Ex-Ante Evaluation(for Japanese ODA Loan)

Southeast Asia Division 5,
Southeast Asia and Pacific Department
Japan International Cooperation Agency

１．Name of the Project

（１）Country: Republic of the Philippines

（２）Project: Central Mindanao High Standard Highway Construction Project (Cagayan de Oro-Malaybalay Section) (Engineering Services)

（３）Project Site / Target Area: Misamis Oriental Province (including Cagayan de Oro City), and Bukidnon Province, Mindanao

Loan Agreement: March 27, 2026

２．Background and Necessity of the Project

（１）Current State and Issues of the Road Sector/Area and the Priority of the Project in Mindanao, Philippines

Mindanao Island is one of major islands in the country of approximately 102,000 square kilometers located in the southern part of the Republic of the Philippines (hereinafter referred to as “the Philippines”), with a population of about 27.53 million (Philippine Statistics Authority: PSA, 2024). In the southwestern part of the island, long-standing conflict between Islamic anti-government groups and the national armed forces has hindered development, including road infrastructure, resulting in a high poverty rate of 24.9%, compared to the national average of 15.5% (PSA, 2023).

On the other hand, following the Comprehensive Agreement on the Bangsamoro in 2014 between the Philippine government and the Moro Islamic Liberation Front (MILF), the Bangsamoro Transition Authority was established in March 2019. With the steady progress of the peace process, expectations have recently been rising for full-scale economic development, particularly in the agriculture and mineral industries.

The Philippine government’s medium-term development plan, the Philippine Development Plan (2023–2028), identifies “Expand and Upgrade Infrastructure” as a key priority and highlights “Seamless and Inclusive Connectivity Achieved” as one of the strategies in the transport infrastructure sector. In particular, the road sector accounts for approximately 90% of passenger transport and around 50% of freight transport nationwide, making improvements to road infrastructure indispensable for the country’s economic growth.

Furthermore, under the Mindanao Spatial Strategy/Development Framework (2015–2045) issued by the Philippine government, Davao City—the island’s major urban center with a population of approximately 1.78 million (2020)—is designated as the island’s sole metropolitan center, while Cagayan de Oro City (population approx. 730,000: 2020) is

designated as one of the 11 regional centers. The framework states that strong connectivity between these cities, as well as with Malaybalay City (population approx. 190,000: 2020) located in between them, is essential.

The existing road connecting Davao City and Cagayan de Oro City is used to transport processed feed, beverage products, and other goods produced in Davao City to Cagayan de Oro City, as well as to facilitate the movement of agricultural products to and from the ports in both cities. Among this route, the Cagayan de Oro–Malaybalay section is critical not only for transporting agricultural goods from inland areas to Cagayan de Oro City but also for managing logistics between Cagayan de Oro and Davao. Traffic volume exceeds 8,000 vehicles per day, with trucks accounting for roughly 40%, underscoring the section's importance as a major arterial road in central Mindanao. However, this section contains numerous sharp switchbacks where traffic accidents occur frequently, and steep gradients where heavy vehicles travel slowly (around 20 km/h on average). These conditions hinder the efficient transport of agricultural products such as pineapples and create other logistical challenges. Moreover, traffic volume on the existing road has been increasing—from 14,585 PCU/day in 2019 (JICA, 2021) to 15,729 PCU/day in 2021, of which trucks accounted for 9,960 PCU/day (JICA, 2024)—and has already exceeded the road's capacity (10,000 PCU/day). Therefore, new road construction is needed to reduce the traffic burden on the current route.

The Central Mindanao High Standard Highway Development Project (Cagayan de Oro–Malaybalay Section) (hereinafter referred to as "the Project") aims to strengthen and improve connectivity and travel efficiency between Cagayan de Oro City and Davao City by constructing the technically challenging Cagayan de Oro–Malaybalay section, which requires long-span bridges. In doing so, the Project will contribute to the economic and social development of the Mindanao region.

In the Master Plan on High Standard Highway Network Development (Phase 2) (2021) ("the M/P"), formulated with JICA's support, the section under the Project is identified as a priority for short-term development. The Project is also included in the Philippine government's Infrastructure Flagship Projects, which promote high-priority strategic infrastructure development, and is positioned as one of the government's most important initiatives.

Additionally, greenhouse gas emissions are expected to be reduced by approximately 7% compared to a scenario without the Project. This aligns with the Philippines' Nationally Determined Contribution (NDC) under the Paris Agreement, which sets a target of a 75% reduction in greenhouse gas emissions from 2020 to 2030, including in the transport sector.

（2）Japan's and JICA's Policy Cooperation Policy and Operations in the Road Sector/ Mindanao Area

Under Japan's Country Development Cooperation Policy for the Republic of the Philippines (September 2023), support is to be provided for the development of high-quality infrastructure, including transportation networks, under the priority area of "Strengthening the Foundations for Sustainable Economic Growth." Furthermore, the JICA Country Analysis Paper for the Philippines (March 2024) analyzes that the development of high-quality infrastructure—including transportation network systems centered on the Greater Capital Region and regional cities—is an urgent need.

In addition, the JICA Global Agenda for the "Transportation" sector identifies "Building a Global Network" as a key cluster, aiming to create a world in which all people and goods can move safely, securely, and freely. The Project is consistent with these policies and analyses. It is also expected to contribute to SDG Target 3.6 (halving the number of global deaths and injuries from road traffic accidents), SDG 8 (inclusive and sustainable economic growth), and SDG 9 (building resilient infrastructure).

（３）Other Donors' Activities

Under its policy of promoting regional economic development in Mindanao and the Visayas—areas with high poverty rates—through strengthened connectivity within local growth corridors, the Asian Development Bank (ADB) is currently implementing road development in the Zamboanga Peninsula of Mindanao under the Improving Growth Corridors in Mindanao Road Sector Project.

The World Bank, meanwhile, identifies support for improving local road networks in Mindanao as one of its priority areas and is currently assisting in the upgrading of the existing road connecting Cagayan de Oro City and Davao City through the Mindanao Transport Connectivity Improvement Project.

３．Project Description

（１）Project Description

① Project Objective

The objective of the Project is to improve transportation access between north-central and southern Mindanao by constructing alternative road connecting Cagayan de Oro City to Malaybalay City as part of the Central Mindanao High Standard Highway from Cagayan de Oro to Davao, thereby contributing to economic and social development of Mindanao.

The portion eligible for this ODA loan covers engineering services related to the detailed design, bidding assistance, and other preparatory work for the section located within Cagayan de Oro City. These services are intended to facilitate the smooth and efficient implementation of the Project.

② Project Components

(a) Overview of the Overall Project Plan

The Project involves the development of the Cagayan de Oro–Malaybalay section of the Central Mindanao High Standard Highway, which connects the major Mindanao cities of Cagayan de Oro and Davao. The overall project plan consists of:

1) Civil Works:

Construction of approximately 65 km of high-standard, four-lane (two lanes per direction) roadway, including long-span bridges. Of this, about 12 km within Cagayan de Oro City (Section 1) is planned to be financed by JICA, while the remaining approximately 53 km (Sections 2–5) is expected to be financed by ADB and other development partners.

2) Consulting Services:

(i) Detailed design, (ii) Tender assistance, (iii) Construction supervision, (iv) Support for strengthening operation and maintenance capacity, (v) Environmental and social considerations. Under this loan, prior to the the Civil Works, the consulting services will cover the detailed design (including preparation of draft bidding documents) for Section 1, as listed in items (i) to (v) above.

(b) Scope of Civil Works, Facilities, and Equipment

The civil works consist of approximately 65 km of high-standard, four-lane roadway, including long-span bridges. Of this, approximately 12 km within Cagayan de Oro City (Section 1) will be financed through a JICA loan, while the remaining approximately 53 km (Sections 2–5) is expected to be financed by ADB and other partners.

(c) Scope of Consulting Services

The consulting services include detailed design, tender assistance, construction supervision, support for strengthening operation and maintenance capacity, and environmental and social considerations. Under this loan, the services will cover the detailed design for Section 1 (including preparation of draft bidding documents) and related tasks.

The detailed design for Sections 2–5 will be implemented under ADB financing through the Infrastructure Preparation and Innovation Facility, Second Additional Financing (Loan Agreement signed December 2023), for which selection of consultants is currently underway.

③ Project Beneficiaries (Target Group)

Misamis Oriental Province (including Cagayan de Oro City) (population approx. 1.73 million) and Bukidnon Province (population approx. 1.60 million) (PSA, 2024).

（２）Estimated Project Cost

388,969 million Japanese Yen (Japanese ODA loan: 1,672 million Japanese Yen) (The total project cost including the main loan portion is scheduled to be recaluculated during the detailed design.)

（３）Schedule

March 2026-November 2028 (33 months). Loan closing is considered as the completion of

the Project. (The overall project schedule will be confirmed in detail during the appraisal of the loan for construction stage. The targeted completion year for the entire project is anticipated to be 2034.)

（４）Project Implementation Structure

① Borrower: The Government of the Republic of the Philippines

② Executing Agency: Department of Public Works and Highways (DPWH)

③ Operation and Maintenance System：

The Project will have different completion timings for each section, and each completed section will be opened to the public free of charge as soon as it is finished. The operation and maintenance of each section opened in sequence will be carried out by the DPWH Regional Office.

After the entire highway becomes fully operational, operation and maintenance will be contracted to a private company selected through a bidding process conducted by the Philippine government, and the entire route is expected to become a toll road.

Transaction advisory services necessary for outsourcing operation and maintenance to a private operator are expected to be supported by ADB and other development partners.

（５）Collaboration and Sharing of Roles with Other Donors

① Japan’s Activity

In the M/P previously supported by JICA, the Project was proposed as a priority initiative to be developed in the short term, and a pre-feasibility study (pre-F/S) was conducted accordingly.

② Other Donors’Activity

Sections 2–5 of the Project are expected to be financed by ADB and other development partners. The implementing agency plans to carry out the detailed design for Sections 2–5 under the ADB-financed “Infrastructure Preparation and Innovation Facility, Second Additional Financing” (Loan Agreement signed in December 2023), and the consultant selection process is currently underway.

（６）Environmental and Social Consideration

① Category: A

② Reason for Categorization:

The Project falls under both the road sector and areas considered vulnerable as defined in the “JICA Guidelines for Environmental and Social Considerations” (promulgated in April 2010; hereinafter referred to as the JICA Guidelines).

③ Environmental Permit:

The Department of Environment and Natural Resources (DENR) of the Republic of the Philippines issued the Environmental Compliance Certificate (ECC) on February 13, 2025.

④ Anti-Pollution Measures:

During construction, measures such as water spraying, leachate treatment, and restrictions on working hours will be implemented to ensure compliance with national emission and environmental standards for air quality, water quality, noise, and other parameters. After the commencement of operation, noise mitigation measures—such as the installation of noise barriers—are planned to be implemented.

⑤ Natural Environment:

The project area is located approximately 7 kilometers southwest of the protected area (Mt. Kitanglad Range), and no significant adverse impacts on the natural environment are anticipated.

⑥ Social Environment:

The Project involves the acquisition of approximately 394 hectares of land and the involuntary resettlement of 96 households (379 persons). Land acquisition will proceed in accordance with the Resettlement Plan developed in line with national procedures and the JICA Guidelines. During community consultations related to resettlement, affected residents expressed requests for adequate compensation and prior disclosure of information; therefore, compensation and resettlement procedures that reflect these concerns are planned to be implemented. No significant objections to the Project have been raised by the affected residents.

Since the Project traverses Ancestral Domains (AD) traditionally inhabited by Indigenous Peoples and will have impacts on them, CP (Certification Precondition) has been obtained through the Philippine FPIC (Free and Prior Informed Consent) process. In addition, an Indigenous Peoples Plan (IPP) has been formulated as part of the preparation study for the Project, and no major opposition to the Project has been observed through FPIC (Free, Prior, and Informed Consultation) conducted in accordance with the JICA Guidelines. Since the project area traverses an AD inhabited by Indigenous Peoples, their consent through continuous FPIC in accordance with the JICA Guidelines will be monitored.

⑦ Other/Monitoring:

Under the supervision of DPWH, monitoring of air quality, water quality, noise and vibration, ecosystems, and other environmental parameters will be carried out in accordance with the Environmental Management Plan and the Environmental Monitoring Plan. DPWH will also monitor the progress of land acquisition, livelihood restoration support, and related activities.

（７）Cross-Sectoral Issues

①Climate Change Measures and Biodiversity Conservation–Related Aspects

In areas with the existing road, the Project is expected to contribute to climate change mitigation, as greenhouse gas emissions are projected to be reduced by approximately 7% compared with a non-project scenario due to improved traffic flow and reduced congestion. Moreover, if high-standard highway resilient to the adverse impacts of climate change, such as floods, inundation, and landslides, is developed, it could contribute to climate change adaptation measures. Accordingly, the Project has the potential to support climate change mitigation efforts and contribute to SDG Goal 13.

②Measures Against HIV/AIDS and Other Infectious Diseases

DPWH plans to implement infection prevention measures for contractors and workers in accordance with the infectious disease prevention programs developed by the Department of Health, including protocols related to COVID-19 and HIV/AIDS.

（８）Gender Category: ■GI(S) (Gender Informed (Significant))

<Details of Activities/Reason for Categorization>

To address gender-based challenges—such as restrictions on women's mobility, concerns over transport safety, and the limited participation of women in the infrastructure sector—a Gender and Development (GAD) Plan has been formulated. The Plan sets forth measures and indicators to promote gender-responsive recruitment requirements and policies in infrastructure projects, as well as the development of corresponding guidelines, in order to monitor progress in implementing these initiatives. The GAD Plan also includes initiatives such as on-the-job training (OJT) programs for women, aimed at promoting their entry into occupation which is traditionally not common for women (e.g., masonry and carpentry). Moreover, as the study have identified cultural norms, mobility restrictions, and travel-related costs as factors limiting women's mobility, the Plan incorporates actions such as providing local communities with information about laws related to gender equality, ensuring that both women and men are consulted at all stages of the Project, and conducting gender-sensitive activities and confidence-building workshops for local women.

（９）Other Important Issues:

For Section 1 of the Project, advanced Japanese construction technologies, such as PC box girder with corrugated steel-web bridge and half-precast for high piers, and sinso-caisson, are expected to be introduced and utilized.

４. Targeted Outcomes

（１）Quantitative Effects

Outcomes (Operation and Effect Indicators)

(To be determined during the appraisal of the loan for construction stage.)

Indicators		Baseline (Existing Road) (Yr2021) (The existing road (Cagayan de Oro-Malaybalay section))	Target (Yr2036) (2 years after the completion of the Project)	
			CMH＊	Existing Road + CMH
Operation Indicators	Traffic Volume (Veh/day)	9,584	14,800	19,600
	Volume of Passengers (person / day)	30,827	85,500	113,300
	Volume of Cargo (t / day)	10,199	19,456	20,275
Effect Indicators	Traveling time (minutes)	Approx. 90	51	-

(*Note) This refers only to the new road sections to be constructed under the Project and does not include the existing road.

（２）Qualitative Effects

Improvement of travel efficiency and enhancement of safety (including a reduction in traffic accidents on the existing road), strengthening of connectivity in the target area, and promotion of economic development in the surrounding regions.

（３）Internal Rate of Return

Based on the assumptions listed below, the economic internal rate of return (EIRR) for the Project is 15.2%. As the operation and maintenance of the entire road upon full opening will be handled under a separate project through private outsourcing, and since the implementing agency does not intend to generate revenue through toll collection or similar user charges from the operator, the Financial Internal Rate of Return (FIRR) is not established as a project benefit indicator.

【EIRR】

Cost：Project costs, operation and maintenance costs (both excluding taxes)

Benefit：Vehicle operating cost savings, and travel time cost savings

Project Life：30 years

５. External Factors and Risk Control

（１）Preconditions:

Regarding the loan for the construction stage following the detailed design, it is necessary that financing for Sections 2–5 by ADB and other partners be provided in a timely manner. Accordingly, the Government of the Philippines and ADB and other partners' examination and consultation processes will be closely monitored.

（２）External Factors:

To maximize the effectiveness of the Project, the existing roads between Malaybalay City and Davao City (the Sayre Highway and the Davao–Bukidnon Road) must be widened from two lanes to four lanes. The implementation status of these widening works will be monitored. (As of April 2024, approximately 95% of the total length has already been completed.)

６. Lessons Learned from Past Projects

In the ex-post evaluation of the ODA Loan Project “Urgent Bridges Construction Project for Disaster Mitigation in Regional Areas” for the Philippines (evaluation year: 2013), it was noted that the deterioration of heavy equipment required for maintenance had become an obstacle to proper upkeep. To ensure appropriate maintenance of the long-span bridges, high-pier bridges, and other structures to be constructed under the Project, the consulting services will include support for strengthening the operation and maintenance capacity of the implementing agencies, including the regional offices. In addition, a bridge inspection vehicle will be included in the scope as maintenance equipment.

７. Evaluation Results

The Project is aligned with the development challenges and policies of the Philippines, as well as with the cooperation policies and analytical frameworks of the Government of Japan and JICA. By developing the Cagayan de Oro–Malaybalay section of the Central Mindanao High Standard Highway—which connects the major cities of Cagayan de Oro and Davao—the Project will contribute to the economic and social development of the Mindanao region. It is also expected to contribute to SDG Target 3.6 (halving the number of global deaths and injuries from road traffic accidents), SDG 8 (inclusive and sustainable economic growth), and SDG 9 (building resilient infrastructure). For these reasons, the need to support the implementation of the Project is considered to be high.

８. Plan for Future Evaluation

（１）Indicators to be Used

As indicated in Sections 4.

（２）Future Evaluation Schedule

Ex-post evaluation: two years after the project completion

END

Attachement: Map of the Central Mindanao High Standard Highway Construcion Project (Cagayan de Oro-Malaybalay Section) (Engineering Services)

Attachment: Map of the Central Mindanao High Standard Highway Construcion Project (Cagayan de Oro-Malaybalay Section) (Engineering Services) (Reference: JICA)