of resettlement options;
- To identify the productive skills, competencies and capabilities of PAPs; evaluate present and future economic opportunities; and, formulate a menu of livelihood options to re-establish their income and livelihood;
- To ensure adequate involvement of the PAPs and that appropriate grievance mechanisms are accessible to them during the implementation of the RAP;
- To identify institutional arrangements during pre-, actual and post-relocation stages of for RAP implementation, including mechanisms for grievance redress by PAPs;
- To estimate the cost and propose a timetable of RAP implementation; and,
- To identify the necessary resources, particularly the funds, that will be needed for implementing the RAP.

#### **1.3.2 Scope and Limitations of the Resettlement Action Plan (RAP) Study**

This Resettlement Action Plan (RAP) was prepared in conjunction with the Feasibility Study of Pasig-Marikina River Channel Improvement Project (PMRCIP), Phase IV. It covers the areas affected by the project's Right-of-Way limits and the impacts in terms of physical, economic and social displacement due to the expected taking of land and improvements thereon due to the Project implementation.

Subsequent modification on the design will definitely require a review and probable update of this RAP. The project-affected persons (PAPs) covered by this study only include the claimants of lands identified by the parcellary survey and the informal settler families (ISFs) residing along the riverbanks in Bgy. Bagumbayan. This is because the LGU of Pasig City has already started removing and resettling the ISFs in Bgy. Santolan and there are no ISFs affected within the jurisdiction of Marikina City.

### 1.3.3 Methodology of the Resettlement Action Plan (RAP) Study

The following methods were employed in the preparation of this RAP:

- a) Review of the institutional capacity of the concerned government and non-government agencies that will implement the RAP;
- b) Census of Households and House Tagging (C/T) to establish the eligibility of Project-Affected Persons (PAPs) and enumerate the affected lands and structures;
- c) Socio-Economic Survey (SES) to obtain the baseline demographic and socio-economic profile of PAPs
- d) Inventory and Valuation of Assets, including lands, houses and other structures/improvements on land
- e) Communication, Consultation and Public Participation

## 2. LEGAL AND POLICY FRAMEWORK

### 2.1 Legal Framework

The most pertinent laws and policies that bear on land acquisition and resettlement are summarized in **Table S2.1**, including the institutional policies of international financing institutions (IFI) like JICA, ADB and the WB, which are possible funders of the PMRCIP Phase IV.

**Table S2.1 Summary of Pertinent Laws and International Policy on Land Acquisition and Resettlement**

Philippine Laws/Statutes	Institutional Policy of IFI
1987 Philippine Constitution	JICA Guidelines for Environmental and Social Considerations
PD 1067- The Water Code of the Philippines	
RA 7279- Urban Development and Housing Act of 1992	
RA 7835- Comprehensive & Integrated Shelter Financing Act of 1994	
RA 8974- An Act to Facilitate the Acquisition of Right-Of-Way (Repealed)	
RA 7160- Local Government Code	World Bank Operational Policy 4.12
RA 10752- An Act Facilitating the Acquisition of the Right-Of-Way, Site or Location for National Government Infrastructure Projects	

### 2.2 Land Acquisition and Resettlement Policies

The preparation of this RAP was guided first by the DPWH Land Acquisition, Resettlement, Rehabilitation and Indigenous People's Policy (LARRIPP) (3<sup>rd</sup> edition, March 2007), as well as the policies of international funding institutions such as the World Bank and Japan International Cooperation Agency (JICA).

The LARRIPP prescribes the eligibility and entitlements due to PAPs as well as the procedures for land acquisition and involuntary resettlement. On the other hand, institutional funding institutions such as the JICA, which is the potential funding agency of the project, prescribes the following policies and principles governing involuntary resettlement:

- Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.
- When avoidance is proved unfeasible, measures must be in place to minimize impact.
- People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported by project proponents in a timely manner.
- Prior compensation, at full replacement cost, must be provided as much as possible.
- Measures must be in place to enable affected people to at least restore if not improve their standard of living, income opportunities, and production to pre-project levels.
- Meaningful participation of affected people and their communities must be promoted in the planning, implementation, and monitoring of resettlement action plans.

- Appropriate grievance mechanisms must be made available to the affected people and their communities.
- Consultations must be held with the affected people and their communities.

### **3. IMPACTS AND MITIGATION MEASURES**

#### **3.1 Land Acquisition**

The implementation of PMRCIP Phase IV will affect highly urban areas of Pasig City, Quezon City, and Marikina City along the riverbanks of Marikina River. Potential adverse impacts of the project include land acquisition; demolition of structures and improvements; physical relocation of people; and accompanying loss of livelihood and social services for project-affected persons (PAPs).

There are 104 lot owners<sup>1</sup> whose lands may be acquired, and improvements thereon removed, either partially or totally, due to the implementation of the project. Seven of these PAPs are big commercial-industrial business operators. The total area of land to be acquired<sup>2</sup> is 124,089 m<sup>2</sup>. Initial estimates indicate that about 7,380 m<sup>2</sup> total floor area of structures will likely be demolished. This includes two building structures within Ignacio Complex, of which more than 20% will be severely affected. These PAPs will be compensated by the DPWH for their lost assets at fair market value for land and at replacement cost for structures.

#### **3.2 Involuntary Resettlement of People**

A total of 71 informal settler families (ISFs) from Brgy. Bagumbayan, Quezon City will lose in part or in full, the houses they presently occupy. These PAPs will be resettled by the Quezon City Local Inter-Agency Committee (LIAC) in coordination with the DILG, NHA and DPWH.

#### **3.3 Resulting Economic and Social Displacement**

The PAPs most affected by loss of livelihood or diminution of income are the following: (1) big industrial and commercial establishments and their employees who may be retrenched due to work closure; (2) tenured residents who may need to find new shelters away from their present place of work and residence; (3) informal settler families who will be uprooted from their present sources of income; (4) workers and students who may need to spend more for transportation to and from new place of residence; (5) boat operators who stand to lose their income temporarily.

Social displacement of PAPs, especially the ISFs, will come in the form of: (1) loss of social support system of family, friends and neighbors, who may not be with the PAPs in their new place of business or residence; (2) loss of / inadequate access to social services and facilities, particularly if transferred to far flung areas; (3) loss of access to formal or informal credit facilities; (4) displacement of school-age population.

#### **3.4 Avoidance and Mitigation Measures**

Care was taken to ensure that the acquisition of land and improvements thereon will be kept to the minimum. To this end, the following structural design mitigation measures were considered: maintaining a 90-m maximum channel bed width throughout the stretch of Middle and Upper Marikina River; (b) use of 90-m rectangular cross-section between Rosario Weir (Sta. 6+700) and Sta. 10+500 near the Marcos Bridge; (c) construction of higher river walls; (d) use of steel sheet pile and/or reinforced concrete as an alternative to earth dike; and (e) deepening the river channel by dredging.

The mitigation measures include: (1) compensation at fair market value for land and at replacement cost for non-land assets; (2) resettlement of families whose house structures will be severely affected; (3) provision of livelihood and employment opportunities for those whose sources of income will be adversely affected, particularly for the economically productive PAPs who may lose their present economic opportunities due to physical relocation; (4) provision of basic education, health, and other social services in the new place of residence; and (5) provision of community support infrastructure such as water supply, power, drainage and in the resettlement site.

<sup>1</sup> There are 4 lots affected but owned by the governments.

<sup>2</sup> There are 16 lots to be affected by the project implementation, while the area cannot be computed since number of corners are not known and/or digitized lots may not in between those with technical descriptions.

## **4. SOCIO-ECONOMIC PROFILE OF AFFECTED POPULATION**

The 71 ISFs occupying the riverbanks in Bgy. Bagumbayan were surveyed. These are distributed as follows: Mangahan Ext., 50 HH; Mercury Ave., 11 HH; Old Tawiran 9 HH; and Manalo Bridge-Calle Industriya, 2 HH.

There are no structures occupying the project alignment in other barangays affected by the project. Inasmuch as data are not available to validate land ownership claims, PAPs from other barangays were excluded from the scope of the SES.

### **4.1 Demographic Characteristics**

The average family size is 3.9. The ratio of male to female is almost 1:1. The mean age of HH heads is 37.4, while the spouse is slightly younger at 32.22. Extremely vulnerable groups include 14 HH headed by females and 4 HH headed by senior citizens, who could become impoverished by displacement.

Nearly 60% of HH members are within the economically productive age of 21-60. About 65% of HH heads and their spouses reached or finished high school or secondary education, while 14% and 17%, respectively, were able to acquire tertiary education or earn vocational skill certification. Among HH members only about 5% are either college or vocational graduates while 22% finished high school. Close to 37% of HH members failed to complete secondary education. The incidence of dropouts or out-of-school youth (OSY) is high, which is largely attributed to lack of money for education.

#### **4.1.1 Housing Conditions**

Nearly eight of 10 ISFs live in single-detached houses. 90% consist of Type II structures made up mainly of light housing materials. Roofs are predominantly of galvanized iron.

#### **4.1.2 Access to Basic Utilities**

About 44% of households connected to MERALCO for power supply, while 30% maintain 'illegal' connections through their neighbors. More than 13% still have no electricity and 3% depend on portable sources such as LPG.

Half of the ISFs have piped-in water, 10% purchase water from vendors while the rest rely on public faucets, shallow wells and even rainwater. Although 50% of the households use water-sealed facilities, only a tenth of these are connected to septic tanks and the rest to open drains and sewerage.

For cooking, 44% of PAPs use LPG although majority still use traditional materials like wood, kerosene and charcoal for fuel.

### **4.2 Economic Condition**

#### **4.2.1 Employment and Income**

Of the HH heads, 63 are working: in construction (49%), private employment (19%), sales and vending (8%), and driving occupations (6%). One of every 10 male HH heads have buy-and-sell businesses and construction jobs to augment primary income. The female working spouses engage in blue-collar private-sector jobs as sales ladies or engage in food vending.

The average monthly income of ISFs is Php 10,117.00. This figure is higher by 15% compared to the 2014 national monthly poverty threshold income level of Php 8,778.00. Almost 50% of the HH members contribute to family income through sales/vending and private or government employment.

#### **4.2.2 Household Expenditure**

Seven out of 10 (~73%) households live on Php 15,000 per month or lower. The average monthly expense is estimated at Php 12,320. On average, monthly expenses are 20% higher than reported monthly incomes, which implies that PAPs seem to be spending 20% more than what they earn. The top five expenses are on food (45%), water and electricity (9%), education (8%), transportation (6%), and housing (6%).

#### **4.2.3 Employable Skills of PAPs**

There are 26 types of skills identified, namely, construction (58%), driving/automotive mechanics (15%) and manufacturing (8%). The inventory of other skills like food processing, cosmetology, and dressmaking/ tailoring shows the range that can be tapped towards enterprise development.



### **4.3 Resettlement Preferences**

Most PAPs (68% of male HH heads compared to 50% of female heads) prefer to be relocated to NHA sites. About 18% of males and 50% of the females choose in-city resettlement.

### **4.4 Awareness and Perception of the Project**

Nearly 47% perceive the project to secure the community from flooding, while 27% perceive that the project will bring social benefits in terms of better housing, health and education.

## **5. PUBLIC INFORMATION, CONSULTATION AND PARTICIPATION**

The preparation of the PMRCIP Phase IV engineering plans and project alignment and the formulation of this RAP have been achieved through close collaboration and consultation with the LGUs of Marikina City, Pasig City and Quezon City. Each LGU's development plans, land use plans and past resettlement programs and experiences were reviewed, along with ocular surveys of project areas and resettlement sites.

Public information campaigns and consultations among the affected communities were done through oral and video presentations meant to educate the people on the importance of the flood control project in the aftermath of Tropical Storm "Ondoy" and other recent flood events. Updates were given on the completed and ongoing river improvement works under PMRCIP Phases II, III and V, and the scope of works in the next stage (Phase IV and Phase V). The campaign explained the potential adverse impacts of clearing the ROW particularly so-called danger areas of waterways against illegal encroachments in order to optimize the project's benefits.

The reiterative dialogues between the Pasig City LGU and the DPWH representatives resulted in these agreements: (1) the project design will follow and reinforce the design and alignment of Pasig City's on-going flood control project; and (2) Pasig City LGU, through the Resettlement Housing Unit (RHU), will independently resettle the ISFs in Brgys. Santolan and Mangahan. Further, the stakeholder meeting was held by DPWH-UPMO-FCMC inviting the 12 representatives of 7 business-establishments together with Pasig City LGU.

The ICP activities with the LGUs of Quezon City and Marikina City yielded the following consensus with respect to the PAPs: (1) Quezon City LIAC in coordination with the DILG, NHA, MMDA and DPWH will resettle the ISFs in Brgy. Bagumbayan, QC; and (2) the project will not necessitate resettlement of residents in areas covered by the project in Marikina City.

## **6. COMPENSATION AND ENTITLEMENT**

### **6.1 Category of PAPs**

PAPs are categorized based on their tenurial status at the time of census cut-off date, as follows:

- Land Owners - PAPs who are land title holders or who have formal legal rights to land including customary and traditional land rights recognized under law
- Structure Owners on Private Lots – PAPs who own the structure built on own lot or on another person's private lot with the consent of the owner
- Business Owners – PAPs who operate businesses in the project area, regardless of scale of business and ownership of land and/or structure on which they operate said businesses
- Informal Settlers - PAPs who do not have formal legal rights to land they are occupying. These include:
  - Structure Owners - PAPs who own the structure built on public or private lot without the consent of the owner
  - Renters – occupying the land and/or structures for a fee
  - Rent-free occupants (RFO) – includes co-owners, sharers or caretakers of land and/or structure

### **6.2 Severity of Impact**

PAPs are further categorized based on the severity of project impact on their assets, thus:

- Severely Affected - PAPs who stand to lose 20% or more of their assets, or even less than 20%, if the remaining land/structure is no longer viable for continued use as intended
- Marginally Affected - PAPs who stand to lose less than 20% of their assets, or even more than 20%, if the remaining land/structure is still viable for continued use as intended

### 6.3 Entitlement

Table S6.1 summarizes the eligibility by category of PAPs, as defined in DPWH LARRIPP in case of PAPs occupying private lands and improvements thereon. In case of ISFs occupying priority waterways, the eligibility criteria are in accordance with governing provisions of UDHA and the more recent implementing guidelines governing the Php 50 Billion ISF funds.

**Table S6.1 Checklist of Entitlement Eligibility**

Land	Tenurial Status	Land title	Structure ownership	PAP Category	Eligibility	
					Compensation	Resettlement
Private land	Land owner (title holder)	✓	✓	LO	✓	X
	Structure owner	X	✓	SO	✓	X
	Renter (Land, Structure)	X	X	Lessee	X	X
	Share/Caretaker (structure)	X	X	RFO	X	X
	Business owner	✓	✓	BO	✓	X
Public land	Structure owner	X	✓	ISF <sup>1/</sup>	X	✓
	Structure Co-owner	X	✓	ISF <sup>2/</sup>	X	X
	Share/Caretaker (structure)	X	X	ISF <sup>2/</sup>	X	X
	Renter of structure	X	X	ISF <sup>3/</sup>	X	✓

✓: Yes X: No ISF: Informal Settler Family LO: Land Owner SO: Structure Owner BO : Business Owner RFO : Rent-free Occupant

<sup>1/</sup>: Severely Affected, <sup>2/</sup>: Treated as one HH with Land/Structure Owner, <sup>3/</sup>: May avail of resettlement, subject to availability of slots.

Table S6.2 summarizes the Matrix of Entitlement for eligible PAPs.

**Table S6.2 Entitlement Matrix for the PMRCIP Phase IV PAPs**

TYPE OF ASSET	APPLICATION (Severity of Impact)	ENTITLED PAP	ENTITLEMENT	
			COMPENSATION	OTHER/SPECIAL ASSISTANCE
LAND (classified as residential, commercial, industrial or institutional)	More than 20% of total landholding lost or where less than 20% but the remaining landholding becomes economically unviable	Those with TCT/OCT/Tax Dec	Cash payment for entire landholding	Income rehabilitation assistance for affected businesses
		Those without TCT/OCT but with Tax Declaration	Cash payment for entire landholding, subject to further verification of proof of land ownership	
	Less than 20% of total landholding lost but land remains viable for use	Those with TCT/OCT/Tax Declaration	Cash payment for affected landholding only	
		Those without TCT/OCT but with Tax Declaration	Cash payment for affected landholding only, subject to further verification of proof of land ownership	
STRUCTURE	More than 20% of total structure lost or where less than 20% but the remaining structure becomes unusable as intended	Structure Owner with TCT/OCT/TD	Cash compensation for entire structure	Income Rehabilitation Assistance for affected businesses
		Structure Owner without TCT/OCT but with TD or other acceptable proof of ownership	Cash compensation for entire structure, subject to further verification of proof of land ownership	
	Less than 20% of total landholding lost but land remains viable for use	Structure Owner with TCT/OCT/TD	Cash compensation for the affected structure only	
		Structure Owner without TCT/OCT but with TD or other acceptable proof of ownership	Cash compensation for the affected structure only, subject to further verification of land ownership	
	Not Applicable	ISFs and other owners of structures without acceptable proof of land ownership And those recognized as eligible “returnees”.	No compensation needed	Relocation/resettlement, Transportation Allowance or Assistance, Livelihood Restoration Information settlers in urban centers who opt to go back to their place of origin in the province or be shifted to government relocation sites will be provided free transportation.

TYPE OF ASSET	APPLICATION (Severity of Impact)	ENTITLED PAP	ENTITLEMENT	
			COMPENSATION	OTHER/SPECIAL ASSISTANCE
BUSINESS OPPORTUNITY	Loss of business opportunities due to displacement of land and structure	Those business opportunities and/or income	Acquire the structures but allow the owner of the structure and business to relocate such structure and facilities in the remaining land and/or to use the land for a defined period to give the owner time to transfer, subject to agreement on a case to case basis, in order to ensure that their business opportunities will not be adversely affected.	Income rehabilitation assistance
OTHER IMPROVEMENTS		Owner of community facilities Owner of trees	Cash compensation at replacement cost for the affected portion of community structures	
CROPS (Non-perennial)	100% of planted crops along the river bank	ISF/Backyard gardeners	No compensation needed	Sufficient time to harvest crops

## 7. MENU OF RESETTLEMENT OPTIONS

There are five resettlement options available to PAPs, namely: (1) NHA sites with ready housing units; (2) LGU In-city resettlement site; (3) LGU Off-city resettlement site; (4) Balik-Probinsya; and (5) Financial Assistance. The resettlement options discussed in this chapter apply to PAPs affected by PMRCIP Phase IV, who also qualify as ISFs occupying danger areas along priority waterways that are subject to clearing in compliance with the SC *mandamus*.

### 7.1 Potential Off-city Resettlement Sites in Rizal Province

The options available for relocating the ISFs from Brgy. Bagumbayan are four off - city resettlement sites in Rizal, which were prepared by NHA under the Php. 50 Billion ISF Fund. These are: (1) St. Therese Housing Project Phase I in Brgy. Dalig Teresa; (2) St Martha Housing Project Phase II in Brgy. Maybancal, Morong; (3) St Martha Housing Project Phase III, also in Brgy. Maybancal, Morong; and (4) St. Joseph Residences 1, Brgy. Pinugay, Baras.

The resettlement sites identified are within 18 km to 27 km from Brgy. Bagumbayan, Quezon City (Figure S7.1). This makes the sites ideal for relocation purposes. Moreover, public transportation facilities regularly ply the major routes to and from these locations and make these accessible to commuters.

All in all, there are only 481 units that are unoccupied in St. Joseph Residences 1, which could readily accommodate the 71 identified resettling families from Bagumbayan, QC. The units have a uniform average lot size of 40 sq.m and an average floor area of 26 sq.m. Each housing unit costs Php 260,000. Development includes underground drainage system, individual septic vault, individual house service connection (by Centennial Water Resource), elevated metering system (by Meralco). Provisions for roads ranges from 3-12 meters depending on classification, i.e. whether pathway, tertiary, secondary or main road.

**Table S7.1 NHA Housing Projects in Rizal Province**

Project	Location	Land Area (sq.m)	No. of Units	Available Units*	Ave. Lot Size (sq.m)	Ave. Floor Area (sq.m)	Cost of Lot (Php)	Cost of House (Php)	Total Cost per Unit (Php)
St. Therese Housing Project Phase I	Brgy. Dalig Teresa	25,535	296	n.a.	40	22	115,000	125,000	240,000
St. Martha Housing Project Phase II	Brgy. Maybancal, Morong	86,517	804	n.a.	40	22	115,000	125,000	240,000
St. Martha Housing Project Phase II	Brgy. Maybancal, Morong	242,880	2,000	n.a.	40	22	115,000	125,000	240,000
St. Joseph Residences 1	Brgy. Pinugay Baras	61,100	1,500	481	40	26	125,000	135,000	260,000

Note) \*: Updated in August 2018 by NHA.

## 8. MENU OF LIVELIHOOD REHABILITATION OPTIONS6THE OBJECTIVE OF THE LIVELIHOOD REHABILITATION PROGRAM IS TO BE ABLE TO RESTORE TO PRE-RESETTLEMENT LEVEL, IF NOT IMPROVE, THE ECONOMIC BASE OF THE PAPS AFTER RELOCATION.

A menu of livelihood options will include: (i) employment/job referral, (ii) enterprise development, (iii) skills training, (iv) cooperative formation, (v) credit mobilization and (vi) livelihood support services.

### 8.1 Employment

At present, the gainfully employed PAPs from Brgy. Bagumbayan, Quezon City may opt to stay in their present occupations. For the unemployed, an enhanced and more aggressive employment and job referral/placement program is needed that matches the skills and capabilities of the incoming PAPs in the following construction industry or service sector.

## **8.2 Enterprise Development**

Enterprise Development Program will provide a package of assistance to enhance the capabilities and potentials of PAPs to become successful entrepreneurs with a view to generate more employment and income through the following, among others:

- Basic Skills Training – training on any craft with business / economic potentials
- Advanced Skills Training – upgrading of basic skills to hone their capability towards commercial production
- Business Development Program
- Technical Assistance on business incubation and registration
- Micro-enterprise Development
  1. Community-based Social Enterprise
  2. Access to Micro-Credit Facilities
  3. Cooperative Formation

Institutions such as the Department of Agriculture (DA), Technical Education and Skills Development Authority (TESDA), Cooperative Development Authority (CDA), and Department of Social Welfare and Development (DSWD) are expected to provide the Livelihood Rehabilitation Trainings to relocated PAPs.

## **9. RESETTLEMENT COST AND BUDGET**

The estimated total cost of implementing the RAP amounts to nearly **Php 4.72 billion**. This includes the total costs of: (i) land acquisition – Php 4.55 billion; (ii) compensation for structures – Php 129.366 million; (iii) resettlement site development – Php 33.750 million; (iv) business income rehabilitation assistance – Php 0.105 million; (v) financial assistance and logistics during relocation – Php 5.1 million; and (iv) external monitoring and post-implementation evaluation – Php 3.0 million.

The DPWH will provide the needed funds for the acquisition of land and compensation for structures. It shall also provide the funds for monitoring resettlement implementation through the IMA and EMA. On the other hand, the LGU of Quezon City, through its LIAC, shall coordinate with the DILG for the allocation of funds out of the Php 50 Billion ISF Funds for the resettlement and rehabilitation of ISFs from Barangay Bagumbayan.

## **10. GRIEVANCE REDRESS MECHANISM AND PROCEDURE**

Grievance redress mechanism will be put in place: one involves the LIAC and the other the RAP Implementation Committee (RIC). The complaints, grievances and concerns of the ISFs are to be brought to the LIAC's Sub-Committee on Grievance Redress for resolution. The LIAC may also endorse the complaints and grievances to the DPWH UPMO-FCMC (as the project's Implementing Office of the DPWH), when necessary.

In the case of grievances by private land and structure owners, the PAPs should address the complaint to the concerned RAP Implementation Committee (RIC). When court cases are resorted to by either the DPWH through expropriation or by the PAPs through legal complaints, the DPWH will deposit with the court in escrow the corresponding amount (100%) at fair market value, to allow the DPWH to proceed with the works. The PAP will receive the final cost of the asset being acquired within one (1) month following the receipt of such decision of the court.

The PAPs shall be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures.

## **11. IMPLEMENTATION PLAN**

Two institutions shall coordinate the implementation of the RAP. These are: (1) the Local Inter-Agency Committee or LIAC, which shall be in charge of the resettlement of ISFs from Bagumbayan, Quezon City; and (2) the DPWH UPMO- FCMC, ESSD and DEO which are the key actors of the implementing

agency which will handle the compensation for land and structures of tenured PAPs, as well as in monitor RAP implementation.

The DPWH is expected to initiate the process of land acquisition and compensation for structures starting January 2019 to secure the project's ROW. The DPWH will ensure that ROW acquisition proceeds in close parallel with the construction schedule.

## **12. MONITORING AND EVALUATION**

The DPWH-ESSD independently or jointly with the LGU-LIAC, shall act as the Internal Monitoring Agent (IMA). It shall be responsible for the internal monitoring of the RAP implementation against the planned activities, time frame, budget and entitlement that will be done on an on-going basis throughout the project construction and at least a year thereafter.

External Monitoring Agent (EMA) will be commissioned by the UPMO-FCMC to undertake independent external monitoring and evaluation. The EMA for the Project will be either a qualified individual, a consultancy firm, an academic institution or an NGO with qualified and experienced M&E staff.

The indicators for monitoring and evaluation are found in Table S12.1.

**Table S12.1. Indicators for Resettlement Monitoring and Evaluation (1/2)**

<b>Aspect</b>	<b>Contents</b>	<b>Verifiable Indicators</b>	<b>Methodology</b>
Budget and Time Frame	<ul style="list-style-type: none"> <li>• Social preparation among PAPs and host communities: IEC, consultation, community organization</li> <li>• Social survey, tagging and inventory of affected assets</li> <li>• Land acquisition</li> <li>• Compensation and entitlement</li> <li>• Inter-agency arrangements commitments</li> <li>• Resettlement site development</li> <li>• Restoration of social infrastructure and services</li> <li>• Livelihood and income-restoration</li> </ul>	<ul style="list-style-type: none"> <li>• Budget allocation and disbursements</li> <li>• Manning and deployment schedules</li> <li>• Organization and activity of IRTAF</li> <li>• Progress and status of implementation of RAP activities throughout project cycle</li> <li>• Milestones against physical/financial targets and timeline of activities</li> </ul>	<ul style="list-style-type: none"> <li>• Process documentation</li> <li>• Review of progress reports</li> <li>• Key informant interview</li> <li>• Post-site development inspection</li> <li>• Review of MOA stipulations and delivery of agency commitments</li> </ul>
Delivery of Entitlements to PAPs	<ul style="list-style-type: none"> <li>• ROW acquisition</li> <li>• Policy guidelines and compensation policy</li> <li>• Eligibility criteria</li> <li>• Appraisal of affected properties and assets</li> <li>• Payment of compensation and entitlement</li> <li>• Resettlement options including self-relocation</li> <li>• Delivery of non-monetary entitlement</li> </ul>	<ul style="list-style-type: none"> <li>• Type and amount of monetary entitlements intended and actual provided</li> <li>• Applicability of criteria in qualifying for entitlements</li> <li>• Applicability of methodology for determining fair market value of properties and assets</li> <li>• Payment made against inventory of assets actually affected</li> <li>• No. of structures demolished or cleared against census tagging (C/T) master list</li> <li>• No. of PAPs transferred to resettlement site</li> <li>• No. of self-relocating PAPs</li> <li>• Delivery of disturbance allowances, transfer assistance, transportation, etc.</li> <li>• Assistance during demolition, hauling, transport and re-establishment of dwellings and other structures</li> <li>• Time allowed for harvesting crops</li> <li>• Observance of humane conduct of demolition activities and movement of PAPs</li> <li>• Condition of resettlement site and facilities according to standards</li> <li>• No. of PAPs inhabiting resettlement site against Master list</li> <li>• Delivery to PAPs of tenurial documents (land titles or conditional deeds of sale)</li> <li>• Appropriateness of schemes and terms of payment for land/or shelter development</li> </ul>	<ul style="list-style-type: none"> <li>• Process documentation of ROW acquisition</li> <li>• Process documentation of appraisal of properties and improvements</li> <li>• Review of implementation of LARRIPP Policy Guidelines on ROW Acquisition</li> <li>• Review of RAP</li> <li>• Key informant interviews among PAPs due for entitlements</li> <li>• Inspection of cleared areas and resettlement site</li> <li>• Post-relocation survey</li> <li>• Review of project reports on program/activity progress and status</li> <li>• Review of financial and relevant records on amortization, equity and delivery of legal ownership documents</li> </ul>



**Table S12.1. Indicators for Resettlement Monitoring and Evaluation (2/2)**

<b>Aspect</b>	<b>Contents</b>	<b>Verifiable Indicators</b>	<b>Methodology</b>
Benefits to PAPs and Host Communities	<ul style="list-style-type: none"> <li>● Benefits derived from compensation and entitlement</li> <li>● Condition and adequacy of resettlement site development</li> <li>● Condition and adequacy of shelter development</li> <li>● Effectiveness and adequacy of Livelihood and income restoration program</li> <li>● Effectiveness and adequacy of Social rehabilitation and re-integration program</li> <li>● Benefits to extremely vulnerable Groups</li> <li>● Benefits accruing to host communities</li> </ul>	<ul style="list-style-type: none"> <li>● Status and progress against target delivery of livelihood development options</li> <li>● Status and progress against target delivery of social rehabilitation program</li> <li>● Types and number of PAPs benefited by income restoration programs (training, technical assistance, credit and micro-lending and livelihood generation schemes)</li> <li>● Quality of improvements in occupation and livelihood pattern of PAPs</li> <li>● Improvements in occupation and livelihood pattern of PAPs</li> <li>● Improvement in production and resource use pattern of PAPs</li> <li>● Income and expenditure pattern of PAPs</li> <li>● Cost of living and additional cost incurred by PAPs</li> <li>● Adequacy of incomes compared to cost of living</li> <li>● Social and cultural conditions/presence of social security safety nets</li> <li>● Improvement in socio-economic condition of extremely vulnerable groups</li> <li>● Community members availing of resettlement site facilities and services</li> <li>● Socio-economic condition of receiving community</li> </ul>	<ul style="list-style-type: none"> <li>● Post -relocation assessment of benefits and impact</li> <li>● Socio-economic survey among PAPs and host community</li> <li>● Key informant interviews</li> <li>● Post-RAP implementation evaluation</li> <li>● Process documentation</li> </ul>
Consultation, Grievance and Special Issues	<ul style="list-style-type: none"> <li>● Information Dissemination</li> <li>● Reiterative consultation</li> <li>● Institutional mechanism and grievance redress procedures</li> </ul>	<ul style="list-style-type: none"> <li>● Report on IEC activities</li> <li>● Status report on project Grievance and Arbitration Measures under IRTAF or other avenues</li> <li>● No. of PAPs conforming receipt of entitlements (as timely and adequate)</li> <li>● No. of PAPs benefited by the grievance redress measures</li> </ul>	<ul style="list-style-type: none"> <li>● Process documentation</li> <li>● Key informant interview</li> </ul>

## **CHAPTER 1 INTRODUCTION**

### **1.1 Project Background and Rationale**

The Philippines is one of the most severely damaged countries by natural disasters in the East-Asia Region. Economic and human damages caused by natural disasters are considerable and repeated in a long-term. Among the natural disasters, storm (typhoon/tempest) and flood have the largest number of affected people, accounting for more than 95% of the total casualty by all types of disaster (from January 2000 to December 2008). And it is anticipated that the risk of the storm/typhoon-related disasters will be increased due to the Climate Change.

Especially Metro Manila, with population of 12.87 million which is about one-eighth of the total population of the Philippines of 100.98 million (2015), and a center of politics, economics and culture of the Philippines, is at a high risk of the storm/typhoon-related disasters since it is located in a coastal low-lying area. Pasig-Marikina river running through the center of Metro Manila and flowing out to the Manila Bay, contributes largely to the flooding by riverbank overflow of floodwaters. The recurrent flooding problem is a bane to the country's progress/development as it hinders business and economic activities affecting not only Metro Manila but also the entire country, as is experienced at the time of Tropical Storm "Ondoy" in 2009.

Flood and Drainage Management is one of the principal issues addressed in the Philippine Development Plan (PDP 2017-2022), and its strategic plan and focus is to reduce adverse effects of flooding occurrences by maintaining watersheds and providing efficient and adequate infrastructure, prioritizing the highly vulnerable areas. DPWH, which is mandated to implement the infrastructure development projects including the flood control works, has also identified the Pasig-Marikina Channel Improvement Project as one of the priority projects in the Medium-Term Public Investment Program (MTPIP) (2017-2022).

#### **1.1.1 Pasig-Marikina River Channel Improvement Project (PMRCIP)**

In 1998, a Special Assistance for Project Formation (SAPROF) Study proposed the implementation of Pasig-Marikina River Channel Improvement Project (PMRCIP) as part of Japan International Cooperation Agency (JICA) Master Plan for Flood Control Drainage Project in Metro Manila. The PMRCIP will be implemented with financial assistance from the Japan Official Development Assistance (ODA) in four phases, namely:

- (1) Phase I: Detailed Design of the Overall Project (from Delpan Bridge to Marikina Bridge: 29.7 km), completed in March 2002
- (2) Phase II: Construction of Stage I: Channel Improvement Works in Pasig River from Delpan Bridge to junction with Napindan Channel: 16.4 km, completed in May 2013
- (3) Phase III: Construction of Stage II: Channel Improvement Works in Lower Marikina River including Construction of Marikina Control Gate Structure (MCGS) from the junction with Napindan Channel to Manggahan Floodway: 7.2 km
- (4) Phase IV: Construction of Stage III: Channel Improvement Works in Lower/Middle Marikina River from Manggahan Floodway to Marikina Bridge: 6.1 km.

#### **1.1.2 Completed and On-going Implementation of the Pasig-Marikina River Channel Improvement Project (PMRCIP)**

##### **(1) Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase I**

The Detailed Design of the overall project was carried out as Pasig-Marikina River Channel Improvement Project (PMRCIP) for 29.7 km from Delpan Bridge to Marikina Bridge between October 2000 and March 2002 with a loan from Japan Bank for International Cooperation (JBIC)

##### **(2) Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase II**

Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase II involved the construction of 16.4 km of Channel Improvement Works along Pasig River from Delpan Bridge to Lambingan Bridge (9.2 km); and from Lambingan Bridge to Napindan Channel in Upper

Pasig River (7.2 km). It was completed in May 2013 under the Japanese Special Term for Economic Partnership (STEP) Loan.

**(3) Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase III**

Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase III involves dredging the river channel and construction of dikes and sluiceways to improve 5.4 km Lower Marikina River from Napindan Channel to downstream of Manggahan Floodway. It also includes the rehabilitation and repair of 16.4 km stretch of Pasig River, which was damaged by Tropical Storm "Ondoy" as well as the sections not covered by Phase II. Implementation began in April 2013 and was completed in March 2018 under the Japanese STEP Loan.

**(4) Pasig-Marikina River Channel Improvement Project (PMRCIP) Phase IV and Phase V**

Through the devastating flood damages brought by Tropical Storm "Ondoy", DPWH decided to expedite the implementation of Phase IV as well as the upper section from Marikina Bridge to San Mateo Bridge (so-called as Phase V). The preparatory study was undertaken for Phase IV together with the review of feasibility study and detailed design for Phase V was undertaken by the supplemental consulting services of PMRCIP Phase III. On the other hand, the construction works for Phase V were successively started consisting ten (10) construction packages from 2016 and now on-going under the local fund.

**(5) Updated Scope of PMRCIP**

The overall objective of the Project is to mitigate flood risks in Metro Manila and thereby contribute to the sustainable urban economic development of the National Capital Region and its neighboring provinces.

To realize the full objectives of the Flood Control Master Plan, and in the aftermath of Tropical Storm Ondoy, the phasing of the implementation of Pasig-Marikina River Channel Improvement Project (PMRCIP) was revised. The scope of the proposed river improvement works now includes the Marikina Control Gate Structure (MCGS) and flood protection works, which were extended up to San Mateo Bridge for Phase V.

Further, the flood damage has increased with urbanization in low-lying areas adjacent to the junctions of Cainta and Taytay rivers along the East Bank of Manggahan Floodway due to backflows from the Floodway. The construction of floodgate to prevent the backflows at the junctions are therefor included in the works of Phase IV since the construction of MCGS may increase the backflow discharges. The implementation of PMRCIP is summarized as shown in Table 1.1.1.

**Table 1.1.1 Revised Implementation of Pasig-Marikina River Channel Improvement Project (PMRCIP)**

PMRCIP Phase	Scope of Works	Length to be Improved (Design Discharge)
I <sup>1/</sup>	Pasig River Channel Improvement (1) (Delpa Bridge to Napindan Channel)	29.7 channel length (1,200/600 m <sup>3</sup> /s)
II <sup>1/</sup>	Pasig River Channel Improvement (1) (Delpa Bridge to Napindan Channel)	13.1 km on both banks (1,200/600 m <sup>3</sup> /s)
III <sup>1/</sup>	Lower Marikina River Channel Improvement (Napindan Channel to downstream of MCGS)	5.4 km channel length (500 m <sup>3</sup> /s)
	Pasig River Channel Improvement (2) (Remaining Sections between Delpa Bridge and Napindan Channel)	9.9 km on both banks (1,200/600 m <sup>3</sup> /s)
IV	Middle Marikina River Improvement & Construction of MCGS (Lower Marikina R. (Sta.5+400) - Marikina Bridge) Construction of Cainta and Taytay Floodgates	8.0 km channel length (2,900 m <sup>3</sup> /s)
V <sup>2/</sup>	Upper Marikina River (Marikina Bridge – San Mateo Bridge)	5.8 km channel length (2,900 m <sup>3</sup> /s)

<sup>1/</sup>: Completed, <sup>2/</sup>: On-going construction

The Preparatory (Feasibility) Study of Phase IV and the Detailed Design of Phase V were completed in July 2015 during Supplemental Agreement No. 1 to the contract for Consulting Engineering Services for PMRCIP Phase III. The overall project area of Pasig-Marikina River Channel Improvement Project (PMRCIP) is shown in Figure 1.1.1.

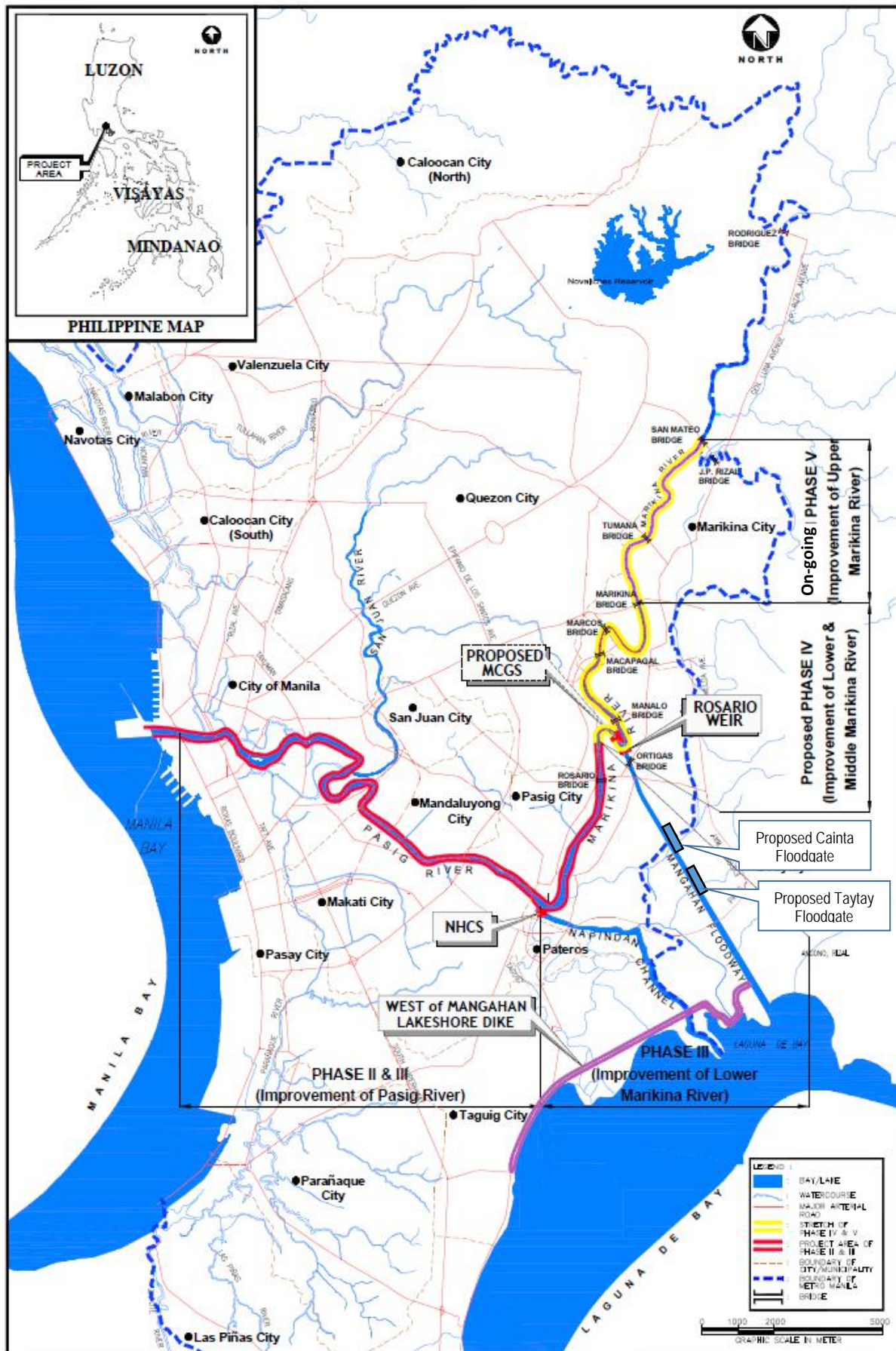
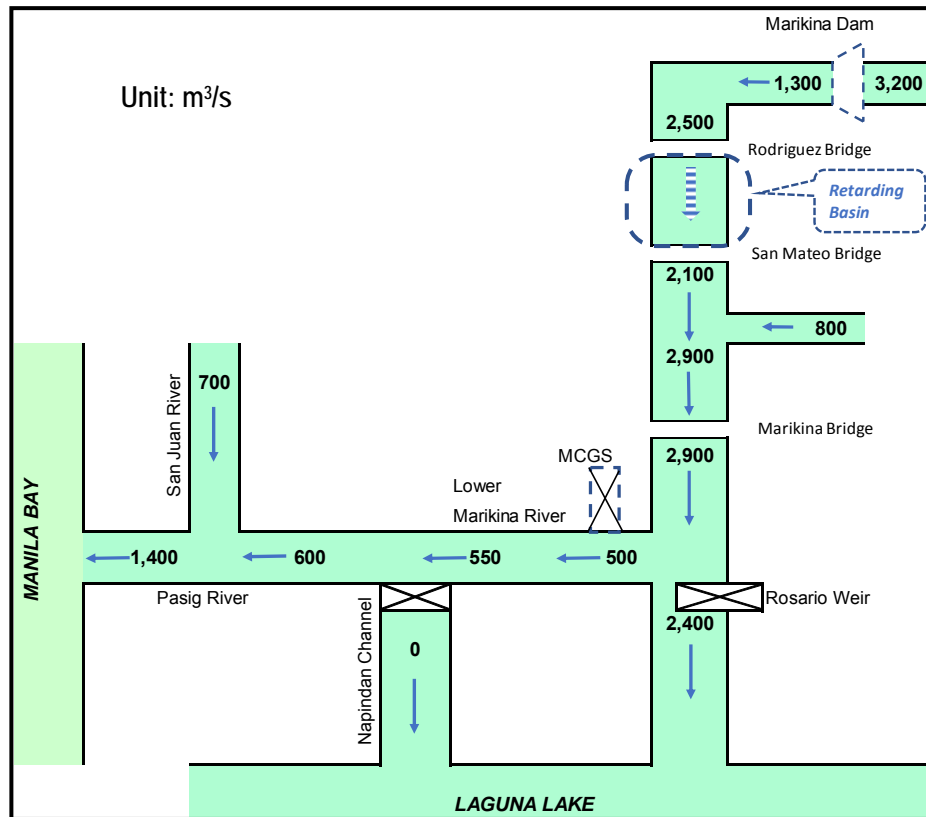


Figure 1.1.1 Location Map of Pasig-Marikina River Channel Improvement Project (PMRCIP)

### 1.1.3 Project Description of PMRCIP Phase IV

#### (1) Design Discharge

In the master plan of flood mitigation for Pasig-Marikina River of which project scale has been determined to be a 100-year return period. The basic conditions and design discharges to attain the flood mitigation level of a 100-year return period are shown below:



**Figure 1.1.2 Basic Conditions and Design Discharge Distribution for Flood Mitigation Plan of 100-year Return Period**

#### (2) Middle Marikina River Channel Improvement Plan

The main civil works consist of dredging and revetments. The river channel will be widened by excavation and deepened by dredging. An average design channel bed width of 90 m is expected to convey the design flood discharge of 2,900 m<sup>3</sup>/s. The map showing the river channel improvement plan of PMRCIP Phase IV is found in Figure 1.1.4. A typical cross-section is shown in Figure 1.1.5. The target areas of PMRCIP Phase IV are (1) the lower part of Marikina River from the end of PMRCIP Phase III (St. 5+400) to Mangahan Floodway (St. 6+700) and (2) the middle part of Marikina River from Mangahan Floodway (St. 6+700) to Marikina Bridge (St. 13+350) with a total length of 8.0 km.

#### (3) Design Longitudinal Profile

In principle, the riverbed of Middle Marikina River should be maintained at the present elevations. The design gradient of riverbed elevation between Rosario Weir (Sta. 6+650) and Marikina Bridge (Sta. 13+350) is proposed to be 1/4,000. Design riverbed elevations at main points are summarized as follows:

**Table 1.1.2 Design Riverbed Elevations at Main Points**

Station	Location	Riverbed Elevation	Remark
Sta. 6+300	MCGS	EL. 8.00 m	Level
Sta. 6+650	Diversion Point to Mangahan Floodway	EL. 8.01 m	Gradient = 1/4,000
Sta. 7+200	Manalo Bridge	EL. 8.13 m	
Sta. 9+900	Macapagal Bridge	EL. 8.80 m	
Sta. 10+250	LRT-2 Bridge	EL. 8.90 m	
Sta. 10+300	Marcos Bridge	EL. 8.90 m	
Sta. 13+350	Marikina Bridge	EL. 8.92 m	



#### (4) Design Cross-section

To set the crown elevation of river wall and dike, the freeboard of 1.2 m corresponding to the design discharge are employed in accordance with “the DPWH Design Guidelines Criteria and Standards”.

Complying with the existing channel cross-sections of Middle Marikina River, the cross-sections are classified into four (4) types of which dimensions are defined as enumerated in Table 1.1.3 below:

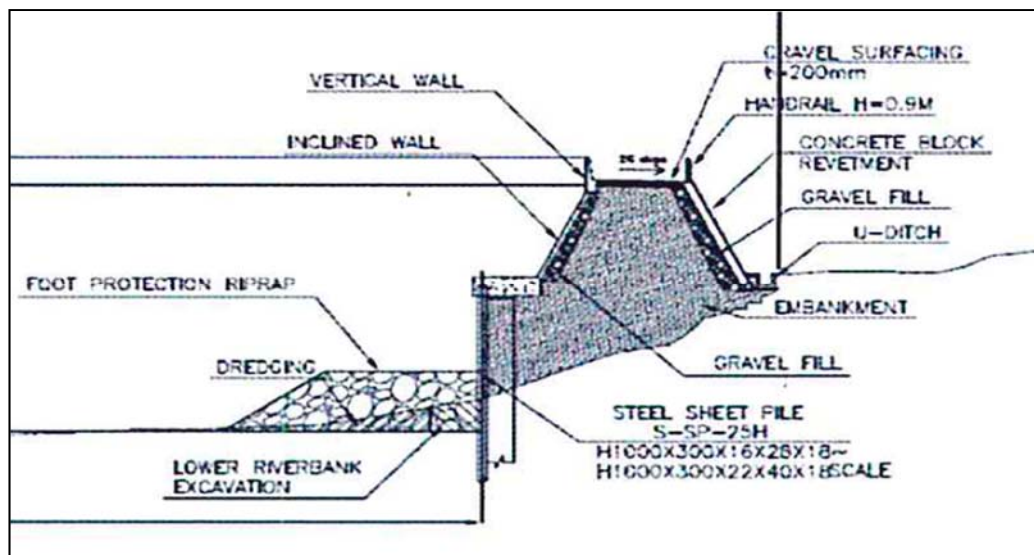
**Table 1.1.3 Channel Cross-Section Parameters**

Type	Station	Riverbed Width (m)	River Width (m)	Section Type
I	Sta. 6+700 – Sta. 10+500	90	90	Single and rectangular
II	Sta. 10+500 – Sta. 11+000	90	110 - 160	Single and trapezoidal
III	Sta. 11+000 - Sta. 12+000	80	110 - 140	Compound and trapezoidal.
IV	Sta. 12+000 – Sta. 13+350	80	115 - 140	Compound and trapezoidal*

Note: The section of Sta. 12+000 to Sta. 13+350 (Marikina Bridge) which is composed of the low water and high-water channels will be tentatively provided with no dike as the high-water channel has been used for factories, sport complex, residential houses, stores and restaurants.

#### (5) Structural Design

An alternative to the originally proposed dike is to use reinforced concrete floodwall resting on steel sheet piles (SSP) to minimize land acquisition and house demolition. The revetment is to be supported by an earth embankment with the paved maintenance road for river patrol/inspection, flood warning and open to the public. The typical detail of the SSP revetment structure consists of the following components:



**Figure 1.1.3 Section of Typical Revetment Dike Structure**

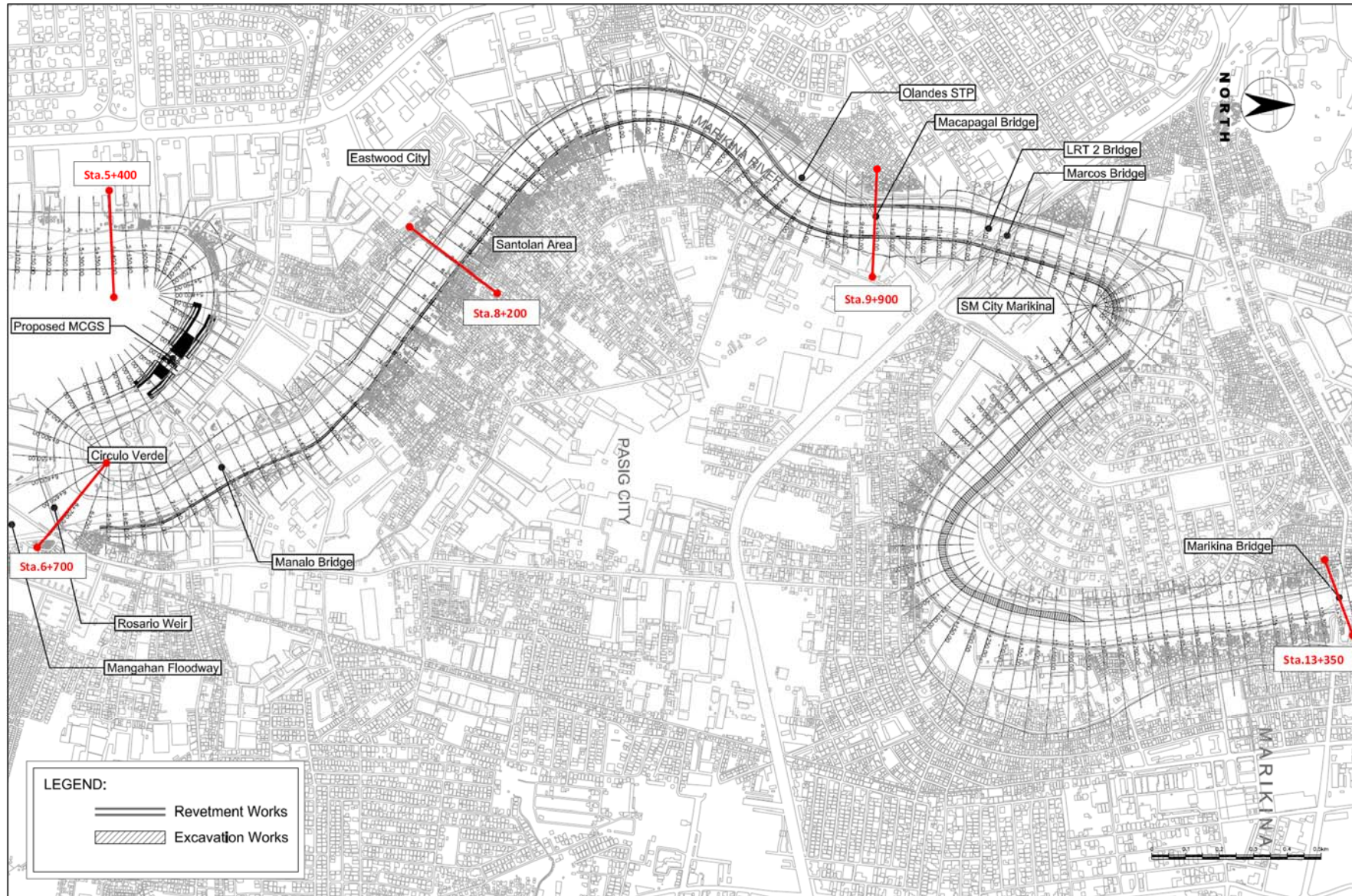


Figure 1.1.4 River Channel Improvement Plan of PMRCIP IV

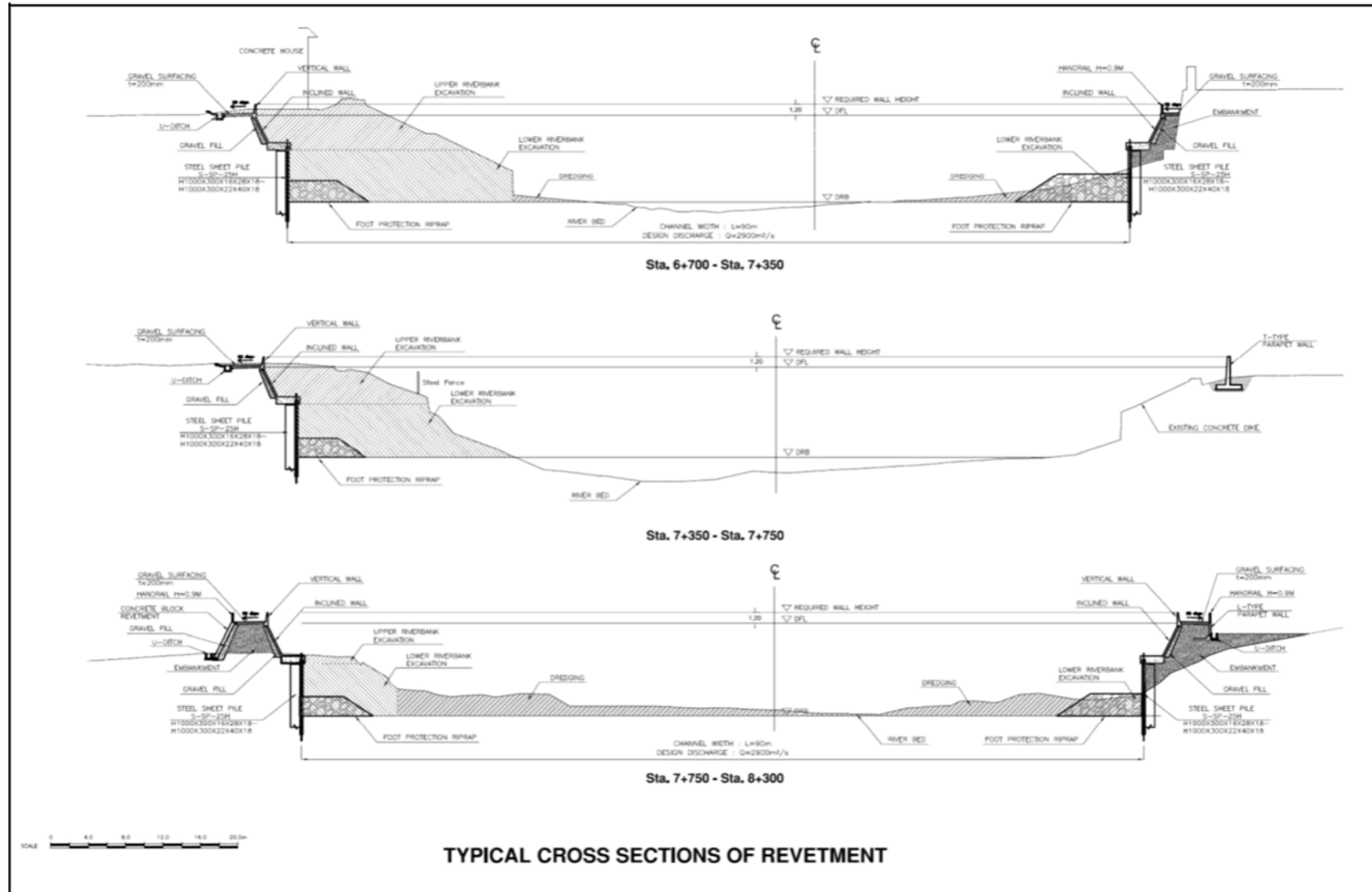


Figure 1.1.5 Typical Cross-Sections of Revetment along Middle Marikina River (1/3)



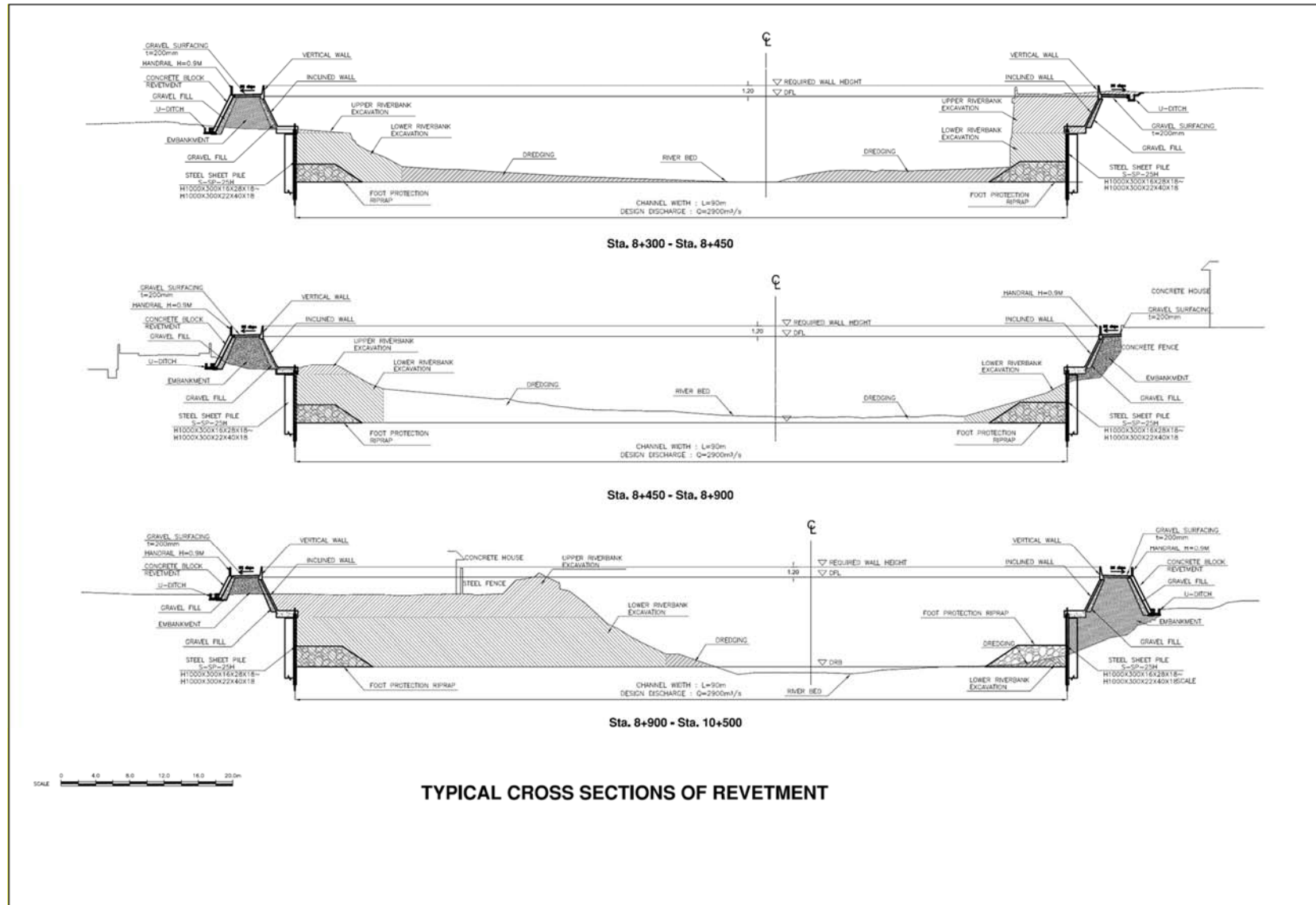


Figure 1.1.5 Typical Cross-Sections of Revetment along Middle Marikina River (2/3)

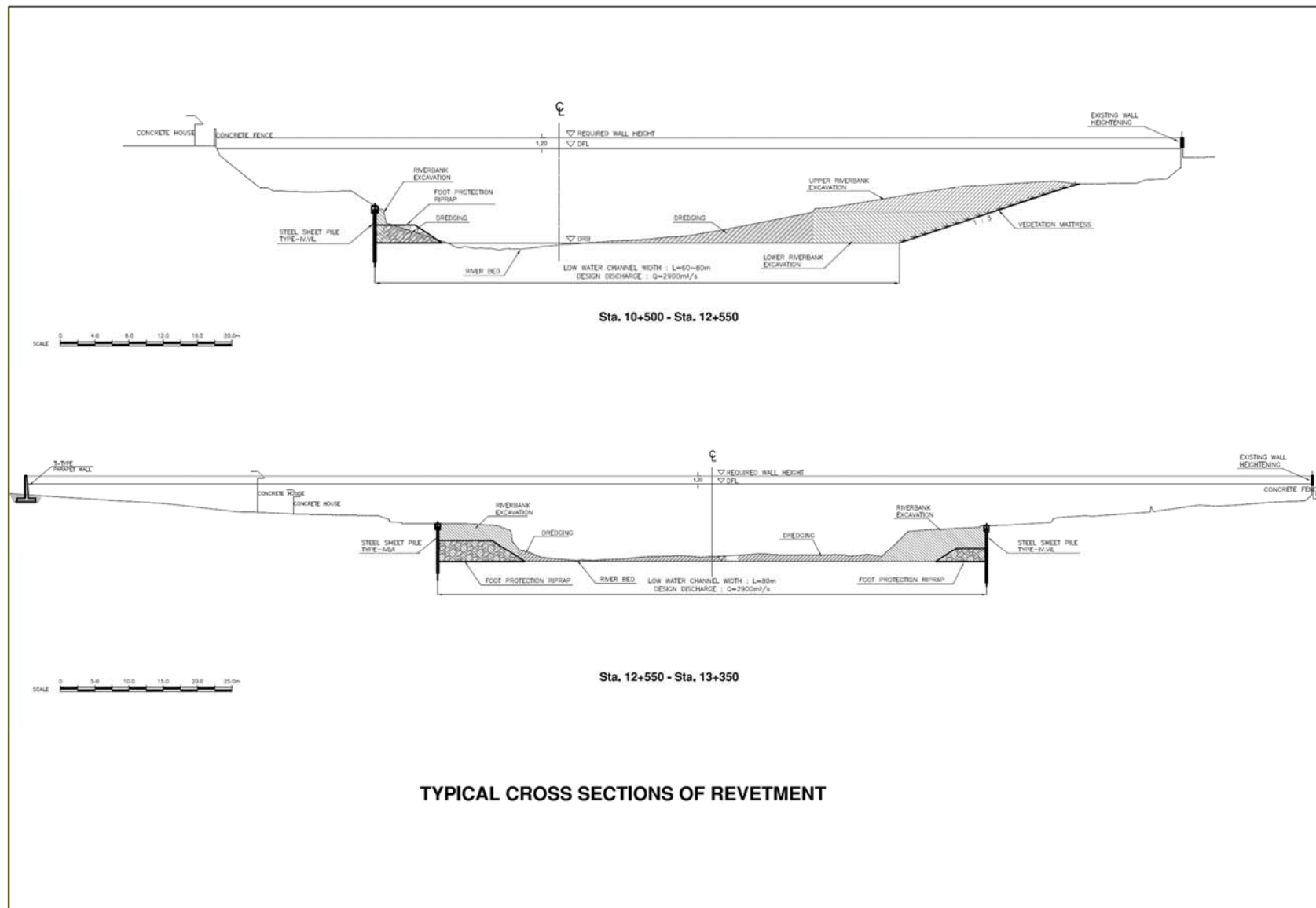


Figure 1.1.5 Typical Cross-Sections of Revetment along Middle Marikina River (3/3)

## (6) Drainage Plan

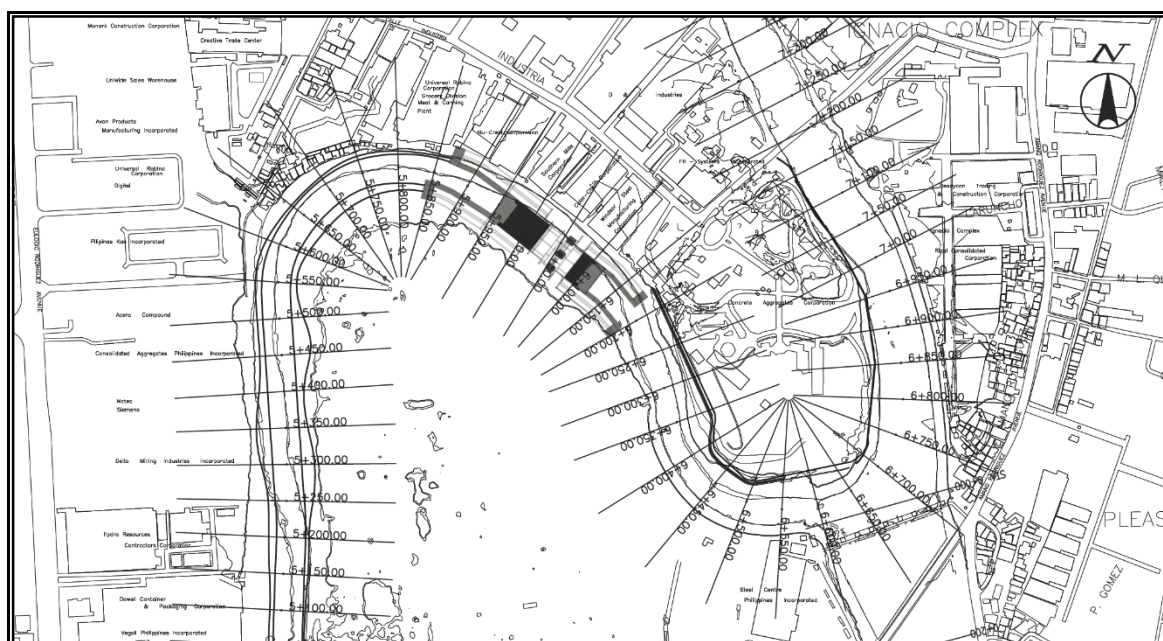
The proposed drainage system will allow unimpeded outflow of inland runoff and prevent backflow from Marikina River through a collector pipe and/or U-ditch with manholes. A flap gate is proposed at the main outlet to stem the backflow at design high water level. The summary of proposed drainage facilities for Phase IV is shown in the table below.

**Table 1.1.4 Summary of Proposed Drainage Facilities in Phase IV**

Proposed Facility	Quantity	Dimension
Outlet	98 RCP Locations	910 mm ~ 1800 mm
	18 RCBC Locations	1620 mm x 1700 mm ~ 2770 mm x 6000 mm
Manhole	253 Locations	Varying dimensions
Collector Pipe:		
RCP	975 m	910 mm
PVC	1160 m	150 mm ~ 300 mm
Flap Gate	102 Locations	Circular type: 910 mm ~ 1520 mm
		Rectangular type: 1200 mm x 1200 mm ~ 2000 mm x 2000 mm

## (7) Marikina Control Gate Structure (MCGS)

The site that was finally selected for the MCGS is located near the EFCOS Master Control, about 300 m downstream from its original location in the 2002/DD to minimize land acquisition. Generally, the original design of MCGS prepared in 2002 is employed in this study (Figure 1.1.6).



**Figure 1.1.6 Proposed Location of MCGS**

The MCGS is a gated weir with two (2) roller gates of which each size is 20.0 m wide and 11.0 m height. The sill elevation on the riverbed is set at EL. 8.0 m, which is lower by 2.5 m compared with the Rosario Weir. Design discharge is 500 m<sup>3</sup>/s and design water level is EL.17.4 m upstream and EL.14.74 m downstream. the design of MCGS prepared in 2002 is employed as shown in Figure 1.1.7.

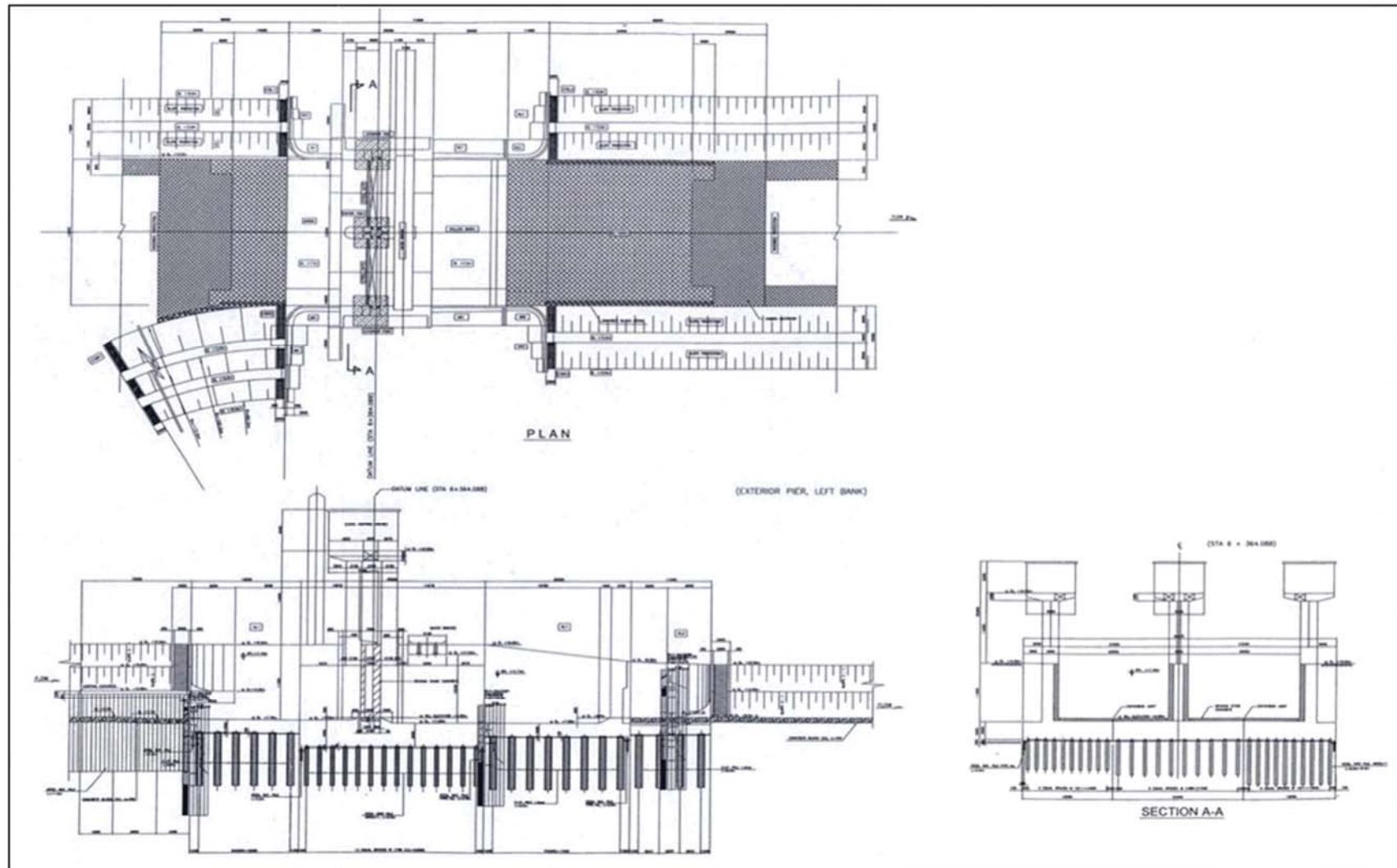


Figure 1.1.7 Structural Design of MCGS



### (8) Construction of Cainta and Taytay Floodgates

Floodgates will be provided to prevent backflows from the Floodway at the joining sections of Cainta and Taytay rivers. The floodgates at Cainta River and Taytay River are to be closed when the water levels of the Floodway is higher than that of Cainta River and Taytay River, respectively.

The construction site and required area for Cainta Floodgate which are in the Mangahan Floodway area as shown below:



Figure 1.1.8 Proposed Cainta Floodgate Site



Figure 1.1.9 Proposed Taytay Floodgate Site

Cainta Floodgate has a total width for water flow estimated at 24 m because of the river width of 20 m to 25 m. The dimensions of the floodgate are 4 gates x 6.0 m wide x 7.6 m high of a roller gate as shown in Figure 1.1.10.

Taytay Floodgate is to adjust the existing three-ream box culvert<sup>1</sup>, the dimensions of roller gate are 3 gates x 2.5 m wide x 2.0 m high of a roller gate as shown in Figure 1.1.11.

<sup>1</sup> Due to the construction of floodgate, there may be an inner pressure to the existing box culvert, therefore it is required that the structural stability against the said pressure will be examined.

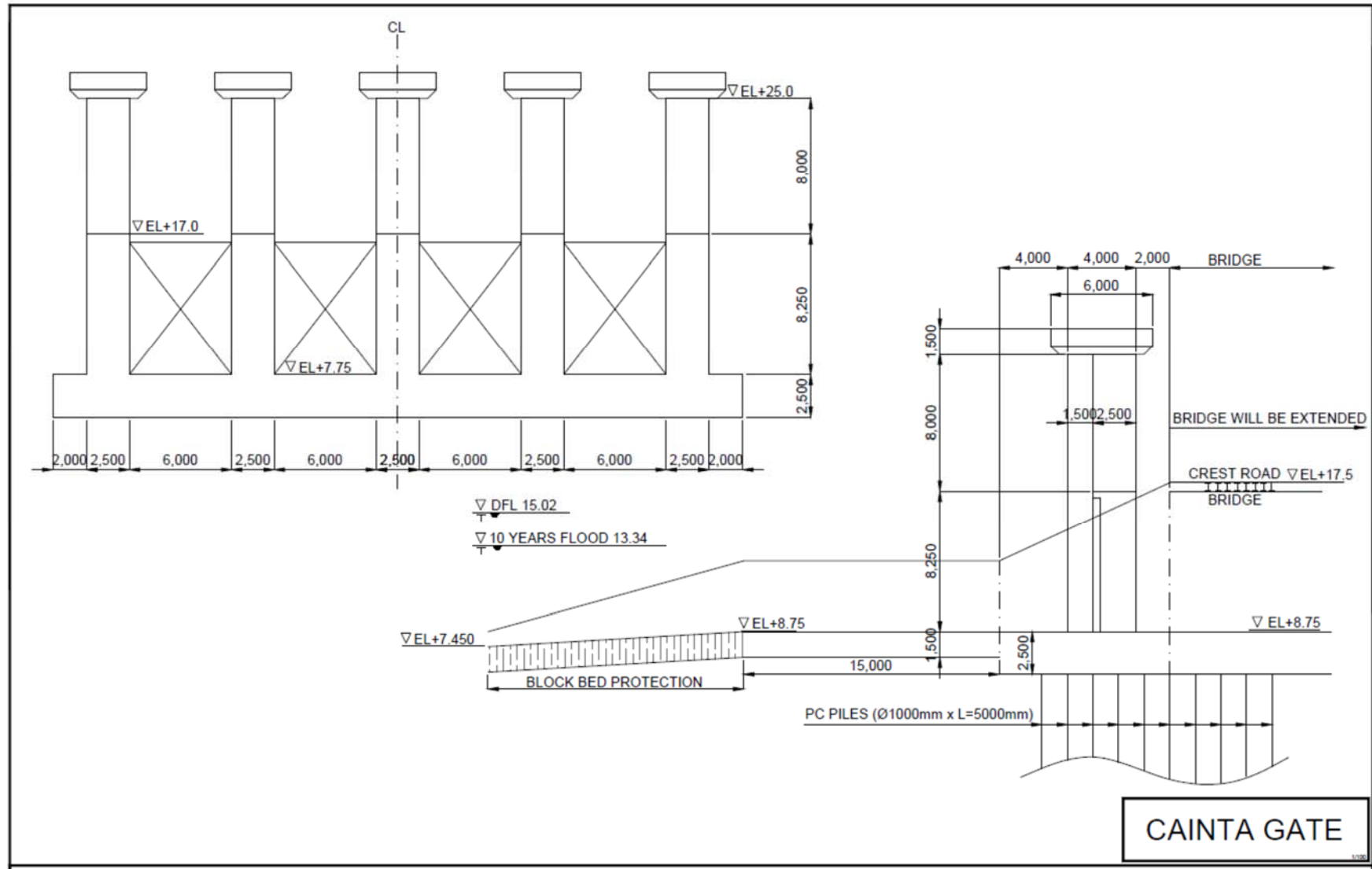


Figure 1.1.10 Plan of Cainta Floodgate

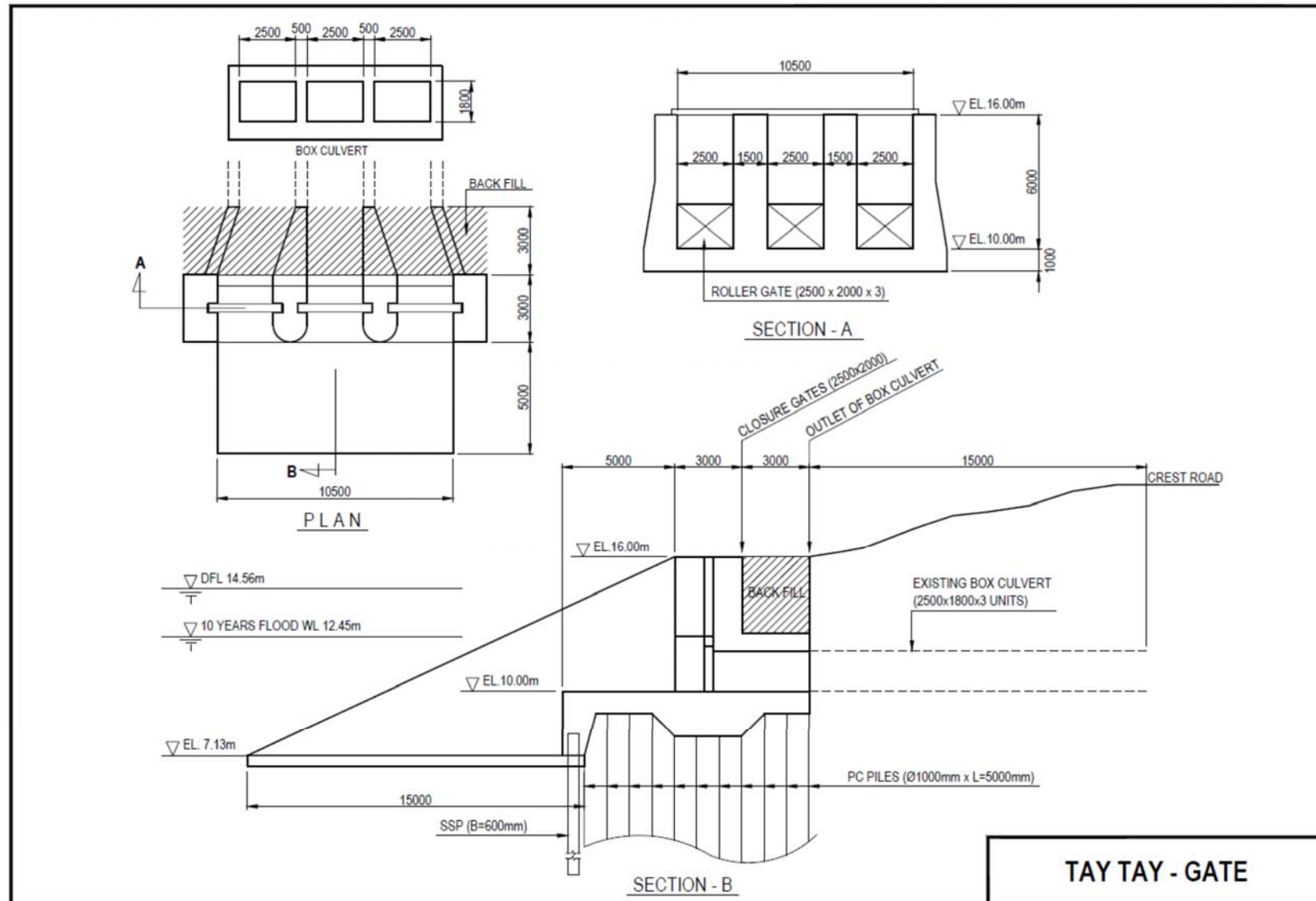


Figure 1.1.11 Plan of Taytay Floodgate

**(8) Construction Plan****Construction Methodology****(a) Steel Sheet Piling Work**

- i. Steel sheet pile with H-beam must be driven into hard strata by vibro-hammer with water jet or Down-the Hole Method in case the strata is extremely hard.

**(b) Floodwall Work and Drainage Outlet Work**

- i. Concrete coping will be provided after piling works. Then earth backfilling, rebar installation for the inclined wall and concrete works will follow.
- ii. The drainage outlet works will be done in parallel. Normally a temporary linear cofferdam with dewatering for dry work will be carried out in front of the proposed drainage outlet prior to the major works.

**(c) Construction of MCGS**

The MCGS will be constructed on a dry site condition protected by the temporary earth cofferdams. The construction work is to be implemented in four (4) stages as follows:

Stage 1	:	Diversion Works (Construction of Diversion channel, Cofferd dam, Access Road, and Temporary bridge)
Stage 2	:	Foundation and Civil Works (Excavation, Foundation Piling, Concrete Works)
Stage 3	:	Building, Mechanical, Electrical and Telecommunication Works
Stage 4	:	Appurtenant Structure Works

**Summary of Construction Works**

The main civil works of the Project are dredging, excavation, embankment, piling, riprap, reinforced concrete slope protection, precast concrete block protection, parapet wall, drainage structure installation and bridge works. The work quantities are summarized in Table 1.1.2.

**Table 1.1.5 Work Quantities of Major Construction Works for Full Scheme**

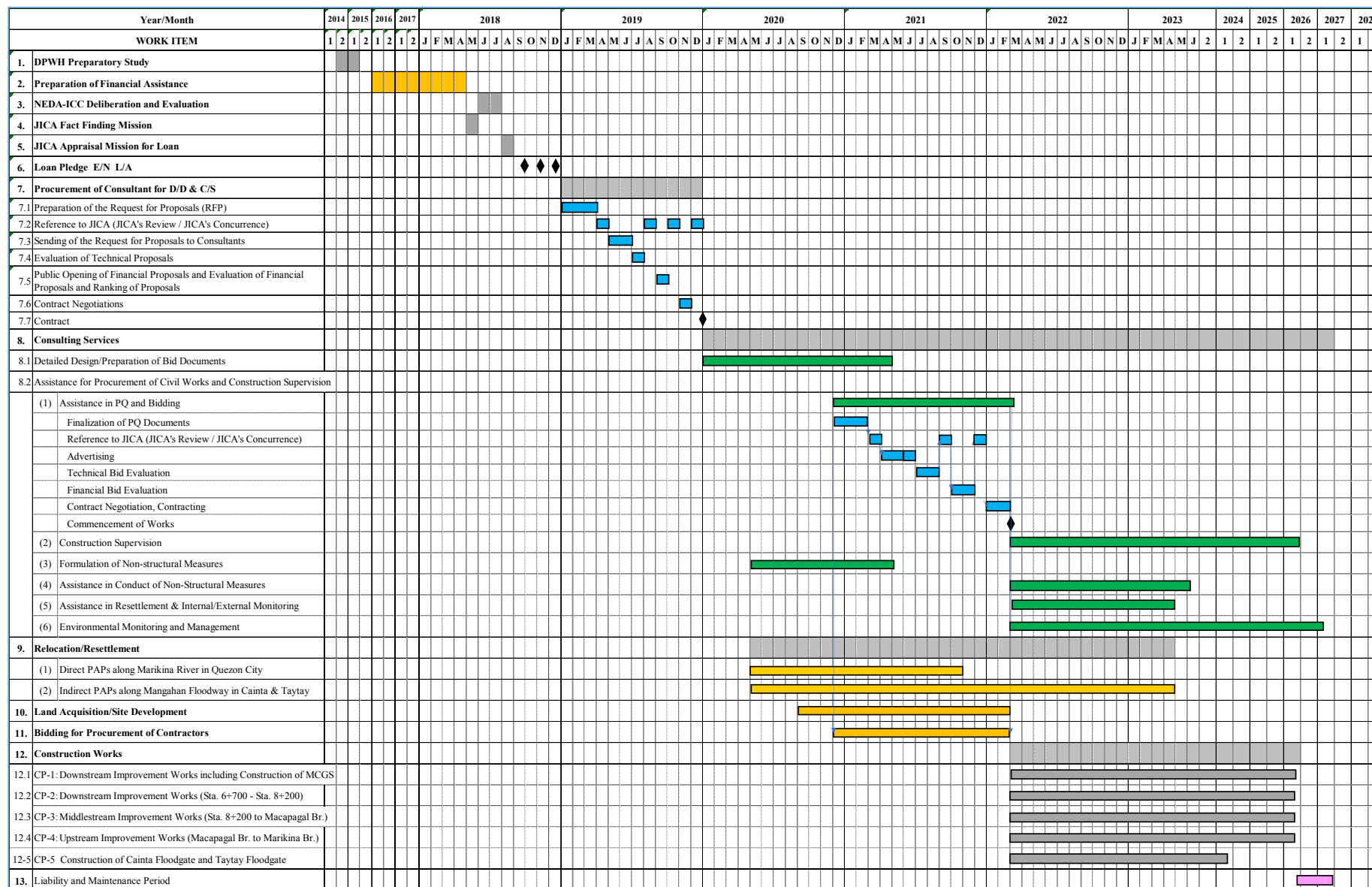
No.	Item	Component	Work Quantity
1	SSP Revetment and RC Floodwall	a) SSP with H-beam	a) 7.1 km
		b) SSP w/o H-beam	b) 3.3 km
		c) Coping Concrete	c) 10.4 km (6,200 m <sup>3</sup> )
		d) RC Floodwall	d) 8.4 km (11,800 m <sup>3</sup> )
		e) Riprap	e) 10.4 km (203,800 m <sup>3</sup> )
2	Reinforcement of Existing Floodwall	a) RC Floodwall	a) 6.1 km (13,000 m <sup>3</sup> )
3	Channel Excavation	a) Dredging	a) 495,000 m <sup>3</sup>
		b) Excavation	b) 1,178,500 m <sup>3</sup>
4	Dike/Maintenance Road	a) Embankment	a) 164,000 m <sup>3</sup>
		b) Concrete Pavement	b) 8.9km (22,100m <sup>2</sup> )
		c) Concrete Block for Slope	c) 5.4 km
		d) Drainage Ditch	d) 5.9 km
5	Drainage Outlet	a) Box Culvert with Sluice Gate	a) 18 locations
		b) Drainage Outlet with Flap Gate	b) 102 locations
		c) Drainage Outlet w/o Flap Gate	c) 98 locations
6	Bridge Work (To be implemented under GOP financing)	a) Construction of New Manalo Bridge	a) 3 spans (105 m long), PC Girder
7	MCGS Roller gate: 2 gates x 20 m (W) x 10 m (H)	a) Foundation Piles	a) 460 pieces
		b) RC Works	b) 14,500 m <sup>3</sup>
		c) Mechanical & Electrical Works	c) 1 lump sum

**(9) Proposed Schedule of Implementation**

The proposed improvements are divided into four contract packages. The project is proposed for implementation in 2016-2023 as shown in Figure 1.1.12.



*Pasig-Marikina River Channel Improvement Project (Phase IV)*



**Figure 1.1.12 Proposed Implementation Schedule of PMRCIP Phase IV**

## **1.2 Objectives, Scope and Methodology of the Resettlement Action Plan (RAP)**

### **1.2.1 General Objectives**

The overriding goal of resettlement planning is to ensure that the social and economic bases of project-affected persons (PAPs) are at least restored, if not improved, after the Project. The PMRCIP IV is likely to cause impacts in terms of involuntary displacement of people, loss of economic assets, disruption of lives and livelihoods, and restriction of access to economic resources and social services. An evaluation of the potential impacts will be discussed in Chapter 3.

As a mitigation measure, the RAP will ensure that all affected households will be adequately compensated for their losses and provided with rehabilitation measures to assist them to improve, or at least maintain, their pre-project living standards and income generating capacity. The RAP will also see to the peaceful and humane relocation of PAPs prior to the commencement of the project.

These objectives are in keeping with governing and applicable local laws, policies and legal issuances and jurisprudence of the country, as will be discussed in Chapter 3. The objectives are also cognizant of the resettlement policies and guidelines of international financial institutions such as the new JICA Guidelines for Environmental and Social Considerations (2010) and the World Bank's Operational Policy No. 4.12 (WB OP 4.12).

### **1.2.2 Specific Objectives**

Specifically, the Resettlement Action Plan (RAP) has the following objectives:

- To identify, enumerate and profile the Project Affected Persons (PAPs);
- To assess the potential adverse impacts of the Project on the social and economic bases of these PAPs;
- To enumerate real properties and assets (lands, houses, trees, crops and other improvements), including social structures and public facilities that will be affected in part or in full.
- To assess the fair market value of these properties and assets and determine the fair compensation and entitlement for these losses. Regardless of tenure status these private and public properties shall not be taken for the Project's use without just compensation at replacement cost;
- To identify ways to bridge the gap between the JICA/WB /LARRIP policies and guidelines and to formulate the most appropriate and viable resettlement policy that is socially acceptable to the stakeholders, particularly the concerned local government units (LGUs) and the PAPs;
- To present viable options and strategies to ensure proper and humane resettlement of the PAPs in a timely manner;
- To conduct reiterative communication, consultation and coordination with PAPs, affected communities, local government units (LGUs), government housing agencies and other stakeholders to ensure meaningful dialogue, participation and equity in the benefits of the project;
- To identify potential resettlement sites and formulate a menu of resettlement options;
- To identify the productive skills, competencies and capabilities of PAPs; evaluate present and future economic opportunities; and, formulate a menu of livelihood options to re-establish their income and livelihood;
- To ensure adequate involvement of the PAPs and that appropriate grievance mechanisms are accessible to them during the implementation of the RAP;
- To identify institutional arrangements during pre-, actual and post-relocation stages of for RAP implementation, including mechanisms for grievance redress by PAPs;
- To estimate the cost and propose a timetable of RAP implementation; and,
- To identify the necessary resources, particularly the funds, that will be needed for implementing the RAP.

### 1.2.3 Scope and Limitations of the Resettlement Action Plan (RAP) Study

This RAP was prepared in parallel with the Feasibility Study (FS) of PMRCIP IV and is thus predicated on that study. The FS identifies the most economically and technically feasible structural and non-structural measures that will achieve the desired reduction in the risk of flooding in areas drained by Lower and Middle Marikina River and immediate surroundings. At this stage, the location, design, alignment and specifications of the flood control structures and therefore the limits of the project's right-of-way (ROW) are only preliminary estimates. These will be subject to further re-evaluation and validation during the detailed design (DD) stage. It is highly probable that the area needed to secure the project's ROW will be expanded or reduced during the detailed design stage. Hence, the exact number of PAPs and their assets that may likely be removed can only be ascertained during the DD stage. The RAP will therefore be updated eventually to reflect actual scope of land acquisition and involuntary resettlement based on the final approved design and alignment.

#### (1) Pasig City

The LGU of Pasig City has an on-going locally funded project consisting of the construction of floodwall. The approved design and alignment of the Pasig City flood control project falls within the proposed design alignment of PMRCIP IV, notably in barangays Santolan and Manggahan. After a series of meetings, DPWH and Pasig City agreed to reconcile the alignment of the flood control structures. In a gesture of full support to the PMRCIP project, as it did with Phase III, the LGU further committed to take full responsibility for the resettlement of more than 200 informal settler families (ISFs) occupying the proposed sites for dike construction. Incidentally, these same areas are within the expanded easements of the river and are subject to clearing by the LGU of so-called "danger areas" of priority waterways by virtue of the Supreme Court *mandamus* in support of the clean-up of Manila Bay.

During the meeting with Pasig City on 19 March 2018<sup>2</sup>, it was informed that as of March 2018, Pasig City has completed the floodwall of 700 m in Santolan area which are for 1<sup>st</sup> and 2<sup>nd</sup> stages of the proposed 6 stages construction program, and another 300 m floodwall of the 3<sup>rd</sup> stage is proposed in 2018. The relocation/resettlement of ISFs in connection with the floodwall construction has been successfully and smoothly undertaken and Pasig City will solely undertake the relocation of ISFs residing in the area.<sup>3</sup>

#### (2) Quezon City

Similarly, some stretches of the riverbank in Barangay Bagumbayan, Quezon City will be affected by the construction of the MCGS. These river ways are presently occupied by 71 informal settler families. Being in the flood danger areas, these ISFs are qualified beneficiaries of resettlement program for households occupying priority waterways, in compliance with the same Supreme Court *mandamus*. After a series of coordination meetings with the engineering and housing officials of Quezon City, the LGU expressed its commitment to resettle these ISFs through the Quezon City Local Inter-Agency Committee (LIAC) in coordination with the NHA and the DILG, among other agencies.

During a meeting with the Quezon City LIAC and subsequently during dialogues with the barangay officials of Bagumbayan and the Quezon City Housing and Community Development and Resettlement, it was agreed that the socio-economic survey would be undertaken by the RAP Study Team of PMRCIP Phase IV. This RAP includes the results of this census-tagging and socio-economic survey. These results have been officially transmitted to the Quezon City government through the LIAC and the NHA.

During the detailed design stage, there could be people affected by the PMRCIP IV than originally identified. By that time, the resettlement program for resettling ISFs in danger areas, shall have been completed. A new set of inter-agency commitments may be needed to resettle the PAPs who may still be found occupying the river ways.

#### (3) Marikina City

The Marikina City LGU pursued an intensive relocation and resettlement of ISFs living along waterways, particularly the Middle/Upper Marikina River, and other danger areas. It even declared

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<sup>2 2</sup> Source: Minutes of Meeting on 19 March 2018 as shown in Annex C. Due diligence report is attached in Annex G.

(City Ordinance No. 10 s. 1994) an easement width of 96 m from the centerline of the Middle/Upper Marikina River.

The Marikina LGU was able to remove and resettle about twenty-two thousand (22,000) families to in-city resettlement sites. These housing units were built by the LGU in six different barangays with an aggregate area of 106 ha. The ISFs on the riverbanks moved to three of these sites, namely: Barangays Malanday, Nangka, and Tumana

#### **(4) Cainta and Taytay Municipalities**

In connection to the construction of Cainta and Taytay floodgates, there will be some PAPs (ISFs) at the construction sites in the Mangahan Floodway. The resettlement of the ISFs is included in the Resettlement Action Plan for Mangahan Floodway, while a land acquisition for the construction will not be required since the construction site will be inside the Floodway.

#### **1.2.4 Methodology of the Resettlement Action Plan (RAP) Study**

Experienced and qualified resettlement experts commissioned to prepare this RAP were guided by and have meticulously observed governing laws, policies, standards and international best practice in the study and preparation of this RAP. Thus, the following tasks and activities were conducted to ensure that the environmental and social concerns of the DPWH and its implementing office (the UPMO-FCMC in this case) as well as international funding institutions such as the World Bank, ADB and JICA are sufficiently met.

##### **(1) Institutional Arrangements**

A review was made of the adequacy of the institutional capacity of the concerned local government units of Pasig City, Marikina City and Quezon City to implement resettlement programs and plans, as well as to identify within each LGUs the specific offices that are involved in resettlement and housing planning and implementation. The level and adequacy of institutional arrangement that each LGUs had with other government and non-government organizations and housing agencies were similarly probed especially focusing on what each institution are willing and do contribute in resettlement planning and implementation resource requirements (i.e. time, effort, materiel and money).

##### **(2) Census of Households and House Tagging (C/T)**

The census aims to establish the eligibility of Project-Affected Persons (PAPs) and the day that it starts establishes the benchmark date for exclusion of non-beneficiaries. The tagging meanwhile identifies the affected structures and ensures that subsequent structures added after the tagging can be easily identified and excluded. This is a highly coordinated activity among the RAP Study Team, the DPWH (i.e. the UPMO-FCMC, the concerned District Engineering Office (DEO), the LGU (with the concerned engineering, urban poor affairs and resettlement offices), the National Housing Authority (NHA) and the other Local Inter-Agency Committee (LIAC) members, and the barangay officials.

Qualified Project-Affected Persons (PAPs) are those found to be residing in, doing business and/or utilizing the resources within the project area as of date of census and tagging.

The resulting Census Master List was submitted to the concerned Local Government Units (LGU) through the UPMO-FCMC (as the DPWH implementing office) and to the other concerned member-agencies of the LIAC (e.g. NHA, PCUP, DILG, etc.). The concerned offices of the National Housing Authority (NHA) and the Presidential Commission on the Urban Poor (PCUP) will further prequalify the PAPs pursuant RA 7972.

The final Master List of eligible Project-Affected Persons (PAPs) shall bear the endorsement of the concerned Local Government Units (LGU), the National Housing Authority (NHA) and Presidential Commission on the Urban Poor (PCUP) and concurred by the Department of Public Works and Highways (DPWH).

##### **(3) Socio-Economic Survey (SES)**

The socio-economic survey complements the census and house tagging and was undertaken to obtain the baseline demographic and socio-economic profile of Project-Affected Persons (PAPs) which includes, among other things, the following:

- Name, age, sex, and educational attainment of HH head, spouse and other HH members
- Tenurial status (including proof thereof, if any), ethnicity and length of residence

- Household members' occupation and primary and secondary sources of income
- Family income level and expenditures
- Transportation cost to and from school/work
- Employment, Business, Skills (current and preferred)
- Living Conditions - Power supply, water supply, fuel, sanitation facilities, method of garbage disposal, appliances etc. valuable items owned
- Housing Conditions - type and dimensions of structure (wall, roof, flooring), type of housing materials, age of structure, number of rooms
- Family Health Conditions - Common illnesses; access to health services
- Gender concerns - Family roles, ownership, rights
- Access to Social Services - Health facilities, educational facilities, recreational facilities, solid waste disposal, religious centers, peace and order, credit facilities
- Social organizations and community network
- Resettlement preference
- Project Awareness and Perception

The Questionnaire Survey Form (Annex A) was used for the Socio-Economic Survey (SES). This was designed and finalized in consultation with the concerned Local Government Unit (LGU), the National Housing Authority (NHA) and Department of Public Works and Highways (DPWH)-Environment and Social Safeguards Department (ESSD).

Secondary data from available government and private sources will supplement the data obtained from SES. Additional information, as may still be necessary, will come from key informant interviews and focus group discussions with the community leaders and government officials.

#### **(4) Assets Inventory and Valuation**

A detailed inventory of potentially affected assets was undertaken in close coordination with the Parcellary Survey contractor (to generate the needed maps and marked project limits on the area) and then ground validated. Regardless of tenurial or ownership status, these assets will include the following:

- lands
- houses
- commercial/industrial buildings
- social/institutional structures
- public facilities/utilities
- other structures of economic value to PAPs

Mapping was done side by side with the inventory to indicate the location of the affected lands and structures with respect to the proposed project. It also indicate whether assets are expected to be affected severely or marginally.

#### **(5) Market Valuation and Replacement Cost Study**

A duly licensed appraiser evaluates the replacement cost of affected real properties and improvements. Methods includes ocular surveys, key informant interviews, secondary data from similar appraisal studies, market research including documentary evidence on recent sale of similar properties in the area.

The appraiser is to be guided by the standards set forth in RA 10752 and the LARRIPP as well as employ generally accepted guidelines and criteria in appraising the fair market value of affected land and non-land assets, including among others:

- a. The classification and use for which the property is suited;
- b. The developmental costs for improving the land;
- c. The value declared by the Owners;
- d. The current selling price of similar lands in the vicinity;
- e. The reasonable disturbance compensation for the removal and/or demolition of certain improvements on the land and for the value of improvements thereon;

- f. The size, shape or location, tax declaration and zonal valuation of the land;
- g. The price of the land as manifested in the ocular findings, oral as well as documentary evidence presented;
- h. Such facts and events as to enable the affected property owners to have sufficient funds to acquire similarly-situated land of approximate areas as those required from them by the government, and thereby rehabilitate themselves as early as possible; and
- i. Provide transaction costs: apart from determining the rates for land and non-land assets as indicated above, transaction costs such as administrative charges, taxes, registration and building permit costs, as necessary, were also estimated.

After all the needed data had been gathered, the appraiser will do a Grid Analysis and Comparable Sales Analysis to more accurately estimate the cost that will be involved in land acquisition and asset rehabilitation. The results of the work of the appraiser will form part of the RAP.

#### **(6) Entitlement Matrix**

An Entitlement Matrix specific to the Project was prepared outlining the eligibility criteria and entitlements due to PAPs based on the results of the SES and the assets inventory and valuation. The Entitlement Matrix was guided by the LARRIPP version of 23 March 2007.

After the master list of PAPs shall have been finalized by the Marikina City Local Inter-Agency Committee (LIAC) and concurred by the Department of Public Works and Highways (DPWH), the inter-agency RAP Implementation Committee (RIC) organized for the purpose will review and come to an agreement on the adoption of the herein proposed Entitlement Matrix.

#### **(7) Communication, Consultation and Public Participation**

A series of coordination, information dissemination and consultation meetings with all project stakeholders is carried out during resettlement planning. The participants included LGU officials of Marikina, the concerned barangay officials, the LGU Local Inter-Agency Committee (LIAC)/Local Housing Board (LHB), the DPWH-UPMO-FCMC, the concerned DPWH-District Engineering Office (DEO), and representatives of national government agencies represented in the LIAC/LHB. Community consultation meetings with affected families were also held in close coordination with the Local Housing Board, LIAC and barangay officials.

## CHAPTER 2 LEGAL AND POLICY FRAMEWORK

### 2.1 Legal Framework

The pertinent laws and policies that bear on land acquisition and resettlement are summarized in Table 2.1.1 below, including the policies of international financing institutions (IFI) like JICA, ADB and the WB, which are possible funders of the PMRCIP Phase IV.

As will be gleaned from the succeeding discussions, the laws of the Philippine as well as its jurisprudence are at par with internationally accepted policies and best practices in the acquisition of private property for public use, as well as of involuntary resettlement of displaced people.

**Table 2.1.1 Summary of Pertinent Laws and International Policy on Land Acquisition and Resettlement**

Philippine Laws/Statutes	Institutional Policy of IFI
1987 Philippine Constitution	JICA Guidelines for Environmental and Social Considerations and World Bank Operational Policy 4.12
PD 1067- The Water Code of the Philippines	
RA 7279- Urban Development and Housing Act of 1992	
RA 7835- Comprehensive & Integrated Shelter Financing Act of 1994	
RA 8974- An Act to Facilitate the Acquisition of Right-Of-Way*	
RA 7160- Local Government Code	
RA 10752- An Act Facilitating the Acquisition of the Right-Of-Way, Site or Location for National Government Infrastructure Projects	

\*: RA 8974 was repealed with effect of RA 10752 in March 2016.

#### 2.1.1 Philippine Laws Governing Land Acquisition and Resettlement

##### (1) The Philippine Constitution

The basic legal foundation for land acquisition and resettlement policies in government projects in the country rests on the 1987 Philippine Constitution, notably the following:

Article II, Section 10 - The State shall promote social justice in all phases of development.

Article II, Section 11 - The State values the dignity of every human person and guarantees full respect for human rights.

Article III, Section 9 - Private property shall not be taken for public use without just compensation.

Article III, Section 11 - Free access to the courts and quasi-judicial bodies and adequate legal assistance shall not be denied to any person by reason of poverty.

Article XIII, Section 10 - Urban or rural poor dwellers shall not be evicted nor their dwellings demolished, except in accordance with the law and in a just humane manner. No resettlement of urban or rural dwellers shall be undertaken without adequate consultation with them and the communities where they are to be relocated.

Further, under Philippine jurisprudence, only the court of law has exclusive and final authority in determining “just compensation” and that “valuation for just compensation laid down in the statutes may serve only as a guiding principle or one of the factors in determining just compensation but it may not substitute the court’s own judgment as to what amount should be awarded and how to arrive at such amount”<sup>1</sup>.

##### (2) The Water Code of the Philippines (PD 1067, 1976)

The Philippine Water Code stipulates the full and uncontested ownership of the State of water and water bodies, specifically, river and their natural beds (Article 5).

<sup>1</sup> G. R. No. 173520 30 January 2013 National Power Corporation vs. Spouses Rodolfo Zabala and Lilia Baylon. See also G.R. No. 150936, G.R. No. 185124 and G.R. No. 180979 among the pertinent cases where the court declared that the determination of just compensation is a purely judicial function.

Article 51 - The banks of rivers and streams and the shores of the seas and lakes throughout their entire length and within a zone of three (3) meters in urban areas, 20m in agricultural areas, and 40m in forest areas along their margins, are subject to the easement of public use. No person shall be allowed to build structures of any kind or to stay in this zone longer than necessary for recreation, navigation, floatage, fishing, or salvage.

Further, in constructing flood control structures in declared flood prone areas, the government enjoys the widest latitude in defining the legal easement it needs “along and adjacent to the river bank and outside the bed or channel of the river.”

Article 58, - Private lands that have been encroached through a change in the river course thus resulting in the submergence of their lands to become part of the river bed, is not entitled to compensation by government.

### **(3) Urban Development and Housing Act (UDHA) (RA 7279, 1992)**

The law is meant to promote urban development by addressing the incidence of informal settlements and guiding the treatment and rehabilitation of informal settlers or “squatters”.

Section 28 - Eviction or demolition as a practice is discouraged except under the following circumstances:

1. When persons or entities occupy danger areas such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways, and other public places such as sidewalks, roads, parks, and playgrounds;
2. When priority government infrastructure projects with available funding are about to be implemented; or
3. When there is a court order for eviction and demolition.

In cases where relocation and resettlement are not undertaken within the prescribed 45-days after issuance of notice, the affected families are entitled to “financial assistance in the amount equivalent to the prevailing minimum daily wage multiplied by sixty (60) days...”

Section 29 – Local government units, in coordination with the National Housing Authority, are mandated to implement the resettlement of persons living in danger areas such as “esteros”, railroad tracks, garbage dumps, riverbanks, shorelines, waterways, and other public places.

Section 21 - These agencies shall provide relocation sites with basic facilities including water supply, power, roads, and sewerage and solid waste disposal system; and basic services such as health, education, communication, security, recreation, relief and welfare.

Section 22 - Socialized housing and resettlement projects shall be located near areas where employment opportunities are accessible and relocatees shall be given priority in government livelihood programs.

Section 23 - The LGUs, in coordination with the Presidential Commission for the Urban Poor (PCUP) and concerned government and non-government agencies, shall provide resettlement beneficiaries the opportunity to organize themselves into cooperatives and self-help groups, be represented, air grievances participate in the decision-making process and prevent the incursion of professional squatters and squatting syndicates into their communities.

It also provides in no uncertain terms the following benefits, which should form part of the project cost for resettlement:

- a. Protection and promotion of legitimate collective interest to include appropriate documentation and feedback mechanisms;
- b. Land survey and titling at minimal cost;
- c. Liberalized terms on credit facilities and housing loans and one hundred percent (100%) deduction from every homebuyer’s gross income tax of all interest payments made on documented loans incurred for the construction or purchase of the homebuyer’s house; to
- d. Exemption from the payment of documentary stamp tax, registration fees and other fees for the issuance of transfer certificate of titles;
- e. Basic services as provided for in Section 21 of this Act; and,
- f. Such other benefits that may arise from the implementation of this Act.



**(4) Comprehensive and Integrated Shelter Financing Act of 1994 (RA 7835)**

Section 4 National Shelter Program Implementation

- a. Resettlement Program- This program shall involve land acquisition and site development by the National Housing Authority to generate serviced home lots for families displaced from sites earmarked for government infrastructure projects, those occupying danger areas such as waterways, esteros, railroad tracks and those qualified for relocation and resettlement assistance under Republic Act 7279. To sustain this program, the NHA shall engage in land banking activities to ensure availability of land.
- b. The Presidential Commission for the Urban Poor (PCUP- The PCUP is hereby mandated to coordinate with the NHA, and the concerned LGU or the PEA in the identification and processing of qualified beneficiaries of public rental housing facilities provided for in this Act.

The Social Housing Finance Corporation (SHFC), a subsidiary of the National Home Mortgage Finance Corporation, is the lead implementer of the Community Mortgage Program (CMP) and the Abot-Kaya Pabahay Fund program for both formal and informal settlers in the country.

**(5) An Act to Facilitate the Acquisition of Right-Of-Way (ROW), Site or Location for National Government Infrastructure Projects (RA 10752, s. 2016)**

This enabling law translates the constitutional provision of Article III Section 9, among others, pertaining to the use of or acquisition of private properties for government projects. The specific pertinent provisions, are quoted here verbatim for emphasis and clarity, as follows:

Section 1 - Declaration of Policy - Article III, Section 9 of the Constitution states that private property shall not be taken for public use without just compensation. Towards this end, the State shall ensure that owners of real property acquired for national government infrastructure projects are promptly paid just compensation.

Section 2 - National Government Projects.- The term “national government project” shall refer to all national government infrastructure, engineering works and service contracts, including projects undertaken by government-owned and controlled corporation, all projects covered by Republic Act No. 6957, as amended by Republic Act No. 7718, otherwise known as the Build-Operate-and-Transfer Law, and other related and necessary activities, such as site acquisition, supply and/or installation of equipment and materials, implementation, construction, completion, operation, maintenance, improvement, repair, and rehabilitation, regardless of the source of funding.

Section 4 - Modes of Acquisition Real Property – The government may acquire real property needed as right-of-way, site or location for any national government infrastructure project through donation, negotiated sale, expropriation or any other mode of acquisition as provided by law.

Section 6 - Negotiated Sale – In order to facilitate the determination of just compensation, the court may consider, among other well-established factors, the following relevant standards:

**(6.1) Compensation Price**

As provided in Section 5 of the Act, the IA may acquire through negotiated sale the required ROW project, by offering to the property owner as compensation price, the sum of the:

- a. current market value of the land
- b. replacement cost of structures and improvements therein; and current market value of crops and tress therein

**(6.2) Use of Government Financial Institutions and Independent Property Appraisers**

To determine the appropriate price offer for the acquisition of ROW through negotiated sale, the IA may engage the services of either of the following, taking into consideration efficiency, economy and the need of the IA to facilitate the implementation of national government infrastructure projects:

- a. A government financial institution (GFI) with adequate experience in property appraisal to be selected by the IA through a competitive process; or
- b. An independent property appraiser (IPA) accredited by:
  - (1) the Bangko Sentral ng Pilipinas (BSP) or
  - (2) a professional association of appraisers recognized by BSP

In determining the value of the affected structures of informal settlers, the assessment shall consider:

the type of structure; (ii) the size of the structure; and (iii) the prevailing cost of materials to rebuild similar structure without discount on salvaged materials or due to depreciation.

Section 9 – Relocation of Informal Settlers - the government, through the Housing and Urban Development Coordinating Council (HUDCC) and the National Housing Authority (NHA), in coordination with the LGUs and IAs concerned, shall establish and develop resettlement sites for informal settlers, including the provision of adequate basic services and community facilities, in anticipation of informal settlers that have to be removed from the ROW or site of future infrastructure projects, pursuant to the provisions of RA No. 7279. Whenever applicable, the concerned LGUs shall provide and administer the resettlement sites.

Section 10 - Appropriations for Acquisitions of Right-Of-Way, Site or Location for Any National Government Infrastructure Project in Advance of Project Implementation. - The Government shall provide adequate appropriations that will allow the concerned IAs to acquire the required right-of-way, site or location for national government infrastructure projects in advance of the project implementation. These appropriations shall include the funds needed to cover the following expenses for activities directly related to right-of-way acquisition for the projects as provided in this Act:

- a. Cost of parcellary surveys and appraisal of properties affected by the projects;
- b. Compensation for the project-affected land, structures and improvements, including relocation or replacement of compensable utilities, crops and trees;
- c. Cost of development and implementation of resettlement projects covered by this Act, including planning, social preparation, in accordance with HUDCC design standards and costings. Where necessary, this may include land development and housing construction, provision of basic services and community facilities, livelihood restoration and improvement, and other activities under the resettlement action plan in coordination with concerned government agencies; and
- d. Related expenses of the IA, including CGT in the case of negotiated sale under Section 6 of this IRR, DST, transfer tax and registration fees for the transfer of titles, and other relevant administrative expenses for right-of-way management, including the cost of ECC application.

#### **(6) The Local Government Code (RA 7160)**

The Local Government Code endows local government units (LGUs) with more power and accountability for its constituents, even in the implementation of projects by the national government agencies. Section 5 states that the power of the LGU is to be interpreted liberally in favor of the LGU to facilitate the acceleration of economic development and upgrade the quality of life for its constituency.

Section 25 requires national agencies to fully and meaningfully engage the local government units concerned in the planning and implementation of national projects in the LGU's jurisdiction. When LGU resources are inadequate for its participation in a national project, it may request the President of the Philippines for assistance and the latter "may direct the appropriate national agency to provide financial, technical, or other forms of assistance at no extra cost to the local government unit concerned.

Section 27 further stipulates that no project or program shall be implemented by government authorities unless the consultations are complied with, and prior approval of the Sanggunian concerned is obtained. Moreover, occupants of areas where such projects are to be implemented shall not be evicted unless appropriate relocation sites have been provided, in accordance with the provisions of the Constitution.

Hence, while the UDHA mandates the relocation and actual resettlement of the informal settlers by the LGU, the funds for this purpose need not necessarily come from the LGU coffers. On the other hand, national agencies implementing projects in a particular LGU must appropriate funds for the acquisition, relocation, resettlement and rehabilitation of project affected people (PAPs).

**(7) Operational Guideline No. 01 series 25 June 2014- Operational Guideline in the Transfer of Informal Settler Families from Danger Areas in the National Capital Region**

The guideline, formulated and finalized through an inter-agency collaborative process lead by the Department of the Interior and Local Government, provide the operating procedure for the immediate transfer of informal settler families (ISF) from danger areas into resettlement areas within NCR. It is consistent with the UDHA and was actively supported by the NHA, PCUP, the LGUs and the organization of ISFs. The guideline also authorized the creation of a Project Management Office to ensure its immediate implementation. Central to the guideline is the insurance of humane and orderly transition of the ISFs to their relocation sites.

**(8) Amending EO 152, s. 2002 (Executive Order No. 708 s. 2008)**

This act authorized the creation of the Presidential Commission for the Urban Poor as the primary arm of government to implement the provisions of UDHA. Consistent with the intent of the Local Government Code, the President of the Philippines authorized the devolution of the specific powers and functions (e.g. eviction and demolition) of the PCUP to the LGU. Further, the EO caused the creation of Local Housing Boards (LHB), an inter-agency body with the responsibility to plan and implement the relocation, resettlement and housing of informal settlers within an LGU.

**(9) Strengthening the Presidential Commission for the Urban Poor (PCUP) (Executive Order No. 69 s 2012).**

The EO transferred the PCUP directly under the Office of the President to effectively coordinate, formulate, and evaluate policies and programs concerning the urban poor. Further, the PCUP is tasked to undertake social preparation activities related to the urban poor.

**2.2 Land Acquisition and Resettlement Policies and Guidelines of DPWH**

**2.2.1 Department Order No. 327 series December 2003- “Guidelines for Land Acquisition and Resettlement Action Plans (LAPRAP) for Infrastructure Projects”**

This Order serves as the legal basis for the preparation of the LAPRAP, which was eventually enhanced and developed into the current LARRIP policy. Further, according to this Department Order, the “preparation and implementation of the LAPRAPs shall be the responsibility of the implementing office (IO).”

**2.2.2 Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples Policy (LARRIPP, DPWH 2007)**

The Land Acquisition, Resettlement, Rehabilitation and Indigenous People’s Policy (LARRIPP) (3rd edition, March 2007) embodies the principles and guidelines governing land acquisition and involuntary resettlement caused by Department of Public Works and Highways (DPWH) infrastructure projects. Specifically, the LARRIPP prescribes the following:

**(1) Eligibility**

Project Affected Persons (PAPs) who are verified to be residing, occupying, doing business or using the resources within the limits of the project area as of the date of census are eligible for compensation. In relation to their affected assets, the PAPs include the following:

1. Land
  - a. Legal owners of agricultural, residential, commercial and institutional) who have full title, tax declaration, or who are covered by customary law (e.g. possessory rights, usufruct, etc.) or other acceptable proof of ownership.
  - b. Users of arable land who have no land title or tax declaration
  - c. Agricultural lessees
2. Structures
  - a. Owners of structures who have full title, tax declaration, or who are covered by customary law (e.g. possessory rights, usufruct, etc.) or other acceptable proof of ownership.
  - d. Owners of structures, including shanty dwellers, who have no land title or tax declaration or other acceptable proof of ownership.
  - e. Renters

## **(2) Severity of Impact**

Affected properties will be compensated based on the severity of impact as follows:

### **1. Severe**

Full compensation in accordance with RA 10752 if more than 20% of the property or even less than 20%, if the remaining portion of the property is no longer economically viable for continued use as intended.

### **2. Marginal**

Compensation for affected portion only if less than 20% of the structure is affected or even more than 20%, if the remaining portion of the property or asset is still viable for continued use as intended.

## **(3) Entitlement**

Eligible Project Affected Persons (PAPs) shall be adequately compensated in the following manner:

### **1. Land**

Compensation for affected land shall be at the rate to be negotiated between the Department of Public Works and Highways (DPWH)-UPMO-FCMC and the Project-Affected Persons (PAPs) as per prevailing policy and operational guideline of the DPWH. As a rule, DPWH's default initial offer is based on the Fair Market Value (FMV), as provided for in RA 10752.

### **2. Structures**

Compensation in cash at replacement cost for the affected portion of the structure, including the cost of restoring the remaining structure, as determined by the Appraisal Committee, with no deduction for salvaged building materials.

### **3. Other Improvements**

- a. Compensation in cash at replacement cost for the affected portion of public structures to government or non-government agencies or to the community in case of a donated structure by agencies that constructed the structure.
- b. Compensation to cover the cost of reconnecting the facilities, such as water, power and telephone.

### **4. Other Entitlements/Assistance**

- a. Business Income Loss - Project-Affected Persons (PAPs) will be entitled to an income rehabilitation assistance to be based on the latest copy of the Project-Affected Person's (PAP's) income tax record for the period corresponding to the stoppage of business activities, but not to exceed Php. 15,000 for severely affected structures.
- b. Inconvenience Allowance - The amount of Php. 10,000 shall be given to Project-Affected Persons (PAPs) with severely affected structures, which require relocation and new construction.
- c. Rehabilitation Assistance – Cost of skills training and other livelihood development equivalent to Php. 15,000 per family, if the present means of livelihood is no longer viable and Project-Affected Persons (PAPs) will have to engage in a new income activity.
- d. Rental Subsidy – Given to Project-Affected Persons (PAPs) who will lose their house, under the following circumstances:
  - i. The concerned Project-Affected Persons (PAPs) were physically residing in the affected structure and land at the time of the cut-off date
  - ii. The residential structure is considered as severely affected.
  - iii. The Project-Affected Persons (PAPs) do not own any other land on which to reestablish residence
  - iv. The rental subsidy shall be equivalent to the prevailing average monthly rental of similar structure of equal type and dimension as the house lost.
- e. Transportation Allowance or Assistance - Free transportation to Project-Affected Persons (PAPs) who opt to relocate or go back to their places of origin (Balik-Probinsya Program).

#### **(4) Public Consultation and Participation**

Coordination meetings with concerned Local Government Units (LGU) and government agencies as well as public consultations were used to convey and disclose to all decision makers, especially the Project-Affected Persons (PAPs), such important project details affecting them, including the following:

1. the benefits and impacts of the project;
2. the affected families;
3. the entitlements and just compensation for affected assets and how the Bureau of Internal Revenue (BIR) zonal valuation and the fair market value may be substantially different;
4. the procedures for evaluating compensation and entitlement based on the fair market value and the negotiation procedures entailed, as provided for in RA10752; and,
5. the channels available to PAPs and related procedures for complaints and grievance.

##### **2.2.3 Department Order No. 23 series February 2015- “Flood Control and Drainage/Slope Protection Projects Policies”**

The Pasig and Marikina Rivers are both major river systems as defined by the National Water Resources Board. They are in the priority list of rivers that are under study for formulating an integrated water resource management (IWRM) plan.

DO 23 stipulates that project “preference shall be given to the UPMO-FCMC to implement flood control projects in major or principal river basins/systems as there may be an integrated water resource management approach given that major or principal river basins/systems transcend administrative and political boundaries.”

##### **2.2.4 Department Order No. 5 series January 2003- Creation of the Infrastructure Right of Way and Resettlement Project Management Office (PMO) and the Implementation of the Improved IROW Process**

This Order calls for the adoption of the IROW Procedural Manual, which aims to streamline the IROW acquisition process. It provides for the conduct of the preparation of an IROW Action Plan based on parcellary survey prior to the preparation of a project’s feasibility study. Regardless of the funding source for the infrastructure project, the IROW process laid out in the Manual must be objectively adopted.

##### **2.2.5 Department Order No. 34 series May 2007- “Simplified Guidelines for the Validation and Evaluation of Infrastructure Right-Of-Way (IROW) Claims”**

This Order further simplified the process of due diligence, evaluation and validation of IROW claims. It is part of the continuing effort of the DPWH to streamline and standardize its operating procedure consistent with anti-red tape initiatives and compliant to presidential orders related to good governance.

##### **2.2.6 Department Order No. 245 series 15 September 2003- Implementation of the Social and Environmental Management System Operations Manual**

This Order calls for the adoption of the SEMS Manual of Operations by all implementing offices of the DPWH. The SEMS manual serves as guide to project proponents in ascertaining the environmental and social soundness commensurate with the scale and characteristics of a project. It is compliant with the EIS system implemented by the Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR).

The Manual clarifies the incorporation of other social safeguards not specified in the LARRIPP. In particular, it provides more definitive guidelines on Eligibility, Compensation and Other Entitlements, such as:

1. Relocation Options ( 9.4.1 p. 89)
2. Income Restoration and Relocation Strategies (9.4.4 p. 89-92)
3. Public Participation and Consultation (9.5 p.93-96)
4. Gender Sensitive and Mainstreaming (9.6 p.97)

An important highlight of the order is the provision emphasizing that “the cost of implementing these conditions and mitigating measures in the ECCs and EMPs/EMoPs shall be included in the project budget of the IO concerned.”

### **2.2.7 Department Order No. 187 series 08 August 2002- Strict Compliance to Inclusion of Preparation of Parcellary Plans and Cost Estimates for ROW Acquisition in Detailed Engineering of Infrastructure Projects**

This Order directs all implementing offices of the DPWH to comply with the requirement for the preparation of parcellary plans and cost estimates for ROW acquisition during the detailed engineering phase of the project. It emphasizes the timing when the parcellary survey should be performed and the requirement to include the cost of developing squatter relocation site as well as the estimated relocation cost in the project budget. Specifically, “the cost of ROW acquisition xxx shall be estimated and included in the total construction cost of the proposed project. For projects involving squatter relocation, the cost of development of identified relocation site and the estimated relocation cost shall be included as an item in the ROW acquisition”.

## **2.3 Policies of International Funding Institutions**

### **2.3.1 Japan International Cooperation Agency (JICA) Policy on Involuntary Resettlement**

The key policies and principles governing involuntary resettlement prescribed in the Japan International Cooperation Agency (JICA) Guidelines on Social and Environmental Considerations (2010) are as follows:

- Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.
- When, after such an examination, avoidance is proved unfeasible, effective measures to minimize impact and to compensate for losses must be agreed upon with the people who will be affected.
- People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported by project proponents etc. in a timely manner.
- Prior compensation, at full replacement cost\*, must be provided as much as possible.
- Host countries must make efforts to enable people affected by projects and to improve their standard of living, income opportunities, and production levels, or at least to restore these to pre-project levels. Measures to achieve this may include: providing land and monetary compensation for losses (to cover land and property losses), supporting means for an alternative sustainable livelihood, and providing the expenses necessary for the relocation and re-establishment of communities at resettlement sites.
- Meaningful participation of affected people and their communities must be promoted in the planning, implementation, and monitoring of resettlement action plans and measures to prevent the loss of their means of livelihood.
- In addition, appropriate and accessible grievance mechanisms must be established for the affected people and their communities.
- For projects that will result in large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public.
- In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance.
- When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.

\*: JICA's Replacement Cost

Land	Agricultural Land	The pre-project or pre-displacement, whichever is higher, market value of land of equal productive potential or use located in the vicinity of the affected land, plus the cost of preparing the land to levels similar to those of the affected land, plus the cost of any registration and transfer taxes.
	Land in Urban Areas	The pre-displacement market value of land of equal size and use, with similar or improved public infrastructure facilities and services and located in the vicinity of the affected land, plus the cost of any registration and transfer taxes.
Structure	Houses and Other Structures	The market cost of the materials to build a replacement structure with an area and quality similar or better than those of the affected structure, or to repair a partially affected structure, plus the cost of transporting building materials to the construction site, plus the cost of any labor and contractors' fees, plus the cost of any registration and transfer taxes.

### **2.3.2 The World Bank's (WB) Operational Policy 4.12**

The Japan International Cooperation Agency (JICA) Guidelines specifically prescribes that “it is desirable that the resettlement action plan include elements laid out in the World Bank (WB) Safeguard Policy, OP 4.12.” The following additional principles specific to this Project are adopted from the World Bank OP 4.12, as follows:

1. Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey) to prevent a subsequent influx of encroachers or others who wish to take advantage of such benefits.
2. Eligibility of Benefits include the Project-Affected Persons (PAPs) who have formal legal rights to land (including customary and traditional land rights recognized under law), the Project-Affected Persons (PAPs) who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the Project-Affected Persons (PAPs) who have no recognizable legal right to the land they are occupying.
3. Provide support for the transition period between displacement and livelihood restoration.
4. Particular attention must be paid to the needs of the displaced vulnerable groups, especially those below the poverty line, landless, elderly, women and children.

### **2.3.3 Gaps between the Philippine Resettlement Policy Framework and International Guidelines**

The Land Acquisition, Rehabilitation and Indigenous People's Policy (LARRIPP) (2007) was influenced and guided by the World Bank's (WB's) Resettlement Policy, which the ADB and Japan International Cooperation Agency (JICA) also follow. Thus, there is no significant discrepancy between the Department of Public Works and Highway's (DPWH's) and the international agencies' resettlement frameworks.

However, there are gaps that need to be reconciled between the international guidelines and Land Acquisition, Rehabilitation and Indigenous People's Policy (LARRIPP) versus the resettlement practices observed by Local Government Units (LGUs) and government housing agencies. In particular, there are differing practices in the qualification of Project-Affected Persons (PAPs), the type of losses and the eligibility for compensation and resettlement. And the gaps, if not remedied as recommended, may put the PAPs at a gross disadvantage. Measures are herein proposed to address these gaps, as shown in Table 2.3.1 below.

It must be reiterated that the PMRCIP Phase IV will likely be funded by the JICA; hence, the international environmental and social safeguards as presented above will have to be seriously considered, as this will be required in signing the agreement between the foreign funding agency and the Philippine government.

A precedent case in point is that of *Abaya vs. Ebdane* (G.R. 167919, 14 February 2007). In this instance, the Supreme Court decided that the procurement procedure of the Japan Bank for International Cooperation (JBIC) has sufficient legal basis---in substance and in form---to guide the procurement procedure of its funded Projects because the loan agreement between the Bank (Japan Government) and the Philippine government constitutes an international agreement and is consistent with international best practice. Following this ruling based on the principle of *pacta sunt servanda* in international law, in the eventuality that the Philippine government enters into agreement with JICA to provide financing for the PMRCIP Phase IV (just like previous PMRCIP projects), the provisions of JICA and the WB's O.P.4.12 should prevail over Philippine laws in case of conflicts or where gaps exist.

**Table 2.3.1 Proposed Land Acquisition and Resettlement Policy to Bridge Gaps in Local vs. JICA/WB Policy Frameworks**

<b>No.</b>	<b>(A) JICA/WB/ADB Guidelines</b>	<b>(B) Laws/Policies</b>	<b>Gaps between (A) and (B)</b>	<b>Proposed Policy in this RAP</b>
1	Involuntary resettlement and loss of means of livelihood are to be avoided when feasible by exploring all viable alternatives.	Constitution LARRIPP	None	Same
2	When population displacement is unavoidable, effective measures to minimize impact and to compensate for losses should be taken.	LARRIPP RA10752 (Refer to Section 2. Declaration of Policy)	None	Same
3	People who must be resettled involuntarily and people whose means of livelihood will be hindered or lost must be sufficiently compensated and supported, so that they can improve or at least restore their standard of living, income opportunities and production to pre-project levels.	LARRIPP RA10752 (Refer to Section 2. Declaration of Policy)	None	ISFs shall be provided with in-city resettlement sites and provided with livelihood opportunities to help them re-establish their economic base.
4	Compensation must be based on the full replacement cost.	LARRIPP RA10752	None	Owners of affected tenured lands shall be compensated at BIR zonal value or fair market value (FMV), whichever is higher. Owners of affected structures on tenured land shall be compensated at full replacement cost.
5	Compensation and other kinds of assistance must be provided prior to displacement.	LARRIPP does not clearly state the timing of provision. Under RA 10752, APs will be paid in two installments for their affected properties. Initially, they will be paid 50% of compensation due for their affected lands and 70% of compensation due for structures and crops found on their affected	Mode / Timing of Payment	PAPs will not be displaced until after they have been paid compensation and allowances in full. For negotiated sale, a full compensation shall be paid prior to issuance of a new title in favor of DPWH and relocation/clearance of land. Civil works shall be started only in the section



No.	(A) JICA/WB/ADB Guidelines	(B) Laws/Policies	Gaps between (A) and (B)	Proposed Policy in this RAP
		lands. The balance in compensation for the land and improvements will be paid to the APs only after the acquired lands have been cleared of all improvements (i.e., structures, trees, and crops)		where prior compensation to PAPs are paid, and relocation and/or clearance of land are completed. DPWH will notify property owners early to enable PAPs to prepare requisite documents as proof of ownership for payment of compensation with a reasonable timeline. DPWH will provide assistance to PAPs whose lands will be subject to Extra Judicial Settlements, which establish Help Desk at each LGU prior to the issuance of the Notice of Taking under RA 10752 on ROW Acquisition. Once Parcellary survey is completed, Notice of Taking should be issued immediately for PAPs to ensure time to complete/progress Extra Judicial Settlement process before the start of negotiation.
6	For projects that entail large-scale involuntary resettlement, resettlement action plans must be prepared and made available to the public.	LARRIPP	None	Same
7	In preparing a resettlement action plan, consultations must be held with the affected people and their communities based on sufficient information made available to them in advance.	LARRIPP	None	Same
8	When consultations are held, explanations must be given in a form, manner, and language that are understandable to the affected people.	LARRIPP	None	Same

No.	(A) JICA/WB/ADB Guidelines	(B) Laws/Policies	Gaps between (A) and (B)	Proposed Policy in this RAP
9	Appropriate participation of affected people must be promoted in planning, implementation, and monitoring of resettlement action plans.	LARRIPP	None	Same
10	Appropriate and accessible grievance mechanisms must be established for the affected people and their communities.	LARRIPP	None	Same
11	Affected people are to be identified and recorded as early as possible in order to establish their eligibility through an initial baseline survey (including population census that serves as an eligibility cut-off date, asset inventory, and socioeconomic survey), preferably at the project identification stage, to prevent the subsequent influx of encroachers or others who wish to take advantage of such benefits.	LARRIPP sets the cut-off date as the date of the commencement of the census survey.	None	The cut-off date for eligibility of ISFs to entitlement is the date of commencement of the census (June 5, 2015).

No.	(A) JICA/WB/ADB Guidelines	(B) Laws/Policies	Gaps between (A) and (B)	Proposed Policy in this RAP
12	<p>Eligible beneficiaries include the PAPs who have formal legal rights to land (including customary and traditional land rights recognized under law), the PAPs who don't have formal legal rights to land at the time of census but have a claim to such land or assets and the PAPs who have no recognizable legal right to the land they are occupying.</p>	<p>RA 10752 (refer to Section 9 – Relocation of Information Settlers)</p> <p>RA 7279 (UDHA) provides that these persons are not eligible for any resettlement and other entitlements:</p> <p>(i) Professional Squatters – those persons who have previously been awarded home lots or housing units by the government but who sold, leased or transferred the same to settle illegally in the same place or in another urban area, and non-bona fide occupants and intruders of lands reserved for socialized housing;</p> <p>(ii) Squatting Syndicates - groups of persons who are engaged in the business of squatter housing for profit or gain. This definition excludes individuals or groups who simply rent land and housing from professional squatters or squatting syndicates.</p>	<p>These persons shall not be eligible for any form of entitlement. They shall be summarily evicted, and their structures demolished without benefit of compensation or any form of assistance.</p> <p>They may salvage the demolished materials by themselves.</p>	<p>The LGU in coordination with NHA and PCUP will conduct a final qualification of PAPs who will be eligible for resettlement, compensation and rehabilitation assistance.</p> <p>As a policy, ISFs will not be eligible for compensation if:</p> <p>(i) they have previously been awarded home lots or housing units by the government but sold, leased or transferred the same to settle illegally in the same place or in another urban area; and</p> <p>(ii) they are non-bona fide occupants and intruders on lands reserved for socialized housing.</p>

No.	(A) JICA/WB/ADB Guidelines	(B) Laws/Policies	Gaps between (A) and (B)	Proposed Policy in this RAP
13	Provide support for the transition period (between displacement and livelihood restoration). (WB OP 4. 12 Para. 6)	LARRIPP provides assistance in cash or in kind, aside from just compensation at replacement cost, including but not limited to: (i) Income Rehabilitation assistance – for loss of business/income due to disruption of business; (ii) Inconvenience Allowance to relocating PAPs whose structures are severely affected; (iii) Rehabilitation assistance in the form of cash or skills training for PAPs whose present means of livelihood is no longer viable and who will have to engage in a new income activity; (iv) Transportation allowance or assistance to relocating PAPs who opt to go back to their province of origin. (See also Sec. 3.3)	The LGUs in Metro Manila provide financial assistance (minimum wage x 30 days) and/ or transportation allowance to self-relocating PAPs based on RA 7279.	Income rehabilitation assistance shall be provided to PAPs who stand to lose or experience disruption of their businesses. Resettling PAPs shall be provided with livelihood programs to rehabilitate their economic base. (See also Chapter 9)
14	Particular attention must be paid to the needs of the vulnerable groups among those displaced, especially those below the poverty line, landless, elderly, women and children, ethnic minorities etc. (WB OP 4.12 Para. 8)	LARRIPP	None	Same

LARRIPP : Land Acquisition, Resettlement, Rehabilitation and Indigenous Peoples' Policy, Department of Public Works and Highways, Republic of the Philippines, March 2007.

## CHAPTER 3 IMPACTS AND MITIGATION MEASURES

### 3.1 Parameter of Severity of Impacts

The potential adverse impacts of the project include land acquisition; demolition of structures and improvements; involuntary resettlement; and the accompanying loss of livelihood and social support for project-affected persons (PAPs) at varying degrees of severity.

The severity of project impact on the assets of PAPs is categorized as:

1. Severely Affected when the PAPs stand to lose 20% or more of their assets, or when even less than 20% if the remaining land/structure is rendered unviable for continued use as originally intended
2. Marginally Affected when the PAPs stand to lose less than 20% of their assets, or when even more than 20% but the remaining land/structure is still viable for continued use as originally intended

### 3.2 Potential Adverse Impacts of the Project

The implementation of PMRCIP Phase IV will affect highly urbanized areas of Pasig City, Quezon City, and Marikina City along the riverbanks of Lower/Middle Marikina River. These riparian areas are occupied by industries/factories, commercial establishments, residential houses, roads, a boat station.

Potential adverse impacts of the Project include land acquisition; demolition of structures and improvements; involuntary resettlement; and accompanying loss of livelihood and social support for project-affected persons (PAPs).

This chapter enumerates the PAPs and inventories their assets, with a view to compensate their losses and rehabilitate their social and economic base.

#### 3.2.1 Impact on Land

##### (1) Number of Private Land Owners

Along Lower and Middle Marikina River there are 104 lot claimants whose lands and non-land assets may be affected by PMRCIP IV, while there are 4 lots identified as government own by the national government such as NHA and 1 lot by Marikina City. Therefore, a total of 100 lots are privately owned. These lot owners, subject to further verification of tenurial status, stand to have their lots and improvements acquired and compensated, either partially or totally, for the implementation of the project.

Among those that will be affected are five industrial land owners from barangays Manggahan and Santolan, Pasig City and one boat station owner from Bagumbayan, Quezon City. These PAPs may be compensated by the DPWH for their lost assets at fair market value for land and at replacement cost for structures. (Master List of Parcellary Survey is shown in ANNEX B-4)

**Table 3.2.1 Number of Affected Lands, Phase IV**

LGU	Barangay	No. of
		Land Claimants
Marikina City	Barangka	5
	Industrial Valley	3
	J. dela Peña	10
	Kalumpang	10
	San Roque	5
	Santa Elena	3
	Tañong	5
	<b>Sub-Total</b>	<b>41</b>
Pasig City	Manggahan	11
	Rosario	2
	Santolan	17
	<b>Sub-total</b>	<b>30</b>
Quezon City	Bagumbayan	31
	Libis	2
	<b>Sub-total</b>	<b>33</b>
<b>TOTAL</b>		<b>104</b>

Source: Parcellary Survey, RASA, 2015.

**(2) Area of Private Lands to be Acquired**

Table 3.2.2 shows the affected area of public and private land holdings of PAPs for Phase IV based on Parcellary Survey conducted in 2015 where the area affected of 16 digitized lots cannot be computed since number of corners are not known and/or digitized lots may not in between those with technical descriptions. The total area of land to be acquired is 133,568 m<sup>2</sup>.

**Table 3.2.2 Total Area of Affected Public and Private Lands**

City	AREA (sq.m)	Affected Area (sq.m)			Percentage of ROW Area
		Total	Submerged	ROW	
Quezon City	273,401.40	107,404.00	76,104.00	29,935.00	22.41%
Pasig City	432,331.00	115,585.00	52,905.00	62,672.00	46.92%
Marikina City	645,466.00	92,371.00	48,972.00	40,961.00	30.67%
<b>TOTAL</b>	<b>1,351,198.40</b>	<b>315,360.00</b>	<b>177,981.00</b>	<b>133,568.00</b>	<b>100.00%</b>

Source: RASA, Updated Parcellary Survey Plan, PMRCIP IV, 2017.

The actual area for private land acquisition may be way less than these preliminary figures, which includes the area of the government owned lands as shown in Table 3.2.3 below:

**Table 3.2.3 Total Area of Affected Public Lands**

City	AREA (sq.m)	Affected Area (sq.m)			Percentage of ROW Area
		Total	Submerged	ROW	
Quezon-1: RP	2,466.00	2,466.00	1,588.00	878.00	9.26%
Marikina-1: RP (NHA)	16,740.00	12,420.00	9,357.00	3,063.00	32.31%
Marikina-2: Marikina City	2,381.00	18.00		18.00	0.19%
Pasig-1: RP	6,474.00	6,474.00	954.00	5,520.00	58.23%
<b>TOTAL</b>	<b>28,061.00</b>	<b>21,378.00</b>	<b>11,899.00</b>	<b>9,479.00</b>	<b>100.00%</b>

Therefore, the actual area of private land to be acquired is estimated at 124,089 sq.m, as details are show in Table 3.2.4 below:

**Table 3.2.4 Total Area of Affected Private Land to be Acquired**

City	AREA (sq.m)	Affected Area (sq.m)			Percentage of ROW Area
		Total	Submerged	ROW	
Quezon City	270,935.40	104,938.00	74,516.00	29,057.00	23.4%
Pasig City	425,857.00	109,111.00	51,951.00	57,152.00	46.1%
Marikina City	626,345.00	79,933.00	39,615.00	37,880.00	30.5%
<b>TOTAL</b>	<b>1,323,137.40</b>	<b>293,982.00</b>	<b>166,082.00</b>	<b>124,089.00</b>	<b>100.0%</b>

Initial estimates indicate that at least one institutional/commercial land owner will be severely affected as its structure, the ferryboat station, needs to be totally removed.

The biggest area for land acquisition is located in the industrial-commercial areas in Barangays Manggahan and Santolan of Pasig City, which reached 29,683 sq.m. Most of these lands are owned by big private corporations. Referring to the results of parcellary survey (ANNEX B-4 MASTER LIST OF PARCELLARY SURVEY), there are several big land owners who are mostly real estate development/industrial corporations including those in Pasig City, while the land area to be acquired by the Project are currently used as riverine park or being idle within the easement. Although there are a few land uses classified as agriculture as per tax declaration, the lands are actually used for riverine park or roads along the river, therefore, there is no agricultural area within the right-of-way of the Project. Further, the area classified as “submerged” is located under water, i.e. within a river channel so that the said submerged area is not subject for land acquisition/compensation.

Marikina City has the second most lands affected, and Quezon City had the least. In terms of percentage share of affected lands, Quezon City had the lowest with only 23.4% compared with Marikina City which had 30.5%. (Refer to Table 3.2.5)

**Table 3.2.5 Area of Affected Private Lands and Improvements to be Acquired and Compensated (PMRCIP Phase IV)**

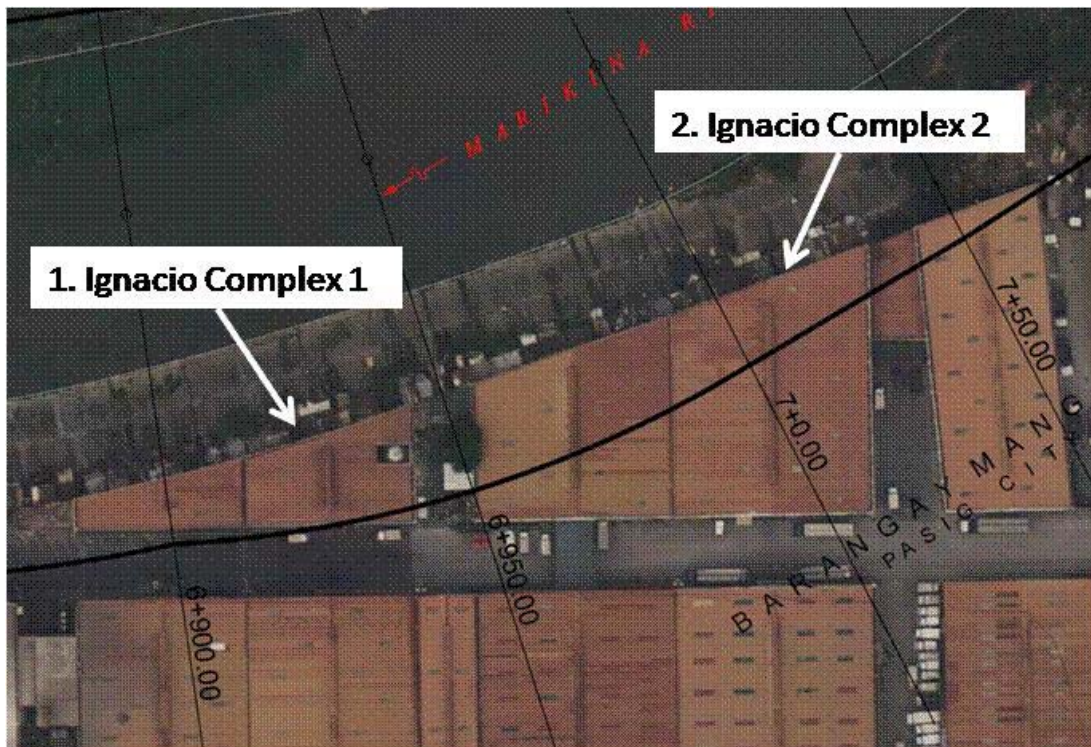
No.	Affected Private Properties	Location	Affected Land Area (sq.m)	Affected Floor Area (sq.m)
1.	IGNACIO Complex*	Mangahan	11,276	2,603
2.	READYCON Trading & Const'n Corp.	Mangahan	3,123	46
3.	HANSSON Paper Phil. Corp.	Mangahan	6,959	3,020
4.	JENTEC Storage Inc.	Mangahan	4,681	753
5.	KBM8 Ready Mix (Portland Cement)	Santolan	3,644	840
6.	Eastwood Ferry & Reclamation	Bagumbayan	-	117
7.	Other Land Acquisition - Quezon City	-	29,057	-
8.	Other Land Acquisition - Pasig City	-	27,469	-
9.	Other Land Acquisition - Marikina City	-	37,880	-
Total			124,089	7,379

\*: There are 4 private companies in IGNACIO Complex as tenant, such as (1) AsphalTrade Corp., (2) LBL Prime Properties Corp., (3) IGLOO Supply Chain, and (4) R.F.M. Ice Cream.

### (3) Area of Affected Structures

Figure 3.2.1 - Figure 3.2.5 shows the inventory of structures that will be affected in Phase IV. The total area of structures affected is 7,380 sq.m, while the respective floor areas of four (4) companies in IGNACIO Complex are not obtained in this stage.

In case the occupants of two building structures within IGNACIO Complex stand to lose more than 20% of the structures, it is evaluated that they will be severely affected. Then, PAPs will be compensated by the DPWH-IROW for their structures at full replacement cost of the whole properties, and business-income loss to be caused by the land acquisition/removal of the structures will be also compensated through the property appraisal.



**Figure 3.2.1 Affected industrial lots with structures in Quezon City and Pasig City (1/5)**





Figure 3.2.2 Affected industrial lots with structures in Quezon City and Pasig City (2/5)

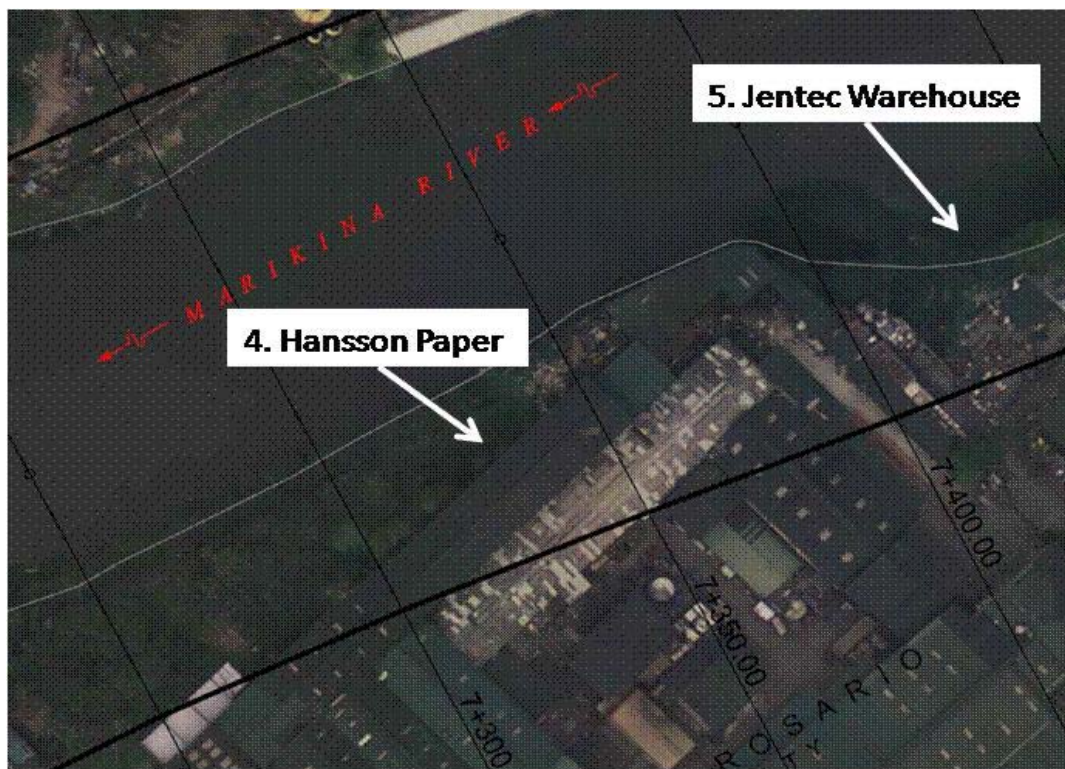


Figure 3.2.3 Affected industrial lots with structures in Quezon City and Pasig City (3/5)



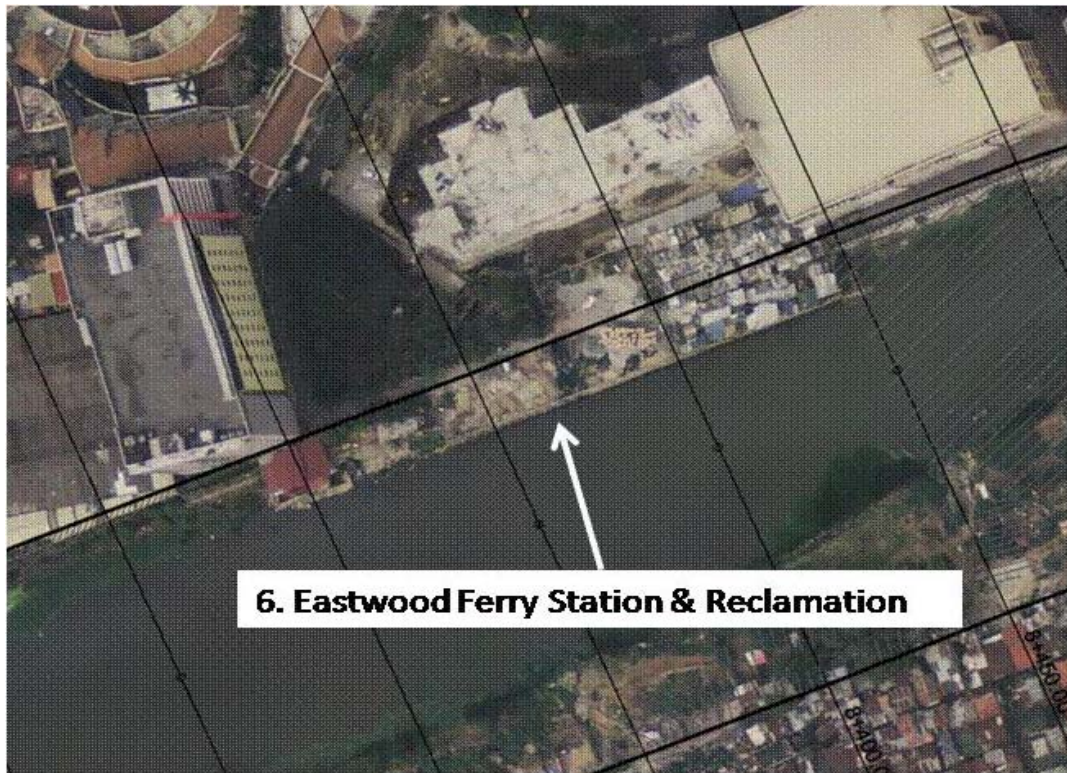


Figure 3.2.4 Affected industrial lots with structures in Quezon City and Pasig City (4/5)



Figure 3.2.5 Affected industrial lots with structures in Quezon City and Pasig City (5/5)

Other than the afore-mentioned buildings showing the extent of potential impact on private properties in Pasig and Quezon cities. These have been no structures excluding trees reckoned from the initial field reconnaissance and parcellary survey of the area along PMRCIP Phase IV section.

#### (4) Area of Public Facilities and Utilities

Initially, the public facilities and utilities will be identified and assessed how they will be affected by the Project during the detailed engineering design for avoiding and mitigating the impacts. As per possible, the information will be given to the agency/organization concerned for coordination and consultation.

For public facilities along the Marikina River, particularly the sections in Marikina City, there are riverside parks together with jogging lane and promenade, which may be affected by the construction of dike/revetment of the Project. The dike/revetment will be principally constructed along the periphery of riverside so that the facilities will be maintained to be the same before and after the Project, while ordinary uses of facilities will be limited during the construction works for safety reason.

Public utilities such as water pipeline, sewerage line, electric posts/wires including roads and walk ways will be also affected by the construction works of the Project. Through the coordination/consultation with the agency/organization responsible for operation/maintenance, appropriate methods of constructions will be prepared by the Contractor and submitted to DPWH for approval.

### 3.2.2 Impact on People

#### (1) Number of Informal Settlers

A total of 71 informal settler families from Brgy. Bagumbayan, Quezon City stand to entirely lose the housing structures they presently occupy. These PAPs will be resettled by the Quezon City Local Inter-Agency Committee (LIAC) in coordination with the DILG, NHA and DPWH.

The 71 ISFs were identified during the census-tagging and socio-economic survey conducted on April 28-May 5, 2015. The census list of PAPs and photo documentation of structure tags (Annex B) have been submitted to NHA for further prequalification of PAP's eligibility for resettlement. As a rule, ISFs who have been recipients of government relocation programs in the past are no longer qualified for resettlement benefits pursuant to RA 7279 (UDHA).

Table 3.2.6 shows the distribution of these informal settler families by their location along the riverbank and the number of residential structures to be demolished.

**Table 3.2.6 Number of Informal Settler Families to be Resettled**

Area		Structures Tagged	Number of HH	HH Population
1	Manggahan St.	30	51	202
2	Tawiran	5	10	30
3	Mercury Ave.	4	9	40
4	Manalo Br.	1	1	2
<b>Total</b>		<b>40</b>	<b>71</b>	<b>274</b>

#### (2) Structures Occupied by Informal Settlers

There are 40 residential structures occupied by 71 informal settler families in Bagumbayan, QC. Based on agreement reached during discussions with QC LGU/LIAC, NHA and DILG, these structures will be demolished completely prior to implementation of Phase IV. These ISFs will not only be severely affected by the project. More importantly, they are presently occupying so-called danger areas of the identified priority waterways and are subject to summary relocation pursuant to the SC Mandamus.

Figure 3.2.6 shows the row of houses occupied by the ISFs directly over the riverbanks of Lower Marikina River near the proposed MCGS structure under PMRCIP Phase IV.





**Figure 3.2.6 House structures occupied by informal settler families along Lower Marikina River in Bgy. Bagumbayan, Quezon City (May 5, 2015)**

### **(3) Temporary Impact on Boat Transportation**

The construction of PMRCIP IV will necessitate the demolition of the informal boat station in Tawiran area in Bgy. Bagumbayan near Eastwood in Quezon City. The impact will be temporary, inasmuch as the project will restore if not replace the station to a better state after project construction.

Informally operated boats serve as the main means of affordable transportation for commuters who cross the Lower/Middle Marikina River to and from their base to their places of work, school and economic activities on the other side. Most of the passengers consist of students who go to schools nearby, employees of call centers in Eastwood and factory workers in Santolan and Bagumbayan. A one-way fare costs P5.00.

At least two boats alternately ply the river crossing route. These are operated by residents of Bagumbayan, accordingly with permission from the management of Megaworld Corporation, owner of Eastwood. Operation starts at 6:00 o'clock in the morning until 10:00 o'clock in the evening. According to one operator who refused to be named, there is even a request made by call center agents to extend operation hours up to 12 midnight, as this will benefit BPO employees who are on late night-shifts.

A two-day boat passenger count was carried out on May 4 and May 8, 2015 by the RAP Study team to assess the significance of impact of the temporary loss of boat transport (Figure 3.2.7).



**Figure 3.2.7 Ferry boat passengers crossing to and from Tawiran Station in Bgy. Bagumbayan near Eastwood, QC**

Table 3.2.7 summarizes the results of this boat passenger survey. On a regular weekday (Monday), there are a total of 1,344 passengers who cross the river to and from Tawiran at an average rate of 112.83 persons per hour in the morning and 102.17 persons per hour in the afternoon. During weekend (Saturday) as expected, there are more passengers taking this route. An average of 116.5 passengers cross in the morning, while 122.17 cross in the afternoon. Assuming that the daily boat operation extends until 10 pm at average 100 more passengers/hour; this means an additional 400 passengers per day.

All in all, a total of 1,700 persons, more or less, who rely on the ferry boat transport crossing Marikina River during weekdays and 1,800 during weekends are likely to be affected by the temporary removal of the boat station. Per month, this translates to 51,800 passengers or an income loss of Php 259,000 for boat operators.

**Table 3.2.7 Ferry Passenger Count in Tawiran, Bgy. Bagumbayan**

Time		ADULT		CHILDREN		Total
		Male	Female	Male	Female	
AM	6-7	103	046	000	000	149
	7-8	107	056	010	001	174
	8-9	083	071	002	000	156
	9-10	059	042	005	002	108
	10-11	024	023	014	002	063
	11-12	043	030	007	001	081
PM	12-1	040	029	005	001	075
	1-2	037	043	008	000	088
	2-3	062	023	002	000	087
	3-4	045	029	006	003	083
	4-5	070	027	003	001	101
	5-6	111	053	009	006	179
<b>DAY 1 (May 4, 2015) TOTAL BOAT PASSENGERS</b>						<b>1,344</b>

Time		ADULT		CHILDREN		Total
		Male	Female	Male	Female	
AM	6-7	114	057	000	000	171
	7-8	127	053	007	000	187
	8-9	059	040	001	002	102
	9-10	062	051	006	002	121
	10-11	029	015	004	001	049
	11-12	042	022	005	000	069
PM	12-1	041	035	006	003	085
	1-2	059	049	008	003	119
	2-3	057	046	007	004	116
	3-4	047	045	007	005	104
	4-5	061	036	009	004	110
	5-6	105	070	015	009	199
<b>DAY 2 (May 9, 2015) TOTAL BOAT PASSENGERS</b>						<b>1,428</b>

#### (4) Economic Displacement

The taking of land and structures of PAPs are likely to cause significant loss of livelihood and diminution if not loss of income. The PAPs most affected by economic displacement would include the following: (1) tenured residents who may need to find new shelters away from their present place of business, work and/or residence; (2) informal settler families who will be uprooted from their present sources of income; and, (3) workers and students who may need to spend more for transportation to and from new place of residence

### (5) Social Displacement

Social displacement of PAPs, especially the ISFs, will come in the form of: (1) loss of social support system from family, friends and neighbors, who may not be with the PAPs in their new place of business or residence; (2) loss of / inadequate access to social services and facilities, particularly if transferred to far flung areas; (3) loss of access to formal or informal credit facilities; (4) displacement of school-age population.

### 3.3 Avoidance/ Preventive Measures

#### 3.3.1 General Approach

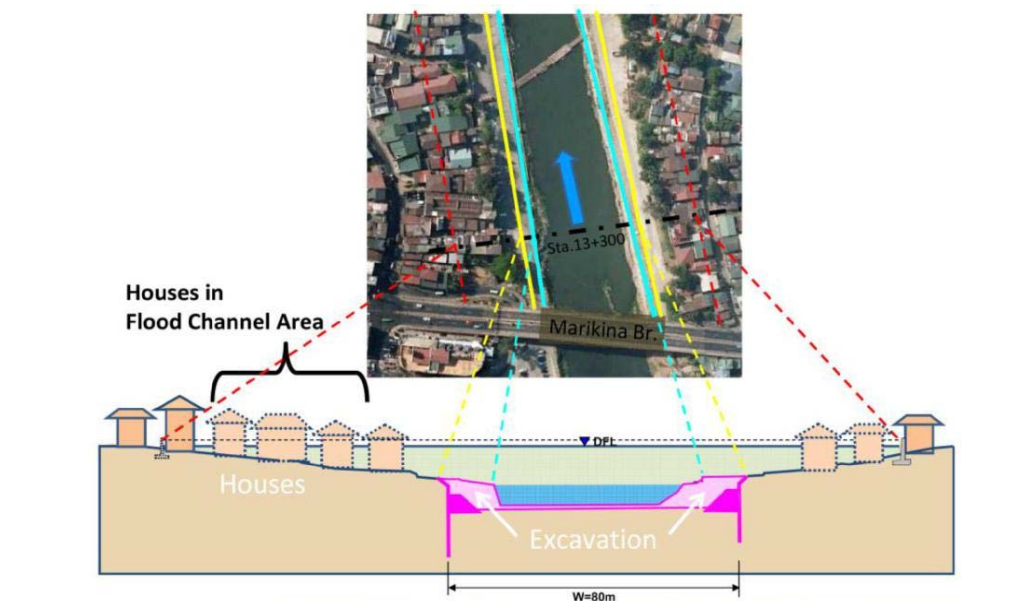
Care was taken during this study to ensure that the taking of land, improvements thereon and other assets and dislocation of PAPs will be kept to the minimum necessary in order to achieve the objectives of the Project. To this end, the following measures were considered most feasible to minimize, if not totally avoid, land acquisition and involuntary resettlement:

- maintaining a 90-m maximum channel width throughout the stretch of Middle Marikina River;
- design scale of a 30-year return period, with corresponding design discharge of 2,900 m<sup>3</sup>/s;
- use of 90-m rectangular cross-section between Rosario Bridge (Sta. 6+700) and Sta. 10+500 near the Marcos Bridge;
- heightening the river wall along sections adjoining highly populated areas;
- use of steel sheet pile and reinforced concrete instead of earth dike;
- deepening by dredging the river channel;
- locating the Marikina Control Gate Structure (MCGS) at the uninhabited section downstream of Bgy. Bagumbayan.

#### 3.3.2 No Dike Section – Downstream of Marikina Bridge

The river channel improvement under PMRCIP Phase IV is proposed to confine the design flood discharge of 2,900 m<sup>3</sup>/s inside the river channel as riparian area has been developed and highly urbanized. Therefore, most of the target section from Rosario Weir to Marikina Bridge is proposed to have SSP revetment with a parapet wall of which top elevation is set to be 1.2 m higher than the design flood level.

On the other hand, many stores, restaurants and houses have been built-up in the river channel area in this section and hence inundated/suffered from the flood damage during large-scale floods (refer to Figure 3.28). In order to mitigate flood damages over the section, it is required to relocate those stores, restaurants and houses and construct the high dike/river wall. However, the owners of stores/restaurants and residents in this area prefer staying with taking the risk of flood inundation to moving out of the area, while they used to prepare for floods and evacuate during flooding. It is mainly to maintaining their standard of living and livelihoods.



**Figure 3.3.1 Plan of Dike and Widening Low Water Channel at Downstream of Marikina Bridge**

Further, the said adverse impacts could not be aggravated toward the downstream areas since this section is situated in a valley-like topographic area. Therefore, it is considered that only widening of the low water channel could be implemented under the Phase IV project. The total channel improvement including the dike construction will be undertaken after the relocation of those stores, restaurants and houses.

In such case, it is important to conclude a mutual agreement not only with the affected people in the area but LGUs concerned, then Public Consultation was convened for Left Bank Area of Barangays San Roque, Sta Elena and Sto. Niño on 29 April 2017, and for Right Bank Area of Barangay Jesus dela Peña on 04 June 2018.

**Table 3.2.8 Summary of Public Consultation Meetings**

	Left Bank Area	Right Bank Area
Date of Meeting	29 April 2017	04 June 2018
Venue of Meeting	Pagoda in Brgy. Sta. Elena, Marikina City	Senior Citizen's Pavilion in Brgy. Jesus dela Pena, Marikina City
Number of Attendants	26	26
- Barangay	20	20
- DPWH	1	3
- Consultant	5	3
Main Point Discussed/Conclusion	<ul style="list-style-type: none"> <li>● The river channel improvement solution must not cause the separation of the people and the community from the river.</li> <li>● If there is a need to erect flood wall structures, it must not prevent people from accessing and appreciating the view of the river.</li> <li>● As the community later exclaimed, bridges to cross rivers are much preferred than walls that prevents accessing the other side of the river.</li> </ul>	<ul style="list-style-type: none"> <li>● Cognizant that the city has a highly functioning disaster risk reduction and management system with a working flood forecasting and evacuation procedure, they have developed a high-level of resiliency in coping with the flood risk.</li> <li>● No high river wall will be constructed along the right bank of Marikina River from Marikina Bridge (Sta. 13+350) to around Provident Village (Sta. 13+050).</li> </ul>

Note: Full Reports of Public Consultation Meetings are attached in **ANNEX E**.

As agreed through the Public consultation meeting, there will be temporarily no high dike/river wall constructed

### 3.4 Mitigation Measures

This resettlement plan embodies the measures meant to mitigate the unavoidable adverse impacts of the project in terms of taking of properties and the resulting social and economic displacement. The mitigation measures include: (1) compensation at fair market value for land and at replacement cost for non-land assets; (2) resettlement of families whose house structures will be severely affected; (3) provision of livelihood and employment opportunities for those whose sources of income will be adversely affected, particularly for the economically productive PAPs who may lose their present economic opportunities due to physical relocation; (4) provision of basic education, health, and other social services in the new place of residence; and (5) provision of community support infrastructure such as water supply, power, drainage and in the resettlement site.

As far as possible, the respective LGUs of Pasig City and Quezon City should provide the resettlement sites that are most acceptable to PAPs so that the affected families, especially the vulnerable groups, will not be severely impoverished due to displacement. If such is not feasible, then the site should at least be only within convenient commuting distance to/from the current places of work or schools of the PAPs in Metro Manila.

There will be loss of livelihood and access to cheaper means of transport due to the temporary stoppage of operation of the ferry boat. Nevertheless, the ferry station may be restored or built anew, probably even modernized, after project construction.

## **CHAPTER 4 SOCIO-ECONOMIC PROFILE OF THE AFFECTED POPULATION**

### **4.1 Basic Information**

The ISFs described below consists of 71 households interviewed out of the 75 identified by NHA in Barangay Bagumbayan, Quezon City. (Four families refused to be interviewed). The ISFs surveyed represents 4% of the barangay's household population based on the 2010 census data.

While these ISFs are likely to be affected by the implementation of the PMRCIP Phase IV, they are first and foremost the object of massive resettlement program of the government through the P50B fund under the Office of the President. This program, started in 2011, is in response to the Supreme Court Mandamus to clear the priority waterways of informal settlers as part of the initiative to clean up Manila Bay. These ISFs will be resettled by the Quezon City LIAC in coordination with the NHA, DILG, and DPWH.

For purpose of resettlement planning, this profile has been generated from a social survey undertaken between May 28 and June 4, 2015 by the Consultants of PMRCIP Phase III. The unit of analysis is the "household", defined by the National Statistics Office (NSO) as a composite group of individuals sharing the same dwelling and pooling various income sources for common use.<sup>1</sup> Collectively, the surveyed group is also referred to as "project-affected persons" (PAPs). The Master List of PAPs is found in **ANNEX B**.

This report does not include potentially affected residents with formal titles to land whose assets are likely to be affected by the acquisition of the projects right-of-way. These formal settlers are best surveyed and profiled after the alignment has been finalized and the RAP is updated during the detailed design stage of the PMRCIP Phase IV. This report does not also cover the ISFs from Barangays Santolan and Manggahan, Pasig. Just as it did in PMRCIP Phase III, the LGU of Pasig City committed to independently undertake the resettlement of their constituents, including the social preparation, census/tagging and socio-economic survey activities. A Certification to this effect will be issued by the City Mayor through the office of Resettlement and Housing Unit (RHU) of the LGU. The due diligence review is compiled for the on-going resettlement of ISFs from Barangay Santolan by Pasig City LGU, as shown in **ANNEX F**. A stakeholder meeting for formal settlers, particularly land owners in Barangays Santolan and Manggahan will be held in August 2018.

#### **4.1.1 Scope of SES**

A total of 71 households (HH) were surveyed. The respondents are distributed as follows: Manggahan Ext., 50HH; Mercury Ave., 11HH; Old Tawiran 9HH; and Manalo Bridge-Calle Industriya, 2HH. All households were identified as informal settler families or ISFs.

There are no structures occupying the project alignment in other barangays affected by the project. Hence, no member of the Survey Team was deployed to work on these barangays. Consequently, SES in these other barangays are excluded from the scope of the present RAP study. Moreover, data are not available to validate ownership claims over the affected lots.

#### **4.1.2 Unit of Analysis**

The unit of analysis is the "household", defined by the National Statistics Office (NSO) as a composite group of individuals sharing the same dwelling and pooling various income sources for common use. Collectively, the surveyed group is also referred to as "project-affected persons" (PAPs). The complete SES data was filed hereunder.

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<sup>1</sup> This distinction is made to avoid confusion with the term "family", which could have a larger inclusive meaning by recognizing bonds of affiliation and affinity, and/or which pertains to units arising from the bond of marriage or cohabitation. A household, thus, could have more than one family and considering one as "family" means more than just blood ties.

## 4.2 Demographic Characteristics

### 4.2.1 Household Structure

In general, the PAPs consist of relatively small, nuclear, male-headed, and young households. The average family size is 3.9. (Table 4.2.1). The figure is lower compared to the national average of 4.6 and the National Capital Region's average of 4.3.<sup>2</sup> Around 72% of the HH have 3-5 family members. Only 14% of the HH have 6 or more family members.

**Table 4.2.1 Household Size, Bagumbayan, QC, 2015**

HH size	n	%
1	2	2.8
2	8	11.3
3	22	31.0
4	17	23.9
5	12	16.9
6	6	8.5
7	3	4.2
8	1	1.4
<b>Total</b>	<b>71</b>	<b>100.0</b>

The households are of the nuclear type. This is shown in the relationship of other members to the household head, where a total of 62% comprise spouses and children (Table 4.2.2).

**Table 4.2.2 Relationship of HH Members to HH Head**

Position in HH	n	%
HH Head	71	31
Spouse	57	25
Child	83	37
Sibling	2	9
Other relative	13	6
<b>Total</b>	<b>226</b>	<b>100</b>

Female heads of HH are older than their male counterparts. The age of HH heads is 37 years on average (mean, 37.4) (Table 4.2.3), while the spouse is slightly younger on average at 32 (mean 32.22) (Table 4.2.4). Care must be taken to address the resettlement and rehabilitation of the 14 HH headed by females, and the 4 HH that are headed by senior citizens, who could become impoverished by displacement.

**Table 4.2.3 Age Distribution of Household Heads**

Age	Sex of Household Head				Total	
	Male		Female			
	n	%	n	%	n	%
18 to 24	11	19.3	2	14.3	13	18.3
25 to 29	9	15.8	2	14.3	11	15.5
30 to 34	11	19.3	1	7.1	12	16.9
35 to 39	3	5.3	2	14.3	5	7.0
40 to 44	5	8.8	1	7.1	6	8.5
45 to 49	6	10.5	3	21.4	9	12.7
50 to 59	8	14.0	3	21.4	11	15.5
60 to 64	2	3.5	0	0.0	2	2.8
65 above	2	3.5	0	0.0	2	2.8
Total	57	100.0	14	100.0	71	100.0

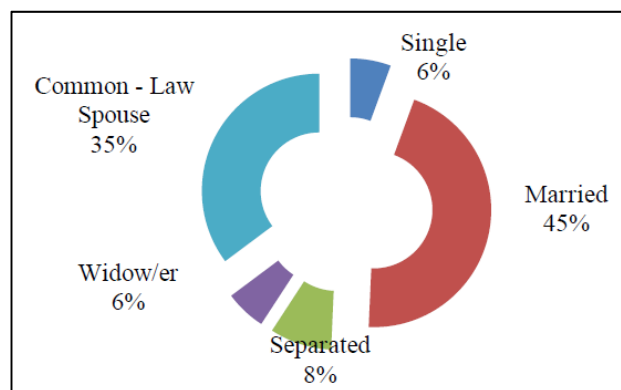
<sup>2</sup> National Statistics Office (NSO), Household Population Census, 2010. Table 1, Household population, Number of Households, and Average Household Size by Region, Province and Highly Urbanized City: Philippines, 2010. Available at [www.census.gov.ph](http://www.census.gov.ph).



**Table 4.2.4 Age Distribution of Spouses**

Age	Male		Female		Total	
	n	%	n	%	n	%
below 18	1	12.5	0	0.0	1	1.7
18 to 24	2	25.0	12	24.0	14	24.1
25 to 29	2	25.0	11	22.0	13	22.4
30 to 34	1	12.5	7	14.0	8	13.8
35 to 39	1	12.5	4	8.0	5	8.6
40 to 44	1	12.5	7	14.0	8	13.8
45 to 49	0	0.0	5	10.0	5	8.6
50 to 59	0	0.0	3	6.0	3	5.2
60 to 64	0	0.0	1	2.0	1	1.7
<b>Total</b>	<b>8</b>	<b>100.0</b>	<b>50</b>	<b>100.0</b>	<b>58</b>	<b>99.9</b>

Interestingly, although 45% of household heads are married, nearly half of these are in common-law relationships (Figure 4.2.2). The incidence of solo parents<sup>3</sup> is reported in 16% of the survey population.

**Figure 4.2.1 Marital Status of HH Heads, Bagumbayan, QC, 2015**

The ratio of male to female is almost 1:1, with a slightly older male population. Nearly 60% of HH members are within the legally, economically productive age of 21-60 (Table 4.2.5). This indicates a population group with a strong potential to contribute substantially to improving the social and economic base of the PAPs. This group should be the target population for a well-suited social and economic rehabilitation program after relocation.

**Table 4.2.5 Age Distribution of HH Members**

Age	Male		Female		Total	
	n	%	n	%	n	%
0-6	13	11.6	23	20.2	36	15.9
7-12	14	12.5	9	7.9	23	10.2
13-16	6	5.4	5	4.4	11	4.9
17-20	7	6.3	10	8.8	17	7.5
21-59	68	60.7	66	57.9	134	59.3
60-64	2	1.8	1	0.9	3	1.3
65 and above	2	1.8	0	0.0	2	0.9
<b>Total</b>	<b>112</b>	<b>100.0</b>	<b>114</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>

#### 4.2.2 Educational Attainment

Educational attainment among the HH heads is rather high, and probably indicating a strong potential to improve their socio-economic capacity. About 65% of HH heads and their spouses reached or finished

<sup>3</sup> Defined by law as solely undertaking the responsibilities of parenthood. *The Solo Parents Welfare Act of 2000 (RA 9372)*

high school or secondary education, while a good 14% and 17%, respectively, were able to acquire tertiary education or earn vocational skill certification (Table 4.2.6).

Among the spouses, women tend to have higher educational attainment. This implies that skills-based livelihood programs should be able to target not only the household head but also their spouses and other productive members of the household.

**Table 4.2.6 Educational Attainment of HH Heads and Spouses**

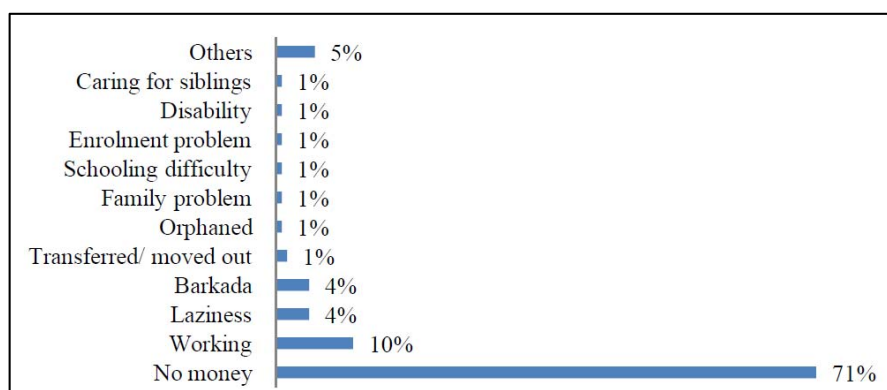
Educational Attainment	Household Head		Spouse	
	n	%	n	%
No schooling	0	0	1	2
Elem undergrad	8	11	4	7
Elem grad	7	10	6	10
HS undergrad	27	39	15	26
HS grad	18	26	22	38
College undergrad	6	9	5	9
College/ Post grad	1	1	2	3
VOC undergrad	1	1	1	2
VOC grad	2	3	2	3
<b>Total</b>	<b>71</b>	<b>100</b>	<b>58</b>	<b>100</b>

On the other hand, low educational attainment is seen among HH members in general. Only about 5% are either college or vocational graduates while only 22% finished high school. Close to 37% of HH members failed to complete high school (Table 4.2.7).

**Table 4.2.7 Educational Attainment of HH Members**

Educational Attainment	Sex				Total	
	Male		Female			
	n	%	n	%	n	%
No Schooling	4	3.8	6	6.1	10	4.9
Pre-school	4	3.8	2	2.0	6	3.0
Elem undergrad	21	20.0	15	15.3	36	17.7
Elem grad	9	8.6	8	8.2	17	8.4
HS undergrad	35	33.3	25	25.5	60	29.6
HS grad	18	17.1	27	27.6	45	22.2
College undergrad	6	5.7	9	9.2	15	7.4
College/Post grad	1	1.0	2	2.0	3	1.5
Vocational undergrad	2	1.9	3	3.1	5	2.5
Vocational grad	5	4.8	1	1.0	6	3.0
Total	105	100.0	98	100.0	203	100.0

The incidence of dropouts or out-of-school youth (OSY) is high among the surveyed population. Of the 75 members reported to be of schooling age (5-22 years old), about 37% do not go to school on a regular basis. Economic reasons, namely, the lack of money (68%) is the most cited reason for dropping out of school. (Figure 4.2.2).



**Figure 4.2.2 Reason for Dropping-Out of School**

### 4.2.3 Housing Condition

#### (1) Type of Housing Structures

Table 4.2.8 shows that nearly 8 of 10 are single-detached structures while the rest are duplexes indicating efforts to maximize space available for housing. The housing structures are predominantly Type II, made up mainly of light housing materials, as observed among 90% of PAHs. Despite this, galvanized iron is the most common form of roofing material typical of urban dwellings in Metro Manila, District.

**Table 4.2.8 Type of Structures Occupied by PAPs**

Type of Structure	n	%
Single-detached	54	75.7
Duplex	17	24.3
<b>Total</b>	<b>71</b>	<b>100.0</b>

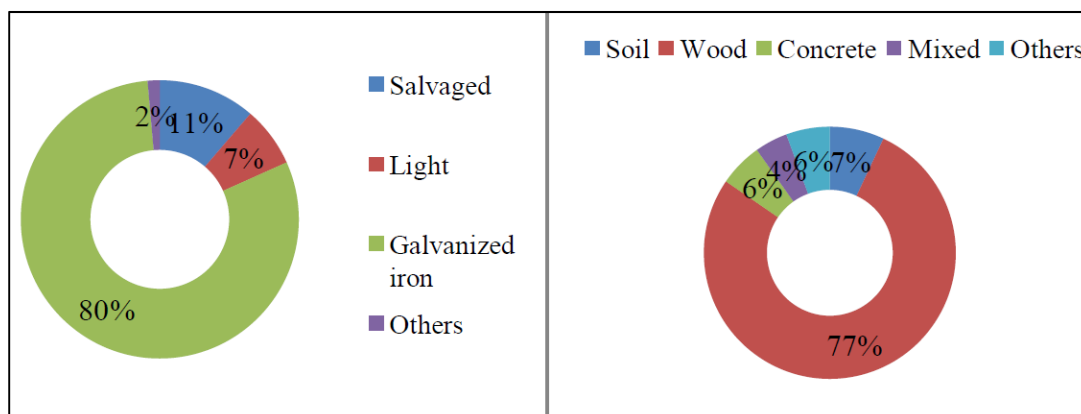
#### (2) Type of Housing Materials

As shown in Table 4.2.9, most (90%) of the houses are makeshift structures made of light materials. Some houses are only categorized as semi-concrete or of mixed materials because the occupants utilize the existing floodwall built by the adjoining factory owner as walls of the houses built by PAPs.

**Table 4.2.9 Type of Housing Materials Used by PAPs**

Type I (Salvaged)	2	2.8
Type II (Light)	64	90.1
Type III (Semi-concrete)	3	4.2
Type 5 (Mixed Materials)	2	2.8
<b>Total</b>	<b>71</b>	<b>100.0</b>

Meanwhile, galvanized iron wood is still used for roofing and wood for flooring by 80% and 77% of the PAPs, respectively (Figure 4.2.3).



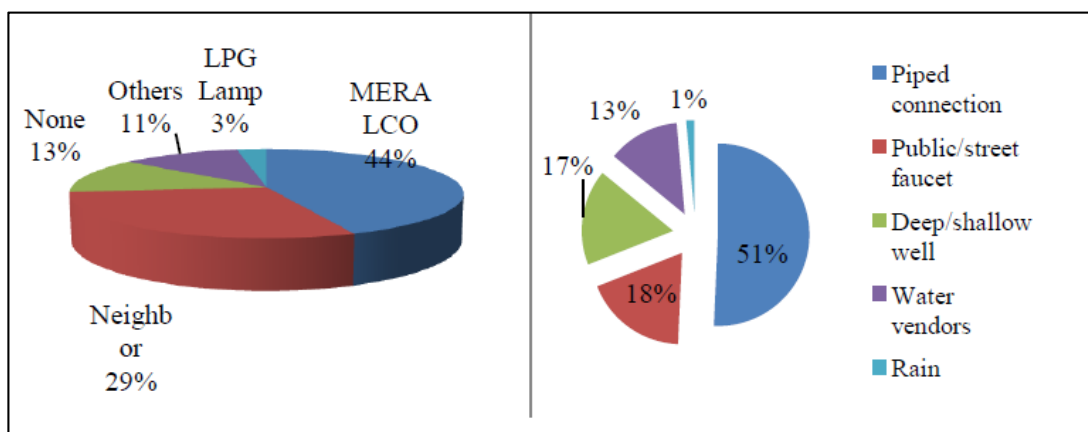
**Figure 4.2.3 Roofing and flooring materials**

### 4.2.4 Access to Basic Utilities

#### (1) Power and Water Supply

Living in an informal settlement has not constrained households from obtaining formal connections to power and water service providers (Figure 4.2.4). Interestingly, 44% of households manage to connect with MERALCO whereas another 30% maintain “illegal” connections with their neighbors. More than 10 households (13%) still have no electricity and some (3%) are dependent on portable sources like LPG.

Meanwhile, half of the ISFs already have piped water connections. About 10% purchase water from vendors while the rest rely on public faucets, shallow wells and even rainwater.

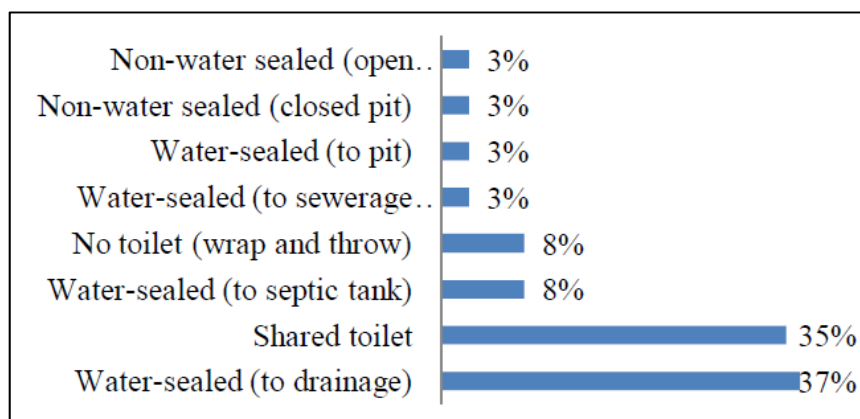


**Figure 4.2.4 Access to power and water supply**

## (2) Sanitation

Sanitation conditions in the study area are less than ideal. Although half of the households use water-sealed facilities, only a tenth of these are connected to septic tanks and the rest to open drains and sewerage (Figure 4.2.5). The lack of facilities is further evidenced by a third of households sharing toilets while the remainder dispose their waste into pits or out into the open.

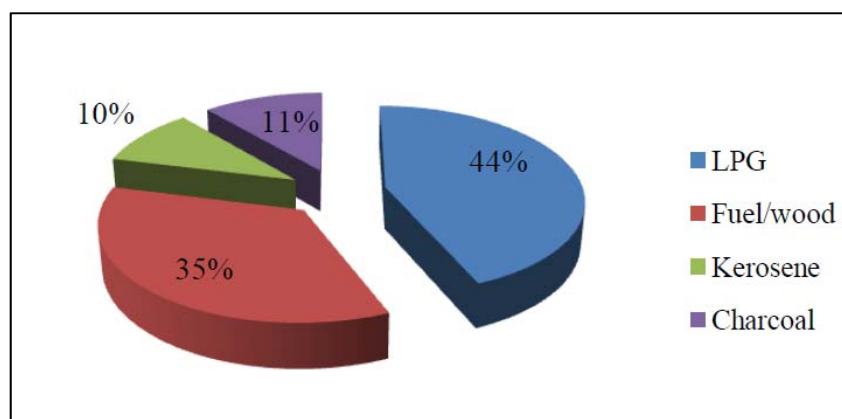
In assessing relocation options for the PAPs, it would be necessary to ensure that minimum entitlements to basic services are delivered, in particular power, water supply and sanitation.



**Figure 4.2.5 Toilet facilities**

## (3) Fuel

For cooking, 44% of PAPs use LPG although majority still use traditional materials like wood, kerosene and charcoal for fuel (Figure 4.2.6).



**Figure 4.2.6 Fuel Used by PAPs**

### 4.3 Economic Conditions

#### 4.3.1 Employment and Income

##### (1) Livelihood and Income Sources of HH Heads and Spouses

Of the HH heads, 63 are working; primarily in construction (49%), private employment (19%), sales and vending (8%), and driving occupations (6%). One of every 10 HH heads take on additional work through buy-and-sell and moonlighting in other construction jobs as well as other employers. By gender, male-headed households are more into male-dominated jobs led by construction while female-headed households spread out to sales, laundry and housekeeping jobs. About 50% of the spouses are gainfully working, too. Female working spouses engage in blue-collar private-sector jobs (sales-ladies) and in food vending.

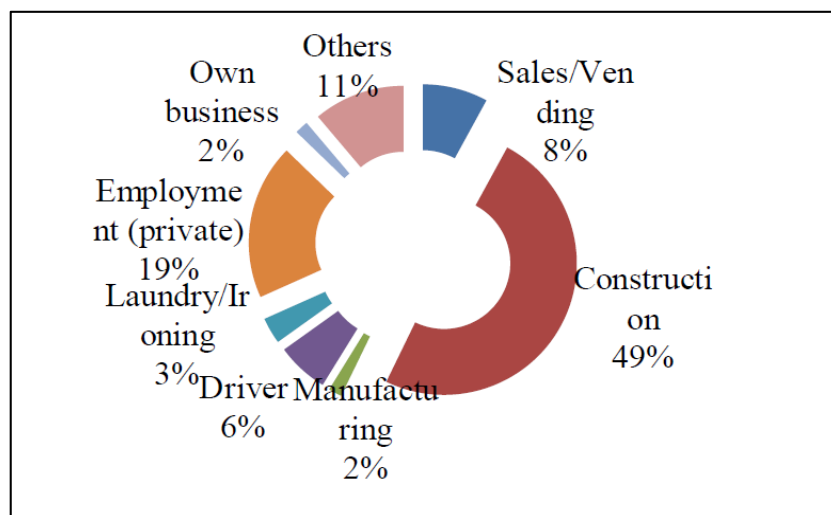


Figure 4.3.1 Occupation of HH Heads

##### (2) Household Income

Table 4.3.1 shows the distribution of income among PAPs. The average monthly income of the affected population is Php 10,117.00/month. This figure is higher by 15% compared to the 2014 national monthly poverty threshold income level of Php 8,778.00 (USD 199).<sup>4</sup> Initially this means that the study population may be able to meet monthly basic requirements for food and non-food items to stay out of poverty, although the analysis of expenditure data would qualify this further.

Households headed by contractual workers have higher incomes (Php 9,359/month) compared to those led by permanent workers (Php 10,832/month). This condition appears explained by the concentration of contractual workers in construction jobs (79%) that pay higher wages and additional allowances (overtime, Sunday work) and are not subject to high taxes. Permanent workers, meanwhile, may be working with private employers (30%) but receive lower monthly pay because of tax deductions.

Table 4.3.1 Household Income Distribution

Monthly Income (Php)	n	%
Less than 3,000	7	11
3,001 to 10,000	28	43
10,001 to 15,000	21	33
15,001 to 20,000	5	8
20,001 to 25,000	1	2
Above 30,000	2	3
Total	64	100

<sup>4</sup> Philippine Statistics Authority (formerly NSCB). 2014. *Table 1a. Average Monthly Thresholds for a Family of Five: 2013 and 2014*. Breakdown per province and highly urbanized city not available. US equivalent based on USD1=Php 44. <http://www.nscb.gov.ph/poverty/default.asp>.

Generally, males earn higher incomes than females (Table 4.3.2). Male-headed households registered average monthly incomes of Php 10,413.00/month, which is higher by 22% compared to their female-headed counterparts. Nearly 40% of males earn Php 10,000/month and higher compared to 31.5% of their counterpart.

**Table 4.3.2 Household Income**

Income Level	Male		Female		Total	
	n	%	n	%	n	%
less than 3,000	8	12.1	8	22.2	16	15.7
3,001 to 6,000	13	19.7	13	36.1	26	25.5
6,001 to 10,000	17	25.8	9	25.0	26	25.5
10,001 to 15,000	20	30.3	4	11.1	24	23.5
15,001 to 20,000	4	6.1	2	5.6	6	5.9
20,001 to 30,000	1	1.5	0	0.0	1	1.0
30,001 to 40,000	3	4.5	0	0.0	3	2.9
<b>Total</b>	<b>66</b>	<b>100.0</b>	<b>36</b>	<b>100.0</b>	<b>102</b>	<b>100.0</b>

**(3) Primary Sources of Income**

The pooling of labor and income is a common practice. As many as 40% of the household members contribute a stable primary income source. In all, 53% of the 71 HH have more than one income earner. Of the 159 other household members consisting of gainfully employed children, sibling or other relatives, 62% are working or running their own business. More than 55% of the male members work in construction projects, while 58% of females are either government or private employees.

**Table 4.3.3 Primary Sources of Income of HH Members**

Source of Income	Male		Female		Total	
	n	%	n	%	n	%
Sales/Vending	2	3.0	4	10.5	6	5.7
Construction	37	55.2	3	7.9	40	38.1
Manufacturing	0	0.0	2	5.3	2	1.9
Driver	5	7.5	1	2.6	6	5.7
Laundry/Ironing	1	1.5	4	10.5	5	4.8
Employment (gov't)	13	19.4	12	31.6	25	23.8
Employment (private)	4	6.0	10	26.3	14	13.3
Own business	0	0.0	1	2.6	1	1.0
Others	5	7.5	1	2.6	6	5.7
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>38</b>	<b>100.0</b>	<b>105</b>	<b>100.0</b>

**(4) Secondary Income Sources**

Almost half of the HH members contribute to family income through secondary sources, notably from sales/vending and moonlighting in private or government employ.

**Table 4.3.4 Secondary Sources of Income of HH Members**

Source of Income	Male		Female		Total	
	n	%	n	%	n	%
Sales/Vending	4	17.4	3	27.3	7	20.6
Construction	2	8.7	0	0.0	2	5.9
Laundry/Ironing	0	0.0	1	9.1	1	2.9
Employment (govt)	3	13.0	2	18.2	5	14.7
Employment (private)	2	8.7	1	9.1	3	8.8
None	12	52.2	4	36.4	16	47.1
<b>Total</b>	<b>23</b>	<b>100.0</b>	<b>11</b>	<b>100.0</b>	<b>34</b>	<b>100.0</b>

### (5) Security of Employment

Despite enjoying multiple income sources and the high productivity within the household, PAPs are still vulnerable for lack of job security. Close to 60% of HH heads and 67% of HH members work on a contractual basis. The same is observed among working spouses.

**Table 4.3.5 Security of Employment**

Employment Security	Male		Female		Total	
	n	%	n	%	n	%
Permanent	21	33.3	24	68.6	45	45.9
Contractual	42	66.7	11	31.4	53	54.1
<b>Total</b>	<b>63</b>	<b>100.0</b>	<b>35</b>	<b>100.0</b>	<b>98</b>	<b>100.0</b>

### 4.3.2 Household Expenditure

#### (1) Expenditure Level

The distribution shows that 7 of 10 (73%) households incur living costs equal to or lower than Php15000 per month (Table 4.3.6). The average monthly expense is estimated at Php12, 320, from a low of Php3, 308 to a high of Php28, 930.

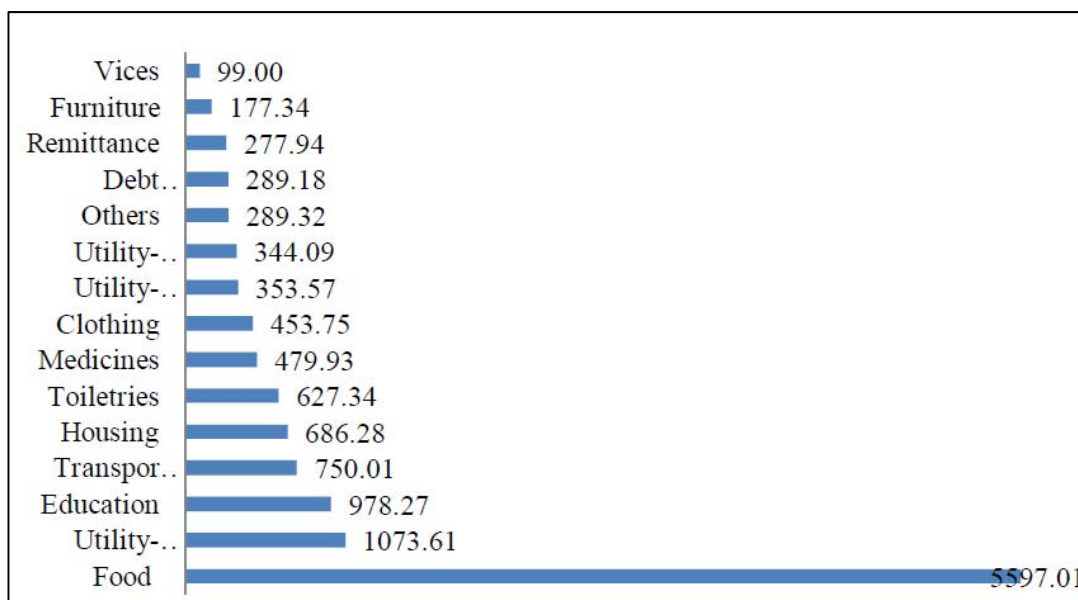
On average, monthly expenses are 20% higher than reported monthly incomes. In simple terms, the PAHs are spending 20% more than what they earn. This is the trend whether the household is large or small, male- or female-headed or led by permanent or contractual workers. These data could indicate that PAPs are always in debt, or depend on debt for monthly shortfalls.

**Table 4.3.6 Distribution of HH Expenses**

Monthly Expense (Php)	n	%
3,001 to 10,000	29	41
10,001 to 15,000	23	32
15,001 to 20,000	11	16
20,001 to 25,000	5	7
25,001 to 30,000	3	4
<b>Total</b>	<b>71</b>	<b>100</b>

#### (2) Spending Pattern among PAPs

The spending hierarchy among PAPs is shown in Figure 4.3.2. The average amount spent on a monthly basis is estimated at Php12, 476, for 15 various types of goods and services. The top five expenses are on food (45%), water and electricity (9%), education (8%), transportation (6%), and housing (6%).



**Figure 4.3.2 Hierarchy of Monthly Expenditures**

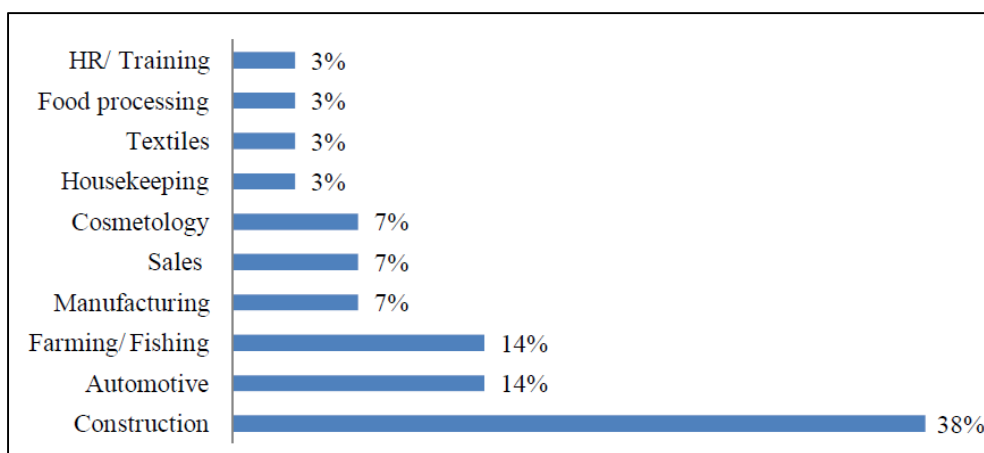
### (3) Employable Skills of PAPs

Table 4.3.7 is an inventory of skills set of the HH heads. There are 26 types identified, though these tend to be dominated by male-oriented skills; namely, construction (58%), driving/automotive mechanics (15%) and manufacturing (8%). The presence of other skills like food processing, cosmetology, and dressmaking/ tailoring shows the range that can be tapped towards enterprise development, whether for individuals or groups.

The detailed inventory of the skills set of other employed and employable PAPs is in Figure 4.3.3 according to trade or sector.

**Table 4.3.7 Inventory of Skills of Household Heads**

Type of Skill	n	%
Carpentry, masonry, scaffolding, welding, water proofing, pre-cast iron fabrication, machine operation, foreman and construction-related skills	35	58.33
Cooking	4	6.7
Driving, Auto-mechanic	9	15.0
Manufacturing	3	5.0
Haircutting	1	1.7
Laundry	1	1.7
Sales/Selling	1	1.7
Trainer Skills	1	1.7
Livestock, Poultry Raising	3	5.0
Dressmaking/ Tailoring	2	3.3
<b>Total</b>	<b>60</b>	<b>100.0</b>



**Figure 4.3.3 Skills Sets of PAPs**

### (4) Membership in Financial Institutions

Regardless of job tenure security issues, there appears to be adequate access to government and private financing. About 86% of working HH heads is a member of the Social Security System (SSS), Government Service Insurance System (GSIS) or Home Development Mutual Fund (HDMF or Pag-IBIG Fund). (Table 4.3.8).

**Table 4.3.8 Membership in Financial Institutions**

Type of Membership	n	%
None	10	14
SSS	20	28
PAG-IBIG Fund	1	1
GSIS & PAG-IBIG	4	6
SSS & PAG-IBIG	36	51
<b>Total</b>	<b>226</b>	<b>100</b>



## 4.4 Land Tenure

### 4.4.1 Migration History

About 87% of those surveyed are migrant-households, having come from provinces outside of Metro Manila the within the past years. As a whole, the PAHs may be considered of mixed ethnicity basing on the origins of its migrant-households (Figure 4.4.1). A considerable 80% came from provinces in the Visayas and Mindanao.

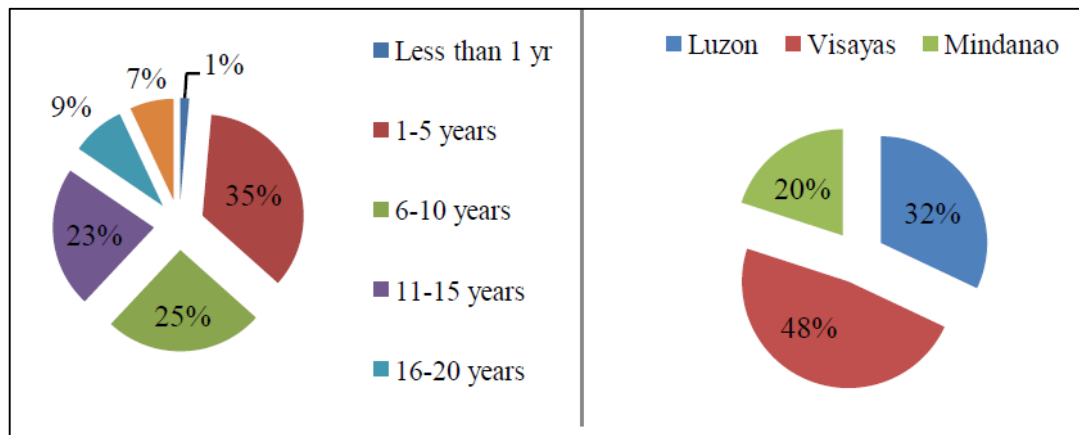


Figure 4.4.1 Migration History and Place of Origin

### 4.4.2 Tenure of Occupancy

All ISFs surveyed are informal settlers occupying public easements or supposedly no-habitation zones along the Marikina River, implying the absence of formal title to land. Housing tenure, meanwhile, is defined as the mode of occupation of a housing unit, in the absence of tenurial status over the land. Of the 71 PAPs surveyed, 80% households own their house structures, whether as independent owners (56%) or „co-owners“ (24%). The rest are renters and rent-free occupants. (Figure 4.4.2)

Programs intending to provide better housing should likewise consider the mix of self-help with arrangements for usufruct, lease or amortized forms of land ownership.

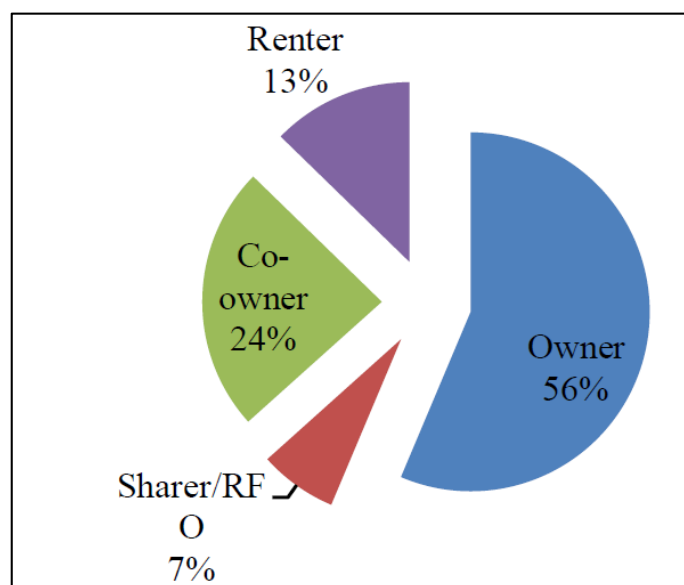


Figure 4.4.2 Housing Tenure

Table 4.4.1 shows the length of residence by tenure of occupancy of house structures. It appears that owners are long-time residents, having lived in the area for more than 20 years. House-building activities, however, appear to have picked up by the year 2000 onwards. Renters, meanwhile, entered only recently, more in the past five years, suggesting that since 2010, house-owners may have begun generating rental income from their dwellings. Renters in the area, therefore, are not long-time settlers but still bear economic interests in moving into the settlement.

**Table 4.4.1 Length of Residence by Housing Tenure**

Length of Residence	Owner (40)	Sharer/ RFO (5)	Co-Owner (17)	Renter	Total
				(9)	(71)
Less than 1 year	0	0	0	11	1
1-5 years	20	60	41	78	35
6-10 years	25	20	41	0	25
11-15 years	37	0	0	11	23
16-20	8	20	12	0	9
> 20 years	10	0	6	0	16

#### 4.5 Resettlement Preferences

Most PAPs (68% of male HH heads compared to 50% of female-headed HH) prefer to be relocated to NHA sites. Fewer respondents-- 18% of males and half the females-- choose in-city resettlement. Interestingly, financial assistance is the least preferred option.

**Table 4.5.1 Resettlement Preference**

Preference	Male		Female		Total
	n	%	n	%	
NHA Sites/ ready housing units	39	68.42	7	50.0	46
In-city	10	17.54	7	50.0	17
Off-city	3	5.26	0	0.0	3
Financial Assistance	1	1.75	0	0.0	1
Balik-Probinsya	4	7.02	0	0.0	4
<b>Total</b>	57		14		71

#### 4.6 Perception of the Project

Probably due to their frequent and often traumatic experience with flooding, PAPs have a high awareness and good perception about the project. Nearly 47% perceive the project to secure the community from flooding, while 27% perceive that the project will bring social benefits in terms of better housing, health and education.

**Table 4.6.1 Project Perception**

Perception	Male	
	n	%
1 Economic (livelihood/employment)	2	2.8
2 Social (Housing, Health and Education)	19	26.8
3 Safety (Out of danger from flooding, etc.)	33	46.5
4 Others	6	8.5
5 Don't Know	1	1.4
No answer	10	14.1
<b>Total</b>	<b>71</b>	<b>100.0</b>

## **CHAPTER 5 PUBLIC INFORMATION, CONSULTATION AND PARTICIPATION**

### **5.1 Local Government Unit (LGU) and Public Consultations**

#### **5.1.1 LGU Consultation**

The preparation of the PMRCIP Phase IV engineering plans and project alignment, including the formulation of this RAP have been achieved through close collaboration and consultation with the LGUs of Marikina City, Pasig City and Quezon City. Moreover, each LGU's development plans, land use plans and past resettlement programs and experiences were reviewed, along with ocular inspections of resettlement sites.

A series of joint ocular surveys with representatives of the three LGUs indicated the initial degree of impact in each areas. Afterwards, rigorous consultation dialogues and meetings with the Local Chief Executives (LCEs) and other local officials in all three LGUs was undertaken where inputs from the LGUs were considered to minimize the impact areas.

In particular, the LCE of Marikina City emphasized that they will not allow any dislocation of residents along the Marikina River especially in Brgy. Malanday since the residents there are resettled families and are beneficiaries of the Community Mortgage Program (CMP) of the SHFC.

For Quezon City, it was agreed that the LGU will resettle the ISFs of Brgy. Bagumbayan following the Mandamus of the Supreme Court.

On the other hand, the LCE of Pasig City confirmed that the LGU will take full responsibility for relocating and resettling the affected ISFs in Brgy. Santolan considering that these PAPs are the same people who will be affected by their own flood control and by-pass road project. Therefore, the stakeholder meeting for PMRCIP Phase IV was once postponed avoiding misinformation on the floodwall construction being undertaken by Pasig City.

#### **5.1.2 Public Consultation**

##### **(1) Stakeholder Meeting in Pasig City**

Although DPWH has agreed to convene the stakeholder meeting for PAPs in Brgys. Santolan and Mangahan after the design to modify the constructed floodwall, a stakeholder meeting for PMRCIP Phase IV with property owners to be affected and subject to land acquisition/compensation in the same barangays was held on August 31, 2018.

Representatives of 8 business-establishments attended to the stakeholder meeting with the officials of DPWH-UPMO-FCMC and Pasig City LGU. After presentations of PMRCIP Phase IV and Legal Background/Current Practice for Land Acquisition/Compensation, the meeting has proceeded for open discussion in which the representatives conveyed their queries and suggestions, and DPWH made clarifications and answers to them. (For details of the stakeholder meeting, refer to ANNEX H)

Summarizing the discussion, main points which were clarified and confirmed are as follows:

- (a) Plan and design of PMRCIP Phase IV will be finalized in the detailed engineering design which is scheduled in 2019-2020.
- (b) During the detailed engineering design, the consultation meetings with the stakeholders will be convened to minimize social impacts such as land acquisition and compensation for smooth implementation of the Project.
- (c) On the other hand, it is assured that the business/income loss to be caused by the land acquisition and relocation of structures will be compensated.
- (d) The construction of floodwall by Pasig City LGU will be well adjusted with PMRCIP Phase IV through a close coordination with DPWH.
- (e) Any progress of the project development and related information shall be well disseminated to the stakeholders.

## **(2) Public Consultation Meeting in Bagumbayan, Quezon City**

The public consultation meeting was convened on 08 October 2018 for the 71 ISFs to be affected by the proposed MCGS, where about 51 persons registered in the public consultation meeting. Prior to the public consultation meeting, a pre-public consultation meeting was held among the government offices such as DPWH, NHA and Quezon City – Housing and Community Development and Resettlement Department (HCDRD) to a brief planning review at the same venue. Discussed were to provide information on the conditions of newly certified resettlement site in Brgy. Pinugay, Baras, Rizal Province and explain to the ISFs in terms of available entitlements and assistances.

It was agreed that the LGU will convene its LIAC to facilitate and implement the resettlement smoothly. The representatives of the QC-HCDRD agree and will send out invitations for the LIAC meeting to all LIAC members i.e. NHA, PCUP, DILG, MMDA, PNP, DPWH, etc.

After a roll-call based on the master list of PAFs, the public consultation was commenced. Following the presentation of the PMRCIP Phase IV including the NHA's resettlement site development project, St. Joseph Residences 1 in Brgy. Pinugay, Baras, Rizal Province, the following concerns and queries were raised by the ISFs presented during the meeting:

1. Job affected at the project site;It
2. Schooling of the \children who will be affected once the relocation starts;
3. Road conditions at relocation site;
4. Availability/condition of electricity and water supply;
5. ISFs not included in the 71 families listed on the RAP;
6. Size of the housing unit at the relocation site;
7. Livelihood in the relocation site; and
8. If there is financial assistance to be given to the affected families.

These queries ;and concerns of ISFs were answered and clearly explained by each of the concerned agencies and no resistance/objection was encountered from the said ISFs as regards their transfer to the proposed relocation site of the project. (Please see ANNEX I: Proceeding of the Public Consultation Meeting in Bagumbayan for details)

## **5.2 Inter-agency Coordination**

The DPWH-Consultant conducted information campaigns among the communities that will be affected by the proposed construction works. The campaigns were coordinated with relevant national government agencies and local government units first then barangay officials and their constituents. These campaigns were done through oral and video presentations meant to educate the people on the importance of the flood control project by bringing to the people's awareness the havocs wrought in Metro Manila by Typhoon Ondoy and other recent flood events.

Updates were given on the completed river improvement works under Phase I and II, the progress of on-going construction under Phase III, the scope of works in the next stage (PMRCIP Phase IV) and the benefits in terms of protection of lives and properties against flood hazards. The campaign emphasized the role and participation of the public in the river bank management and maintenance after project completion. It also explained the potential adverse impacts including the necessity of clearing the project areas and to maintain the so-called danger areas such as the waterways and "esteros" against illegal encroachments prior to and after construction works.

The first wave of inter-agency coordination consisted of a series of reiterative dialogues between the Pasig City LGU and the DPWH representative. As a result, it was agreed that the project design will follow and reinforce the design and alignment of Pasig City's on-going flood control project. The Pasig City LGU, through the Resettlement Housing Unit (RHU), is committed in independently clearing the danger areas of Brgys. Santolan and Manggahan-priority waterways within its jurisdiction,

The second wave of ICP activities was undertaken with the LGUs of Quezon City and Marikina City. These LGUs will work closely with the DPWH to resettle the PAPs, as follows:

1. Quezon City LIAC in coordination with the DILG, NHA, MMDA and DPWH will resettle the ISFs in Brgy. Bagumbayan, Quezon City. The DPWH-Consultant conducted social preparation activities and was followed immediately by the socio-economic survey among the PAPs. The partial results have been furnished the NHA. The processed data will also be officially turned over when ready.
2. The agenda, areas covered, attendance, presentation materials and minutes of the proceedings of these ICP activities are found in ANNEX C.

## **CHAPTER 6 COMPENSATION AND ENTITLEMENT**

### **6.1 Category of Project-Affected Persons (PAPs)**

Persons are considered as project-affected if, at the time of census, they are verified to be occupying, living/residing, doing business and/or utilizing the land, resources and improvements that will be acquired or removed due to the Project, irrespective of ownership status.

PAPs who are categorized as ISFs were reckoned by the household (HH) as a unit of representation. In other words, members who share a common kitchen were considered as one household, regardless of the number of families or extended families living together under one roof.

PAPs are categorized based on their tenurial status at the time of census cut-off date, as follows:

1. Land Owners - PAPs who are land title holders or who have formal legal rights to land including customary and traditional land rights recognized under law
2. Structure Owners on Private Lots – PAPs who own the structure built on own lot or on another person's private lot with the consent of the owner
3. Business Owners – PAPs who operate businesses in the project area, regardless of scale of business and ownership of land and/or structure on which they operate said businesses
4. Informal Settlers - PAPs who do not have formal legal rights to land they are occupying. These include:
  - a. Structure Owners - PAPs who own the structure built on public or private lot without the consent of the owner
  - b. Renters – occupying the land and/or structures for a fee
  - c. Rent-free occupants (RFO) – includes co-owners, sharers or caretakers of land and/or structure

As explained in Chapter 3, the PMRCIP Phase IV project will necessitate taking of public and private lands and will cause the demolition in part or in full of structures and improvements on these lands such as industrial buildings, factories, warehouses, commercial establishments, residential houses, and fence walls.

The areas affected by the project are within highly urbanized cities; hence, no agricultural lands will be acquired. Similarly, there are no known indigenous community or indigenous people residing in the area.

### **6.2 Severity of Impact**

PAPs are further categorized based on the severity of project impact on their assets, thus:

1. Severely Affected - PAPs who stand to lose 20% or more of their assets, or even less than 20%, if the remaining land/structure is no longer viable for continued use as intended
2. Marginally Affected - PAPs who stand to lose less than 20% of their assets, or even more than 20%, if the remaining land/structure is still viable for continued use as intended

### **6.3 Cut-Off Date**

The first day of the census tagging and interview survey, i.e., **April 28, 2015**, was considered as the cut-off date by which to reckon eligibility of PAPs. Any person who is not included in the master list of PAPs identified during this survey will not be eligible for compensation and resettlement.

The establishment of the eligibility cut-off date aims to prevent the influx of ineligible non-residents who might take advantage of the perceived benefits of resettlement entitlements under the Project.

### **6.4 Entitlement**

#### **6.4.1 Eligibility for Entitlement**

Table 6.4.1 summarizes the eligibility by category of PAPs. The eligibility criteria are defined in DPWH LARRIPP in case of PAPs occupying private lands and improvements thereon. In case of ISFs occupying priority waterways, the eligibility criteria are in accordance with governing provisions of

UDHA and the more recent implementing guidelines governing the Php 50 Billion ISF funds. These have generally been agreed by consensus among the inter-agency members:

1. Land owners whose land parcels are to be affected by the project will be justly compensated based on fair market value for land, in accordance with ROW acquisition procedures defined by RA 10752 and the DPWH-IROW.
2. Structure owners will be justly compensated for affected structures based on replacement cost for structures, in accordance with ROW acquisition procedures adopted by the DPWH-IROW.
3. Lessees of private lands and/or structures shall be the responsibility of the land/structure owner.
4. Businesses shall be compensated for the opportunity loss due to project implementation.
5. Lessees and rent-free occupants (co-owners, sharers, caretakers) of structures on privately owned lots shall be the sole responsibility of the lot owner. DPWH will neither compensate them for their structure nor resettle them.
6. Severely affected informal settlers (ISFs) except rent-free occupants who are occupying their own structures along the waterways and easements of waterways (public lands) shall be eligible for resettlement and resettlement assistance by the concerned LGU.
7. ISFs who are co-owners, caretakers or sharers of structures with other ISFs shall be treated as one HH with the ISF structure owner and are not eligible for separate resettlement nor assistance compensation.
8. Informal settlers who are absentee structure owners shall neither be compensated nor resettled.
9. Those who moved in, moved out and sold or bought the structures of PAFs after the cut-off date shall neither be compensated nor resettled.
10. Pursuant to UDHA, the following persons are not eligible:
  - those who have availed of any government resettlement program in the past;
  - professional squatters and/or squatting syndicates;
  - those who, taking advantage of the perceived benefits of resettlement, occupied the project site after the census date.

As mentioned in the foregoing, 1<sup>st</sup> screening: potential eligible ISFs are only the listed (in Master List) and interviewed in the census/tagging and socio-economic survey. All ISFs including returnees in the above (the listed and interviewed) is finally evaluated for the resettlement and other entitlements, where the returnee is usually disqualified in the evaluation.

However, based on an appeal for re-evaluation to NHA, the returnee could be given a chance to be qualified by NHA if there is a valid reason for returning back to their illegal settlement (e.g. difficulties to cope up with the livelihood in the provided relocation site) unless the ISF is determined as “Professional ISF” as defined by RA. 7279 (UDHA).

**Table 6.4.1 Checklist of Entitlement Eligibility**

Land	Tenurial Status	Land Title	Structure ownership	PAP Category	Eligibility	
					Compensation	Resettlement
Private Land	Land Owner (title holder)	✓	✓	LO	✓	X
	Structure Owner	X	✓	SO	✓	X
	Renter (Land, Structure)	X	X	Lessee	X	X
	Sharer/Caretaker (Structure)	X	X	RFO	X	X
	Business Owners	✓ X	✓ X	BO	✓	X
Public Land	Structure owner	X	✓	ISF 1 <sup>1/</sup>	X	✓
	Structure co-owner	X	✓	ISF 2 <sup>2/</sup>	X	X
	Sharer/caretaker of structure	X	X	ISF 2 <sup>2/</sup>	X	X
	Renter of structure	X	X	ISF 3 <sup>1/</sup>	X	✓

Note: ✓: Yes X: No ISF: Informal Settler Family LO: Land Owner SO: Structure Owner BO: Business Owner RFO: Rent-free Occupant  
 1<sup>1/</sup>: Severely Affected 2<sup>2/</sup>: Treated as one HH with Land/Structure Owner 3<sup>1/</sup>: May avail of resettlement, subject to availability of slots



#### **6.4.2 Matrix of Entitlement**

Further refinement of the policies on compensation and other forms of resettlement assistance shall be agreed upon amongst the LGU-LIAC, NHA, and UPAO, among other partner-agencies. Specifically, consensus must be reached as to whether or not renters and rent-free occupants (sharers/caretakers) among the ISFs shall be qualified for resettlement and assistance. This means they will enjoy the same priority as the structure owners. This is a departure from the usual practice, wherein the priority for resettlement is given to the structure owners first; renters and sharers next; the rest can be resettled only when vacant slots are available. Even so, this will depend on the availability of extra slots in the resettlement site.

**Table 6.4.2** summarizes the Matrix of Entitlement for eligible PAPs.

**Table 6.4.2 Entitlement Matrix for the PMRCIP Phase IV PAPs**

TYPE OF ASSET	APPLICATION (Severity of Impact)	ENTITLED PAP	ENTITLEMENT	
			COMPENSATION	OTHER/SPECIAL ASSISTANCE
LAND (classified as residential, commercial, industrial or institutional)	More than 20% of total landholding lost or where less than 20% but the remaining landholding becomes economically unviable	Those with TCT/OCT/Tax Dec	Cash payment for entire landholding	Income rehabilitation assistance for affected businesses
		Those without TCT/OCT but with Tax Declaration	Cash payment for entire landholding, subject to further verification of proof of land ownership	
	Less than 20% of total landholding lost but land remains viable for use	Those with TCT/OCT/Tax Declaration	Cash payment for affected landholding only	
		Those without TCT/OCT but with Tax Declaration	Cash payment for affected landholding only, subject to further verification of proof of land ownership	
STRUCTURE	More than 20% of total structure lost or where less than 20% but the remaining structure becomes unusable as intended	Structure Owner with TCT/OCT/TD	Cash compensation for entire structure	Income Rehabilitation Assistance for affected businesses
		Structure Owner without TCT/OCT but with TD or other acceptable proof of ownership	Cash compensation for entire structure, subject to further verification of proof of land ownership	
	Less than 20% of total landholding lost but land remains viable for use	Structure Owner with TCT/OCT/TD	Cash compensation for the affected structure only	
		Structure Owner without TCT/OCT but with TD or other acceptable proof of ownership	Cash compensation for the affected structure only, subject to further verification of land ownership	
	Not Applicable	ISFs and other owners of structures without acceptable proof of land ownership And those recognized as eligible “returnees”.	No compensation needed	Relocation/resettlement, Transportation Allowance or Assistance, Livelihood Restoration Information settlers in urban centers who opt to go back to their place of origin in the province or be shifted to government relocation sites will be provided free transportation.

TYPE OF ASSET	APPLICATION (Severity of Impact)	ENTITLED PAP	ENTITLEMENT	
			COMPENSATION	OTHER/SPECIAL ASSISTANCE
BUSINESS OPPORTUNITY	Loss of business opportunities due to displacement of land and structure	Those business opportunities and/or income	Acquire the structures but allow the owner of the structure and business to relocate such structure and facilities in the remaining land and/or to use the land for a defined period to give the owner time to transfer, subject to agreement on a case to case basis, in order to ensure that their business opportunities will not be adversely affected.	Income rehabilitation assistance
OTHER IMPROVEMENTS		Owner of community facilities Owner of trees	Cash compensation at replacement cost for the affected portion of community structures	
CROPS (Non-perennial)	100% of planted crops along the river bank	ISF/Backyard gardeners	No compensation needed	Sufficient time to harvest crops

### **6.5 Principle of Replacement Cost**

Replacement cost is the amount calculated before the displacement, which is needed to replace an affected asset without depreciation and without deduction for taxes and/or costs of transaction. All compensation for land and non-land assets owned by PAPs who meet the cut-off-date shall be based on the principle of replacement cost, as follows:

1. Existing applicable regulations, appraisal methods and current market price survey and other acceptable methods of analysis employed by the DPWH, DENR, DA, or assessors of LGUs and licensed private appraisers will be used to calculate fair market value of lands.
2. Replacement cost of structures will be based on the actual current market prices of affected materials plus labor and mark-up costs. Labor cost, usually 25 % of the material cost, is assumed to have been added to the direct construction cost. To this, a 20% mark-up cost representing the transportation and applicable taxes is also added to the total estimated direct cost to come up with the total estimated replacement cost.

### **6.6 Assistance to Vulnerable Groups**

Special attention shall be paid to prevent the impoverishment of the poorest of the poor, female-headed households, orphans, senior citizens, persons with disabilities, and other extremely vulnerable groups.

On top of the compensation due them under the Project, these PAPs shall be entitled to the following:

1. Transportation assistance such as mini-buses will be used for free transportation of families that include children, women and senior people, instead of trucks.
2. For the families with persons who need special physical or medical care, respective LGUs shall provide ambulatory care through nurses or social workers to help them before, during and after relocation.
3. DPWH through ESSD in coordination with Quezon City LGU/LIAC and concerned agencies will monitor the change of living standard of the PAPs before and after the resettlement. When the living standards of PAPs are found to have worsened, or that their present means of livelihood become unviable, DPWH and partner agencies will provide appropriate and targeted livelihood development assistance to adequately rehabilitate their economic base.

## **CHAPTER 7 MENU OF RESETTLEMENT OPTIONS**

### **7.1 Resettlement Options Available to PAPs**

In general, there are five resettlement options available to PAPs, namely: (1) NHA sites with ready housing units; (2) LGU In-city resettlement site; (3) LGU Off-city resettlement site; (4) Balik-Probinsya; and (5) Financial Assistance. The resettlement options discussed in this chapter apply to PAPs affected by PMRCIP Phase IV, who also qualify as ISFs occupying danger areas along priority waterways that are subject to clearing in compliance with the SC mandamus.

Based on the results of SES, of the 71 ISFs in Bagumbayan, 49 HH (69%) preferred to be resettled in ready NHA resettlements sites while 14 HH (19.7%) opt for in-city resettlement. Only 5.6% and 4.2%, respectively chose to go home to their province of origin or transfer to off-city relocation. The least preferred option is financial assistance (1.5%).

#### **7.1.1 Resettlement Plans by Respective LGUs**

Pursuant to the UDHA, the LGUs in coordination with NHA, are tasked with the resettlement of persons living in danger areas (esteros, railroad tracks, garbage dump, riverbanks shorelines and waterways). They are to provide relocation or resettlement sites with basic services and facilities and access to employment opportunities sufficient to meet the basic needs of the affected families. To this end, some LGUs in Metro Manila such as Pasig City and Marikina City even succeeded in passing local ordinance declaring as danger areas the easement of waterways that are perennially flooded beyond the 3-m urban limits prescribed by the Water Code (PD. 1067) and clearing these of occupants.

##### **(1) Quezon City**

Quezon City has been resettling ISFs from priority waterways since 2011. It had built several in-city resettlement sites such as Bistekville villages. At present, the only option available for PAPs is off - city resettlement sites prepared by NHA under the Php 50 Billion ISF Fund.

A series of coordination meetings with the LGU, NHA and barangay officials paved the way for the ISFs from Bagumbayan to be included in the next batch of resettlement beneficiaries. The DILG, for its part, has committed to earmark funds from the Php 50 Billion ISF funds for 2015 to secure the resettlement site. The DPWH volunteered to undertake SES to enumerate and profile the ISFs who are also likely to be affected by the proposed construction of the MCGS.

NHA had identified Pandi in Bulacan Province, and Morong, Baras or Tanay in Rizal Province as possible off-city resettlement sites outside Metro Manila. Proximity and accessibility of these areas is seen as an advantage in terms of the distance and cost for travelling for work. These proposed relocation sites are by far the nearest and most accessible resettlement to and from Metro Manila. They also offer considerable advantages in terms of rapid economic growth as seen in the increasing number of business enterprises and commercial malls that have started operating in these areas.

If relocation is done within the last quarter of 2015, there would be not much problem regarding availability of units in these areas. However, NHA has undertook massive relocations on a weekly basis so that the relocation was once deferred to 2016. Further, due to the change of administration of Quezon City LGU in 2016, the coordination with NHA has been suspended by July 2017 when DPWH called the allocation of resettlement housing slots for the PAPs shall be decided by the NHA prior to the start of resettlement activities targeted for the 1<sup>st</sup> Quarter of 2019.

Throughout the successive communication among DPWH, Quezon and NHA, Certification for availability of housing units within St. Joseph Residences 1 located in Barangay Pinugay, Baras Municipality, Rizal Province for ISFs from Barangay Bagumbayan was issued on 17 August 2018 (see Copy of Certification below).

The conditions of resettlement site such as lot area, size of housing unit, basic infrastructures, accessibility, schools, etc. will be provided by NHA. Further, public consultations with the ISFs was convened on 08 October 2018 to inform the said conditions of resettlement site as well as resettlement implementation schedule, while Quezon City will prepare the required budget for resettlement.



Office of the President  
**NATIONAL HOUSING AUTHORITY**

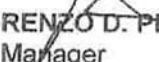


## CERTIFICATION

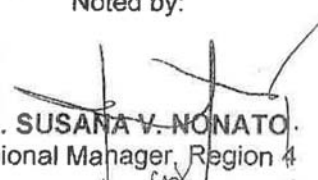
### To Whom It May Concern:

This is to certify that there are **Four Hundred Eighty One (481) available housing units** within **St. Joseph Residences 1** located in **Barangay Pinugay, Baras, Rizal**, to accommodate the ISFs residing along Marikina River from Brgy. Bagumbayan (Upper Stream), Tawiran and Mercury Ave) Quezon City.

This certification is being issued this **17<sup>th</sup> day of August 2018** for whatever legal purpose this may serve.

  
**ENGR. LORENZO D. PINEDA**  
Manager  
BN 2/SV9 & 10 Rizal Housing Projects

Noted by:

  
**AR. SUSANA V. NONATO**  
Regional Manager, Region 4

## **(2) Pasig City**

There are about 242 ISFs in Santolan and Manggahan who are likely to be displaced by PMRCIP IV and the on-going flood control project of the Pasig City government. At any rate, Pasig City has committed to clear the 10-m easement (partially 30 m in Santolan) areas along the riverbanks of Pasig River and along the Lower to Middle Marikina River within its jurisdiction. This is to comply with the Supreme Court Mandamus to clear these and other danger areas of ISFs by the end of December 2015. A Certification to this effect or a Memorandum of Agreement (MOA), as the case may be, will be prepared between Pasig City and DPWH to set the terms of such agreement and/or collaboration, as the case may be.

There are three (3) off-city resettlement sites available for the Pasig City ISFs from Manggahan and Santolan. These sites are all NHA housing projects south of Manila: Southville 7 in Calauan, Laguna; Southville 8 in Rodriguez, Rizal; and, Southville 10, East Shine Residences and Hauzville Homes in Tanay, Rizal (Figure 7.1.1). In fact for the past years since after Typhoon Ondoy, the City has been relocating ISFs from Manggahan Floodway and Santolan to these three ready sites. According to the Pasig City's Housing and Resettlement Unit (PHRU), these three (3) relocation areas in Tanay, Rizal can accommodate about 5,000 ISFs.



**Figure 7.1.1 Photos of Tanay Relocation Sites, Rizal**

Starting from in 2014, as of 2017 a total of 123 ISFs were resettled to East Shine and Southville 10 from Santolan with decent and low-cost house and lot packages. Further, the eligible families are given entitlements and assistance provided by the Pasig City Government under its relocation and resettlement program. (Details are described in Due Diligence Review on the Relocation and Resettlement for Barangay Santolan, Pasig City in **ANNEX F.**)

Pasig City Government will implement the relocation and resettlement program for the remaining ISFs in Santolan in 2018.



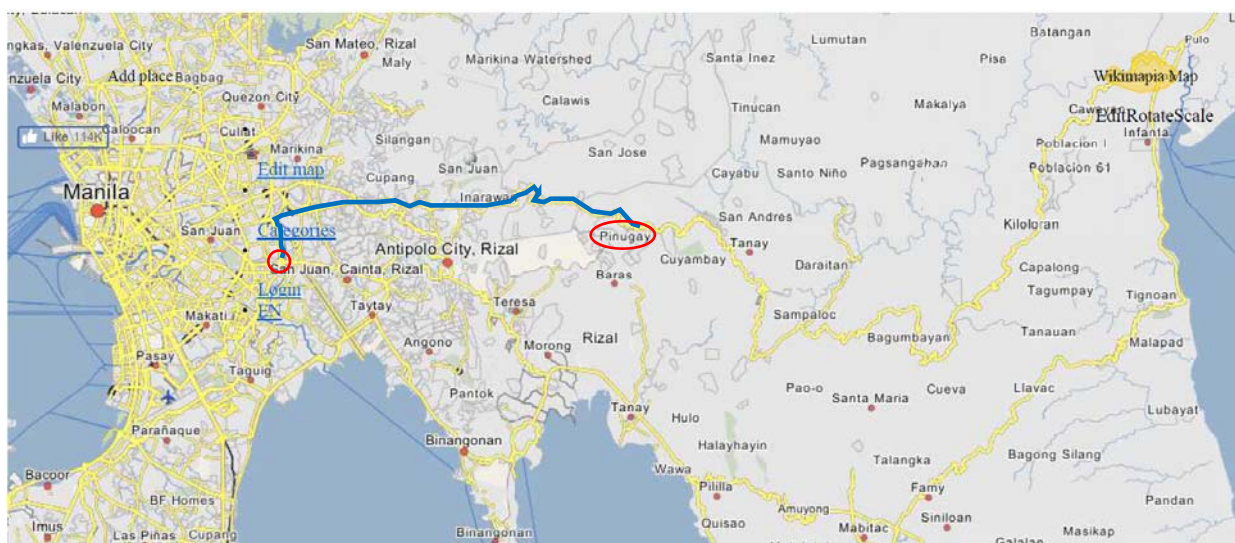
### (3) Balik-Probinsya Program

Next to financial assistance, the Balik-Probinsya Program is an option less preferred by PAPs. The inter-agency members also hesitate to promote this option, unless mechanisms are in place to ensure that sending and receiving LGUs can provide a strong livelihood support to deter relocatees from coming back. Only of the 71 PAPs, or a dismal 5.6% opt to avail of the Balik-Probinsiya Program of the government.

### 7.2 Potential Off-city Resettlement Sites in Rizal Province

As of 2017, the potential relocation sites that were previously proposed by NHA have been all occupied by ISFs from other areas. Eventually, as described in Section 7.1.1, NHA have informed to DPWH that a resettlement site which has available 481 housing units could be available for relocating the ISFs from Bgy. Bagumbayan.

The resettlement site of St. Joseph Residences 1, Baras Municipality in Rizal Province is within 25 km from Bgy. Bagumbayan, Quezon City (Figure 7.2.1). Public transportation facilities regularly ply the major routes to and from these locations and make these accessible to commuters.



**Figure 7.2.1 Location of Resettlement Site**

Table 7.2.1 shows the location of Resettlement site: Brgy. Pinugay, Baras Municipality provided by NHA for Brgy. Bagumbayan ISFs. The table shows that all in all, there are only 481 units that are unoccupied, which could readily accommodate the 71 identified resettling families from Bagumbayan, Quezon City.

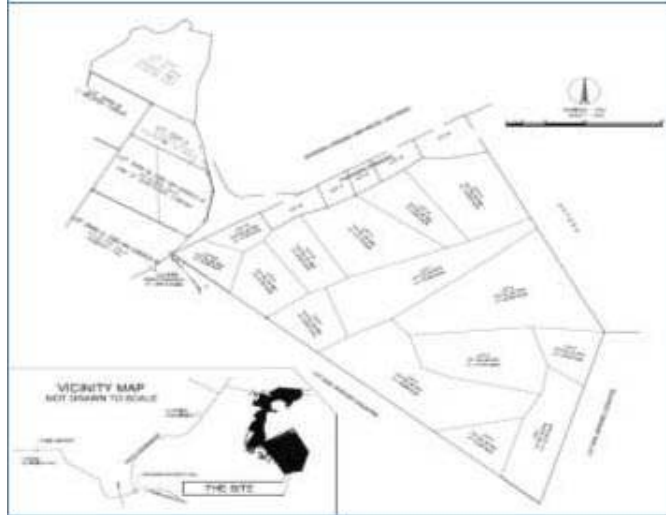
The units have a uniform average lot size of 40sqm and an average floor area of 26 sqm. Each housing unit costs Php 260,000. Development features include underground drainage system, individual septic vault, individual house service connection (by Centennial Water Resource), elevated metering system (by Meralco). Provisions for roads ranges from 3-12 meters depending on classification, i.e. whether pathway, tertiary, secondary or main road.

**Table 7.2.1 NHA Housing Projects in Rizal Province**

Project	Location	Land Area (sq. m)	No. of Units	Available Units	Ave. Lot Size	Ave Floor Area	Cost of Lot	Cost of House	Total Cost per unit
St Therese Housing Project Phase I	Brgy Dalig, Teresa	25,535	296	58	40	22	115,000	125,000	240,000
St Martha Housing Project Phase II	Brgy. Maybancal, Morong	86,517	804	804	40	22	115,000	125,000	240,000
St Martha Housing Project Phase III	Brgy. Maybancal, Morong	242,880	2,000	2,000	40	22	115,000	125,000	240,000
St. Joseph Residences 1	Brgy. Pinugay, Baras	61,100	1,500	481	40	26	125,000	135,000	260,000

### **7.2.1 St. Joseph Residences 1**

Figure 7.2.2 shows the site development plan of St. Joseph Residences 1 Project. Located in Brgy. Pinugay, Baras, Rizal, the resettlement site is laid out on a 6.1-hectare property. The terrain is generally flat to gently rolling. The Project was able to generate 1,500 units with 1,019 units occupied. Hence, only 481 units are available to-date for immediate occupancy. If all 71 ISFs from Bagumbayan decide to relocate, they can be fully accommodated in this relocation site.



**Figure 7.2.2 Site development plan of St Joseph Residences 1 Project**

As shown in Figure 7.2.3, the housing units consist of single-attached row houses. These are individually connected to power supply. NHA awarded the lots and subsidized Meralco application fee of Php 1, 500 for each lot owner as part of the requirements for Meralco individual meter installation. In exchange to this support, the beneficiaries are required to pay their monthly amortization in advance. Every 1st Wednesday of the month, designated NHA personnel would visit the site and collect beneficiaries' monthly payment. Given the one-year moratorium, NHA has been ahead in terms of collection efficiency. A Materials Recovery Facility (MRF) will be established for solid waste management.



**Figure 7.2.3 Existing Conditions Observed in St. Joseph Residences 1 Project**

### 7.3 Existing Socio-Economic Conditions in the Receiving LGU

Baras, officially the Municipality of Baras, (Tagalog: Bayan ng Baras), is a 4th class municipality in the province of Rizal, Philippines. According to the 2015 census, it has a population of 69,300 people.



Municipality Hall



St. Joseph Church

**Figure 7.3.1 Map and landmarks of Baras, Rizal**

A 4<sup>th</sup> class municipality, Baras is composed of ten (10) barangays, namely Evagelista, Rizal (Poblacion), San Jose, San Sandoval, Santiago, Concepcion, San Juan, San Miguel, Mabini, and Pinugay. Based on the 2010 NSO Census<sup>1</sup>, Baras has a population of 47,163. At 4.70% growth rate, the population is projected to increase to 85,544 by 2023.

The total land area of the municipality is 84.93 km<sup>2</sup>, that has slope best suited for agriculture, urban, rural, institutional and infrastructure development. Major crop production<sup>2</sup> is rice at 2054.5 M.T. in 411 has. Other crops include corns, vegetables, root crops, fruits and citrus. Milling, multi-purpose drying facilities, market centers, warehouse are agriculture support facilities and services present in the municipality.

<sup>1</sup> [teresarizal.gov.ph/demography](http://teresarizal.gov.ph/demography)

<sup>2</sup> <http://teresarizal.gov.ph/economy/>

#### **7.4 Securing the Availability of Resettlement Sites**

NHA explained that given the timeline of 2016 for the relocation, their office cannot specifically identify the exact resettlement site for Bagumbayan ISFs. This is due to the high demand in resettlement in view of the SC mandamus to clear priority waterways of human settlements.<sup>3</sup>

If relocation was done in the last quarter of 2015, there would be not much problem regarding availability of units in the areas mentioned. Massive relocations done by NHA on a weekly basis may pose a difficulty if the relocation would be deferred to 2016. The allocation of resettlement housing slots for the ISFs of Bagumbayan shall be decided by the NHA prior to the start of resettlement activities targeted for the 4<sup>th</sup> Quarter of 2015. One thing assured by NHA is that once schedule is confirmed the area can be secured for the 71 PAPs. However, relocatees cannot be given the option to choose from among the areas for relocation.

Moreover, the NHA Quezon City Project Office is dependent on the production of the Regional Office for weekly housing allocation. Nevertheless, the 71 ISFs covered during the survey in Bagumbayan were further shortlisted in order to qualify the legitimate beneficiaries of the resettlement program. No additional families and structures built after the survey shall be considered for relocation. Besides, once the NHA gets information on the possible site for relocation, it needs to be secured for the qualified ISFs.

#### **7.5 Issues with Social Acceptability**

Affected informal settlers in Bagumbayan were interviewed to gauge the social acceptability of relocation and possible proposed resettlement sites which was not yet made definite by NHA during the consultations with residents. A significant number accepts their situation of being relocated and even appreciate the opportunity of having a decent place of their own with better surroundings and free from the perils of flooding during rainy months. A safer and cleaner environment is envisioned by the interviewees. They appreciate the government's effort to keep people away from danger by constructing the project that would also help in cleaning up the river. Although the promise of a more secured residence, the only apprehension is that they will be moved away from their means of livelihood. This means additional cost for transportation, transferring school registration of their children and the presence of basic services in the area for resettlement.

Key informant interviews (KIIs) were conducted to further assess the conditions of the resettlement sites and determine the social acceptability among the receiving LGU/community and the early occupants or resettles. The narrative report is found in **ANNEX D**.

#### **7.6 Conclusions and Recommendations**

The ISFs from Brgy. Bagumbayan in Quezon City are among the fortunate few who were given an opportunity within a year to own their houses at a minimal monthly amortization cost of Php200 for the first four years<sup>4</sup>. These ISFs, whose original houses are mostly makeshift and made of light materials that could readily be carried away by surging flood waters, will be provided with concrete, stronger houses. Moreover, they will be transferred to a location that is definitely flood-free, safe for their loved ones and able to secure all their belongings.

Moreover, their new place of residence will have basic utilities such as power and water supply, individually metered and allotted in their names. Their houses will be fitted with individual septic vault, thus providing better health and sanitation for them and their neighbors. There will be secure, cleaner and more livable spaces for their children to enjoy. None of these conditions are present in their current place of residence along the riverbanks of Brgy. Bagumbayan.

One major consideration that the resettles have to contend with is potential displacement from their present sources of livelihood. Nevertheless, experiences narrated by earlier batch of resettles confirm that this is not really that serious a problem, considering that the commuting distance is manageable, transportation

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<sup>3</sup> The relocation of the 71 ISFs had been scheduled to be planned by the Local Inter-Agency Committee (LIAC) of the Quezon City LGU based on a meeting last 26 January 2017 between selected members of the LHB (i.e. LGU, MMDA, PRRC, DILG), the DPWH-UPMO-FCMC and the Consultant. The actual relocation initially scheduled last 2016 was not carried out by the LGU and the latter has acknowledged its negligence on the matter. Specific date and place of the actual relocation and resettlement is yet to be identified by the LIAC.

<sup>4</sup> the amortization is graduated as follows: 1 to 4 yrs - Php200; 5 to 8 yrs - Php590; 9 to 10 yrs - Php890; 11 to 14 yrs - Php990; 15 to 18 yrs - Php1,090; 19 to 20 yrs - Php1,250; 21 to 22 yrs - Php1,280; 23 to 24 yrs - Php1,310; 25 to 30 yrs - Php1,330. (Source: NHA Rizal/SLB Project Office)

facilities-- at least those that ply the major route-- are readily available, and going home only on weekends is a viable option.

Chapter 4 shows that 6% or an estimated Php 750.00 is allotted for school/work transportation expense by the resettling ISFs. This could eat up more of the family's monthly budget due to high transportation cost to and from the main highway to the resettlement sites. The provision of improved or alternative transportation system, starting with organizing the tricycle drivers and operators into a cooperative and regulating the fare, should be on top of the agenda of NHA and the incoming Home Owners Association officers.

Provision of adequate schools, health centers and other community facilities at a safe location is a move in the right direction. However, the timeline as to when the social amenities could be made available to resettling ISFs is crucial, especially for the school-age population.



## **CHAPTER 8 MENU OF LIVELIHOOD REHABILITATION OPTIONS**

### **8.1 Current Livelihood Programs**

The on-going Livelihood Development Program of the National Housing Authority (NHA) consists of the following: (i) Job Referral and Placement, (ii) Skills Training, (iii) Credit/Loan Assistance, (iv) Impok Pabahay, (iv) Home-based Projects where training on product development/ packaging with marketing assistance, and (v) Guild Formation. These are discussed in more detail below.

#### **8.1.1 Job Referral and Placement**

NHA coordinates with business establishments in the area and other places to identify potential job opportunities and employment for relocatees. The NHA pre-screens job applicants and those relocatees whose qualifications meet the job requirements are referred to employers. In their current experience, the NHA has already referred at least 116 candidates and facilitated the placement of 66 beneficiaries from among the present relocatees. The LGU-Public Employment Service Office (PESO) and the City Social Welfare and Development Office (CSWD) of San Jose del Monte have been active partners in this endeavor. The NHA has also actively referred and found employment for relocatees in at least two construction companies. Some qualified members of the newly relocated families were even employed in the on-going construction of additional structures and facilities by the developers of the relocation site.

#### **8.1.2 Skills Training**

NHA provides skills training to introduce or upgrade skills of the existing labor force to meet the manpower requirements of the nearby communal and industrial establishments in the area of resettlement. Skills training programs are based on the interests and skills preferences of relocate. NHA coordinates with relevant government agencies and private organizations in the conduct of skills training. Among the skills trainings given are the following: (i) Fancy Jewelry Making, (ii) Waste Recycling, (iii) Basic Cosmetology, (iv) Cell Phone Repair, (v) Masonry, (vi) Dishwashing Liquid, Fabric Conditioner and Perfume Making, (vii) Hand Wash, Shampoo, Cologne and Perfume- Making, and (viii) Candle Making. As of December 2014 there were about 41,802 graduates from the skills training provided by NHA from different resettlement areas.

#### **8.1.3 Credit/Loan Assistance**

In terms of credit/loan assistance, NHA has been continuously coordinating with government agencies and non-government organizations in order to help improve the relocatees' access to micro-credit facilities. The Self- Employment Assistance (SEA-K) is one among those programs devoted to providing credit assistance to qualified beneficiaries. To date, NHA has helped provide credit to 50 project beneficiaries among the relocatees from Navotas and Tondo, Manila. Small loans have enabled the establishment by relocatees of such businesses as "Botika Binhi" (community pharmacy), waste recycling and junk shop operation, to name a few. The NHA has also partnered with the City's Social Welfare Department in providing cooperative and credit trainings to 46 other candidate-beneficiaries of the program.

#### **8.1.4 Guild Formation**

NHA's current effort is also focused on guild formation, with the view to organize the relocatees according to their particular skills, such as masonry. The idea is to upgrade their skills and prepare them for quality performance standards, thereby increasing their chances of employment in related construction works.

### **8.2 Enhanced Livelihood Rehabilitation Program**

#### **8.2.1 Objectives of Livelihood Rehabilitation**

The objective of the Livelihood Rehabilitation Program is to be able to restore to pre-resettlement level, if not improve, the economic base of the PAPs after relocation. Specifically, this means re-establishing their former sources of livelihood, if not creating better income earning opportunities for PAPs within and

around their new place of residence. Ultimately, the goal is to see to it that PAPs are economically better off and that, in particular, the vulnerable groups such as the poorest of the poor, the women-headed households, the senior citizens and persons with disabilities do not become impoverished after resettlement.

### **8.2.2 The Need for Targeted Livelihood Development**

The current NHA Livelihood can be enhanced in order that the economically productive members of the PAPs could take advantage of the new opportunities available in the host community. In particular, the program could be aligned with the current and future development thrusts of the host LGU and allied government and private entities. In other words, the livelihood program for the PAPs should be market and demand-driven, while cognizant of the PAPs' capabilities, interests and needs.

## **8.3 Menu of Livelihood Options**

In a more focused way, the following menu of livelihood options is herein proposed: (i) employment/job referral, (ii) enterprise development, (iii) skills training, (iv) cooperative formation, (v) credit mobilization and (vi) livelihood support services. These are discussed in more detail below.

### **8.3.1 Employment and Job Referral**

Linkage / tie up with PESO-DOLE re: available manpower requirement of companies to match with the existing skills acquired/possessed by relocatees/NHA beneficiaries based on the results of skills registration and TESDA skills assessment Facilitates conduct of Pre-Employment Orientation Seminar (PEOS) and Jobs Fair in tie-up with Public Employment Service Office (PESO) Coordination with TESDA Regional /Provincial level re: evaluation of skills possessed for the issuance of Certificate of Competency (COC) which is one of the requirements of the employers, and to enhance their employability for an easy job placement.

At present, the gainfully employed PAPs from Brgy. Bagumbayan, Quezon City may opt to stay in their present occupations. For the unemployed and those who opt otherwise, an enhanced employment and job referral/placement program is needed, if the PAPs are to be gainfully employed in their new residence. In partnership with other agencies, a more aggressive job placement program should be pursued by the NHA that matches the skills and capabilities of the incoming PAPs. Accordingly, this proposed livelihood development program should be able to mainstream the employable population, especially the unemployed segment, in the following industry or sector:

#### **1. Construction**

The current booming real estate, according to experts, will continue in the next five to six years. This means further proliferation of new residential communities and the massive development of "new integrated town sites" and mixed residential-commercial hubs in the so-called growth areas. The PAPs are well-poised for these employment opportunities in construction companies, since majority of the working members (55% of the males) are employed in construction jobs. Many of them would have the competitive edge by upgrading their skills. On-the-job trainings in heavy equipment operation, carpentry, masonry, electrical installation, plumbing, building maintenance and so forth would be best. As an adjunct, some PAPs may be better equipped with new skills such as furniture making, interior decorating and landscaping.

#### **2. Service Sector**

The demand in the service sector is also expected to continue to increase with the ASEAN integration. The PAPs could take advantage of the development of residential, office, commercial and institutional establishments such as business processing outsourcing (BPO) or call centers, schools, hospitals, resorts, health and wellness centers, restaurants and the like. There is a relatively high literacy rate among the PAPs and may be equipped with computer, clerical and related office skills necessary for government and private employ. The opportunity for employment in the BPOs or call centers and the new government center augurs well for the computer literate and the techie



young professionals. Next to computer skills, there is a high interest and demand for training in culinary arts, store operation, and domestic help services. A training program could be designed for customer service in restaurants, resorts, health and wellness centers and the like. The under-schooled and unemployed segment of the PAPs can be trained to secure employment as domestic helps and maintenance crew in condominiums, business offices and social institutions.

### **8.3.2 Enterprise Development**

NHA also has an Enterprise Development Program wherein the target beneficiaries are provided with package of assistance to enhance their capabilities and potentials to encourage recipients to become successful entrepreneurs to take advantage of increased opportunities towards generation of employment and income. The program has the following components:

1. Skills Development Program
  - a. Basic Skills Training – training on any craft with business / economic potentials
  - b. Advanced Skills Training – upgrading of basic skills to hone their capability towards commercial production
  - c. Specialized training on
    - Operation of new equipment
    - Familiarization of new tools
    - Familiarization on product development, design, quality control
    - Other relevant skills
2. Business Development Program
  - a. Orientation of forming a business enterprise to include securing of business license and other legal requirement to operate a business
  - b. Orientation on business organization and management
  - c. Seminar / training on feasibility study preparation, financial management, production management and marketing
  - d. Capacity building tools
    - Preparation of directory of producers, buyers and agencies providing marketing assistance
    - Preparation of Product Profile
    - Preparation of business / products / services information kit
  - a. Technical Assistance / Counseling / Consultancy
    - Prospective entrepreneurs provided assistance on business planning, appropriate capitalization and if needed proper diagnosis of business operation and financial management
    - Continuing business counseling to registered business organizations (associations, cooperatives)

#### **(1) Micro-enterprise Development**

If given financial assistance to start up businesses, PAPs prefer to operate their own business to augment family income after relocation. Skills of PAPs can be utilized in construction, food vending and other products selling, automotive repairs, catering, and providing household services. The PAPs can fill the present and future market demand by enabling them to operate micro and small-scale businesses of their own. Possible trainings topics are on home-based industries such as meat and processed food production, handicrafts and novelty items, and household products

such as soaps and dishwashing liquid. PAPs, especially women, can also be trained in culinary arts, cosmetology, hair science, therapeutic massage and store operation to prepare them to run restaurant and food service, cafes, health and wellness shops, beauty parlors, boutiques, laundry shops, mini-groceries, sari-sari stores and the like. The men can be trained to run their own car wash and automotive repair shops, tricycle service, transport cooperatives, internet cafes, cell phone repair shops and the like.

## **(2) Community-based Social Enterprise**

NHA's current livelihood training programs include fancy jewelry making, waste recycling, cell phone repair, dishwashing liquid, fabric conditioner, perfume hand wash, shampoo, cologne and candle making. Local markets and the community itself as consumers offer income opportunities for PAPs.

The last decade or so has seen the rise of social enterprise in the bid to eliminate poverty, support environmental sustainability and level the playing field for startup and micro entrepreneurs. A bill is now in Congress, namely the Magna Carta for Social Enterprise, otherwise known as the PRESENT (Poverty Reduction through Social Enterprise) Bill, which signals the shift of NGOs and people's organizations from donor-driven to profit-oriented businesses that work hand in hand with communities to help them develop competitive supply chains of goods and services for the local or global market. In the Philippine experience, successful examples of social enterprises have been around in the production of coffee and coconut sugar in Mindanao, carabao milk and onion in Nueva Ecija, and free-range chicken and bamboo in Bulacan, to name a few. Organizations such as the Gawad-Kalinga, Foundation for Sustainable Society (FSSI) and the World Fair Trade Organizations (WFTO) are at the forefront of the movement for social enterprise. A social enterprise development in cottage industries such as meat and food processing, livestock and poultry production, handicrafts and novelty items, health and wellness, and transport service are potential candidates and could be started as a pilot project among the PAPs. Social enterprises require collective efforts and pooling of finances through formation of group enterprises.

### **8.3.3 Other Support Programs**

#### **(1) Access to Micro-Credit Facilities**

The poor are unable to have access to capital that will enable them to undertake enterprise development and other economic opportunities. Commercial banks other financial institutions have rigid requirements and usually require collateral which make it difficult for PAPs who have no properties or businesses to comply with. Savings and loans program are offered by partners like NGOs or civic organizations or government agencies. NHA steps in to coordinate with financing institutions for possible funding assistance to relocatees who intend to put up business and to those with existing business requiring additional capital. NHA-LDD can assist the beneficiary in the preparation of the business plan if required by the financing institution. A credit information facility is usually established at the barangay / LGU level for increased access to credit / livelihood financing.

Relocatees can also take advantage of the current financial intermediation programs of the NHA in accessing the following financing windows:

##### **1. Public-Private Partnership Program**

Through this program, the national government gives incentives to private companies to put up investments, enter into joint undertakings or develop projects jointly with government agencies. The NHA with the help of the NEDA, DTI, TESDA and the LGU could develop a program to start up micro and small businesses among organized PAPs, possibly in food processing or transport service business.

2. Corporate funding through CSR Programs

Big corporate foundations such as Ayala, Meralco Foundation, ABS-CBN, Aboitiz and PLDT, among others may be tapped for financial resources for business start-ups. The Livelihood Program for PAPs may tap into these channels for financial assistance to create lasting and sustainable impact on PAPs. National network of cooperatives can help mobilize funds to support social entrepreneurs.

3. Micro-lending Institutions

The underground or informal market still provides the reliable alternative to banks and can be of good use to PAPs who need capital support for their small businesses. This includes the private lenders, pawnshops, credit cooperatives and other financial conduits. The interest rates, however, are relatively higher and the terms could be downright notorious. Still the NHA and partner agencies could provide guidance in choosing the best, profitable option.

**(2) Cooperative Formation**

The NHA organizes relocatees into guilds according to their economic undertaking (e.g., masonry guild). The CDA can assist in the formation of cooperatives such as transport coop, meat processing/food producers' coop, construction workers coop, credit coop, consumer and producer coop, and others. Community organizing and planning is essential in the formation of cooperatives or social enterprises. This will enable PAPs to have a legal organization where members have a common vision and a governance structure that will guide in its operations and in accessing benefits through cooperatives and social enterprises.

**(3) Assistance in Business Incubation and Registration**

After skills and entrepreneurial training, an important component of the support services to PAPs is assistance during business planning and incubation as well the formal registration and operation. For this, the NHA needs the help of the DTI and the LGU to facilitate the process. For start-up social entrepreneurs, NGOs, POs and private institutions and businesses could provide the needed expertise.

**8.4 Institutions Related to Livelihood Rehabilitation Assistances and Trainings**

Institutions such as the Department of Agriculture (DA), Technical Education and Skills Development Authority (TESDA), Cooperative Development Authority (CDA), and Department of Social Welfare and Development (DSWD) are expected to provide the Livelihood Rehabilitation Trainings to relocated PAPs. There are also NGAs that provide livelihood and training assistance to relocated communities.

Relocatees may be integrated into DWSO's 4P's or the "Pantawid Pamilyang Pilipino Program". 4Ps helps to fulfill the country's commitment to meet the Millennium Development Goals, and has a two-pronged approach: (1) **Social Assistance**, which aims to provide short term poverty alleviation through cash assistance for the poor families' immediate needs; and (2) **Social Development**, which aims to break the intergenerational poverty cycle through investments in human capital. The program, which has the following thrusts, is designed to maximizing the convergence of economic programs and local initiatives:

1. Focus on the poorest of the poor

Anti-poverty interventions are focused towards expanding access of the poor to basic social services, especially education, health and family planning services; providing risk mitigation; and expanding social protection programs so poor households can cope better with economic, social and natural disasters. These will also entail the expansion of economic and social opportunities for the poor so they can increase their incomes and build their assets.

2. Focus on poorest areas

NAPC will focus on the poorest regions and provinces so that those who are especially in need of public support can be provided with the mechanisms to improve their lives. NAPC will incorporate projects that address the vulnerabilities of the poor and marginalized, especially those affected by social conflict and environmental disasters, into the anti-poverty programs.

3. Environmental aspects of the anti-poverty strategy

Specific programs should be designed to reduce the impacts of environmental changes on the poor, who suffer disproportionately from climate change. The National Anti-Poverty Commission has strengthened its framework and policy on anti-poverty to address the plight of the dwellers in flood-prone areas. NAPC organized an inter-governmental technical working group (TWG) which coordinates with LGUs, representatives of basic sectors, NGOs, and UPAO to assist in providing a higher ground to secure the poor from high flood-risk.

## CHAPTER 9 RESETTLEMENT COST AND BUDGET

### 9.1 Resettlement Cost

#### 9.1.1 Land Acquisition

Table 9.1.1 compares the total cost of land acquisition of the affected lands, if based on BIR zonal value (Cost A) and the total cost of land acquisition, if based on FMV (Cost B). At the BIR zonal value, land acquisition would cost nearly **Php 1.86 Billion** while the Fair Market Value (FMV) would be around **Php 4.55 Billion**.

**Table 9.1.1 Comparative Costs of Land Acquisition**

Business Entity/Area		Barangay/ Location	Area of Affected Land (sq.m)	BIR Zonal Value (Php/sq.m)	Cost A (Php '000)	Fair Market Value <sup>a/</sup> (Php/sq.m)	Cost B (Php '000)
			(1)	(2)	(3) = (1) x (2)	(4)	(5) = (1) x (4)
1.	Ignacio Complex	Mangahan	11,276	15,000.00	169,140,000.00	24,000.00	270,624,000.00
2.	ReadyCon	Mangahan	3,123	15,000.00	46,845,000.00	24,000.00	74,952,000.00
3.	Hansson Paper	Mangahan	6,959	15,000.00	104,385,000.00	24,000.00	167,016,000.00
4.	JENTEC Storage	Mangahan	4,681	15,000.00	70,215,000.00	24,000.00	112,344,000.00
5.	Portland Cement	Santolan	3,644	5,000.00	18,220,000.00	14,000.00	51,016,000.00
6.	Eastwood Ferry	Bagumbayan		12,500.00	0.00	82,000.00	0.00
7.	Land Acquisition QC Side		29,444	12,500.00	368,050,000.00	90,000.00	2,649,960,000.00
8.	Land Acquisition PC Side		28,725	15,000.00	430,875,000.00	22,000.00	631,950,000.00
9.	Land Acquisition MC Side		39,251	16,500.00	647,641,500.00	15,000.00	588,765,000.00
<b>TOTAL</b>			<b>127,103</b>		<b>1,855,371,500.00</b>		<b>4,546,627,000.00</b>

Note: <sup>a/</sup>: At fair market value (FMV) based on comparative cost of similar properties offered in the market over the last six (6) months. Highest market values were used, considering that the real estate market in the Philippines is deemed by economists to continue in the upswing trend within the next five years or so.

#### 9.1.2 Compensation for Structures

Table 9.1.2 shows the cost of compensation at replacement cost for structures erected on private lots. The total cost involved is **Php 215.25 Million**.

**Table 9.1.2 Compensation for Structures on Private Land**

	Business Entity	Affected Floor Area(sq.m) (1)	Replacement Cost/a (3)	Cost (Php'000) (1) * (3)
1.	Ignacio Complex	2,603	18,000	46,854
2.	ReadyCon	46	18,000	828
3.	Hansson Paper Co.	3,020	18,000	54,360
4.	Jentec Warehouse	753	18,000	13,554
5.	Eastwood Ferry area	117	10,000	1,170
6.	Portland Cement	840	15,000	12,600
<b>TOTAL</b>		<b>7,379</b>		<b>129,366</b>

At replacement cost based on current cost of construction materials + labor + <sup>a/</sup> markup cost, and assuming that most of the structures are marginally affected.

**Table 9.1.3 Summary Compensation for Land and Structure Using BIR Zonal Valuation**

Area	Barangay/ Location	BIR Zonal Value <sup>a/</sup> (Php/sq.m)	Area of Affected Land (sq.m)	Ave. Replace- ment Cost <sup>b/</sup> (Php/sq.m)	Floor Area of Affected Structure (sq.m)	Acquisition Cost		
						Land (5)	Structure (6)	Total
						(1) x (2)	(3) x (4)	(5) + (6)
Ignacio Complex	Mangahan	15,000.00	11,276	18,000.00	2,603	169,140,000.00	46,854,000.00	215,994,000.00
ReadyCon	Mangahan	15,000.00	3,123	18,000.00	46	46,845,000.00	828,000.00	47,673,000.00
Hansson Paper	Mangahan	15,000.00	6,959	18,000.00	3,020	104,385,000.00	54,360,000.00	158,745,000.00
JENTEC Storage	Mangahan	15,000.00	4,681	18,000.00	753	70,215,000.00	13,554,000.00	83,769,000.00
Portland Cement	Santolan	5,000.00	3,644	15,000.00	840	18,220,000.00	12,600,000.00	30,820,000.00
Eastwood Ferry	Bagumbayan	12,500.00		10,000.00	117	0.00	1,170,000.00	1,170,000.00
Land Acquisition QC Side		12,500.00	29,444			368,050,000.00	0.00	368,050,000.00
Land Acquisition PC Side		15,000.00	28,725			430,875,000.00	0.00	430,875,000.00
Land Acquisition MC Side		16,500.00	39,251			647,641,500.00	0.00	647,641,500.00
TOTAL			127,103		7,379	1,855,371,500.00	129,366,000.00	1,984,737,500.00

a/: Latest BIR zonal value of land in the locality where property is located.

b/: Average replacement cost of current cost of construction materials + labour + mark-up.

**Table 9.1.4 Summary Compensation for Land and Structure Using Fair Market Value**

Area	Barangay/ Location	Fair Market Value <sup>a/</sup> (Php/sq.m)	Area of Affected Land (sq.m)	Ave. Replace- ment Cost <sup>b/</sup> (Php/sq.m)	Floor Area of Affected Structure (sq.m)	Acquisition Cost		
						Land (5)	Structure (6)	Total
						(1) x (2)	(3) x (4)	(5) + (6)
Ignacio Complex	Mangahan	24,000.00	11,276	18,000.00	2,603	270,624,000.00	46,854,000.00	317,478,000.00
ReadyCon	Mangahan	24,000.00	3,123	18,000.00	46	74,952,000.00	828,000.00	75,780,000.00
Hansson Paper	Mangahan	24,000.00	6,959	18,000.00	3,020	167,016,000.00	54,360,000.00	221,376,000.00
JENTEC Storage	Mangahan	24,000.00	4,681	18,000.00	753	112,344,000.00	13,554,000.00	125,898,000.00
Portland Cement	Santolan	14,000.00	3,644	15,000.00	840	51,016,000.00	12,600,000.00	63,616,000.00
Eastwood Ferry	Bagumbayan	82,000.00		10,000.00	117	0.00	1,170,000.00	1,170,000.00
Land Acquisition QC Side		90,000.00	29,444			2,649,960,000.00	0.00	2,649,960,000.00
Land Acquisition PC Side		22,000.00	28,725			631,950,000.00	0.00	631,950,000.00
Land Acquisition MC Side		15,000.00	39,251			588,765,000.00	0.00	588,765,000.00
TOTAL			127,103		7,379	4,546,627,000.00	129,366,000.00	4,675,993,000.00

a/: Fair Market Value (FMV) based on comparative cost of similar properties offered on the market.

b/: Average replacement cost of current cost of construction materials + labour + mark-up.

The total cost for land acquisition and compensation for structures computed using BIR zonal values and replacement cost is **Php 1.985 billion** whereas when computed using fair market value for land and replacement cost for structures is **Php 4.676 billion**. The first table shows the summary compensation cost using the zonal valuation while the second table shows the summary compensation cost using fair market values.

### 9.1.3 Cost of Relocating the Informal Settlers

As far as the ISFs of Phase IV are concerned, the land they occupy will not be compensated but all of them, except professional squatters and those who opt out of resettlement, are entitled to relocation and resettlement to new housing. For Bagumbayan ISFs, this will be arranged with the National Housing Authority (NHA) by the LGU-LIAC of Quezon City. For Santolan ISFs, Pasig City LGU has its own resettlement program and relocation site and will resettle its ISFs independently. Prior to start of construction, all ISFs should have been relocated and resettled consistent with the provision of the Urban Development and Housing Act of 1992 (RA 7279), as well as the Operational Guideline No.01 series 2014 issued by the Informal Settler Families-National Technical Working Group (ISF-NTWG). The budget for the relocation and resettlement, including other assistances that need to be provided as stipulated under the law, will come from the national government and the respective LGUs, in the case of Brgy. Bagumbayan-from the Php50 billion Presidential Fund based on appropriations duly allotted for the purpose, as endorsed by the Local Inter-Agency Committee (LIAC).

Table 9.1.5 shows the breakdown of the tentative cost of resettling the ISFs.

**Table 9.1.5 Estimated Cost for ISF Relocation and Resettlement**

	Particulars	(A) Marikina City	(B) Pasig City	(C) Quezon City	(D) Total
(1)	No. of ISF HH to be relocated	0	0	71	71
(2)	No. of Project Affected Persons				
	(Ave HH size used is 3.9)	0	0	277	277
(3)	Cost of House & Lot*	0	0	450,000	31,950,000
(4)	Financial Assistance**	0	0	18,000	1,278,000
(5)	Transport/M Meal/Disturbance/Dislocation	0	0	10,000	2,769,000
<b>TOTAL</b>					<b>35,997,000</b>

\* Based on Loan Ceiling offered by Socialized Housing Finance Corporation (SHFC)

\*\* DSWD Interim Shelter Fund that could be availed of by the ISFs

Formula: For Cost of House & Lot (3): D= Php450,000\*71 HH; For Financial Assistance (4): D= Php18,000\*71 HH

For Transport/M Meal/etc. (5): D=Php10,000\*277 PAPs

### 9.1.4 Income Rehabilitation Assistance for Affected Businesses

As stated in the LARRIPP, business owners operating in the structures severely affected by the projects are entitled to an income rehabilitation assistance not to exceed Php 15,000, or to be based on the latest copy of the PAF's Tax record for the period corresponding to the stoppage of business activities. There are seven business establishments operating within the project alignment. The total cost of income rehabilitation assistance is Php105, 000, as shown in Table 9.1.6.

**Table 9.1.6 Cost of Business Income Rehabilitation Assistance**

Barangay	No. of Business Owners	Cost per Business, Php	Total Cost, Php
Quezon City	1	15,000	15,000.00
Pasig City	5	15,000	75,000.00
Marikina City	0		
Ferry Operator	1	15,000	15,000
<b>TOTAL</b>	<b>7</b>		<b>105,000.00</b>



### 9.1.5 Cost for Monitoring and Evaluation of Resettlement and Compensation Activities

Internal monitoring will be undertaken jointly by the DPWH-ESSD with the LGU through LIAC. The costs involved will be part of the regular operational costs of these offices.

External monitoring and post-implementation evaluation may need to be commissioned to a private consultant, university or NGO. A lump sum amounting to Php 3.0 Million is assumed to cover the cost for external monitoring and evaluation and post-implementation evaluation of the RAP.

Table 9.1.7 summarizes the estimated total cost of implementing the RAP, which amounts to nearly **Php 4.72 Billion**. This includes the total costs of: (i) land acquisition – Php 4,546.6 Million; (ii) compensation for structures – Php 129.366 Million; (iii) resettlement site development – Php 33.750 Million; (iv) business income rehabilitation assistance – Php 0.105 Million; (v) financial assistance and logistics during relocation – Php 5.1 Million; and (vi) external monitoring and post-implementation evaluation – Php 3.0 Million.

**Table 9.1.7 Estimated Cost for RAP Implementation**

Item	Particulars	Total Cost, Php'000
Land Acquisition (@FMV)	Private residential, commercial and industrial lands	4,546,627
Compensation Structures (@RC)	Structures on private lands	129,366
Resettlement Site Development	Land acquisition and land development	33,750
Income Rehabilitation Assistance	For severely affected businesses	105
Financial Assistance and Logistics during Relocation	For ISF families	5,100
Monitoring and Evaluation	External monitoring and post-implementation evaluation of RAP implementation	3,000
	<b>TOTAL, Php '000</b>	<b>4,717,948</b>

### 9.2 Flow of Funds

The DPWH will be responsible for providing the needed funds for the acquisition of land and compensation for structures thereon. It shall also provide the funds for monitoring resettlement implementation through the IMA and EMA. The DPWH-UPMO-FCMC, in coordination with ESSD and IROW shall handle the payments of the compensation and monitoring.

The LGU of Pasig City shall be fully responsible for resettling and rehabilitation the ISFs in Barangay Santolan and shall appropriate sufficient funds therefore. On the other hand, the LGU of Quezon City, through its LIAC, shall coordinate with the DILG for the allocation of funds out of the Php 50 Billion ISF Funds for the resettlement and rehabilitation of ISFs from Barangay Bagumbayan.

### 9.3 Process and Schedule of Payment

In acquiring the needed land and improvements thereon for the project's ROW, the DPWH will explore donation and other modes of acquiring the property from the owner, consistent with the provision of RA 10752. If these fail, the DPWH will offer to purchase initially at the current market value of the land. In the event that the PAP rejects the compensation at current market price, the DPWH will tender a second offer based on the recommendation of a government financial institution (GFI) with adequate experience in property appraisal or by an independent appraiser. If the PAP still rejects the second offer, the DPWH may initiate expropriation proceedings. The DPWH will deposit with the court in escrow the amount corresponding to 100% of current market value for the land, to allow the DPWH to proceed with the works. The Court shall be the final authority as to the fair market value of the property. The PAPs will receive the payment due them as just compensation for the asset being acquired within one (1) month following the receipt of such decision by appropriate court.

Apart from expropriation cases, under no circumstances shall qualified PAPs be removed from the projects ROW and their assets taken prior to compensation. In the case of PAPs who hold formal titles to land, this

will be in the form of cash to be paid by DPWH. Compensation for loss of structures will be at replacement cost without depreciation and deduction for salvageable materials.

Similarly, qualified ISFs shall be adequately resettled and provided the rehabilitation, transportation and other assistance due them prior to demolition of their dwellings. As agreed with the Quezon City LIAC, the funds for resettling Bagumbayan ISFs shall come from the P50 Billion ISF fund allotted by the DILG for resettling families occupying priority danger areas and waterways.

## **CHAPTER 10 GRIEVANCE REDRESS MECHANISM AND PROCEDURE**

### **10.1 Grievance Redress Mechanism**

The major issues raised by PAPs during consultations have to do with the following:

- a. Compensation and entitlement
- b. Availability and accessibility of relocation site
- c. Availability of livelihood opportunities in the new residence; and
- d. Access to basic utilities (power, water supply and road systems) and social services (education, health, access to credit, etc.)

There are two levels of grievance redress mechanism available to PAPs to air their grievances regarding the above issues, which matter most to them. One is through the LIAC, by virtue of the ISF-NTWG Operational Guideline No. 1 of the DILG. The LIAC is empowered to resolve issues and concerns that may arise in the actual conduct of census, tagging operations, beneficiary selection and dismantling operations, as well as in the planning and development of resettlement sites for the ISFs. The LIAC's Beneficiaries Selection, Awards and Arbitrations Committee (BSAAC), the LHB, or the concerned housing office of the LGUs shall act as the secretariat of the sub-committee. This sub-committee is responsible in safeguarding the rights of all ISFs by any legal action it may consider appropriate.

The other is through the RAP Implementation Committee. The RIC will handle the complaints and grievances, particularly in relation to the payment of compensation and other entitlements due to tenured PAPs or those who have formal claims to land and the improvements thereon.

### **10.2 Grievance Redress Procedure**

The complaints, grievances and concerns of the ISFs shall be elevated to the LIAC as follows:

1. Grievances will be filed by the PAPs with the barangay who will act within 15 days upon receipt thereof, except complaints and grievances that specifically pertain to the valuation of affected assets, since such will be decided upon by the proper courts. When received verbally, the grievances may be written with the help of a staff of LIAC, the LGU, or the barangay for submission.
2. If no mutual or amicable resolution is reached, or if the PAP does not receive a response from the barangay, within 15 days of registry of the complaint, he/she can appeal to the LIAC, which should act on the complaints and grievance within 15 days from the day of its filing. All the complaints and grievances received are to be brought to the Sub-Committee on Grievance Redress for resolution. The LIAC-BSAAC may also endorse the complaints and grievances to the DPWH UPMO-FCMC (as the Project's Implementing Office of the DPWH) for advice and assistance, when necessary.
3. If the complaint is not satisfactory resolved in 15 days or the PAP does not receive any response from LIAC or the LGU, the PAP may elevate their concern, as a last resort, to the appropriate court of law.

In the case of grievances by private land and structure owners, the PAPs should address the complaint to the concerned City RAP Implementation Committee (RIC), which shall endeavor to resolve the issues at the RIC level. Specifically in relation to compensation, in the event that the PAP rejects the compensation at BIR zonal value first offered by the DPWH, the DPWH or the PAP may take the matter to court. When court cases are resorted to by either the DPWH through expropriation or by the PAPs through legal complaints, the DPWH will deposit with the court in escrow the corresponding amount (100%) at current market value, which it is offering the owner for his/her assets as compensation to allow the DPWH to proceed with the works. The Court shall be the final authority as to the fair market value of the property. The PAP will receive the final cost of the asset being acquired within one (1) month following the receipt of such decision of the court.

The PAPs shall be exempted from all administrative and legal fees incurred pursuant to the grievance redress procedures.

## **CHAPTER 11 IMPLEMENTATION PLAN**

### **11.1 Institutional Framework**

#### **11.1.1 Local Inter-Agency Committee (LIAC)**

The Local Inter-Agency Committee or LIAC shall be in charge of the resettlement of informal settler families in Bagumbayan, Quezon City. The LIAC was created with the issuance of Operational Guideline No. 01 s. 2014, by virtue of which informal settler families along danger areas and waterways can avail of the Php50 billion meant to provide adequate, decent and affordable housing with basic services and facilities. The LIAC coordinates with the Informal Settler Families-National Technical Working Group (ISF-NTWG), which is chaired by the Department of Interior and Local Government (DILG) to oversee the relocation and resettlement of informal settlers. The LIAC was constituted from among the members of the ISF-NTWG member agencies, namely, the Local Housing Board (LHB), representatives of the affected informal settler families (ISFs) and its partner Non-Government Organization (NGO). The LHB Chairperson serves as the chairperson of the LIAC. The representatives from national government agencies who sit as members of LIAC are: Local/City DILG, PCUP, NAPC, DSWD, SHFC, NHA, DENR, MMDA, DPWH, HUDCC, and such other government agency that the LIAC may deem necessary, such as but not limited to, DepEd, TESDA, DOLE, DOH, etc. In addition, the Punong Barangay of the affected area where the ISFs are located shall also sit as a member of LIAC, as well as representatives from Civil Society Organizations/NGO, which is assisting the ISF community.

#### **11.1.2 DPWH UPMO- FCMC, ESSD and DEO**

The DPWH UPMO-FCMC is the Implementing Office that will take charge of the over-all project implementation including land acquisition and resettlement activities in close collaboration with other DPWH offices consistent with existing Department policy and operational guidelines. The DPWH Planning Service-ESSD will assist the UPMO-FCMC in the over-a; preparation of the RAP as well as in monitoring its implementation. The DPWH-District Engineering Office will assist the UPMO-FCMC in the claim validation and disbursement of appurtenant compensation, as well as in monitoring RAP implementation. These offices will rationalize the package of compensation and entitlements and assist owners and lessees of private lands and structures to re-establish themselves and ensure smooth hand-over of the properties involved

The DPWH offices concerned will be working hand in hand and coordinate with each city LGU to secure the project's right-of way prior to construction.

Further, a DPWH IROW Committee will be created and shall collaborate with the grievance redress committee that will be established to manage conflict in a timely and effective manner should such a case arise in the course of project implementation.

Figure 11.1.1 shows Implementing Organizations and Their Major Functions for RAP of Phase IV.

### **11.2 Implementation Schedule**

Based on series of discussions with the LIAC, DILG, NHA and the concerned housing and engineering departments of the Quezon City LGU, the ISFs in Bagumbayan will be included among the priority beneficiaries of the Php 50 Billion ISF Fund allocation in 2015 and will be given priority for resettlement in available NHA resettlement sites.

As for Pasig City, the LGU officials during the series of coordination meetings have committed to independently resettle the ISFs in Brgys. Manggahan and Santolan spearheaded by the City Resettlement and Housing Unit (RHU) in coordination with the UPAO. In fact, the LGU has already begun actively clearing these areas of ISFs to secure the ROW for their own LGU-initiated flood control project. It is also a positive note that the same areas will be secured by the Pasig City government against reoccupation by unscrupulous groups. Hence, it is assured that the project alignment shall have been cleared of obstructions by the time construction starts in April 2021, as shown in Figure 11.1.2.

As shown in Figure 1.1.8, the DPWH is expected to initiate the process of land acquisition and compensation for structures starting January 2019 in order to secure the project's ROW prior to construction. The DPWH shall ensure that ROW acquisition proceeds in close parallel with the construction schedule, making sure that land and structure owners are adequately compensated and re-established away from the construction site months ahead of the civil works implementation.

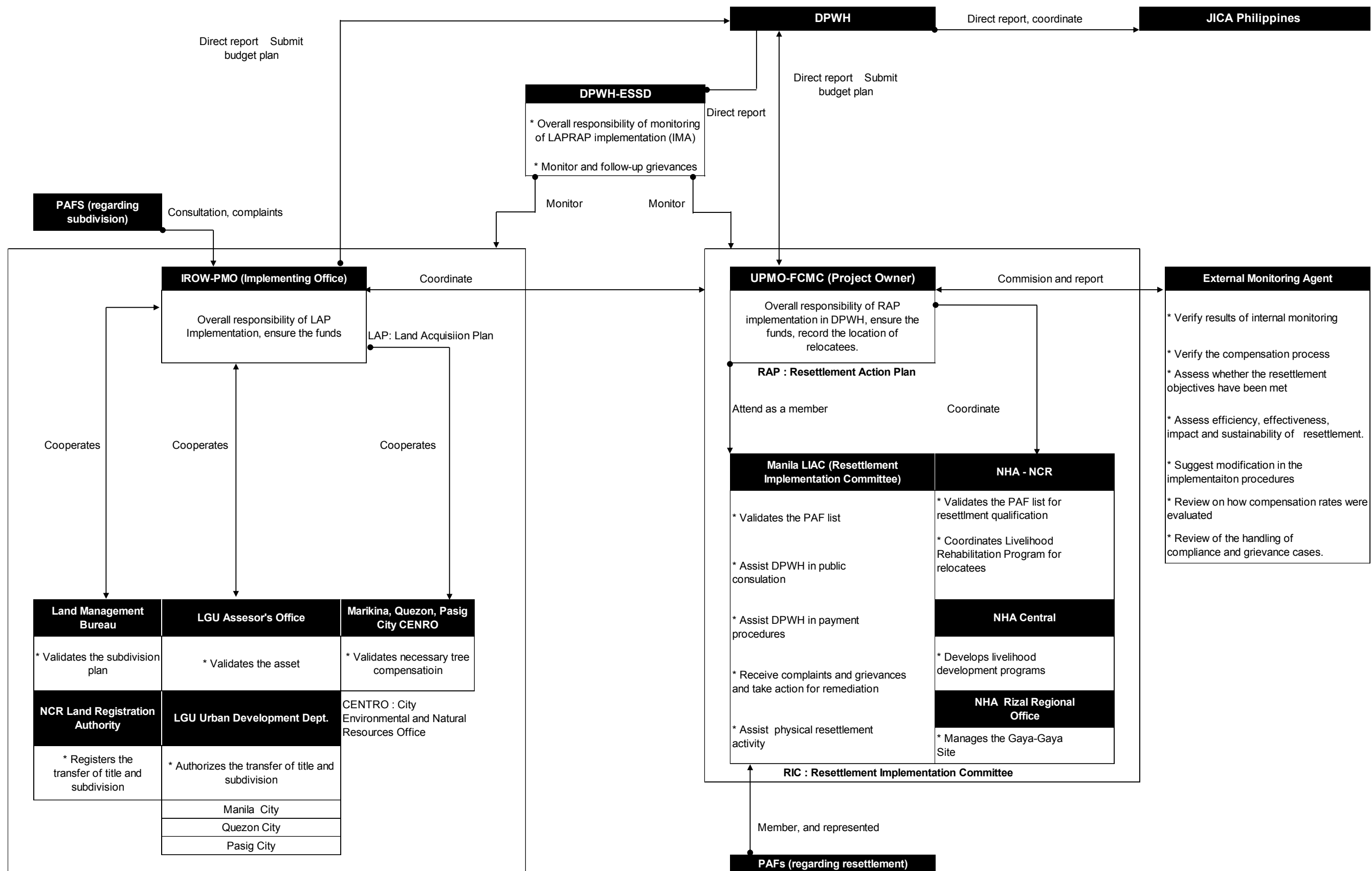


Figure 11.1.1 Implementing Organizations and Functions for RAP of PMRCIP Phase IV

RAP Implementation Schedule		Responsible Organization	2018				2019				2020				2021		2022		2023		2024		2025		2026	
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	1	2	1	2	1	2	1	2	1	2
A	Detailed design services of Phase IV Project	DPWH																								
B	(If project are and design are changed) Census survey, Socio-economic study, and Revision of RAP to include new PAFs	DPWH																								
C	Other consulting services	DPWH																								
D	Construction work for PMRCIP Phase IV	DPWH													Apr											
E	Preparation RAP Marikina																									
	Resettlement of ISFs in Brgy. Bagumbayan, Quezon City	DPWH																								
1	Pre-resettlement monitoring at Project Site	DPWH																								
2	Coordination of sending LGUs, LIAC members regarding resettlement scope and schedule	DPWH																								
3	Verification of eligibility PAFs	DPWH/LIAC																								
4	Coordination and implemenation of the Open Dialogue with attendance of LIAC = Finalization of resettlement program	DPWH/LIAC																								
5	(If project area and design are changed) - Adjustment of resettlement program	DPWH/LIAC																								
6	Grievance redress regarding the eligibility decision	DPWH/LIAC																								
7	Decision of PAFs regarding the choice or acceptance of compensation	PAF																								
8	Preparation of necessary documents and funding by PAFs and LGUs (and Other LIAC member istitutions) for demolition, relocation and financial assistance	PAF/LGU																								
9	Issuance of 30-day notification for structure demolition	LIAC																								
10	Resettlement Activities Monitoring at Project Site	DPWH/LIAC																								
11	Voluntary demolition by PAFs Payment of compensation before physical relocation	PAF DPWH/LIAC																								
12	Official demolition of structures with the attendance of the affected settler(s) and LIAC members Payment of compensation before physical relocation	DPWH/LIAC																								
13	After demolition and clearing the affected project area, the Barangay Police patrols/monitor the cleared area to prevent the returnees (ISF).	Barangay																								
14	DPWH, in coordination with other related institution, provide man-power and equipment to clear and level the site of demolition	DPWH/LIAC																								
15	Post-Resettlement Monitoring at resettled locations	DPWH																								
16	Job training to be provided or introduced based on the monitoring results	DPWH																								
	Land Acquisitioin and Compensation for Marikina River																									
1	Conduct of Parcellary Survey based on Approved Detailed Design																									
2	Identification of lots to be acquired																									
3	Identification of structures and improvement for compensation																									
4	Appraisal for land acquisition and compensation																									
5	Preparation of appraisal report for approval																									
6	Notice for land acquisition and compensation																									
7	Negotiation with land ownwes																									
8	Relocation and removal of structures and improvements																									
9	Demolition of structures and claearing																									
10	Monitoring of land acquisition and compensation																									

Figure 11.1.2 IMPLEMENTING SCHEDULE FOR RAP OF MARIKINA RIVER

## **CHAPTER 12 MONITORING AND EVALUATION**

### **12.1 Roles and Responsibilities**

#### **12.1.1 Supervision and Internal Monitoring**

RAP implementation will require quality and quantity results which are time-bounded. The DPWH-ESSD independently as inherent in its mandate or jointly with the respective committees of the LGU-LIAC, shall act as the Internal Monitoring Agent (IMA). It shall be responsible for the internal monitoring of the actual RAP implementation against the planned activities, time frame, budget and entitlement that will be done on an on-going basis throughout the project construction and at least a year thereafter.

The tasks of the Internal Monitoring Agent (IMA) are to:

- Regularly supervise and monitor the implementation of the RAP in coordination with the LIAC and/or concerned LGU. The findings will be documented in the quarterly report to be submitted by the UPMO to JICA.
- Verify that the re-inventory baseline information of all PAPs has been carried out and that the valuation of assets lost or damaged, the provision of compensation and other entitlements, and the relocation has been carried out in accordance with the LARRIPP and the RAP.
- Ensure that the RAP is implemented as designed and planned.
- Verify that funds for the implementation of the RAP are provided by the DPWH-UPMO in a timely manner and in the amount sufficient for the purpose.
- Record all grievances and their resolution and ensure that complaints are dealt with promptly.

#### **12.1.2 External Monitoring and Evaluation**

An External Monitoring Agent (EMA) will be commissioned by the UPMO-FCMC to undertake independent external monitoring and evaluation. The EMA for the Project will be either a qualified individual, a consultancy firm, an academic institution or an NGO with qualified and experienced M&E staff. The draft Terms of Reference of the engagement of the EMA is prepared by the DPWH (refer to **ANNEX G**) and shall be acceptable to the JICA prior to the engagement.

External monitoring and evaluation will be of two kinds: 1) random observation visits and 2) consultation with PAPs, both at their current residence area and at their relocation site.

The tasks of the EMA shall be the following:

- Verify results of internal monitoring;
- Verify and assess the results of the information campaign for PAPs rights and entitlements;
- Verify that the compensation process has been carried out with the procedures communicated with the PAFs during the consultations;
- Assess whether resettlement objectives have been met; specifically, whether livelihoods and living standards have been restored or enhanced;
- Assess efficiency, effectiveness, impact and sustainability of resettlement and RAP implementation drawing lessons as a guide to future resettlement and indigenous peoples' policy making and planning;
- Ascertain whether the resettlement were appropriate to meet the objectives, and whether the objectives were suited to PAF conditions;
- Suggest modification in the implementation procedures of the RAP, if necessary, to achieve the principles and objectives of the Resettlement Policy;
- Review on how compensation rates were evaluated; and
- Review of the handling of compliance and grievances cases



## **12.2 Monitoring**

The aim of monitoring the implementation of RAP is to ensure that it was consistent with the prevailing policy and operational guidelines of the DPWH particularly the LARRIPP, the SEMS and other orders. It also aims to ensure that issues and concerns arising from the acquisition of land and resettlement of PAPs had been adequately addressed and responded to.

### **12.2.1 Stages and Frequency of Monitoring**

The stages and frequency of the internal monitoring and external monitoring activities are as follows:

1. Compliance Monitoring

This is the first activity that both IMA and EMA shall undertake to determine whether or not the RAP was carried out as planned and in accordance with this Policy.

The EMA will submit an Inception Report and Compliance Report one month after for the official start of engagement which should be timed to the conclusion of the RAP implementation activities and at least one (1) month prior to the start of civil works.

2. EMA Monthly Monitoring

The EMA will be required to conduct monthly monitoring of physical resettlement and payment of the compensation during the RAP implementation activities. Physical resettlement phase is expected to start in May 2020, and end in November 2021. The payment of the compensation, especially for land acquisition, may take longer time, and may continue after August 2019. After the full resettlement of PAPs in their new residence, the internal monitoring activities may be done on a quarterly basis.

3. EMA Monitoring and Final Evaluation

The EMA shall monitor on a semi-annual basis the actual implementation of the RAP against the planned activities, time frame, budget and entitlement throughout the subproject construction. Particular attention will be given to the payment of compensation and conduct of physical relocation as well as restoration of the social and economic base of PAPs after resettlement.

The final evaluation of the payment of the compensation, especially for land acquisition, is expected in July 2020. The timing of the final evaluation of the conditions of resettling PAFs may be done within a year thereafter or before December 2021. This shall be done jointly with the IMA.

4. Post Implementation and Evaluation (PIE)

A third party monitoring by a consulting firm, an NGO, or an academic institution shall be commissioned by JICA to undertake the PIE. The Final Evaluation Report will be submitted one year after the completion of the construction work.

### **12.2.2 Reporting Monitoring Indicators**

The indicators for monitoring and evaluation are found in Table 12.4.1.



**Table 12.4.1. Indicators for Resettlement Monitoring and Evaluation (1/2)**

Aspect	Contents	Verifiable Indicators	Methodology
Budget and Time Frame	<ul style="list-style-type: none"> <li>• Social preparation among PAPs and host communities: IEC, consultation, community organization</li> <li>• Social survey, tagging and inventory of affected assets</li> <li>• Land acquisition</li> <li>• Compensation and entitlement</li> <li>• Inter-agency arrangements commitments</li> <li>• Resettlement site development</li> <li>• Restoration of social infrastructure and services</li> <li>• Livelihood and income-restoration</li> </ul>	<ul style="list-style-type: none"> <li>• Budget allocation and disbursements</li> <li>• Manning and deployment schedules</li> <li>• Organization and activity of IRTAF</li> <li>• Progress and status of implementation of RAP activities throughout project cycle</li> <li>• Milestones against physical/financial targets and timeline of activities</li> </ul>	<ul style="list-style-type: none"> <li>• Process documentation</li> <li>• Review of progress reports</li> <li>• Key informant interview</li> <li>• Post-site development inspection</li> <li>• Review of MOA stipulations and delivery of agency commitments</li> </ul>
Delivery of entitlements to PAPs	<ul style="list-style-type: none"> <li>• ROW acquisition</li> <li>• Policy guidelines and compensation policy</li> <li>• Eligibility criteria</li> <li>• Appraisal of affected properties and assets</li> <li>• Payment of compensation and entitlement</li> <li>• Resettlement options including self-relocation</li> <li>• Delivery of non-monetary entitlement</li> </ul>	<ul style="list-style-type: none"> <li>• Type and amount of monetary entitlements intended and actual provided</li> <li>• Applicability of criteria in qualifying for entitlements</li> <li>• Applicability of methodology for determining fair market value of properties and assets</li> <li>• Payment made against inventory of assets actually affected</li> <li>• No. of structures demolished or cleared against census tagging (C/T) master list</li> <li>• No. of PAPs transferred to resettlement site</li> <li>• No. of self-relocating PAPs</li> <li>• Delivery of disturbance allowances, transfer assistance, transportation, etc.</li> <li>• Assistance during demolition, hauling, transport and re-establishment of dwellings and other structures</li> <li>• Time allowed for harvesting crops</li> <li>• Observance of humane conduct of demolition activities and movement of PAPs</li> <li>• Condition of resettlement site and facilities according to standards</li> <li>• No. of PAPs inhabiting resettlement site against Master list</li> <li>• Delivery to PAPs of tenurial documents (land titles or conditional deeds of sale)</li> <li>• Appropriateness of schemes and terms of payment for land/or shelter development</li> </ul>	<ul style="list-style-type: none"> <li>• Process documentation of ROW acquisition</li> <li>• Process documentation of appraisal of properties and improvements</li> <li>• Review of implementation of LARRIP Policy Guidelines on ROW Acquisition</li> <li>• Review of RAP</li> <li>• Key informant interviews among PAPs due for entitlements</li> <li>• Inspection of cleared areas and resettlement site</li> <li>• Post-relocation survey</li> <li>• Review of project reports on program/activity progress and status</li> <li>• Review of financial and relevant records on amortization, equity and delivery of legal ownership documents</li> </ul>

**Table 12.4.1. Indicators for Resettlement Monitoring and Evaluation (2/2)**

<b>Aspect</b>	<b>Contents</b>	<b>Verifiable Indicators</b>	<b>Methodology</b>
Benefits to PAPs and host communities	<ul style="list-style-type: none"> <li>• Benefits derived from compensation and entitlement</li> <li>• Condition and adequacy of resettlement site development</li> <li>• Condition and adequacy of shelter development</li> <li>• Effectiveness and adequacy of livelihood and income restoration program</li> <li>• Effectiveness and adequacy of social rehabilitation and re-integration program</li> <li>• Benefits to extremely vulnerable groups</li> <li>• Benefits accruing to host communities</li> </ul>	<ul style="list-style-type: none"> <li>• Status and progress against target delivery of livelihood development options</li> <li>• Status and progress against target delivery of social rehabilitation programs</li> <li>• Types and number of PAPs benefited by income restoration programs (training, technical assistance, credit and micro-lending and livelihood generation schemes)</li> <li>• Quality of improvements in occupation and livelihood pattern of PAPs</li> <li>• Improvements in occupation and livelihood pattern of PAPs</li> <li>• Improvement in production and resource use pattern of PAPs</li> <li>• Income and expenditure pattern of PAPs</li> <li>• Cost of living and additional cost incurred by PAPs</li> <li>• Adequacy of incomes compared to cost of living</li> <li>• Social and cultural conditions/presence of social security safety nets</li> <li>• Improvement in socio-economic condition of extremely vulnerable groups</li> <li>• Community members availing of resettlement site facilities and services</li> <li>• Socio-economic condition of receiving community</li> </ul>	<ul style="list-style-type: none"> <li>• Post -relocation assessment of benefits and impact</li> <li>• Socio-economic survey among PAPs and host community</li> <li>• Key informant interviews</li> <li>• Post-RAP implementation evaluation</li> <li>• Process documentation</li> </ul>
Consultation, Grievance and Special Issues	<ul style="list-style-type: none"> <li>• Information Dissemination</li> <li>• Reiterative consultation</li> <li>• Institutional mechanism and grievance redress procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Report on IEC activities</li> <li>• Status report on project Grievance and Arbitration Measures under IRTAF or other avenues</li> <li>• No. of PAPs conforming receipt of entitlements (as timely and adequate)</li> <li>• No. of PAPs benefited by the grievance redress measures</li> </ul>	<ul style="list-style-type: none"> <li>• Process documentation</li> <li>• Key informant interview</li> </ul>