

EIS (Environmental Impact Statement) Summary for the Public – ESP

A. PROJECT DESCRIPTION

PROJECT INFORMATION

- Name of the Project: **CAVITE-LAGUNA EXPRESSWAY (CALAX) (CAVITE SECTION)**
- Location: Municipalities of Kawit and General Trias and Cities of Imus and Dasmarinas, Province of Cavite
- Nature of Project: Expressway

PROJECT COMPONENTS

The CALAX shall have the eight interchanges and one toll barrier. The entire expressway shall have the following subsections:

SECTIONS	SUBSECTION	LENGTH (km)
Cavite	CAVITEX Connection- Open Canal	7.96
	Open Canal- Governor's Drive	11.09
	Governor's Drive- Silang	7.74
	Silang- Silang East	3.63
Laguna	Silang East- Sta. Rosa Tagaytay Road	5.21
	Sta. Rosa Tagaytay Road- Laguna Boulevard	2.76
	Laguna Boulevard- Laguna Technopark	2.64
	Laguna Technopark- Mamplasan	3.66
	TOTAL	44.70

The application for ECC covers the Cavite Section of the CALAX. A separate ECC has been issued for the Laguna Section.

PROJECT SIZE

The entire CALAX (Cavite Section) will have a total length of 30.42 km. The project will require more than 200 ha. This includes provision for all interchanges outside of the standard 60m ROW and the additional ROW required for the alteration, widening of existing local roads and drainage.

PROCESS/TECHNOLOGY OPTIONS

The DPWH established the minimum requirements for the design, construction, operation and maintenance of the CALAX project. Guidelines for environmental management and monitoring during construction has been issued to clarify the conditions on all environmental aspects which should be taken care of by the Contractor. The environmental guidelines aim to avoid, minimize and mitigate any adverse environmental impacts during the construction stage. The major items for environmental management in the performance specifications are the following:

TYPES OF CONCEIVABLE IMPACT	ENVIRONMENTAL ITEMS TO BE MONITORED AND MANAGED	ANTICIPATED RATES ON INPUTS/WASTES
Construction Phase		
1. Noise from construction machinery	Noise and vibration level	72- 94 dBA
2. Disposal of construction waste	Waste segregation and disposal in an approved landfill site	70- 150 kg/day
3. Discharge of wastewater	Portable toilets	180- 290 cum/day
4. Increase of land erosion/ excavated material	Silt traps	To be determined in final design

5. Increase of population inflow with workforce mobilization	Public health and safety	1,000- 1,500 workers
Operational Phase		
1. Noise from movement of vehicles along the highway	Noise and vibration level	72- 94 dBA
2. Expressway maintenance works	Waste segregation and disposal in an approved landfill site	To be identified dependent on work order
3. Discharge of wastewater	Interchanges will be provided with toilets with septic tanks	30- 50 cum capacity

During the preparation of the process method documents, detailed field reconnaissance will be conducted to confirm present social and natural environmental conditions in the vicinity of the project site. In addition, environmental clearances and permits related to construction works will be confirmed and obtained from relevant agencies in cooperation with DPWH prior to the start of construction.

CONSTRUCTION WASTE MANAGEMENT

Wastes that will be generated include organic debris, roots, stumps, wooden planks, steel bars, cement bags and other related materials, The organic debris shall be disposed by the contractor as garbage.

The excavated materials will be temporarily stored at a designated area within the staging area prior to disposal into a permitted disposal site to be identified by the contractor. The general contractor shall be required to ensure that appropriate disposal of the construction spoils is integrated in the contract with the excavation contractor.

RESOURCE UTILIZATION

A. Water Supply

Water for the proposed project will be provided through the water lines of the Maynilad Water Services (MWIS). Water supply shall be provided at each toll plaza, toll plaza building, toll islands, integrated maxi booth and toilets for parking areas. A hydrant shall be installed on every toll island. Water pipes shall be placed either in the technical gallery or in multicellular sheath.

B. Power Supply

Power requirement of the project is primarily for the lighting of the toll plazas and expressway lighting. The lighting system shall be provided in accordance with the Philippine Electrical Code, 2000, published by the Institute of Integrated Electrical Engineers of the Philippines, Inc. While ensuring that safety and security standards are met at the toll plazas, lighting design shall be focused to prevent adverse impact on neighboring properties and road users. Light-emitting diode (LED) lamps shall be used for the toll road lighting.

In the event of normal power failure, generator sets will be utilized as standby power source of the project. The emergency power will be diesel-fueled generator sets.

RESOURCES ALTERNATIVES. The requirement for water, power, construction materials and other resources were considered during the conceptual design and planning of the project. Considering that the proposed project is located within Cavite, water supply and power supply are not foreseen as a concern of the project due to the accessibility and availability of supply. In terms of construction materials, the supply is also readily available because the site is located in close proximity to Metro Manila, Batangas and Bulacan which are major hubs/ sources of the country for various trading and commercial activities.

B. PROJECT LOCATION

The Cavite section of the Cavite- Laguna Expressway (CALAX) is a 4 lane 30.42 km closed system toll expressway that will connect the Cavite Expressway (CAVITEX) in the north through the Provinces of Cavite and Laguna to join the Aguinaldo Highway at Silang, Cavite and

ten eastward to connect with the South Luzon Expressway (SLEX). The project will start from the CAVITEX in Kawit, Cavite and end at the SLEX- Mamplasan Interchanges in Binan, Laguna. The CALAX project is divided into two sections, i.e.: (i) Cavite Section in the north known as the CALAX (Cavite Section) and the (ii) Laguna Section in the south which continues the CALAX from Silang an easterly direction over 14.27 kilometers with four- lane tolled expressway to connect with SLEX.

The project will have interchanges (IC) in eight locations namely: (i) Kawit, (ii) Open Canal, (iii) Governor's Drive, (iv) Silang, (v) Silang East, (vi) Sta-Rosa Tagaytay, (vii) Laguna Boulevard, and (viii) Technopark. It will have one toll barrier before SLEX.



CALAX ALIGNMENT SHOWING THE CAVITE AND LAGUNA SECTIONS

REASON FOR SELECTING THE PREFERRED OPTION. The alignment of the Cavite section of CALAX, engineering studies, topographic surveys, parcellary mapping, and cost estimates. Several meetings and consultations with stakeholders and local government units were undertaken to present the alignment options. The Cavite section alignment revision was made to address stakeholders request.

COMPARATIVE ENVIRONMENTAL AND SOCIAL IMPACTS OF EACH ALTERNATIVE

Alternative	Description	Environmental and Social Impact
Alignment from km 3+00 to km 5+00	Adjustment further to the east	Avoided impacts to Estrella Homes Development in the area of km 3+50
Alignment from km 11+00 to km 16+00	Adjustment to the east	Avoided impacts with Amaia Scapes Development by Avida in the area of km 12+50
Alignment at km 26+00	Adjustment to match alignment coordinates of CALAX Laguna Section	Minor adjustment only
Alignment at 0+00 to km 6+00	Adjustment of alignment	Avoided impacts on future development plans in Barangay Alapan 1B, Kawit and on three ancestral buildings in Barangay Pagasa III, Kawit. The three ancestral buildings are not registered as historical buildings.
Alignment from km 6+00 to km 11+00	Adjustment of alignment further westward	Avoided impacts on planned future development including a planned community heritage park.
Alignment from km 27+50 to km 29-28	Adjustment of alignment	Avoided impacts to development of Stateland Inc.
Alignment at km 12+00 area	Adjustment of alignment eastward	Avoided impacts to Amaia Subdivision
Alignment at km 20+00 area	Adjustment of alignment	Avoided impacts to communities

C. PROJECT PROPONENT

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D. PROJECTED TIMEFRAME OF THE PROJECT IMPLEMENTATION

	Timing (in years)	Start	End
Concession period	35	2016	2051
Land acquisition	2	2016	2018
Construction	3	2017	2020
Operation	30	2020	2051

E. IMPACT AREA

The study area encompassed the three Municipalities of Kawit, General Trias, and Silang and the two Cities of Imus and Dasmarinas, in the Province of Cavite. The EIA study area comprises of the project site as primary impact area. The primary impact area is defined as the immediate vicinity to the perimeter up to a radius of 100 meters. This includes part of the adjoining establishments in the vicinity. The primary impact area was identified based on the potential impacts that maybe generated by the project particularly during the construction phase. These environmental impacts include generation of dust, noise, soil runoff, and traffic that may cause nuisance and hazards to the environment and adjacent communities.

The secondary impact area is defined as the area within 500- m radius if the proposed project site. The secondary impact is projected to experience impacts associated with traffic congestion, flooding, traffic and other socio- economic effects of the road development project.

The secondary impact area will consist of the CALA region, particularly the residential and industrial areas.

F. IDENTIFIED STAKEHOLDERS

DPWH conducted various public consultation meetings about the proposed project, initial project presentations were conducted for the LGU's of the province, municipalities, cities and barangays to be traversed by the road alignment. The consultations were conducted in the five impact areas of the project namely: Municipalities of Kawit, Silang, Genral Trias and Cities of Imus and Dasmarinas in Cavite Province. Consultations were also held with the stakeholders such as business sectors whose interest will be affected by the project, barangay, municipal, city and provincial representatives and land developers. The land developers have been identified to be among the key stakeholders that need to be consulted and informed by the project due to the prevalence of land developments along the project corridor which maybe directly affected by the project.

G. FOR FURTHER INFORMATION

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