



Republic of the Philippines  
Department of Transportation and Communications  
and Philippine National Railways



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# NORTH-SOUTH RAILWAY PROJECT – SOUTH LINE

## Project Information Memorandum



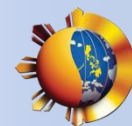
August 2015

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Transaction Advisors



With Assistance From



## Disclaimer

This Project Information Memorandum (“PIM”) has been prepared by the Development Bank of the Philippines (“DBP”), the Asian Development Bank (“ADB”), and CPCS Transcom Limited (“CPCS”) on behalf of and in consultation with the Department of Transportation and Communications (“DOTC”) and Philippine National Railways (“PNR”). DOTC has engaged DBP and ADB to serve as the transaction advisors and CPCS to serve as the technical advisor (DBP, ADB and CPCS, collectively, the “Transaction Advisors”, and each a “Transaction Advisor”) to DOTC in the development, structuring and tendering of the North-South Railway Project – South Line (“NSRP South Line” or the “Project”) under the Philippine Build-Operate-Transfer Law (Republic Act No. 6957 as amended by RA 7718, the “BOT Law”) and its Revised Implementing Rules and Regulations (“Revised IRR”, as amended).

This PIM does not purport to be all-inclusive or to contain all of the information that a prospective participant may consider material or desirable in making its decision to participate in the tender.

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All information in this PIM is qualified by the terms and conditions of the ITPB and any supplemental bid bulletins that may be issued by the DOTC and PNR until the submission of bids. In case of any conflict between the information and terms in this PIM and the ITPB, the information and terms in the ITPB shall prevail.

This PIM does not constitute a solicitation of bids for any aspect of the NSRP South Line. Solicitations of bids and bidding guidelines will be distributed separately.

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## Purpose of this Memorandum

The purpose of this PIM is to provide preliminary information to potential investors on the proposed Project, and to solicit comments and feedback on key Project issues, the bid process and timing for the selection of the concessionaire. The feedback from this preliminary briefing and subsequent consultations with investors will help inform the DOTC, PNR, and the Transaction Advisors in finalizing the terms of the Project structure and the timetable for the tender process.

Investor feedback is actively encouraged. In particular, the DOTC and PNR are keen to receive investors' thoughts and feedback on the following areas:

- (i) Appetite and interest in participating in the Project.
- (ii) Risks and concerns associated with the Project.
- (iii) Manner and timetable for the competitive tender process.

Interested parties may send feedback, questions, and comments by email to DBP and ADB at the contact information provided below:

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## Information Contained in this Memorandum

This PIM summarizes the major elements of the NSRP South Line, including the service area, tariff structure, the configuration of Metro Manila's transport system, government institutions that would be involved in the implementation of the Project, and transaction structure. It also summarizes possible investment issues and the BOT Law procurement process.

# Executive Summary

## The Investment Opportunity

- The NSRP South Line, sponsored by the DOTC and PNR, is a keystone transport project of the GOP under its Public-Private Partnership (“PPP”) Program launched by President Benigno C. Aquino III in November 2010.
- The NSRP South Line is part of the GOP’s efforts to promote inclusive growth. The Project aims to revive and improve the existing railway to provide enhanced passenger transport services to currently underserved areas in southern Luzon and encourage more productive activities.
- PNR currently operates a 56 km commuter line from Tutuban to Calamba. PNR briefly suspended its commuter line service so that PNR could conduct a safety audit and inspection of the line, but has since resumed operations of the commuter line as of July 23, 2015. PNR also operates a 35 km commuter line from Naga to Sipocot with four trips daily. PNR used to offer train services to Legazpi, Albay, but operations have been suspended since October 2012 as a result of train derailment in Sariaya, Quezon caused by typhoon damage to bridges along its railway route.
- The Project will entail the construction, financing, operations, and maintenance of three (3) segments of rail connecting Manila to the provinces of southern Luzon:
  1. **Commuter Line** from Manila to Calamba City in Laguna (56km);
  2. **Long-Haul Line** from Manila to Legazpi City in the Bicol Region (478 km main line), which may be developed on a phased basis based on delivery of right of way; and
  3. **Long-Haul Line Expansion** consisting of (a) an extension from Legazpi City to Matnog in Sorsogon (117km) (the “Long Haul Line Extension”) and (b) a branch line from Calamba to Batangas City (58km) (the “Long Haul Line Branch”), to be developed once right of way is available.

- The Project was approved by the National Economic and Development Authority (“NEDA”) Board, chaired by President Aquino, on 16 February 2015 and will be tendered under the BOT Law. DOTC and PNR, as the representative governmental agencies on behalf of the GOP, will be the direct counterparties and grantors under the concession agreement for the Project (the “Concession Agreement”) that will be awarded to and entered into by the winning bidder for the Project (i.e., the “Concessionaire”).



# **I. Introduction**

## **A. The Republic of the Philippines**

The Republic of the Philippines is an archipelago comprising more than 7,100 islands located in Southeastern Asia. It has a total area of 300,000 km<sup>2</sup>, with the two largest islands (Luzon and Mindanao) taking up over 66% of the land area. With over 100 million people, the archipelago is the seventh most populated Asian country and 12<sup>th</sup> most populated country in the world.

It is estimated that half of the population resides on the island of Luzon, where the Project will be located. Metro Manila, one end of the NSRP South Line, is the most populous of the twelve defined metropolitan areas in the Philippines and the 11th most populous in the world. As of the 2007 census, it had a population of over 11.5 million, comprising 13% of the national population.

The Philippine economy is the 39<sup>th</sup> largest in the world, with an estimated 2014 gross domestic product (GDP) of \$290 billion. A newly industrialized country, the Philippine economy has been transitioning from one based upon agriculture to an economy with more emphasis upon services and manufacturing. Of the country's total labor force of around 41 million, the agricultural sector employs close to 32% of the labor force and accounts for 14% of GDP. The industrial sector employs around 14% of the workforce and accounts for 30% of GDP.

The GOP, under President Benigno C. Aquino III, launched in November 2010 an aggressive program for PPPs in order to mobilize much needed investments in infrastructure that would support its objectives of sustained and inclusive economic growth. The implementation of PPP projects has become a cornerstone of the Aquino administration. Since its inception in 2010, ten (10) projects (valued at about \$3 billion) have been awarded.

## **B. Project Overview**

The current Administration has identified the NSRP South Line as a priority strategic transport investment. The Project is expected to be the sole rail backbone connecting Metro Manila to currently underserved areas in Southern Luzon. The entire NSRP, including both the North and South lines, has also been identified by the World Bank as one of 15 key projects for ASEAN connectivity. The NSRP South Line is deemed consistent with the

current Philippine Development Plan 2011–2016 that highlights the strategy for improving transport efficiencies and promoting user-pay principles for operational service sustainability.

DOTC has engaged the services of DBP which then sub-engaged ADB to jointly act as Transaction Advisors in developing, structuring and assisting the DOTC and PNR in structuring the PPP model for the Project and conducting the competitive tender under the BOT Law for the Project. ADB in turn has retained Allen & Overy LLP, as international legal consultants, and Castillo Laman Tan Pantaleon & San Jose, as Philippines legal consultants, to provide specialized legal services to support the work of the Transaction Advisors. CPCS is retained as the technical advisor for the Project.

### **C. Project Implementing Agencies**

The Project is being implemented jointly by the DOTC and PNR.

#### **1. The Department of Transportation and Communications**

DOTC is the primary planning, implementing, and administrative entity of the Republic of Philippines' executive branch for transportation and communications systems and services. Its specific legal mandate in relation to rail is set out in its charter as follows:

- a. Promote the development of dependable and coordinated networks of transportation and communication systems;
- b. Guide government and private investment in the development of the country's intermodal transportation and communication systems in a most practical, expeditious, and orderly fashion for maximum safety, service, and cost effectiveness; and
- c. Impose appropriate measures so that technical, economic, and other conditions for the continuing economic viability of the transportation and communication entities are not jeopardized and do not encourage inefficiency and distortion of traffic patronage.

To accomplish its mandate related to rail, DOTC is given the following powers and functions:

- a. Formulate and recommend national policies and guidelines for the preparation and implementation of integrated and comprehensive transportation and communications systems at the national, regional, and local levels;

- b. Establish and administer comprehensive and integrated programs for transportation and communications for this purpose, may call on any agency, corporation, or organization, whether public or private, whose development programs include transportation and communications as an integral part thereof, to participate and assist in the preparation and implementation of such program;
- c. Assess, review, and provide direction to transportation and communication research and development programs of the government in coordination with other institutions;
- d. Administer and enforce laws, rules, and regulations in the field of transportation and communications;
- e. Coordinate with the Department of Public Works and Highways (“DPWH”) in the design, location, development, rehabilitation, improvement, construction, maintenance and repair of all infrastructure projects and facilities of DOTC. However, government corporate entities attached to DOTC shall be authorized to undertake specialized railway projects and facilities as directed by the President of the Philippines or as provided by law;
- f. Issue certificates of public convenience for the operation of public land and rail transportation utilities and services;
- g. Establish and prescribe rules and regulations for issuance of certificates of public convenience for public land transport utilities, such as railways; and
- h. Establish and prescribe rules and regulations for the inspection and registration of air and land transport facilities, such as railways.
- i. Determine, fix, and/or prescribe charges and/or rates pertinent to the operation of public land transportation utility facilities and services, except in cases where charges or rates are established by international bodies or associations of which the Philippines is a participating member or by bodies or associations recognized by the Philippines Government as the proper arbiter of such charges or rates.

## **2. Philippine National Railways**

The PNR was created in 1964 for a term of fifty (50) years which was recently extended for another fifty years, or until 2064.<sup>1</sup> The PNR was established to serve as the instrument of the GOP in providing a national railway and transportation system. It is an attached agency to the DOTC, but is mandated to operate and function in accordance with its own charter unless in conflict with Administrative Code of 1987.

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<sup>1</sup> Republic Act No. 10638, approved on 16 June 2014

The PNR, as articulated in its charter, is specifically authorized to:

- a. Acquire and hold the assets of the Manila Railroad Company (its predecessor company);
- b. Own or operate railroads, tramways, and other land transportation, vessels and pipelines for the purpose of transporting for consideration of passengers, mail, property between any points in the Philippines; and
- c. As an auxiliary to its main purpose, to own and/or operate powerhouses, hotels, restaurants, terminals, warehouses, timber concessions, coal mines, iron and other mineral properties and to manufacture rolling stock, equipment, tools, and appliances, as well as to construct and operate in connection with its railroad lines, toll viaducts and toll tunnels.

## II. Project Background

The Philippine Development Plan 2011-2016 (the “Development Plan”) has adopted a framework of “inclusive growth”, which is defined as “high growth that is sustained, generates mass employment, and reduces poverty”. This Development Plan serves as the guiding principle in formulating policies and implementing development programs in the Philippines for the years up to 2016. The Development Plan identifies the lack of transport infrastructure as one of the key constraints to overall growth of the country.

Accordingly, one of the key pillars of the Development Plan is to make large investments in infrastructure. The Development Plan for physical infrastructure investment sets out the creation of an integrated and multimodal national transport and logistics system as a priority in order to better connect underserved but productive areas and communities to markets and other social services. However, the government resource is not unlimited; recognizing that GOP may not have sufficient funds to finance all vital infrastructures on its own, the Development Plan seeks to utilize the PPP model in order to mobilize private capital.

### **The North-South Railway System**

During its peak in the 1970s, the PNR mainline track ran from La Union Province in the north to Legazpi City in the Bicol region for a total distance of 900 km. Today, the PNR's only operations are commuter lines on the 56-km section from Tutuban in Manila to Calamba in Laguna Province and on the 35-km section from Naga to Sipocot in the Bicol region. The long distance passenger service from Manila to Legazpi Albay has been suspended since October 2012 because of typhoon damage to bridges. Track, bridge, and station infrastructure, however, remains largely in place from Tutuban to Legazpi, Albay.

As part of the GOP's efforts to promote inclusive growth and spur economic development in underserved areas, the GOP seeks to rehabilitate and resume operations over the entire system. The rehabilitation and development of the NSRP will consist of the NSRP North Line and the NSRP South Line, and aims to revive a key portion of the national railway network to provide rapid transport within major cities as well as long distance travel in Luzon, the largest and most populous island in the Philippines. Extensive rehabilitation and reconstruction of track, roadbed, bridges, stations, depots and road crossings are needed to bring the proposed line into safe operating condition.

**The NSRP North Line**

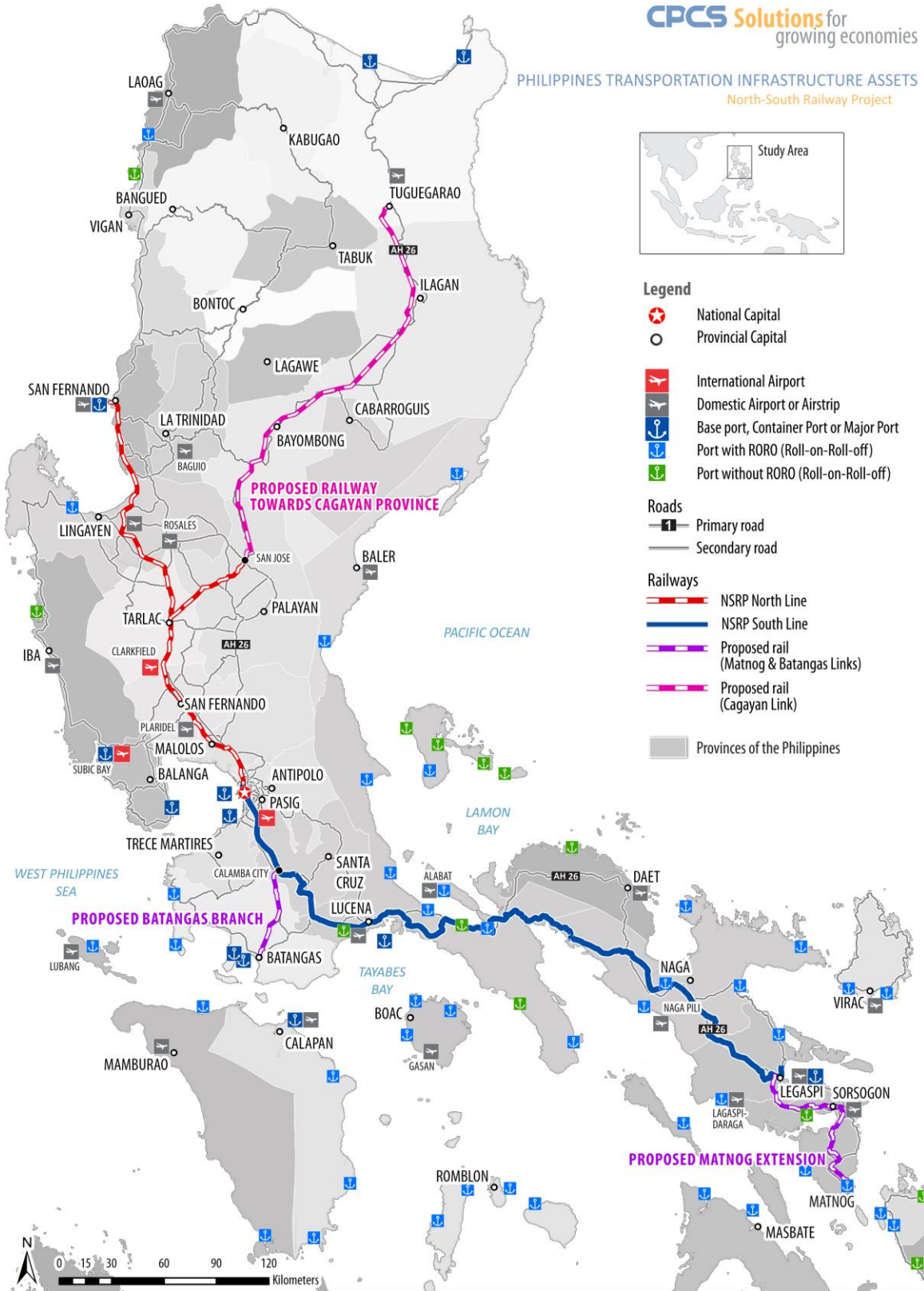
The North Line will connect Manila to north and northeastern provinces in Luzon. The project comprises a 266km long-haul line from Manila to San Fernando City in La Union Province, an extension from San Jose City in Nueva Ecija to Cagayan Province, and a 55km branch line from Tarlac Province to San Jose City. A 34km commuter line from Tutuban to Malolos in Bulacan Province is also part of the project. The first phase of the North Line will be a commuter railway extending from Tutuban to Malolos, currently being undertaken using funding from the Japan International Cooperation Agency.

**The NSRP South Line**

The NSRP South Line, which is the subject of this PIM, is discussed in further detail in succeeding sections. The NSRP South Line will consist of commuter railway operations between Tutuban and Calamba and long haul passenger railway operations between Tutuban and Legazpi, as well as long haul passenger rail operations on the branch line between Calamba and Batangas and extension between Legazpi and Matnog.

The Project was developed with the intent to provide connectivity with Metro Manila's existing urban rail systems including LRT-1, LRT-2, MRT-3, and others. The NSRP North Line, LRT-2 west extension, Metro Manila Bus Rapid Transit, and the Integrated Transport System – South Terminal (“ITS South”) in Food Terminal Incorporated (“FTI”) are expected to connect with NSRP South Line, further enhancing access within and outside Metro Manila.

Figure 2.1: NSRP (North and South) and Other Key Transport Infrastructure



- Legend**
- National Capital (Red star icon)
  - Provincial Capital (Black circle icon)
  - International Airport (Red square icon)
  - Domestic Airport or Airstrip (Blue square icon)
  - Base port, Container Port or Major Port (Blue circle icon)
  - Port with RORO (Roll-on-Roll-off) (Blue circle icon with 'R')
  - Port without RORO (Roll-on-Roll-off) (Green circle icon with 'R')
  - Roads
    - Primary road (Black line with 'A' marker)
    - Secondary road (Grey line)
  - Railways
    - NSRP North Line (Red line)
    - NSRP South Line (Blue line)
    - Proposed rail (Matnog & Batangas Links) (Purple line)
    - Proposed rail (Cagayan Link) (Pink line)
  - Provinces of the Philippines (Grey shaded area)

### **III. NSRP South Line – Commuter Line**

PNR currently operates a 56-km commuter line from Tutuban Station in Central Manila to Calamba in Laguna Province. PNR briefly suspended its commuter line service from May 2015 until July 2015 to conduct an exhaustive inspection, audit and rehabilitation of its commuter train tracks and bridges to ensure the safety of its passengers and trains. PNR resumed operations of the commuter line on July 23, 2015. The future Commuter Line for the NSRP South Line will follow the existing railway alignment used, operated and maintained by PNR for its current commuter line operations.

Tutuban Station is located adjacent to several shopping malls and is in close proximity to commercial centers in Divisoria, the wholesale and bargain shopping hub of Manila, and Binondo, Manila's Chinatown, claimed to be the oldest Chinatown in the world. Both the local populace and tourists frequently travel to Tutuban and the surrounding areas of Divisoria and Binondo/Chinatown for both its tourist attractions, shopping venues and access to markets and other commercial activities. It is expected that this heavily trafficked area within Metro Manila will continue to grow and attract high levels of daily visitors. The PNR Line has stops at España Avenue near the University of Santo Tomas, the oldest university in Asia, and at Santa Mesa near the main campus of the Polytechnic University of Philippines is located. The PNR Buendia Station is located within the Makati Central Business District ("CBD") at the corner of Senator Gil Puyat (formerly, Buendia) Avenue and President Sergio Osmeña Sr. Highway with access to other forms of public transportation traveling to and from the CBD. PNR Stations at Alabang in Muntinlupa City, Santa Rosa and Calamba in Laguna are situated near thriving residential, commercial, and industrial areas.

The PNR commuter line also interfaces with other major transport facilities. At Blumentritt in Manila, PNR and LRT Line 1 stations now stand close to one another. The PNR Santa Mesa Station is accessible from two LRT Line 2 stations. The proposed LRT Line 2 West Extension Project, when completed, will establish two stations near PNR Tutuban Station. Finally, the proposed ITS South Project in the FTI Compound in Taguig City will be situated near the PNR FTI Station.

The existing commuter line running south from Tutuban Station in central Manila to Calamba transports approximately 68,500 passengers per day with an average load factor of 78% for the year 2014. PNR has achieved this level of operation and ridership despite the fact that the rail line and the rolling stock of the commuter line are being operated beyond their useful lives. Given the expected improvements to the infrastructure by the development of the proposed Commuter Line



and the continued economic growth of Metro Manila, PNR expects similar or higher passenger demand in future years of operation.

The existing PNR line from Tutuban to Calamba is at-grade, necessitating numerous road crossings. There are also a number of river and creek crossings with the most significant being the one over the Pasig River. The development of the Project will eliminate many of these at-grade crossings through the use of viaduct and grade-separated crossings on reinforced earth embankment.

The existing PNR line is double-tracked only in the section from Tutuban to Sucat. DOTC and PNR are presently in the process of tendering a contract for the installation of a second track along the Sucat to Alabang section of the PNR line. The bidding process for the second track project is being undertaken jointly by DOTC and PNR with the award of the contract for this project expected by the end of 2015 and anticipated construction completion within six months after award. Following its most recent audit of its infrastructure, PNR is undertaking other projects to address particular safety concerns, including double tracking of rails from Sucat to Alabang, rehabilitation of existing tracks from Tutuban to Los Banos, Laguna, refurbishment of DMUs and diesel electric locomotives, supply and delivery of capital spare parts for DMUs, supply of rail mounted equipment, track ballasting, station development, renovation, and fencing, and others.

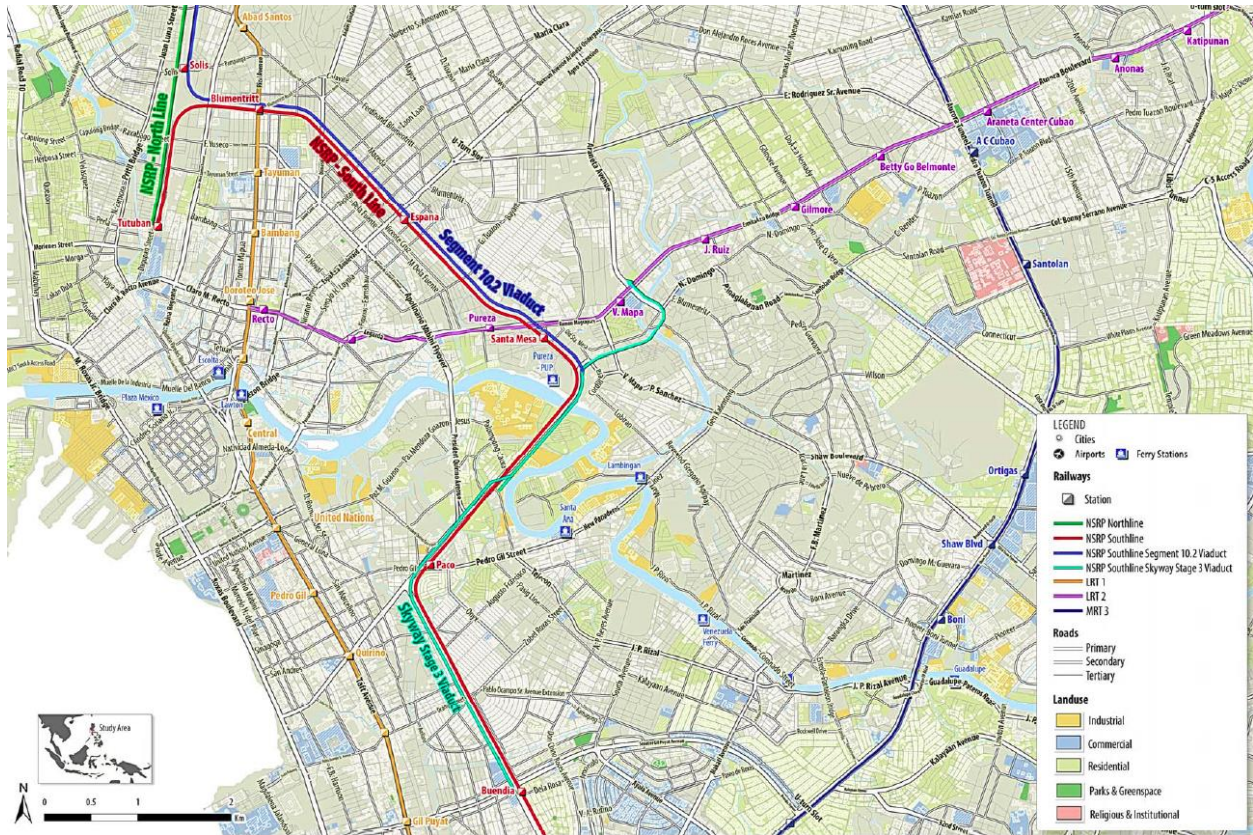
## **A. Alignment and Fixed Infrastructure**

The NSRP South Line Commuter Railway (the “Commuter Line”) will follow the existing PNR railway alignment from Tutuban Station in Manila to Calamba in Laguna and will run for about 56 kilometers. Track gauge shall be 1,067 mm, conforming to the present PNR standard as well as the proposed NSRP North Line.

It is envisioned that the fixed infrastructure component of the Commuter Line under the Project will include the construction of elevated concrete viaduct (approx. 13.8 km) and at-grade railway (built up in some locations using reinforced earth embankments). Track on concrete viaduct will be new direct fixation track while the remainder of the track will be ballasted track. Where possible, existing bridges may be rehabilitated (rather than be replaced) to performance specifications and standards to be specified in the Concession Agreement.

## B. Interface with Other Projects

Figure 3.1: NSRP South Line Interface with the NLEX-SLEX Connector Road and Skyway



### 1. The NLEX-SLEX Connector Road Project

North Luzon Expressway (“NLEX”) Segment 10.2 also known as the NLEX-SLEX Connector Road (the “Connector Road”) is a PPP Project of the DPWH. The Connector Road involves the construction, operation, and maintenance of a 4-lane elevated expressway over the PNR Right-of-Way (“ROW”) starting from C-3 Road in Caloocan through Manila crossing España Avenue towards the Polytechnic University of the Philippines in Santa Mesa, Manila where it connects to the Metro Manila Skyway Stage 3 (“MMSS3”).

The Connector Road is expected to share the PNR ROW with the Commuter Line from the junction with the NSRP North Line at PNR Solis Station just north of PNR Tutuban Station to east of PNR Santa Mesa Station (about 5 km). DOTC and DPWH have determined that the Commuter Line alignment will get priority on PNR ROW and all Commuter Line infrastructure will be within the existing ROW. However, the Commuter Line and the Connector Road will be constructed in close

proximity to each other to minimize land acquisition. Neither project has proceeded to detailed design yet and further design coordination will be required through the preliminary and detailed engineering design phases. DPWH, DOTC, and PNR are in constant coordination for this interface requirement.

## **2. Metro Manila Skyway Stage 3**

The MMSS3 Project is an elevated expressway over its entire length from Buendia, Makati City, to Balintawak, Quezon City, with a distance of about 14.8km and also includes improvement works in selected at-grade locations. It is designed to pull in and ease traffic and access through eight strategically located interchanges: Buendia, Pres. Quirino Avenue, Plaza Dilao and Nagtahan, Aurora Boulevard, E. Rodriguez Avenue, Quezon Avenue, Sgt. Rivera and Balintawak.

The Commuter Line will run at grade under the MMSS3 viaduct in the region of the Polytechnic University of the Philippines (“PUP”). It is expected the MMSS3 viaduct will be built before the NSRP Commuter Line. South of PUP, the MMSS3 viaduct runs adjacent to the PNR ROW and does not interact significantly with the Commuter Line.

### **C. Stations**

There are currently 27 stations over the 56 km Commuter Line with an average spacing of about 2.2 km between stations. It is envisioned that all Commuter Line stations will have new installations designed for interconnection with other transit systems and be in compliance with legal requirements such as access by persons with disabilities, among others.

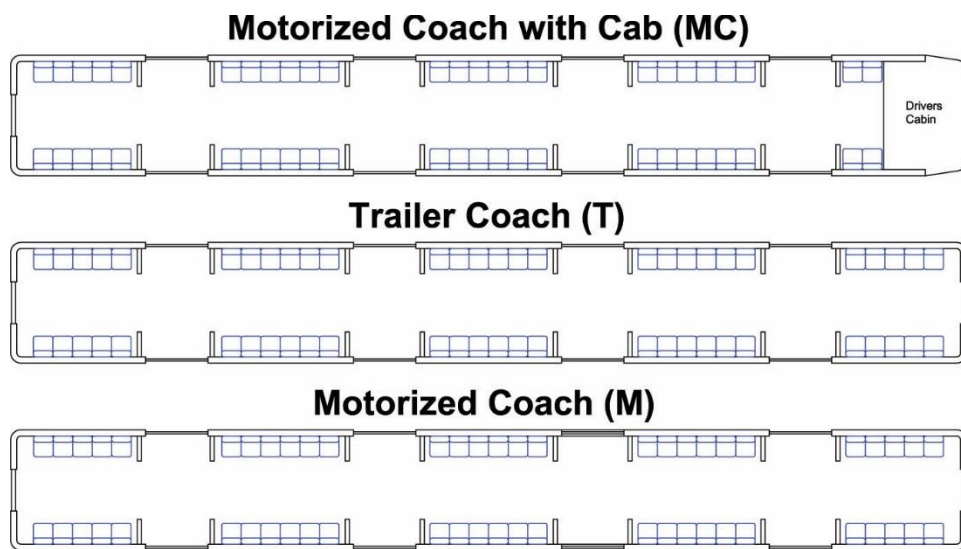
### **D. Depots**

The existing Tutuban Depot is expected to be redesigned and rehabilitated under the Project to accommodate some rolling stock (mainly stabling) for the Commuter Line. An additional new depot facility is also expected to be constructed near Los Baños or Calamba in Laguna (exact location to be determined) for rolling stock stabling, servicing, inspection and maintenance, in addition to serving as a center for the maintenance of fixed civil and electromechanical infrastructure. The design of the depot should satisfy the requirements for stabling, maintenance, and inspection of rolling stock. It shall be a GOP obligation to acquire land for the new depot.

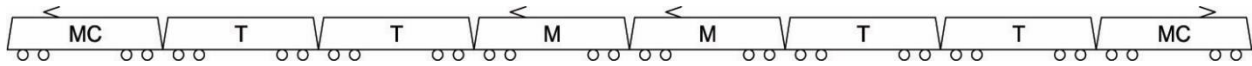
## E. Rolling Stock

Rolling stock for the Commuter Line shall be articulated electric multiple units (“EMUs”) formed into 8-car trainsets. Trainsets are expected to be powered by an overhead contact system with a nominal voltage of 1,500 VDC. Both ends of each trainset shall have a driving cab, separated from the passenger riding compartments but accessible through a lockable door. Each passenger car should be equipped with at least 8 bi-parting sliding plug doors, 4 per car side, and configured with lateral seats, providing generous space for standing passengers and designed to permit the movement of passengers between cars. The indicative minimum design capacity for each train is for 2,496 passengers, assuming that all seats are occupied and standing areas are filled to a density of 7 passengers per m<sup>2</sup>.

Figure 3.2: Proposed EMU Trainset Layout



**Figure 3.3: Proposed EMU Train Configuration**



The following table describes track alignment and dimensions affecting rolling stock design:

**Table 3.1: Track Alignment and Dimensions**

Item	Description
Track gauge:	1,067 mm
Maximum gradient:	3% (0.5% in stations)
Minimum horizontal curve radius:	300 m (main track)
	100 m (depot track)
Minimum vertical curve radius:	3,000 m (main line)
	1,000 m (depot track)
Distance between tracks (c-c):	4.0 m (design)
	3.5 m (minimum)

The final design of the rolling stock must meet the following major specifications:

**Table 3.2: Rolling Stock Specifications**

Item	Specification
Train Length	Max. 162 m
Train configuration	Mc-T-T-M-M-T-T-Mc
Vehicle configuration	Single bodies with 2 bogies
Passenger capacity	More than 2,400 / train at 7 passengers / m <sup>2</sup>
Body length	20,000 mm
Body width	2,850 mm–2,950 mm
Overall height	Max. 44,000 mm
Pantograph working height	4,550 mm – 6,000 mm
Pantograph lockdown height	Max. 4,400 mm
Floor height	1,000 mm
Number doors per side	4 per car
Door type	Bi-parting slide door



Door height	1,900 mm
Door width	1,500 mm
Seating arrangement	Longitudinal
Wheel chair space	At least one space per car
Traction Power Nominal Voltage	1500 V DC
Maximum speed	120 km/h
Maximum acceleration	1.0 m/s <sup>2</sup>
Maximum deceleration of service brake	1.3 m/s <sup>2</sup>
Deceleration of emergency brake	1.3 m/s <sup>2</sup>
Jerk limit	1.1 m/s <sup>3</sup> (Except emergency braking)
Minimum curve radius	50 m
Maximum gradient	4%
Maximum axleload	14 t
Brake system	Disc brakes on all axles
Expected service life	30 years

The quantity of rolling stock supplied under the Project must be sufficient to meet peak hour forecast daily passenger demand. Current estimates call for an initial fleet of between 14 to 16 trainsets. The Concessionaire may, or may be required to (depending on the circumstances), acquire additional train sets in order to meet the minimum performance specifications and standards set forth in the Concession Agreement or as passenger demand warrants.

## **F. Signaling and Communications**

The signaling and train control system of the Commuter Line must be a communications-based train control system (“CBTC”) with cab signals designed to allow 3-minute headways at a design speed of 100 km/h. The system should have a minimum functionality of Automatic Train Operation (“ATO”).

The principal systems required for operating the Commuter Line are:

- Backbone CBTC consisting of a fiber optic network which run the length of the rail line, linking all wayside signals, power operated track switches and the operations control center

- Operating communications including radio communications to enable voice communications between the operations control center, trains and stations, and are compatible with emergency services radios
- Station and passenger information communications that include a passenger information system, public address system, closed circuit television and supervisory control and data acquisition

At-grade road crossings (where permitted) will be fully protected with automatic protection signals including gates and crossing warning devices will be activated automatically by approaching trains. Level crossing safety facilities shall take into consideration train and road speeds, rail and road traffic volumes, and types of road vehicles.

## G. Performance Requirements

Table 3.3: Performance Requirements

Item	Description
Daily operating hours:	0600-2359
Peak hours:	0700-1000;1600-1900
Off-peak hours:	0600-0700; 1000-1600; 1900-2359
Minimum peak headway:	3 min
Minimum off-peak headway:	6 min
Minimum number of stations:	24
Maximum scheduled run time Tutuban – Calamba (one-way):	100 min
Minimum daily on-time performance	95%



## **IV. NSRP South Line - Long Haul Line**

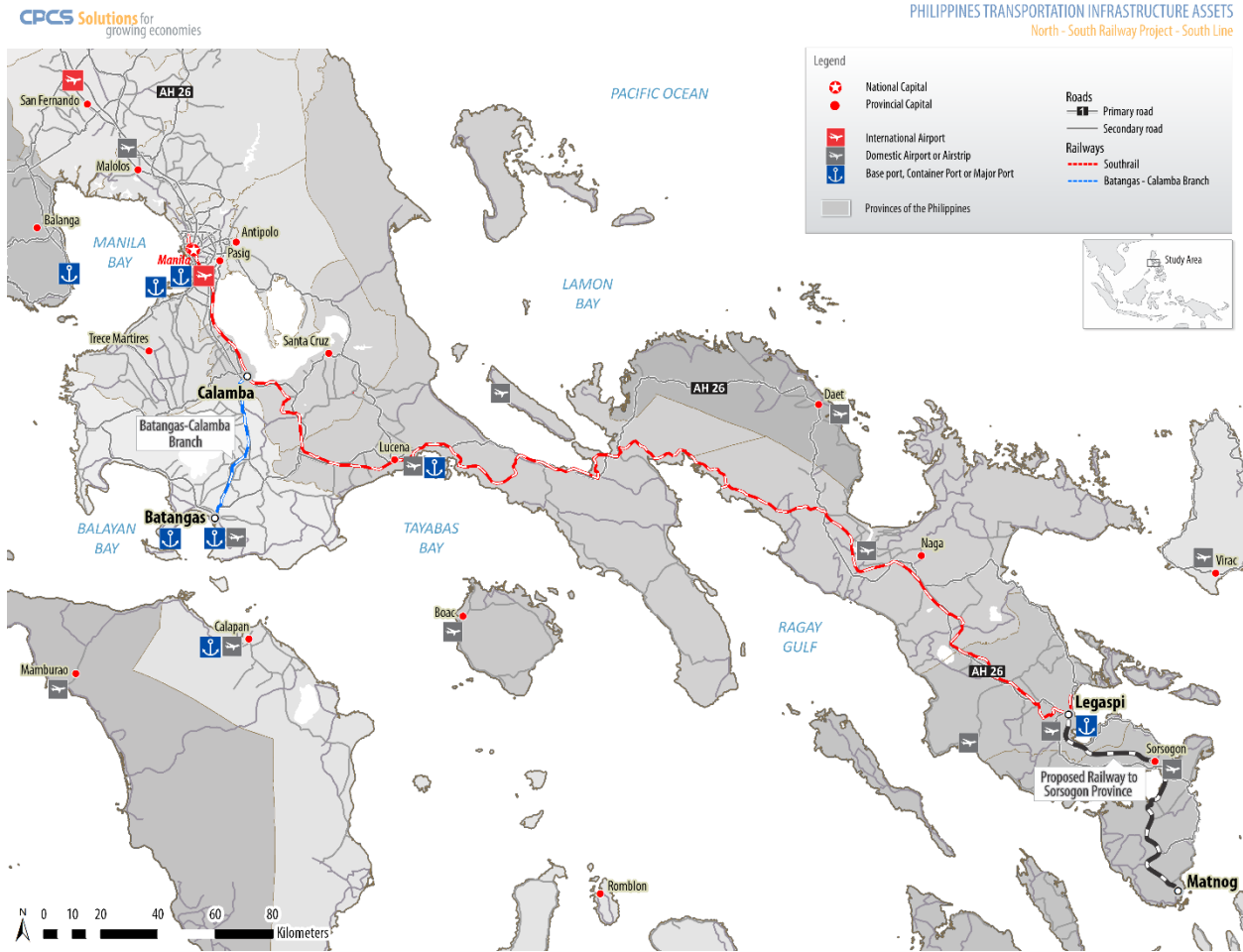
The NSRP South Line Long Haul Railway (“Long Haul Line”) will operate along the same tracks as the Commuter Line and go on to follow the existing PNR Line from Calamba to Legazpi City in the Bicol Region. The Long Haul Line will be expanded by the Long Haul Line Extension (i.e., an extension line of 117km from Legazpi to Matnog) and the Long Haul Line Branch (i.e., a branch line of 58km from Calamba to Batangas (i.e., the Long Haul Line Expansion)).

The PNR line to Legazpi City runs a total of 478 km from Manila, including the 56km segment used for the Commuter Line to Calamba. From Calamba to Legazpi, the line is single-tracked and, similar to the Commuter Line, is narrow gauge (1,067 mm). Overall, the condition of the existing PNR line from Calamba to Legazpi is in fair condition largely on account of good construction, relatively light axle loads and very little accumulated traffic. Most rail defects and damage is due to poor maintenance of joints. Bridges are in widely varying states largely due to lack of maintenance, old age and inadequate protection from natural elements.

There are 397 observed road crossings between Alabang and Legazpi. Of these, 214 are authorized and 183 are unauthorized. Only 31 of the authorized crossings are officially manned by PNR and none of the unauthorized is manned. Unauthorized crossings are ones that have been established without the formal consent of PNR and are often in areas of high encroachment.

As of January 2014, only the existing PNR line between Naga and Sipocot in the Bicol region (35 km) remains operational. This transports approximately 1,300 passengers per day with an average load factor of 50% for the year 2014. The objective of the rehabilitation of the Long Haul Line is to restore existing track structure, including rehabilitation of bridges, to safely accommodate the required rail operations.

Figure 4.1: NSRP South Line and Other Key Transport Infrastructure



## A. Alignment and Fixed Infrastructure

The existing PNR line from Calamba to Legazpi is conventional ballasted track, where parallel steel rails are laid upon sleepers embedded in ballast (except on open deck bridges). Embankment is either on fill or at grade. Rails weigh 37 kg/m and are laid on sleepers of both wood and concrete. The Concessionaire would be expected to replace any existing 37 kg/m rail that is in deteriorating condition or otherwise not suitable to meet the minimum performance specifications and standards.

Uneven spacing of sleepers is prevalent throughout and some sections have a significant number of broken sleepers or are missing rail clips due to pilferage. Wood sleepers and damaged and missing concrete sleepers must also be replaced with new concrete sleepers. Concrete sleepers and

damaged wood sleepers must also be removed from open deck bridges and replaced with hardwood sleepers. A complete surface lift of the track is expected using clean ballast material.

## **B. Stations**

There are a total of 29 stations and 61 flag stops along the PNR Mainline South, south of Calamba. Most of the stations and flag stops are not operational, except for stations on the Naga to Sipocot line. From Calamba to Legazpi, most stations and flag stops have been used for non-railway purposes such as residences, storage areas or as public gathering areas. Most of these stations south of Calamba are in conditions insufficient for efficient and safe operations as a railway passenger station.

There are approximately 44 passing loops of which most are located at stations. In addition, from Tutuban to Calamba, there are 7 crossovers within double tracked sections. Long Haul Line turnouts are generally in poor to fair condition, largely on account of muddied surface condition and missing or defective components. However, some mainline turnouts from Tutuban to Calamba are relatively new and in good condition, though some have missing bolts and nuts indicating insufficient maintenance.

## **C. Depots**

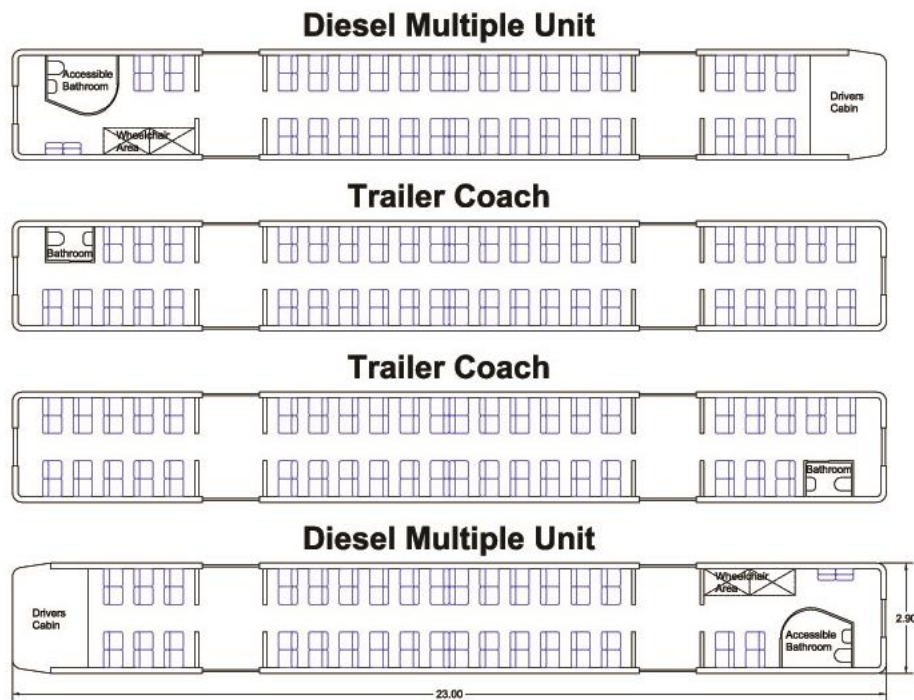
Currently, PNR uses and maintains three depots: Manila Depot (Tutuban), Naga Depot and Calamba Line Sheds. All three are operational but require upgrades in structures, equipment and access roads, and tracks for maintenance of larger rolling stock fleets. Maintenance is a major concern with respect to the state of present PNR operations. For the return of reliable and efficient commuter and long distance rail services, it will be necessary to rehabilitate the existing depots.

A site (yet to be identified and acquired) close to Calamba is to be used as the main site for maintenance and stabling of commuter and long-distance passenger equipment. However, and as noted above, the existing Tutuban depot will be used solely for Commuter Line rolling stock. The Naga Depot will serve to provide a refueling facility, stabling and shunting area and maintenance area for minor or running repairs only for long distance service of rolling stocks. Line sheds at Calamba, Naga and Legazpi will serve to function as an emergency bay and are equipped with basic mechanical and electrical tools and air compressors necessary to perform emergency repairs.

## D. Rolling Stock

Rolling stock for the Long Haul Line shall be diesel multiple units (DMUs) formed into 8-car trainsets, though locomotives may also be used in lieu of DMUs. Both ends of each trainset shall have a driving cab, separated from the passenger riding compartments but accessible through a lockable door. Each passenger car is expected to be equipped with at least 4 bi-parting sliding plug doors, 2 per car side. Trainsets will be designed to permit the movement of passengers between cars.

Figure 4.2: Proposed DMU Trainset Layout



The rolling stock shall be designed to operate safely and efficiently on the track structure. The following table describes track alignment and dimensions affecting rolling stock design:

Table 4.1: Track Alignment and Dimensions

Item	Description
Track gauge:	1,067 mm
Maximum gradient:	3% (0.5% in stations)
Minimum horizontal curve radius:	300 m (main track)
	100 m (depot track)
Minimum vertical curve radius:	3,000 m (main line)

	1,000 m (depot track)
Distance between tracks (c-c):	4.0 m (design)
	3.5 m (minimum)

The final design of the rolling stock shall satisfy the following minimum specifications:

**Table 4.2: Rolling Stock Specifications**

Item	Specification
Train Length	Maximum 94 m
Train configuration	DMc-T-T-DMc
Vehicle configuration	Single bodies with 2 - 2 axle bogies
Passenger capacity	At least 300 per train (all seated)
Body length	Maximum 23,000 mm
Body width	2,900 mm
Overall height	Max. 4,300 mm
Floor height	1,200 mm
Number doors per side	2 per car
Door type	Bi-parting slide door
Door height	1,900 mm
Door width	1,500 mm
Seating arrangement	Coach
Wheel chair space	At least one space per 100 passengers
Maximum speed	100km/h
Maximum acceleration	1.0 m/s <sup>2</sup>
Maximum deceleration of service brake	1.0 m/s <sup>2</sup>
Deceleration of emergency brake	1.3 m/s <sup>2</sup>
Jerk limit	1.1 m/s <sup>3</sup> (Except emergency braking)
Minimum curve radius	50 m
Maximum gradient	4%
Maximum axle load	14 t
Brake system	Disc brakes on all axles
Expected service life	30 years

The quantity of rolling stock shall be sufficient to meet peak hour forecast daily passenger demand. Current estimates call for an initial fleet of 7 trainsets. The acquisition of additional train sets in batches for multi-year planning periods will be subject to passenger demand requirements.

## **E. Signaling and Communications**

The current PNR mainline does not have a signaling system or any infrastructure that would be of any use for the future operations. Stations with sidings have no interlocking devices and points or track switch movements are manually operated with the use of a switch handle or lever.

A reliable and robust communications, control and signaling systems will have to be installed to ensure network capacity, service levels and safe operations. A modern system of train control, such as a global positioning satellite (GPS) / global system for mobile communications (GSM) based signaling and train control system would be suited for the NSRP South Line, as it has minimal wayside infrastructure and can be implemented incrementally as traffic grows. As a first phase, the GSM communications facet of the system could be implemented so as to introduce centralized traffic control. At the same time, either interlockings or remotely controlled power switches can be installed at mainline turnouts.

Only trains with locomotives or DMUs that are properly equipped with CBTC equipment and cab signals will be able to access the line between Calamba and Tutuban under signal indication. If there will be trains which are not properly equipped with CBTC equipment and cab signals on the Commuter Line, it will be necessary to have in place a set of approved and tested rules to govern train movements without signal indication. Movements will only be authorized when there is complete adherence to these rules.

## V. Other Project Parameters

### A. NSRP South Line Cost

The estimated total project cost (excluding financing costs and ROW acquisition) for the NSRP South Line is approximately Php145.20 billion (US3.20 billion). This estimate also excludes capital investments that may be required over the operations period to meet the minimum performance standards and specifications, including the purchase of additional rolling stock to increase the capacity of the system. These costs are inclusive of estimated duties and taxes, and engineering, procurement and construction management costs. They also include costs for the Long Haul Line Expansion.

**Table 5.1: Estimated Project Costs (in PHP billion)**

Cost Item	Commuter Line	LongHaul Line	Long Haul Line Expansion	Total
Fixed Infrastructure	18.40	14.11	30.80	63.31
Stations and Depot	12.84	0.77	0.22	13.83
Signaling and Communications System	31.01	2.73	0.14	33.88
Automatic Fare Collection System	3.82	-	-	3.82
Other Machinery and Equipment	1.70	-	-	1.70
Rolling Stock	17.91	7.68	3.07	28.66
<b>Total (excluding ROW acquisition and financing)</b>	<b>85.77</b>	<b>25.28</b>	<b>34.24</b>	<b>145.20</b>

The table below indicates the organizational split of development costs for the NSRP South Line. It should be noted that annual infrastructure fee payments, which will be comprised of milestone infrastructure payments during the construction period and fixed infrastructure payments during the first 11 years of operation, will be paid by the Government to the Concessionaire. More information is provided under the Concession Structure section of this PIM.

**Table 5.2: Division of Development Costs**

Project Component	Contribution
Railway Infrastructure	Private
Electro-mechanical Works (including Automatic Fare Collection System)	Private
New Rolling Stock	Private
Right-of-way Acquisition	Government
Operation and Maintenance	Private
Rolling Stock	Private
Machinery and Equipment	Private
Real Property Tax for Core Operations	Government

## **B. Right-of-Way**

The proposed alignments of the Long Haul Line and Long Haul Line Branch will follow the existing PNR ROW from Tutuban to Legazpi (in the case of the Long Haul Line) and from Calamba to Batangas (in the case of the Long Haul Line Branch). The GOP must secure the ROW for the Long Haul Line Extension.

Informal settlers and/or project affected persons will become physically displaced or relocated as a result of enforcing the PNR's ROW. Relocation of affected persons and utilities and clearing of the ROW will be a GOP obligation under the Project.

There is substantial encroachment by informal settlers on the existing alignment from Calamba to Legazpi and on the Batangas branch line. A Land Acquisition and Resettlement Framework has been prepared to ensure that all affected persons share in Project benefits through compensation and/or rehabilitation programs in an effort to improve or at least maintain living conditions and income earning capacity at pre-Project levels. DOTC and PNR are in the process of tendering for the preparation of a Land Acquisition and Resettlement Action Plan to further prepare for any additional ROW acquisition and resettlement required for the Project. In some areas, for example with the Connector Road and the MMSS3, ROW will have to be shared with other government projects.



## VI. Traffic Forecasts and Pricing

### A. Long-Haul Line

Long Haul Line passenger traffic and demand forecasts presented below are based on data collection and analysis administered by CPCS.

The passenger traffic assessment and forecasting took the following key steps:

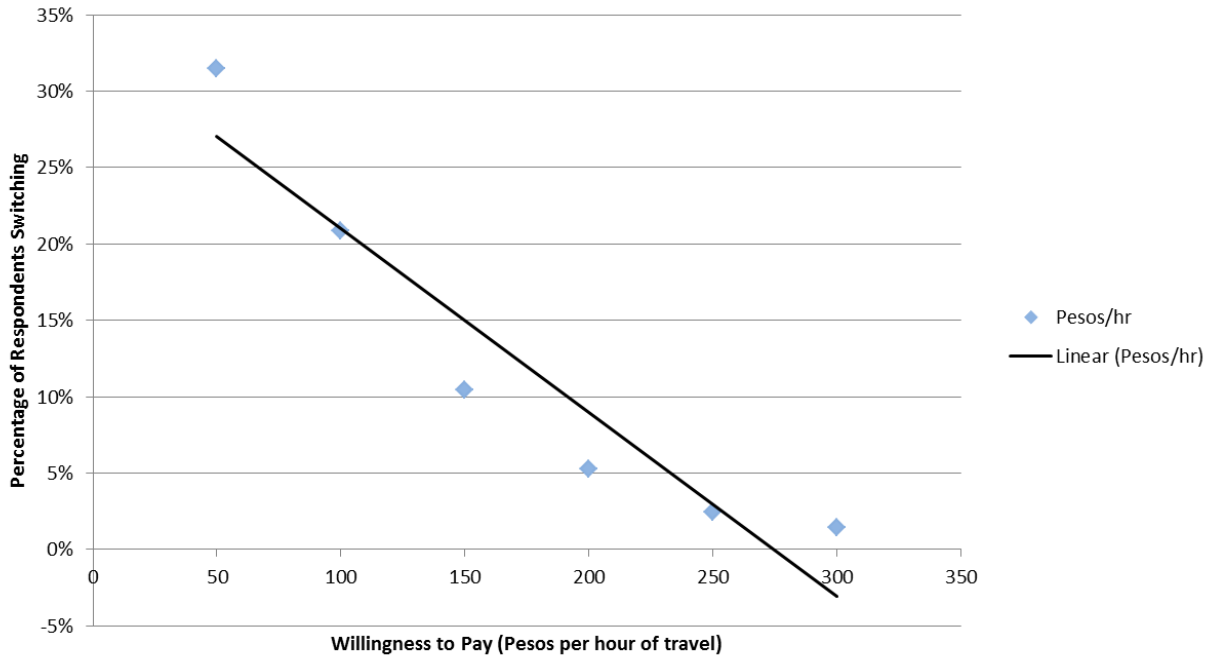
1. Assessment of the overall traffic volumes by origin/destination that could potentially use the proposed railway (i.e. assessment of current movements of people by public buses, private vehicles, and airplanes);
2. Estimation of capture rate for the railway; and
3. Estimation of future passenger demand.

In assessing potential passenger demand, data were collected through surveys of air, public bus and private vehicle passengers. Air passenger data were also collected through the Civil Aviation Authority of the Philippines and data for public bus and private vehicle passengers were sourced by primary research and from the Metro Manila Urban Transportation Integration Study Update and Capacity Enhancement Project (“MUCEP”) in 2012. CPCS developed and administered surveys to collect data on a primary basis where there were data not available from the MUCEP, such as overall bus passenger trip numbers and capturing passengers' willingness to pay to switch transportation modes. Population growth estimates from the Philippines National Statistical Coordination Board were included in the assessments. A tailored demand model was developed to scale data collected to reflect existing traffic flows.

**Table 6.1: Demand Model Data**

	Public Bus	Private Vehicle	Air Passengers
Average Cost of Trip (pesos)	310	235	2,300
Average Trip Duration (hrs)	5.2	3.1	N/A
Average Trip Length (km)	217	N/A	458

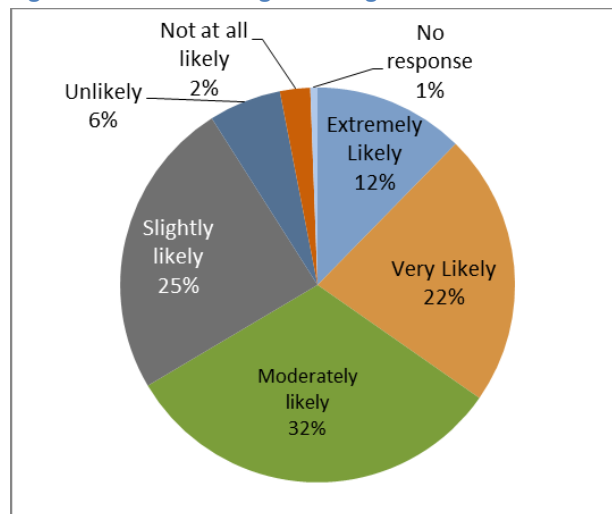
Figure 6.1: Passenger Willingness to Pay for Rail Transportation



From the bus terminal survey, it was determined that approximately 56% of bus passenger travel on Saturday and Sunday with the remaining 44% traveling during weekdays.

When asked if they would consider using a train instead of bus, the responses received are quite positive, with 12% saying it is “extremely likely” that they would take a train, 22% “very likely”, and another 32% “Moderately likely”. The response breakdown may be seen below.

Figure 6.2: Bus Passenger Willingness to Switch Modes



Source: CPCS Provincial Bus Passenger Survey.

The following are the base scenario passenger forecasts for the period of 2020-2050. These figures assume the Batangas branch line and Matnog extension have been completed but are not inclusive of ramp up to full operations in the first few years of operation.

**Table 6.2: Long- Haul Rail Passenger Forecasts**

	2020	2030	2040	2050
One-way Trips / Day	18,624	21,399	23,638	26,111
Passenger km/day (millions)	4.28	4.92	5.44	6.01

Table 6.3 provides an analysis of ridership per line segment. These figures are for one-way traveling Year 1 and are not subject to the ramp-up.

**Table 6.3: Daily Ridership by Line Segment (One-Way)**

	From	To	Ridership
<b>Long Haul Line</b>	NCR	Calamba	3,847
	Calamba	Lucena City	2,363
	Lucena City	Daet	1,432
	Daet	Naga	1,332
	Naga	Legazpi	1,181
<b>Batangas Branch</b>	Batangas	Calamba	1,489
<b>Matnog Extension</b>	Legazpi	Matnog	858

Source: CPCS Model

Table 6.4 provides an analysis of demand by Origin-Destination pairs. This analysis examined major locations along the rail corridor and output the number of estimated passengers in year 1 (ignoring any ramp-up). Again, the National Capital Region (“NCR”) is seen as the core hub with most trips starting and terminating there.

**Table 6.4: Demand Analysis by Origin-Destination**

Total one-way trips per day Year 1	NCR	Batangas	Lucena City	Daet	Naga	Legaspi	Sorsogon	Total
NCR	-	1,489	946	63	144	323	858	<b>3,822</b>
Batangas	1,489	-	4	-	-	-	-	<b>1,493</b>
Lucena City	946	4	-	37	8	-	-	<b>995</b>
Daet	63	-	37	-	-	-	-	<b>100</b>
Naga	144	-	8	-	-	-	-	<b>152</b>
Legaspi	323	-	-	-	-	-	-	<b>323</b>
Sorsogon	858	-	-	-	-	-	-	<b>858</b>
<b>Total</b>	<b>3,822</b>	<b>1,493</b>	<b>995</b>	<b>100</b>	<b>152</b>	<b>323</b>	<b>858</b>	<b>7,742</b>

Source: CPCS Model

## B. Commuter Line

The following charts capture estimated passenger demand figures for the benchmark years of 2020, 2030 and 2040. The annual incremental demand increase between 2020-2030 is 2.0% and between 2030-2040 is 3.3%.

**Figure 6.3: CR One-way Trips / Day**

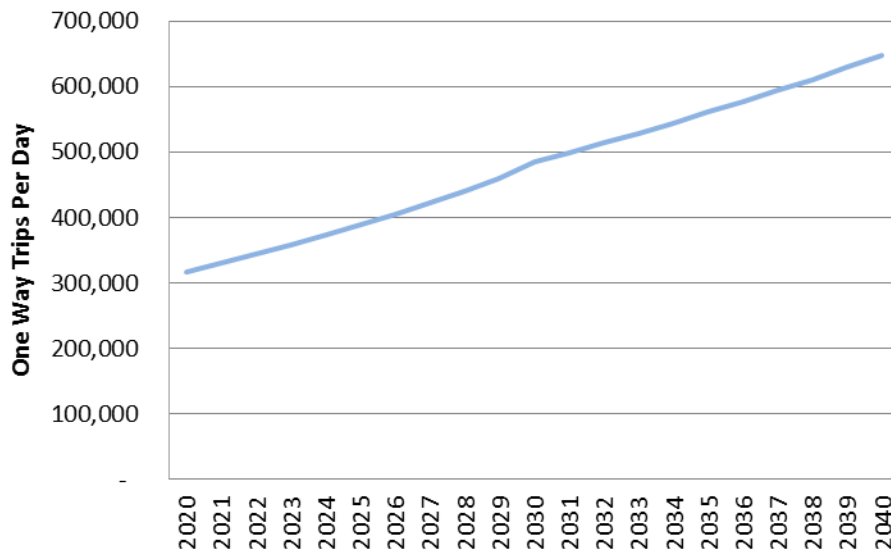


Figure 6.4: CR Passenger km/year (millions)

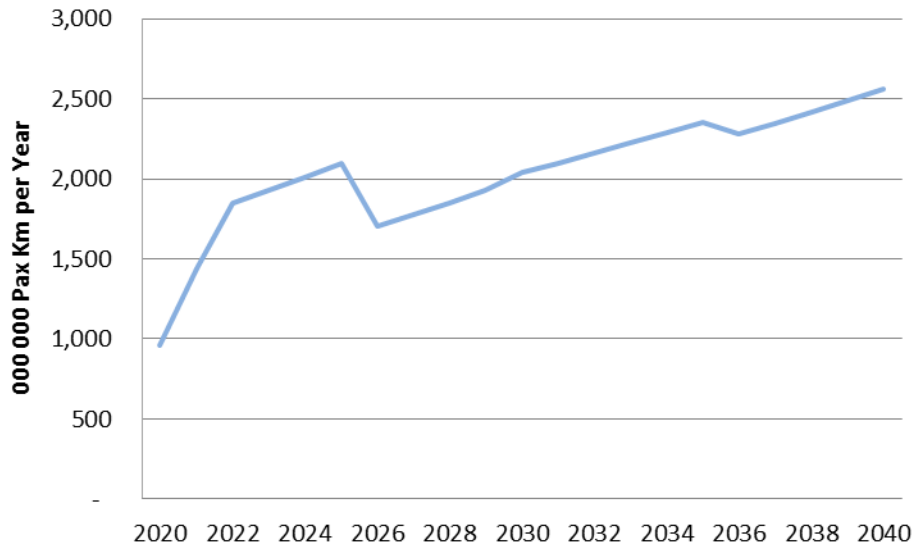


Figure 6.4 shows dips between years 2025 / 2026 and 2035 / 2036. The transport model incorporates the effect of all planned or contemplated transport infrastructure projects in the Metro Manila area. Including these future projects into the model resulted in decreases in rider ship numbers due to an increase in trip length due to competing projects.

### C. Fare Setting

Fares will be determined and set by DOTC and PNR.

#### 1. Long-Haul Line

The fare structure proposed for the Long Haul Line is based on fares roughly equivalent to existing bus fares. The existing Land Transportation Franchising & Regulatory Board (LTFRB) prescribed fare for air-conditioned buses is PHP 11 for the first five kilometers, and PHP 1.55/km to 2.2/km thereafter (depending on class of vehicle). NSRP South Line fares will likely be somewhat higher due to greater comfort/safety with train travel, greater schedule reliability and a surveyed willingness-to-pay for train travel over bus.

## 2. Commuter Rail

The fare structure proposed for the Commuter Line is based on the Light Rail Transit Line 1 (“LRT1”) fare structure as contained in the contract for the LRT 1 Cavite Extension, Operations and Maintenance PPP project (i.e., CAVEX project). This is appropriate because of the similarities between the LRT1 service and the service between Tutuban and Calamba. Base fares assumed are PHP 12.13 for Fixed Fare and PHP 1.10 for Variable Fare (at 2016, excluding value added tax). Every two years the fares will be adjusted up at the a rate of 10.25% while inflation rebasing is done every four years at the prevailing inflation rate (within a range of 3% to 7%) based on the 2015 Inflation Rebasing Factor of 1.042.

## **VII. Procurement Process**

### **A. Legal Basis for Procurement**

The competitive bidding for the Project will be conducted in accordance with the procurement rules and procedures for public bidding set out in the BOT Law and its Revised IRR.

### **B. Nature of the Procurement Process**

The bidding for the Project will follow the two-stage / two-envelope system for procurement pursued through the solicited mode under the BOT law and the Revised IRR. Under the two-stage / two-envelope system, prospective bidders are first pre-qualified based on minimum legal, technical, and financial eligibility requirements laid down by the BOT Rules and the Revised IRR as well as those prescribed by the Pre-Qualification, Bids, and Awards Committee (PBAC) formed by the DOTC and PNR. Only those prospective bidders who pre-qualify shall be deemed eligible to submit their bid, composed of their technical and financial proposals, to the PBAC for consideration. The qualification documents and the bid of each prospective bidder will be evaluated based on their completeness, adequacy, and compliance with the prescribed evaluation criteria.

The general procedure for the bidding will be as follows:

- a. PBAC will request prospective bidders, by publication, to submit pre-qualification bids. Each prospective bidder must submit its pre-qualification documents on the specified pre-qualification documents submission date in order to prove its compliance with the pre-qualification requirements, as described in the invitation to pre-qualify and bid and as prescribed by the BOT Law and its Revised IRR. Prior to the qualification documents submission date, the PBAC may also conduct a pre-qualification conference in Manila to which all prospective bidders will be invited.
- b. After reviewing the qualification documents, the PBAC will determine which of the prospective bidders fulfill the prescribed qualification requirements and inform all such pre-qualified bidders. Only pre-qualified bidders will be able to access the Project data room and be eligible to bid for the Project. The PBAC shall also inform all disqualified bidders in writing of their failure to qualify and the reasons for their disqualification from the bidding.

- c. After the pre-qualification evaluation and issuance of notice of pre-qualification are completed, the PBAC will issue to all pre-qualified bidders the bidding documents which will consist of (a) the Invitation to Bid, (b) the Instructions to Bidders and its Annexes, and (c) the draft Concession Agreement and its Annexes and other Project-related agreements, and will provide the pre-qualified bidders with access to the Project data room. The Instructions to Bidders shall provide in detail the form and required contents of the bids, the detailed procedures for bid submission, bid evaluation, and post-bid requirements. Pre-qualified bidders will also be given the opportunity to comment on the draft Concession Agreement and its annexes and other Project-related agreements. The PBAC may consider these comments in modifying and refining the Concession Agreement leading up to the issuance of the final Concession Agreement upon which the pre-qualified bidders must base their bids. This will help ensure that binding, unconditional bids are submitted on the basis of the final Concession Agreement.
- d. Prior to the bidding, the PBAC will conduct a pre-bid conference to which all pre-qualified bidders will be invited. During the pre-bid conference, pre-qualified bidders may seek clarification regarding any requirements and / or terms and conditions of the bidding documents. Independent of the pre-bid conference, pre-qualified bidders may also submit written requests for interpretation as to the meaning or clarification of any data or requirement or any part of the bidding documents.
- e. On the bid proposals submission date, the pre-qualified bidders will be asked to submit their bids consisting of their technical and financial proposals, a bid security, and other supporting documents.
- f. The technical and financial proposals of pre-qualified bidders will be submitted in two (2) separately sealed envelopes to the PBAC on the bid proposals submission date. The technical proposals of pre-qualified bidders will be opened first and evaluated by the PBAC on a pass / fail basis. Pre-qualified bidders will be informed as to whether their technical proposals passed the evaluation. The financial proposals of pre-qualified bidders who fail to pass the technical evaluation shall be returned unopened together with their bid securities and a letter from the PBAC stating the reasons for their disqualification from the bidding. The bidders who have qualified for the evaluation of the financial proposal shall be notified by PBAC of the date, time and place of the opening of the envelopes for the financial proposal.
- g. The financial proposals of pre-qualified bidders who pass the technical evaluation will be opened and evaluated by the PBAC based on the criteria to determine the most advantageous bid for



the GOP as provide in the Revised IRR. The specifics on the criteria for the evaluation of the financial proposals shall be described in the instructions to bidders.

- h. The pre-qualified bidder with the most advantageous bid will be the winning bidder, and DOTC and PNR shall award the Project to the winning bidder, subject to its compliance with certain requirements in the notice of award issued by the DOTC and PNR.

## **VIII. Concession Structure**

### **A. Legal Framework for Concession**

The BOT Law provides the legal framework for government agencies to enter into PPP contracts with a qualified private sector party for the development and implementation of government infrastructure or development projects. In particular, the BOT Law and its Revised IRR describe the requirements and procedures for the preparation, approval, tendering, and implementation of PPP / BOT projects.

The BOT Law provides the DOTC and PNR with a valid and tested legal framework to undertake the Project and the awarding of the Concession Agreement. To be eligible as an implementing agency under the BOT Law, the government entity must be first authorized by law or its charter to undertake infrastructure or development projects. The project concerned must also be eligible for PPP / BOT implementation under the same law. The DOTC, PNR, and the NSRP South Line Project satisfy these legal requirements.

### **B. Project Structure**

The Project will be implemented as either a Build-Transfer-Operate-Maintain (BTOM) or Build-Gradually Transfer-Operate-Maintain (BGTOM) structure (described below). In a BTOM scheme, the private sector party or Concessionaire will be required to construct, rehabilitate, and supply the infrastructure facility and assume construction-related risks arising from cost overruns, delays, and other performance risks connected to construction. Once the facility is commissioned satisfactorily, title over the facility is transferred to the implementing agency, but the private sector party operates and maintains the facility on behalf of the implementing agency pursuant to the terms of the concession agreement.

The NSRP South Line may also be awarded and implemented as a BGTOM. Under the BGTOM structure, the Concessionaire will construct, operate, and maintain both the commuter railway and the long-haul railway in a vertically integrated structure. That is, a single Concessionaire will be responsible for construction, rehabilitation, supply, as well as the operations and maintenance for both lines. The construction period for the Project will be four (4) years, subject to the timing of ROW delivery.

Under a BGTOM scheme, title over the facility will be gradually transferred during the construction period, whereby the Concessionaire will transfer the ownership of a portion of the NSRP South Line after it is constructed in exchange for a determined percentage of the construction costs. The remaining balance for financing, constructing, operating, and maintaining the Project will come in three forms:

- a. Farebox revenues. Concessionaire will be authorized to charge and collect fares from end users as approved by the regulator for the operating period for each line as set out in the Concession Agreement.
- b. Ancillary revenues. Concessionaire shall be permitted to maximize revenue potential from other commercial revenue sources for the operating period as set out in the Concession Agreement.
- c. Infrastructure Fees/Availability Payments. To provide support to the Concessionaire, Infrastructure fees/ availability payments will be paid to the Concessionaire for the first four (4) years of construction and the first eleven (11) years of operations.

The principal terms and conditions governing the transaction will be set out in the Concession Agreement, which will detail the obligations of the DOTC, PNR, and the Concessionaire in respect of the development and operation of the Project, and other mutual undertakings, covenants, and conditions to be performed or fulfilled by each of the parties.

The GOP further recognizes the need to extend fiscal support to the Project in order to reduce the impact on fares and to enhance the viability and bankability of the Project. For the NSRP South Line, in addition to the infrastructure fees described above, the GOP will pay for certain costs of the Project, such as acquisition of right-of-way, resettlement costs, real property tax for the core facilities along the alignment, and provision of depot space at key locations.

The GOP shall not guarantee the ridership level but shall ensure that fares will be adjusted based on a pre-agreed formula to be defined in the Concession Agreement.

## IX. Key Commercial Features of the Concession Agreement

Below are some key commercial terms contemplated for the Concession Agreement:

1. Grant of a 34-year concession period comprised of four year construction period (subject to ROW delivery) and 30-year operation period. The GOP is prepared to commit to the timing of ROW delivery. The concession period would start from the effectivity of the Concession Agreement.
2. The Concession Agreement will require the Concessionaire to undertake the following and entitle the Concessionaire to certain payments and revenues identified below:
  - Design the civil works for the Commuter Line, the Long Haul Line, and the Long Haul Line Expansion;
  - Construct the Commuter Line inclusive of the Detailed Engineering Design;
  - Rehabilitate, rebuild, or construct as applicable, the Long Haul Line and Long Haul Line Expansion in a phased manner based on ROW delivery;
  - Operate and maintain the NSRP South Line to defined level of performance standards;
  - For the entire NSRP South Line, receive Infrastructure Fees / Availability Payments corresponding to pre-determined construction milestones during construction and equal annual amounts during the first eleven (11) years of operations;
  - Collect and retain the authorized fares from users of the entire NSRP South Line or receive revenues from fares collected by a third party operating the Automatic Fare Collection System;
  - Collect and retain income from other sources in relation to the Project (e.g. advertising, commercial space leases, other commercial developments, etc.); and
  - Turn over the NSRP South Line in good condition to PNR at the end of the operating period. These conditions would be stated in the hand-back provisions of the Concession Agreement.
3. DOTC and PNR obligations shall include but shall not be limited to the following:
  - Procure and deliver in a timely manner the required ROW, including clearing of obstructions/utilities and relocation of affected persons;

- Assist in securing necessary national government regulatory approvals and other consents for the Project;
- Ensure smooth interoperability and interface agreements with other proposed rail and road projects that have a direct impact on delivering the defined level of performance standards;
- Turn-over pre-identified existing assets for use in the Project;
- Conduct and ensure timely implementation of on-going and planned works on the line;
- Make the various required payments to the Concessionaire in amounts and at dates to be defined in the Concession Agreement; and
- Provide other fiscal support.

The specific obligations of DOTC and PNR, where applicable, shall be disclosed in the Concession Agreement.

4. Other commercial points include:

- DOTC and PNR will set the opening fares with approved rates, including the indexation method, which will be disclosed during the tender process;
- A performance regime related to system reliability and availability, customer care, health and safety, and security, among others, will be defined in the Concession Agreement and payment will be varied based on performance measured under a variety of Key Performance Indicators (KPIs). These KPIs would be subjected to both incentive as well as abatement regimes under the Concession Agreement;
- Force Majeure shall be a risk that will be shared by the Concessionaire and the DOTC / PNR; and
- Customary termination provisions (applicable to both the Concessionaire as well as DOTC/PNR) and the obligation to buy unpaid assets upon termination.

## X. Investment Framework

### A. Taxation

Under Republic Act No. 9337 (2004), which amended the National Internal Revenue Code of 1997 (the “Tax Code”), domestic corporations are taxed at thirty percent (30%) of income from all sources within and without the Philippines less any deductions allowed under the Tax Code.

Resident foreign companies and non-resident foreign companies are likewise taxed at thirty percent (30%) of income. For resident foreign companies, this covers income from all sources within the Philippines less any deductions allowed under the Tax Code. For non-resident foreign companies, this is levied in the form of a final withholding tax on gross income from all sources within the Philippines which includes dividends, loan interest, royalties, and management fees. Capital gains tax is imposed on gains realized from the disposition of shares of stock in a domestic corporation other than through the local stock exchange.

If the country of domicile of the foreign company has an existing tax treaty with the Philippines, an exemption from the thirty percent (30%) income tax may be availed of in respect of income classified as business profits if the foreign company does not or is not deemed to have a permanent establishment in the Philippines; in the case of dividends, interest and royalties, the applicable treaty rate applies, which ranges from ten percent (10%) to twenty-five percent (25%). The Philippines currently has tax treaties with 39 countries such as the United States, Japan, France, and United Kingdom, and other European and Asian countries. A tax treaty relief application must be filed with the Bureau of Internal Revenue prior to availing of benefits under an applicable tax treaty.

In addition, a common carriers tax of three percent (3%) is levied on quarterly gross receipts. Further, in line with the objective of the GOP to accelerate the sound development of its national economy, Executive Order No. 226, otherwise known as “Omnibus Investments Code” extends incentives to projects falling under its Investment Priorities Plan (“IPP”). The current IPP includes PPP projects and public infrastructure covering, among others, mass rails; hence, the Concessionaire may register with the Board of Investments (BOI) pursuant to the Omnibus Investments Code. A BOI registered entity is entitled, among others, to the following fiscal incentives subject to certain terms and conditions: (a) income tax holiday; (b) tax credit on raw materials, supplies and semi-manufactured products (for export producers only); (c) additional deduction from taxable income for (i) labor expense; and (ii) necessary and major infrastructure works (cannot be simultaneously

enjoyed with the ITH incentive); (d) exemption from export tax, duty, impost and fees; and (e) modified duty rate for capital equipment, spare parts and accessories.

## **B. Foreign Exchange**

Foreign exchange brought into or sent out of the country by foreign corporations operating in the Philippines may be traded freely and with few restrictions. Foreign investments and profits can also be repatriated in foreign exchange with minimal regulation from the Bangko Sentral ng Pilipinas (“BSP”). Foreign investments need not be registered with the BSP unless the foreign exchange needed to service the repatriation of capital and the remittance of dividends, profits and earnings which accrue thereon shall be purchased from the local banking system. BSP registration requires proof of inward remittance of currency used to fund the investment. Meanwhile, financing schemes which would involve transfer of ownership after a certain period of time as in the case of BOT, Build and Transfer (BT) arrangements shall be registered with the BSP to be eligible for servicing using foreign exchange purchased from the banking system.

## **C. Foreign Ownership and Management**

The Concessionaire or its appointed facility operator of the NSRP South Line must comply with any nationality and other ownership requirements prescribed under applicable Philippine laws and those in its country of origin or principal place of business.

The 1987 Philippine Constitution expressly reserves certain areas of investments for citizens of the Philippines or corporations or associations with a required minimum percentage of ownership of capital by citizens of the Philippines. Of particular importance to the Project is the foreign ownership restriction on the operation of public utilities, including rail systems and associated infrastructure.

Only citizens of the Philippines or corporations or associations organised under the laws of the Philippines and at least 60% of whose capital is owned by citizens of the Philippines may be granted a concession to operate a public utility, which concession shall not exceed a period of 50 years and subject to amendment, alteration, or repeal by Congress when the common good so requires. The moment for determining the requisite Philippine nationality is when the Concessionaire applies for a concession for the Project.

A distinction should be made between operation of the public utility and ownership of the facilities of a public utility. The right to operate a public utility may exist independently and separately from the ownership of the facilities thereof. As held in the case of *Tatad vs. Garcia* (G.R. No. 114222, 6 April 1995), a foreign corporation may own the facilities comprising a public utility as long as the operation of the public utility is undertaken by a corporation at least 60% of whose capital is owned by citizens of the Philippines. Thus, the Concessionaire, or its subcontractor, who will operate the Project, must meet the Philippine nationality requirement.

The extent of foreign participation in nationalized or partially nationalized activities, such as the operation of a public utility, is also governed by Commonwealth Act No. 108 or the “Anti-Dummy Law,” which bans non-Philippine nationals from being elected or appointed to management positions as president, vice-president, secretary, treasurer, etc. in such activities.



## **XI. Indicative Timetable**

### **Tendering Period**

- |              |   |  |
|--------------|---|--|
| July (2015)  | - | Publication of Invitation to Pre-Qualify and Bid               |
| August       | - | Pre-Qualification Conference                                   |
| October      | - | Submission of Qualification Documents                          |
|              | - | Notice of Pre-Qualified Bidders                                |
|              | - | Release of Invitation to Bid Documents                         |
| November     | - | Release of the draft Concession Agreement                      |
| November     | - | Pre-Bid Conference   |
| December     | - | Release of Final Concession Agreement to Pre-Qualified Bidders |
| March (2016) | - | Submission of Bid  |
| May          | - | Issuance of Notice of Award                                    |
|              | - | Signing of the Concession Agreement                            |
| 2Q 2017      | - | Financial Close  |

### **Construction Period**

- |         |   |   |
|---------|---|---|
| 2Q 2017 | - | Start of construction of NSRP South Line                              |
| 2Q 2021 | - | Construction complete (subject to ROW delivery)                       |
|         | - | Start of full operations of NSRP South Line (subject to ROW delivery) |