

JTTRI International Seminar on Railway

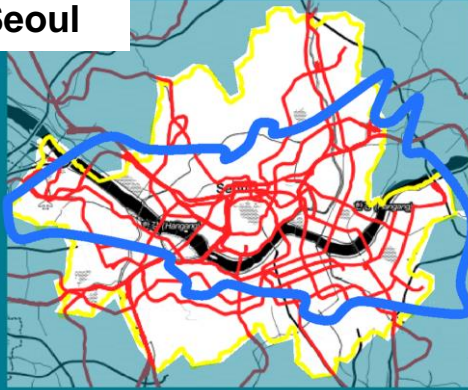


Department of Transportation

12 February 2020
New World Makati Hotel

Rail Transportation in Comparable Cities: Massive Infrastructure Gap

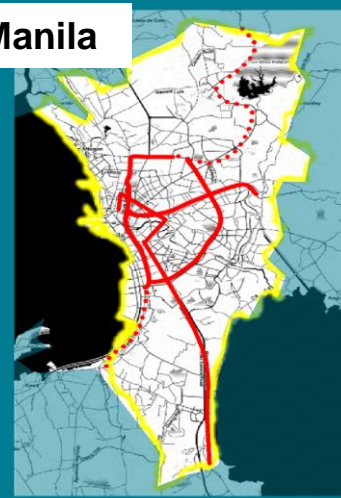
Seoul



Tokyo



Manila



Shanghai



City	Area (sq. km)	Population	Density (Pop/sq. km)	Km of rail	Ridership
Manila	620	12M	19,000	85 (+45) including PNR	1.3 M
Tokyo	620	9M	14,000	700	30 M
Shanghai	500	10M	20,000	590 (+100)	8.4 M (Metro)
Seoul	605	10M	16,000	390 (+100)	7.2 M (Metro)

Optimal Funding Mix: Hybrid Funding

Funding for projects can be done in any combination of the four. Land Value Capture Revenue can be made possible through one or many of the mechanisms previously outlined.



**Government of the
Philippines**

and/or

Local Government Units



Private Sector



Lending Partner/s



**Land Value Capture
Revenue**

Optimal Funding Mix: Hybrid Funding



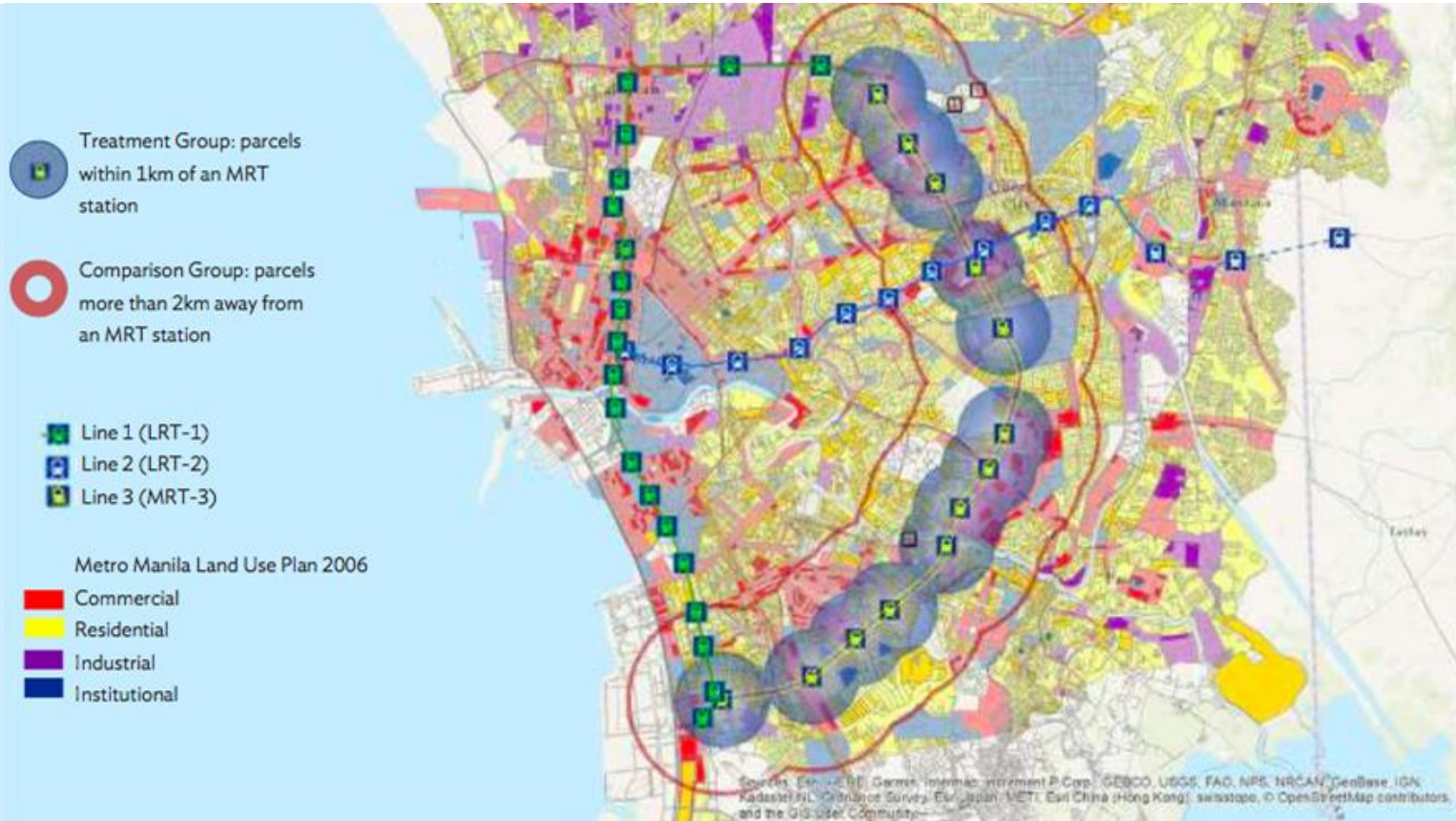
How Do Mass Transit Investments Affect Land Values? Evidence from MRT-3

Abdul Abiad and Jill Adona
Asian Development Bank
September 2018



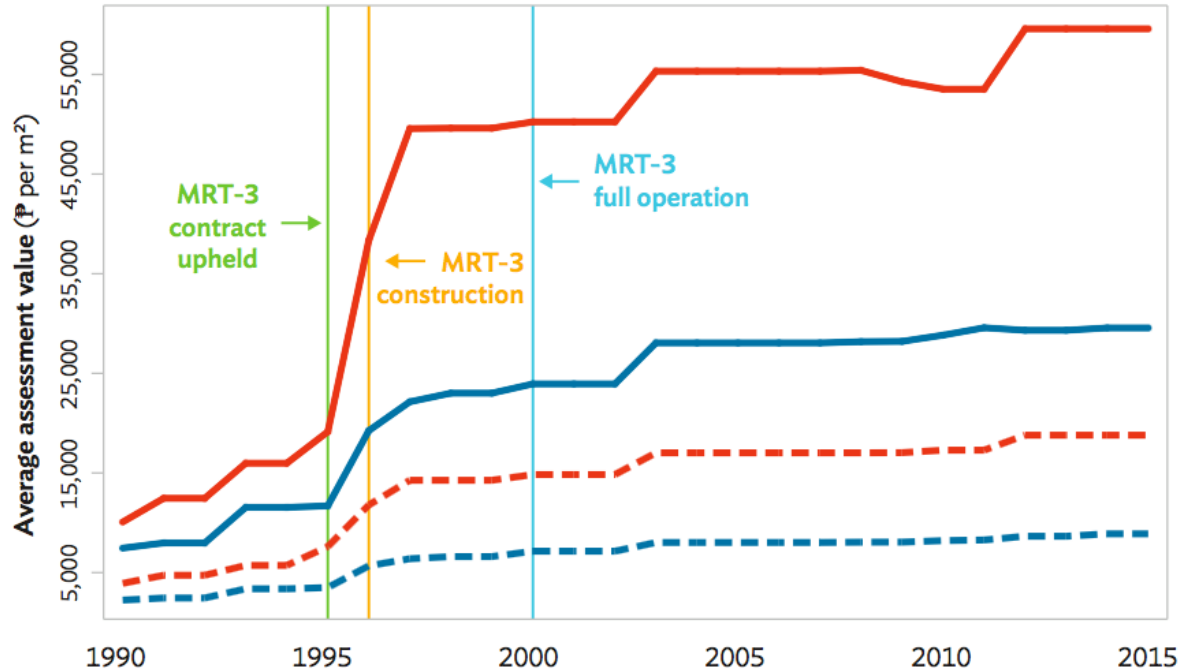
The views expressed are those of the authors and do not necessarily reflect the views and policies of the ADB, its Board of Governors, or the governments they represent.

Land Value Uplift in the Philippines: Evidence from Manila's MRT 3



Land Value Uplift in the Philippines: Evidence from Manila's MRT 3

Evolution of Commercial and Residential Land Values within 1-km and 2-km the MRT 3 Station



Source:
Abiad, A. (2019). Sustaining transit investment in Asia's cities.

- Commercial parcels within 1 km of an MRT station
- Commercial parcels more than 2 km away
- - - Residential parcels within 1 km of an MRT station
- - - Residential parcels more than 2 km away

Land Value Uplift in the Philippines: Evidence from Manila's MRT 3

Conclusions and Policy Implications

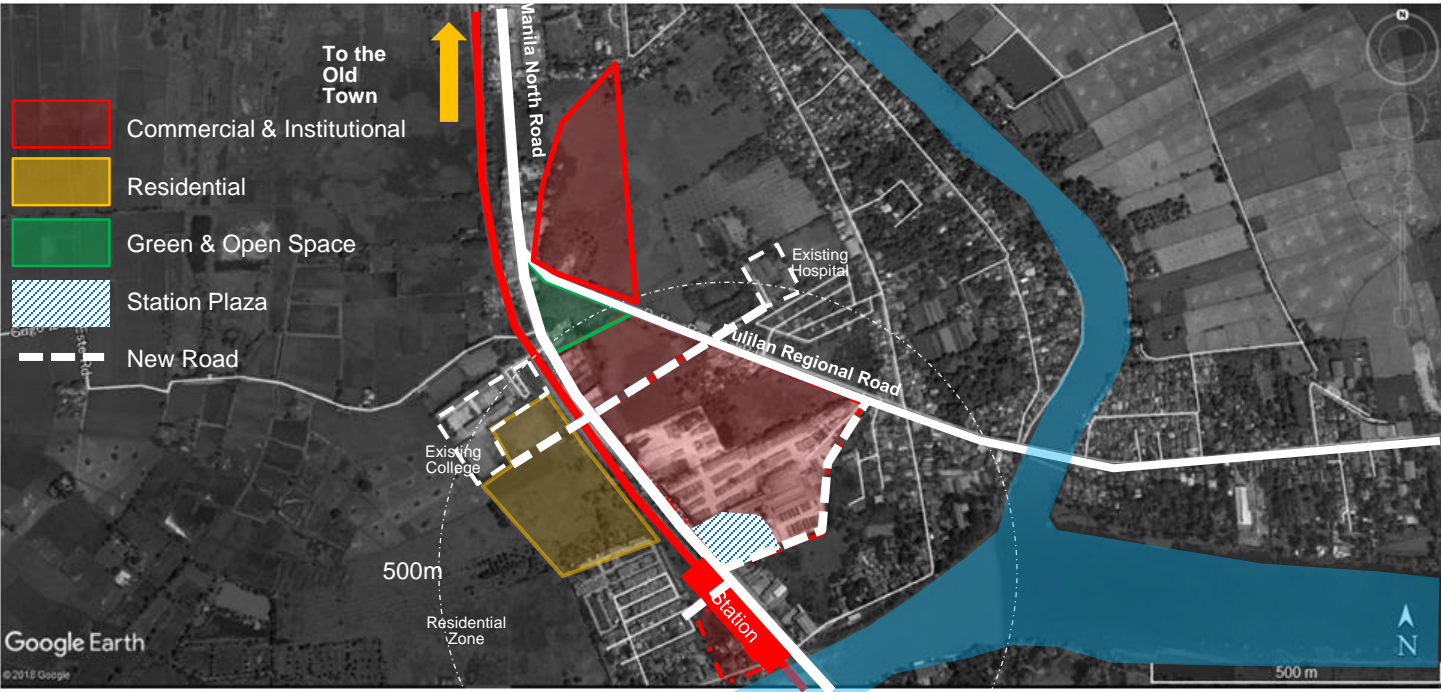
MRT-3 caused residential and commercial land values within 1 km of stations to increase more than in other residential and commercial areas in Metro Manila—by PHP3,700-6,300 per sq. m. and PHP14,000-22,100 per sq. m., respectively

About half of the incremental increase in land values due to MRT-3 occurred even before completion

On aggregate, the incremental impact of MRT-3 on land values within 1 km of stations is close to PHP180 billion, or about US\$3.4 billion

Proposed TOD Concept of NSCR Calumpit Station (Preliminary)

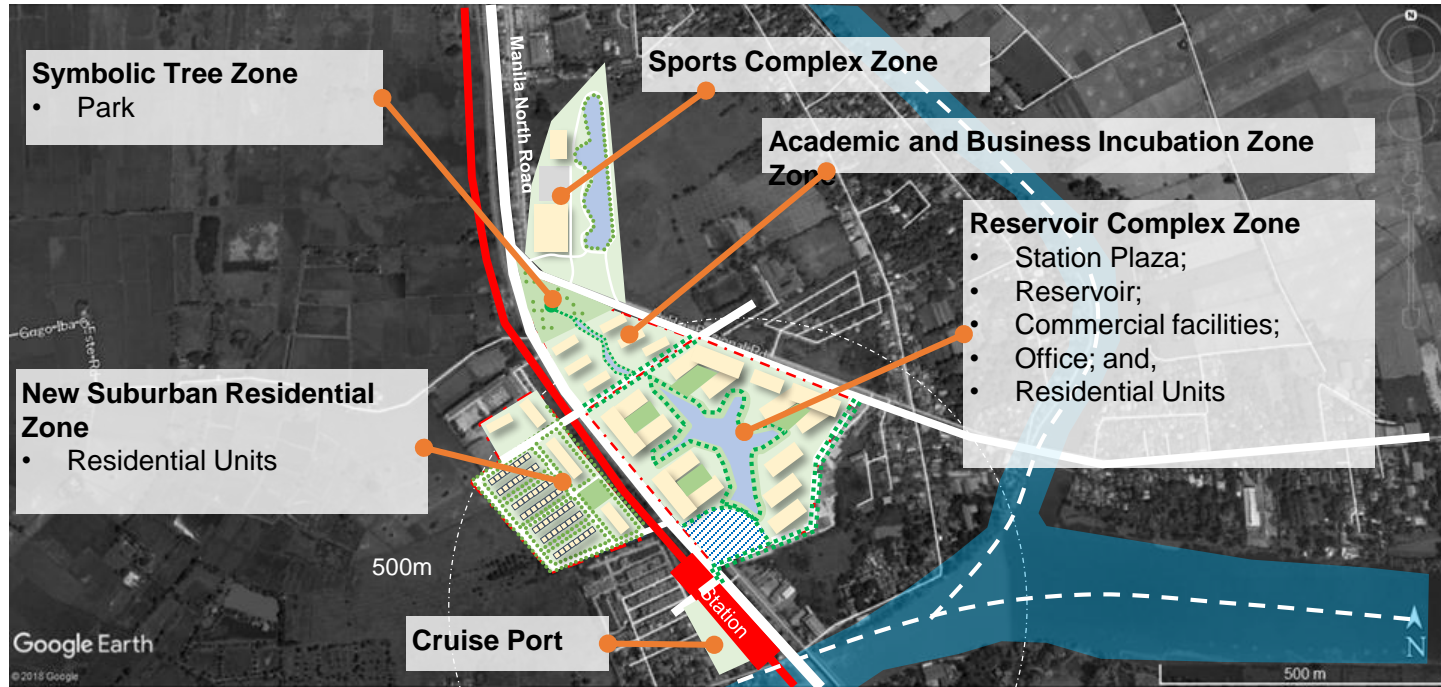
Land Use Image of TOD Area



Source:
N2SC JICA Design Team

Proposed TOD Concept of NSCR Calumpit Station (Preliminary)

Basic Structure of TOD Area



Proposed TOD Concept of NSCR Calumpit Station (Preliminary)

Image of TOD Area



View towards North

Calumpit Station

Proposed TOD Concept of NSCR Angeles Station (Preliminary)

Land Use Image



Source:
N2SC JICA
Design Team

Proposed TOD Concept of NSCR Calumpit Station (Preliminary)

Image TOD Area



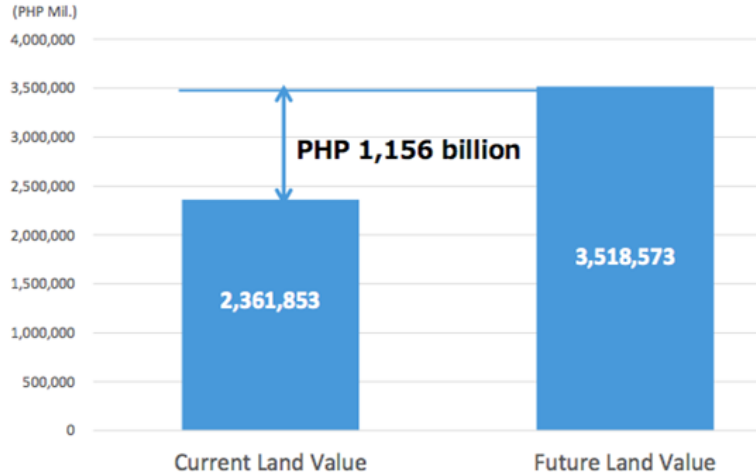
View towards North East

Source:
N2SC JICA Design Team

Angeles Station

Financing Scheme: Estimated Land Value Impact of the North-South Commuter Railway Project

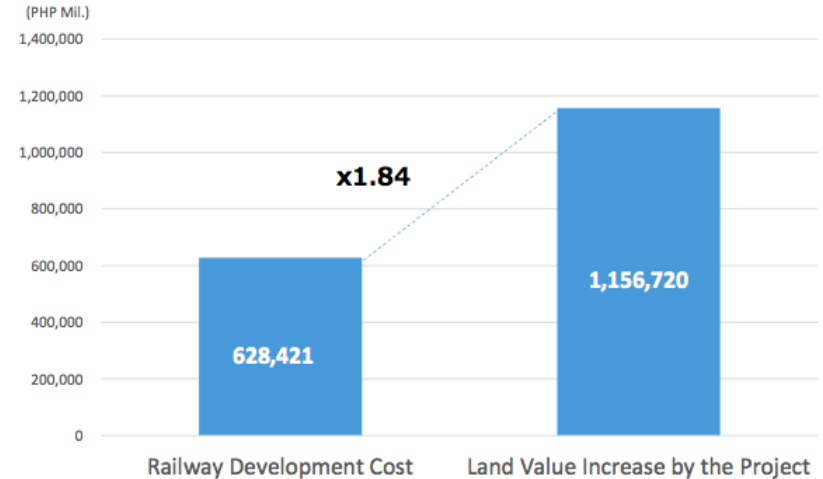
Estimation of Land Value Increase in the area of MCRP and NSRP-South Commuter Station*



* 500m to 3km radius of 25 station land area are the targets of the estimation.

*Other factors such as economic growth of the Philippines and inflation are not considered in the estimation.

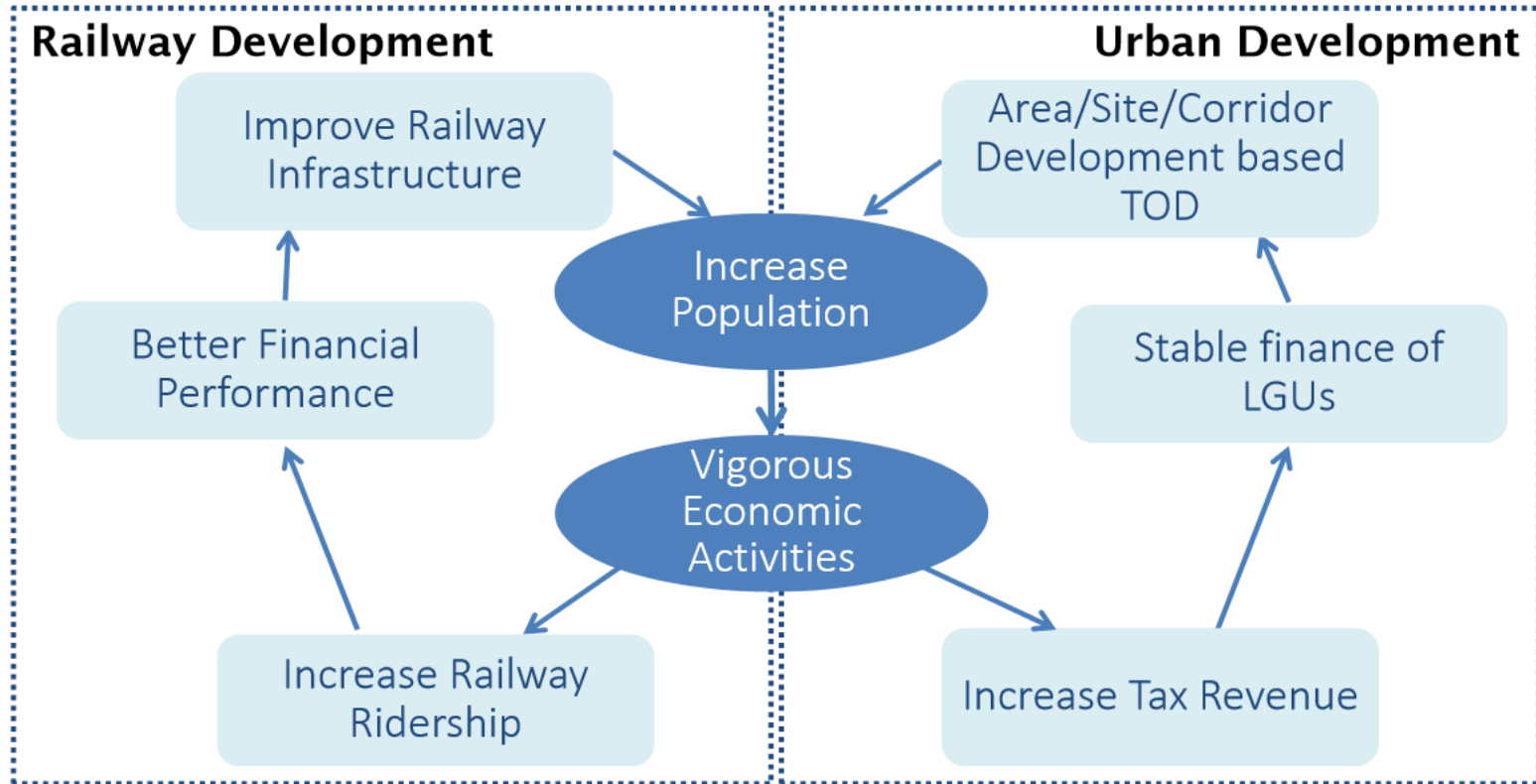
Comparison of the Railway Development Cost (MCRP and NSRP-South Commuter), and the Consequent Expected Land Value Increase



Financing Scheme: Special Infrastructure Levy

- Special Infrastructure Levy (SIL). The Local Government Code (R.A. 7160, Sec. 240) allows an LGU to impose a special levy on the lands benefited by public works projects or improvements funded by that LGU.
- SIL Features
 - SIL shall not exceed 60% of total project cost, including land acquisition.
 - SIL shall be imposed through a Local Tax Ordinance.
 - SIL proceeds directly accrue to the general fund of the LGU.
 - SIL must be levied yearly (min: 5 years, max: 10 years).

Rail Investment and Transit Oriented Development

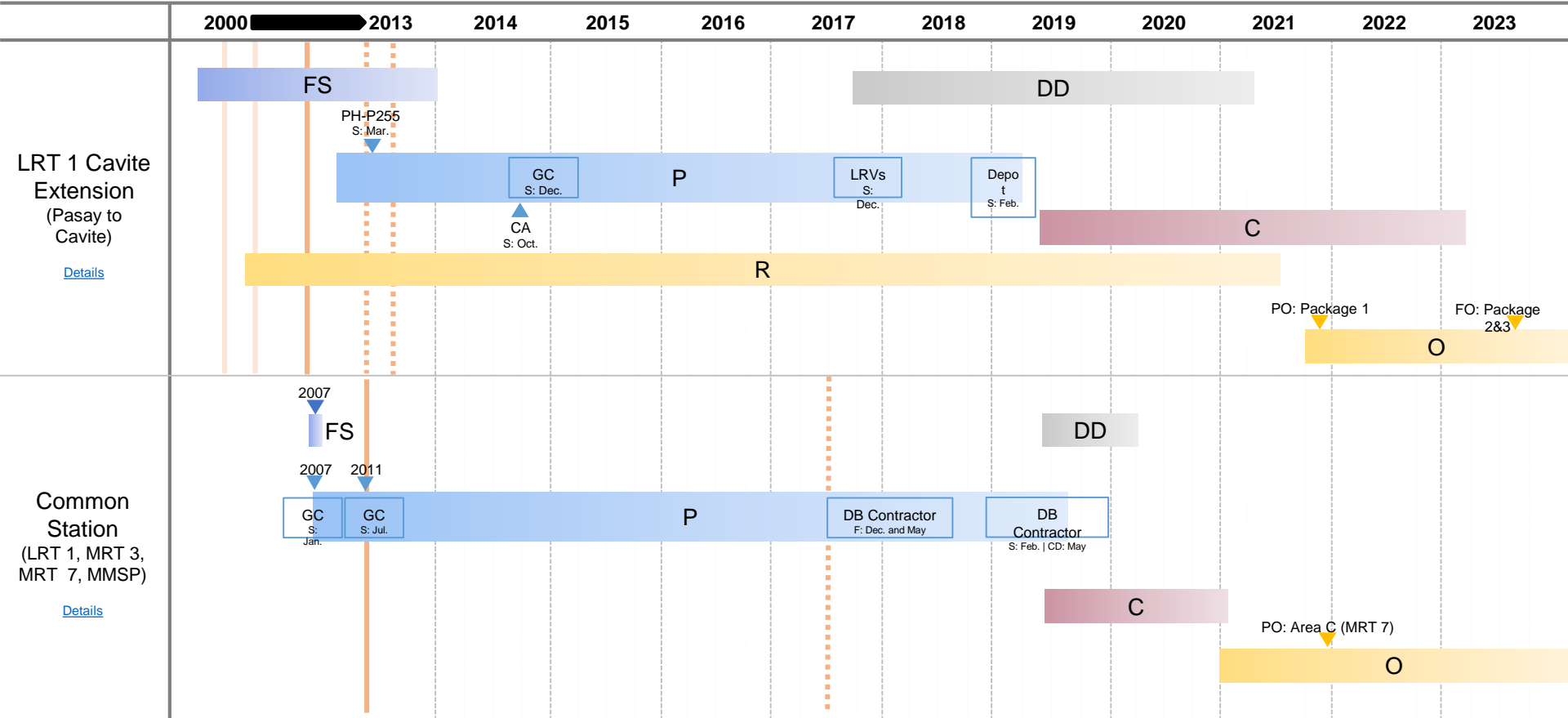


Project Timelines

Rail Projects Timeline (1/6)

SUMMARY

- NEDA / ICC
- - - NEDA Re-approval
- FS:** Feasibility Study
- DD:** Detailed Design
- P:** Procurement
- R:** ROW Site Acquisition
- C:** Construction
- O:** Operations
- CA:** Concession Agreement
- CD:** Commencement Date
- F:** Failed
- S:** Signed
- IC:** Independent Consultant
- GC:** General Consultant
- PO:** Partial Operability
- FO:** Full Operations



Rail Projects Timeline (2/6)

SUMMARY

— NEDA / ICC
- - - - - NEDA Re-approval

FS: Feasibility Study
DD: Detailed Design
P: Procurement
R: ROW Site Acquisition
C: Construction
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CA: Concession Agreement
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2000 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

LRT 2 East Extension
(Santolan to Antipolo)

[Details](#)

FS

PH-P255
S: Mar.

DD

GC
S: Apr.

GC
S: Dec.

Viaducts
S: Mar. | CD: Mar.

Stations
S: Dec. | CD: Feb.

P

E&M
S: Feb. | CD: Jul.

FKS: Viaducts and Stations

CMX: E&M

C

O

LRT 2 West Extension
(Recto to Pier 4)

[Details](#)

FS

Project on hold due to Proposed Privatization of LRT Line 2

GC
F: Jul. and Oct.

GC
S and CD: Aug.

P

DD

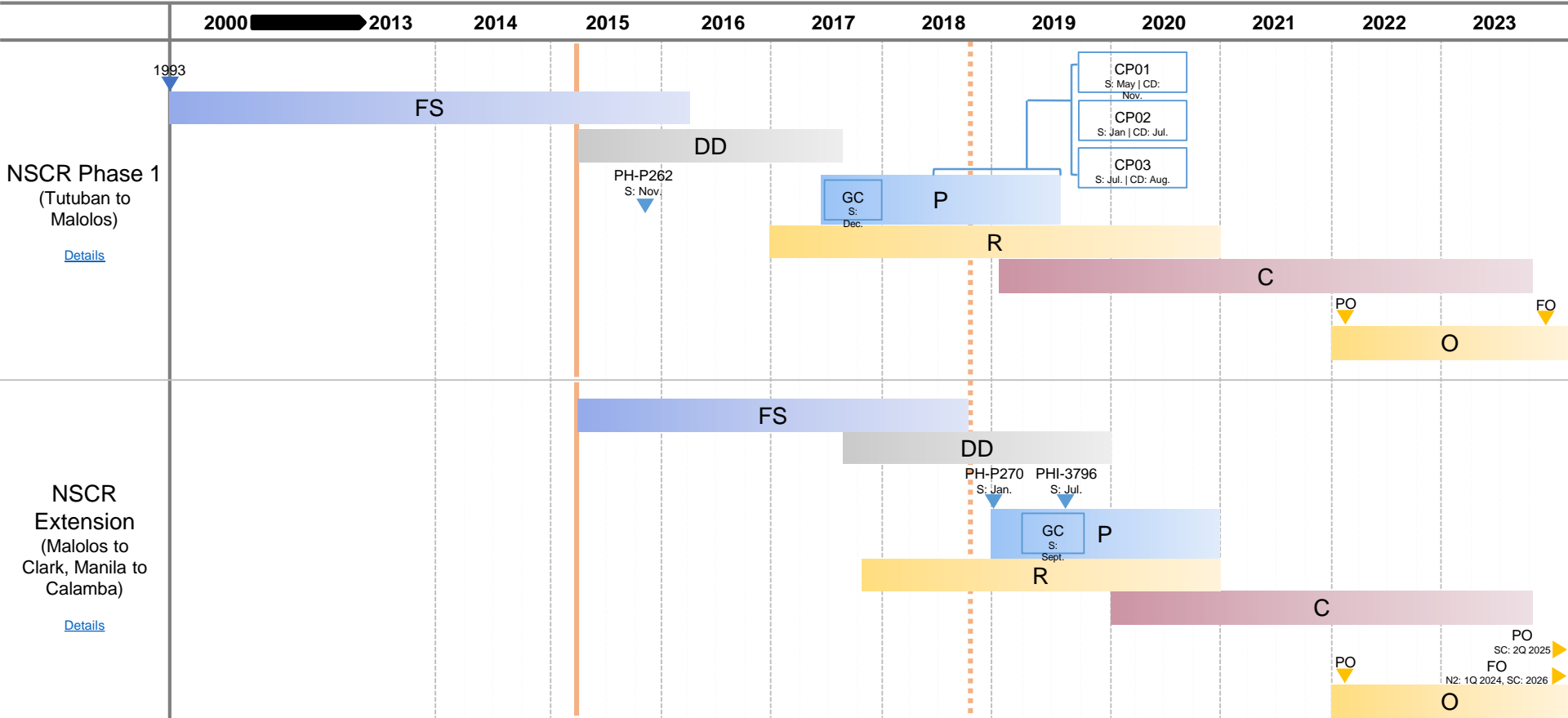
C

O

Rail Projects Timeline (3/6)

SUMMARY

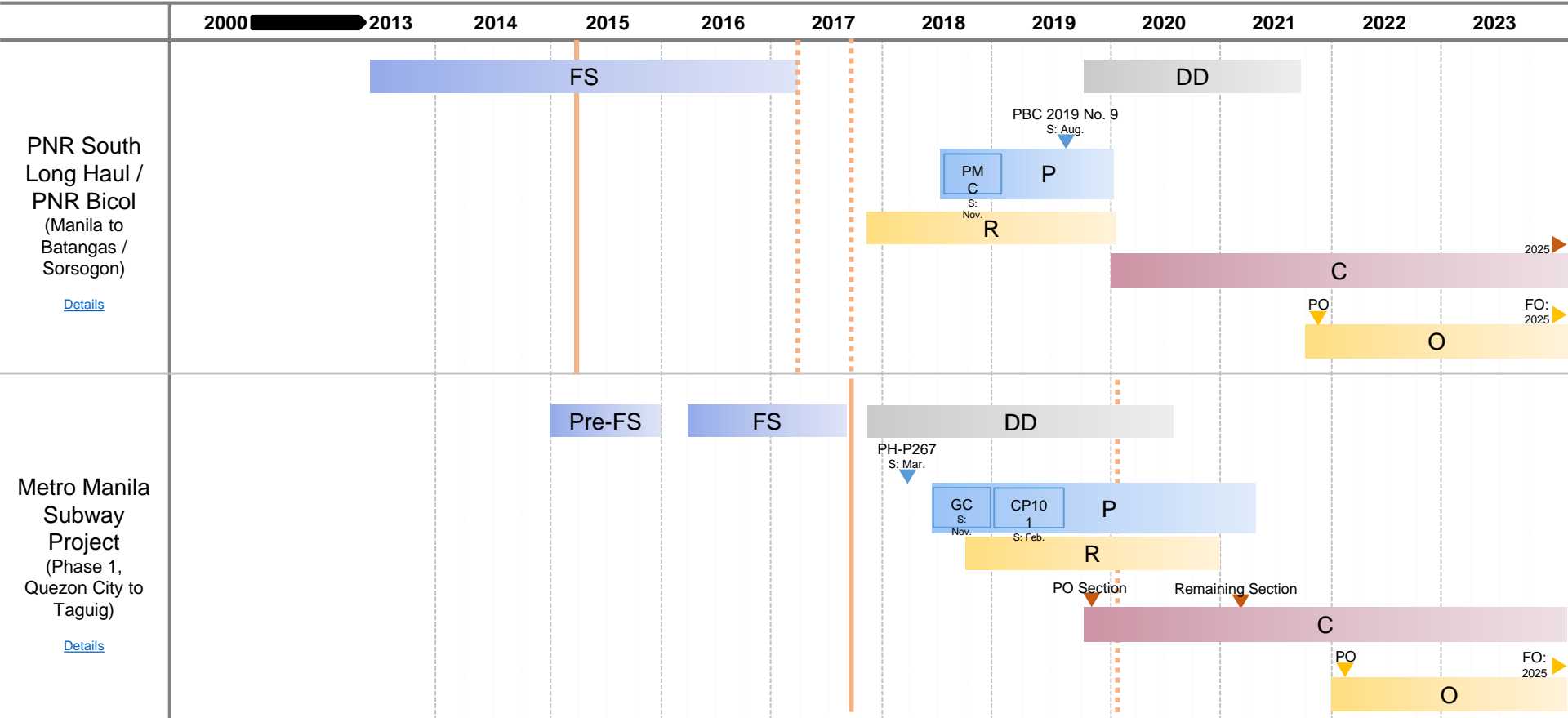
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Rail Projects Timeline (4/6)

SUMMARY

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PNR South Long Haul / PNR Bicol (Manila to Batangas / Sorsogon)

[Details](#)

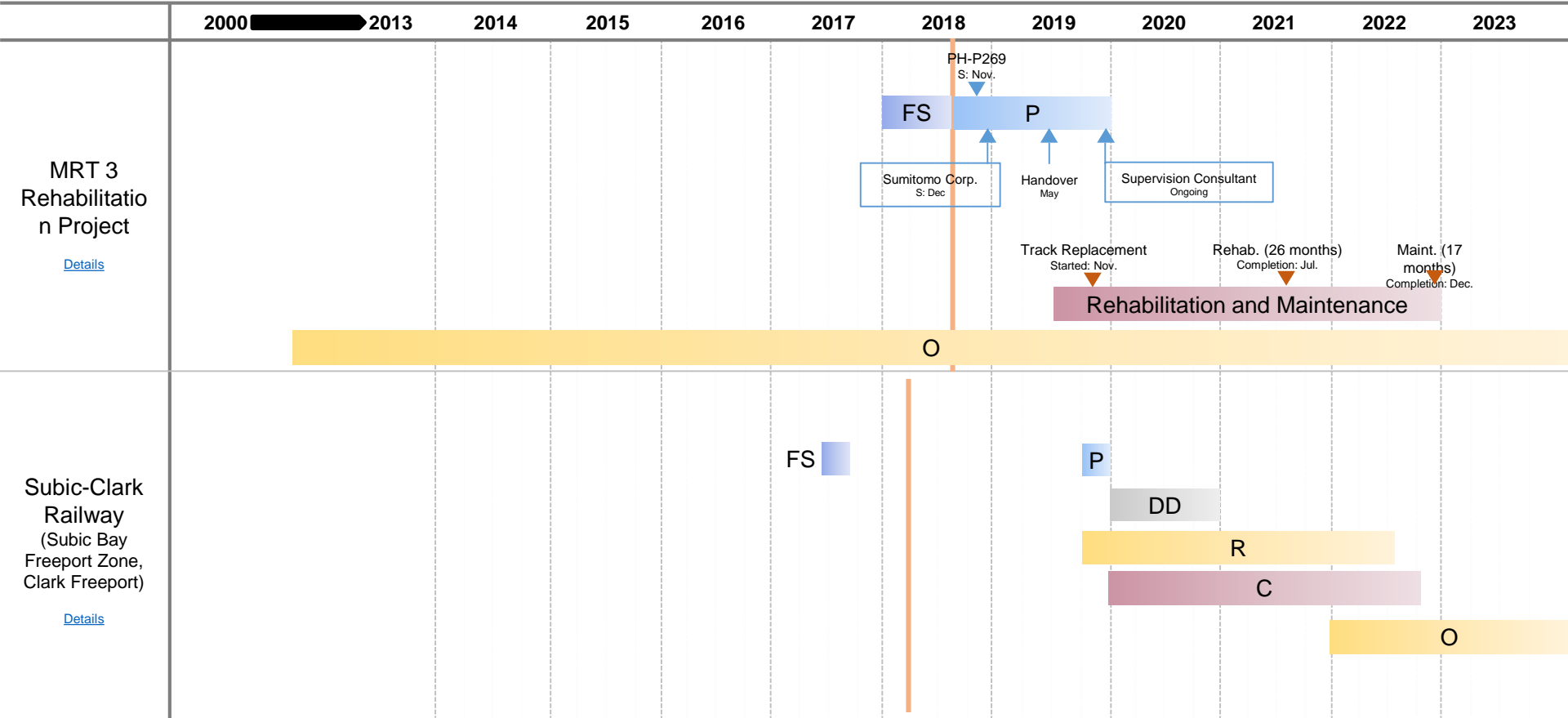
Metro Manila Subway Project (Phase 1, Quezon City to Taguig)

[Details](#)

Rail Projects Timeline (5/6)

SUMMARY

- NEDA / ICC
- - - NEDA Re-approval
- FS:** Feasibility Study
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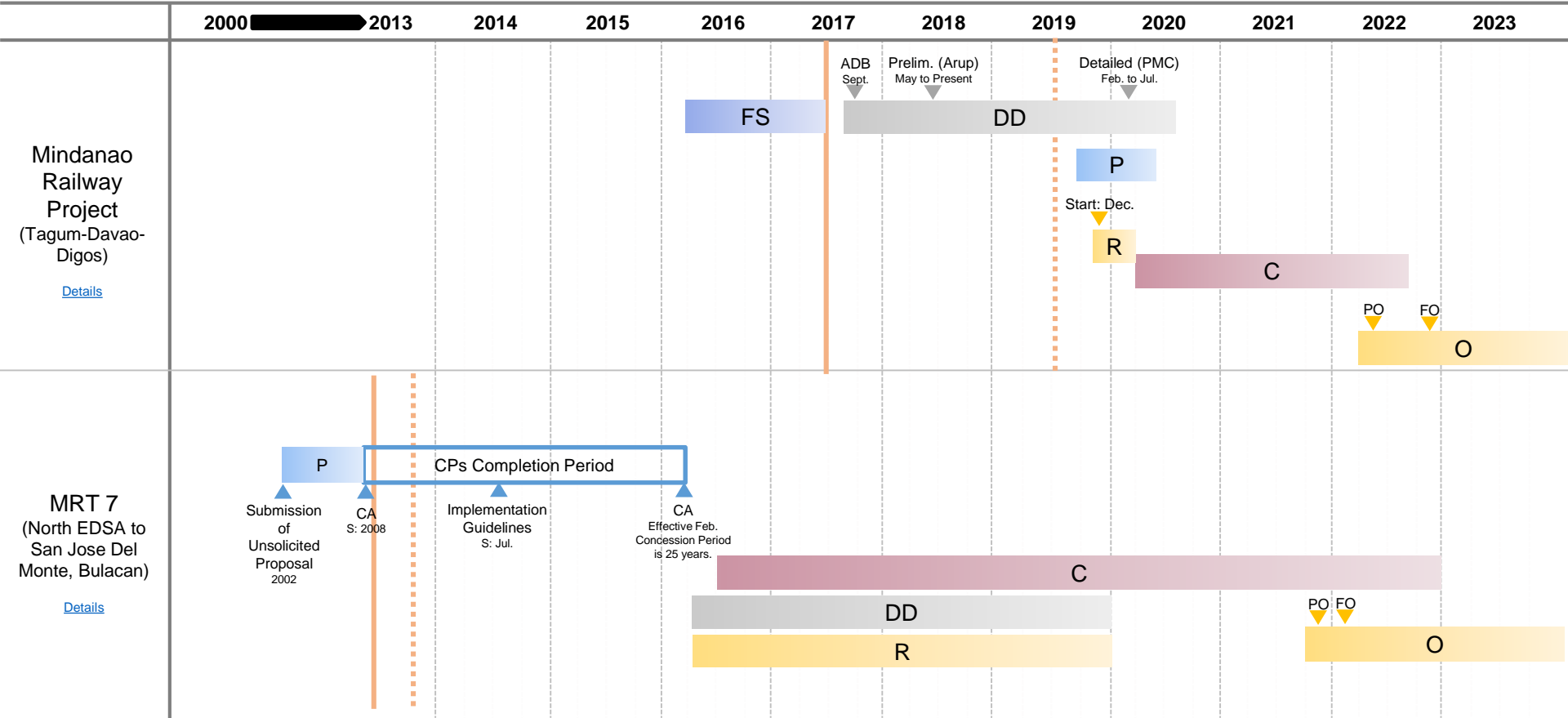


Rail Projects Timeline (6/6)

SUMMARY

- NEDA / ICC
- - - NEDA Re-approval
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Mindanao Railway Project (Tagum-Davao-Digos)

[Details](#)

MRT 7 (North EDSA to San Jose Del Monte, Bulacan)

[Details](#)

Project Photos

PNR Clark Phase 1

(Malolos - Tutuban)

Contract Package 01



Ongoing Construction of Batching Plant at CW 3
Meycauayan Construction Yard
(As of 31 January 2020)



Ongoing Construction of Temporary Site Office at CW 3
Meycauayan Construction Yard
(As of 31 January 2020)

PNR Clark Phase 1

(Malolos - Tutuban)

Contract Package 01



Ongoing Embankment Works at Malanday Depot
(As of 31 January 2020)

PNR Clark Phase 1

(Malolos - Tutuban)



*Transferring of 1st Precast Segment to
PR 5- 114 to PR 5- 115
(As of 27 January 2020)*

**Contract Package 02:
Balagtas**



PNR Clark Phase 1

(Malolos - Tutuban)

Contract Package 02



Installation of Protection to Guiguinto Old Station (As of 23 January 2020)



Installation of Protection to Malolos Old Station (As of 22 January 2020)

LRT 1 Cavite Extension Project

Construction Activities Precast Yard - 90% Complete



*PI Girder Molds was Delivered,
Start of Assembly works for PI Girder Molds*

LRT 1 Cavite Extension Project

Construction Activities



Ongoing installation of steel casing, I-beam framing and deck planks



Ongoing Bored Pile Works



Ongoing installation of pier head / portal beam reinforcement



On going Pier Column Works

LRT 1 Cavite Extension Project

Construction Activities

Ongoing Pier Column Works - 9.87 % Complete



*Ongoing Pier Column Works – Installation of Rebar,
Concrete Pouring works, Formworks Stripping*

LRT 1 Cavite Extension Project

Depot (Baclaran Expansion Depot)

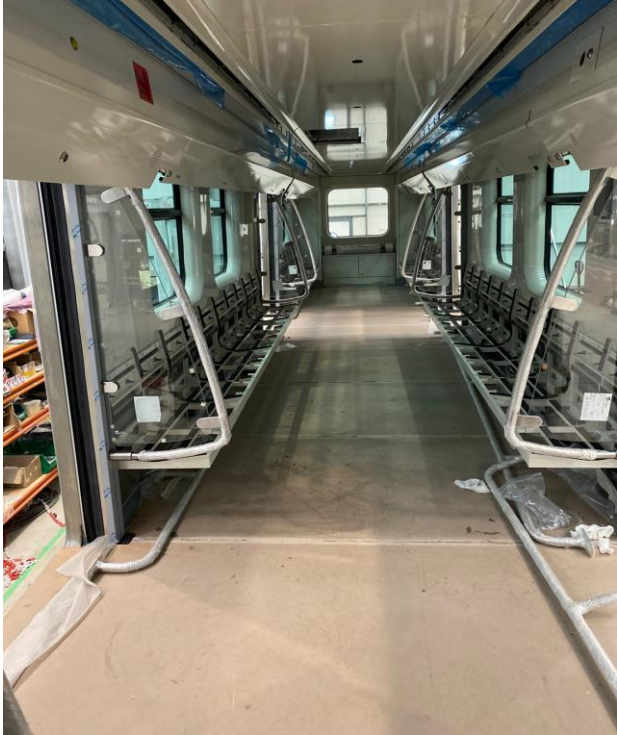


As of January 2020, on-going construction of OCS Foundations



LRT 1 Cavite Extension Project

LRV Manufacturing 31.89% vs 32.68% Physical Progress



*Final Step Interior Assembly
in CAF Trenasa Factory*



Underframe Equipment Assembly
in CAF Trenasa Factory

LRT Line 2 East Extension Project

Package 2 - Design and Build of Stations

% Accomplishment as of January 2020 = 96.17%



Ongoing Installation of Glass Cladding in Elevators at Emerald Station

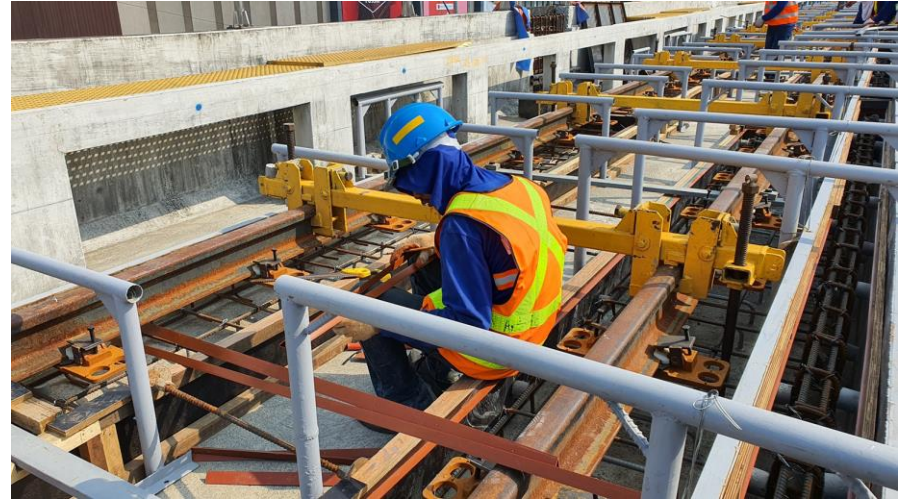


Ongoing Electrical & Mechanical Installation, and Architectural Finishing Works in RSS7 at Masing Station

LRT Line 2 East Extension Project

Package 3 - Design and Build of Electro-Mechanical System

% Accomplishment as of January 2020 = 46.12%



Ongoing Preparation Works of Plinth Construction (Installation of Plinth Rebar, Formworks, and Fastening System)

Metro Manila Subway Project

Phase 1



21 December 2019, Mobilization, Check Awarding and Deeds of Absolute Sale Signing Ceremony at Depot, Valenzuela City



Metro Manila Subway Project

Phase 1



29 January 2020, Initial Inspection of TBM Parts (16-Shield Jacks, 12 Articulation Jacks, 1 Main Bearing, 1 Cutter Reduction Gear and Motors)



Unified Grand Central Station

Site Surveys



Conducted joint site surveys concerning power source utility relocation and free-issued items from LRTA.



Unified Grand Central Station

Aerial Shots



MRT7

ISFs Relocation, Demolition, Construction Activities



MRT-3 Rehabilitation Project



Rail Replacement

93 pcs, 180 m Long Welded Rails already installed.

Completed:

1. Buendia - Taft (SB)
2. Buendia - Magallanes (NB)

On-going:

1. Quezon Avenue - North Avenue (NB)
2. Kamuning - Quezon Avenue (NB)

MRT-3 Rehabilitation Project

Restoration of LRVs



*7 Cars Restored; 59/72 LRVs Operational

MRT-3 Rehabilitation Project

Signaling



*On-going Installation of New Fiber Optic Network Cables

MRT-3 Rehabilitation Project

Elevators and Escalators



*All elevators are operational; As of January 27, 2020, 40/46 escalators are operational

BUILD
BUILD
BUILD



Hard BBB

Infrastructure Building
Improved mass transit and
new road networks



Soft BBB

**Institutional Development and
Capacity Building**
Improved organization and
workforce competencies

