Initial Environmental and Social Examination Report

Project Number: 56236-001
November 2022
Document Stage: Draft

Philippines: Wyntron Electric Vehicle Charger Production Expansion Project

Prepared by Wyntron, Inc. as a requirement of the Asian Development Bank

CURRENCY EQUIVALENTS
(as of 25 November 2022)

Currency unit	–	Philippine Peso (PHP)
PHP1.00	=	$ 0.018
$1.00	=	PHP 56.81

NOTES

(i) The fiscal year (FY) of Wyntron, Inc. ends on 31 December.

(ii) In this report, "$" refers to United States dollars.

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EXECUTIVE SUMMARY

A. Introduction

1. Wyntron Inc. (Wyntron) manufactures Electronic Vehicle Supply Equipment (EVSE) inside the Cavite Economic Zone (CEZ) in Rosario, Cavite. At present, Wyntron produces 55,333 pieces of EVSE. In order to respond to the increasing demand of the global market for EVSE, Wyntron proposes to expand its EVSE production facilities.

Project Name	Wyntron Electronic Vehicle Charger Production Expansion Project
Project Location	Lot 1-13 B20, P4, Main Avenue, CEZ, Rosario, Cavite, Philippines 4106, South Ave, Rosario, Cavite
Project Type	Manufacturing of EVSE Charger
Project Area	32,370 m^2 (lot area) 20,433 m^2 (total floor areas)
Project Size/Capacity	Facility expansion to produce 300,000 pieces of EVSE per year
Project Proponent	Wyntron Inc.

B. Policy, Legal and Administrative Framework

2. The Initial Environmental and Social Examination (IESE) was prepared in accordance with the requirements of the following policies
    - ADB Safeguard Policy Statement, 2009
    - ADB Social Protection Strategy, 2001
    - ADB Access to Information Policy, 2019
    - IFC Performance Standards, 2012
    - World Bank Group General Environment, Health & Safety (EHS) guidelines, 2007
    - Applicable local, national and international laws and regulations including labor laws/child labor laws

3. Based on the assessment conducted, the project is classified as Category B for Environmental and Category C for both Involuntary Resettlement and Indigenous Peoples (IP).
    - The project is determined as Category B for Environment since most of its potential adverse impacts such as generation of wastewater and air emissions are site-specific/localized and can be readily addressed through the implementation of the mitigating measures.
    - In terms of Involuntary Resettlement, the project is considered as Category C since the project is not expected to have any land acquisition, which will result in involuntary resettlement impacts. The project site is located inside an economic zone and the land is to be leased by Wyntron from the Philippine Economic Zone Authority (PEZA).
    - The project is identified as Category C for Indigenous Peoples since there are no IPs that will be affected by the project. The project site is within an industrial zone, away from areas where distinct and vulnerable IPs / ethnic minorities can be found.

C. Key Results of the Environmental and Social Baseline Studies

4. The findings of the environmental and social baseline studies conducted are summarized in the table below.

Table ES-1: Summary of Environmental and Social Baseline Findings

Module	Key Findings
Biophysical Aspects	
Regional Geology	The project site is Quaternary Volcanic Pyroclastic (QVP) which can be described as volcanic plain or volcanic piedmont deposits
Topography and Slope	The proposed project site is relatively flat with slope of 0% to 3% with elevation from 8 to 10 meters above sea level.
Natural Hazards	The project site susceptible to ground shaking, liquefaction, ashfall and flooding.
Climatic Conditions	The project site falls under Type I climate based on the Modified Coronas Classification of the Philippines. This climate type is characterized by two pronounced seasons, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September.
Climate Change	• Warmer temperatures are expected to be experienced throughout the year and is projected to be more intense assuming the High Emission scenario. • More rainfall is expected from December to May under the median range of Moderate Emission and High Emission Scenarios. In contrast, less rainfall is expected from June to November.
Hydrology	• The project site is within the Cañas-Maalimango Water Quality Management Area (WQMA). The nearest river in the project site is the Maalimango River, located about 400 meters away to the west of project site and passes through CEZ. The treated wastewater of CEZ is discharged to this river.
Biological Resources	
Terrestrial Ecology	The terrestrial ecology in the project site is considered as modified habitat. The existing vegetation in the project site consists of shrubs, grass and scattered trees.
Aquatic Ecology	The project is not expected to affect the aquatic ecology in Maalimango River since all the development and operations will be limited on land.
Air Quality and Noise Level	
Ambient Air Quality	The ambient TSP concentration within the sampling stations is within the DENR standards.
Noise Level	The noise level in both the sampling stations are within the NPCC standards.
Surface and Groundwater Quality	
Surface Water Quality	• The Environmental Management Bureau (EMB) is regularly monitoring the water quality of Maalimango River as part of the WQMA activities. The nearest monitoring station in the project site and CEZ is in Maalimango Bridge, downstream of Maalimango Bridge.

Module	Key Findings
	• Based on the monitoring results in 2020, several parameters exceeded the guidelines for Class C waters namely temperature, dissolved oxygen, BOD, phosphate and fecal coliform. This can be attributed to the discharge of untreated domestic wastewater from the nearby communities.
Soil Type	
Soil Type	The soil type within the proposed project site is belongs to Quiangua silt loam.
Economic, Social and Cultural	
Land Use	The project site is within industrial zone since it is located inside the Cavite Ecozone in Rosario, Cavite.
Industries	There are about 426 locators in CEZ. Industries located inside CEZ include electronic companies, metal industries, warehouses, plastic-based manufacturing, garments manufacturing and others.
Infrastructures	• The power supply in CEZ is supplied by MERALCO. • The water supply system and sewerage system in CEZ is operated by the Manila Water Venture Philippines.
Population and Communities	• Based on the 2020 census of the Philippine Statistics Authority (PSA), the Municipality of Rosario has a total population of 110,808 and 31,510 households with average household size of 3.5. From 2015 to 2020, the municipality has an annual population growth rate of 0.02 percent.
Indigenous People	There are no indigenous people (IP) in the vicinity of or within the project site.

D. Environmental and Social Management Plan

5. The Environmental and Social Management Plan (ESMP) presents the identified mitigating measures that shall be implemented to minimize and/or eliminate the potential impacts of the project to its surrounding environment and community. The ESMP considered the potential impacts for the different phases of the project.

Table ES-2: Environmental and Social Management Plan

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
PRE-CONSTRUCTION PHASE						
Acquisition of applicable permits and licenses as required by the national and local policies and regulations	People	Disclosure of the project components and activities	• Submission of complete requirements for processing of all permits	Wyntron Inc.	Integrated in pre-construction cost	Pre-construction expenses
Hiring of workers	People	Increased employment opportunities	• Develop and implement a local labor recruitment policy and plan • Coordination with the local Public Employment Services Office (PESO) and host municipal and barangay LGUs for the hiring process	Wyntron Inc.	Integrated in pre-construction cost	Pre-construction expenses
CONSTRUCTION PHASE						
Rehabilitation of the existing facilities in the expansion site	Land	Generation of construction spoils and debris	• Segregation of debris according to recyclable and non-recyclables • Provision on onsite interim storage area • Hauling of debris items by duly-licensed traders	Wyntron Inc.	P 50,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Implementation of solid waste management plan by the EPC contractors			
	Water	Possible siltation and increase of turbidity of Maalimango River Possible clogging of CEZ drainage system due to siltation	• Establishment of silt traps and erosion barriers • Regular removal of silt and sediments • Regular hauling out of excavated materials • Covering of excavated materials to avoid exposure to rainfall	Wyntron Inc.	P 50,000	Contractor's MOA
	Land	Ground vibration	• Notify nearby CEZ admin and the locators about the activity of using heavy equipment • For hauling trucks, comply with road weight limit standards to avoid ground vibration	Wyntron Inc.	Minimal	Contractor's MOA
	Land/Water	Generation of hazardous wastes	• Proper onsite collection, storage, and disposal of hazardous wastes in safe and sealed containers • Provision of onsite interim storage facility	Wyntron Inc.	P 10,000 per month	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Treatment and disposal of wastes through a DENR-accredited treater and TSD facility • Registration of all EPC contractors as hazardous waste generators			
	Air	Generation of air emissions	• Proper and regular maintenance of heavy equipment	Wyntron Inc.	P 10,000 per month	Contractor's MOA
	Air	Generation of noise	• Installation of mufflers • Perform noisy activities during daytime	Wyntron Inc.	P 20,000	Contractor's MOA
Influx of construction workers	Land/Water	Generation of domestic solid wastes	• Implementation of solid waste management plan by Wyntron Inc. and all EPC contractors • Segregation of solid waste according to recyclable and non-recyclables • Hauling of discarded/recyclable items by duly licensed service providers	Wyntron Inc.	P 15,000	Contractor's MOA
	Water	Generation of domestic wastewater	• Provision of adequate sanitation facilities (i.e. toilets, showers, etc.) • Follow basic housekeeping policies	Wyntron Inc.	P 30,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Delsudging of septic tanks by DENR-accredited service provider for proper treatment and disposal			
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU and CEZ on scheduling and handling the flow of traffic near the project area • Implementation of traffic management plan	Wyntron Inc.	Minimal	Contractor's MOA
	People	Community and occupational safety and health risks	• Requiring all personnel to wear proper PPE • Provision of trainings to all workers • Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas • Implementation of COVID-19 safety protocols • Implementation of occupational and community health and safety policies and protocols	Wyntron Inc.	P 50,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	People	Generation of employment and livelihood opportunities	• Priority hiring of qualified residents of the host communities • Purchasing of local items within the host communities, if applicable	Wyntron Inc.	Minimal	Contractor's MOA
	People	Possible increase in crime incidence	• Coordination with barangay officials and CEZ to ensure peace and order among workers and community members	Wyntron Inc.	Minimal	Contractor's MOA
OPERATIONS PHASE						
Operation of the EVSE charger manufacturing plant	Land/Water	Generation of solid wastes	• Implementation of Solid Waste Management Plan • Segregation of solid waste according to recyclable and non-recyclables • Provision of an onsite interim storage area • Hauling of discarded/recyclable items by duly licensed service providers	Wyntron Inc.	P 10,000 per month	ESMP
	Land/Water	Generation hazardous wastes (used oil, empty chemical containers)	• Collect, store and dispose wastes in safe and sealed containers • Proper segregation of hazardous wasres	Wyntron Inc.	P 10,000 per month	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Provision of onsite interim storage facility • Implementation of hazardous waste management plan • Treatment and dispose wastes through DENR-registered waste transporters or TSD facilities			
	Land/Water	Potential contamination of soil and/or groundwater due to accidential oil spills and leakages	• Implementation of oil spill contingency plan • Possible installation of safety features for fuel storage tanks, such as, but not limited to, spill prevention and detection, bund wall, and secondary containment • Provision of oil spill kits onsite • Maintain canal in the maintenance and repair area of vehicles and equipment	Wyntron Inc.	P 100,000	ESMP
	Land/Water	Potential contamination of soil and/or groundwater	• Implementation of chemical control procedures • Implementation of chemical spill contingency plan	Wyntron Inc.	P 100,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
		due to accidential chemical spills and leakages	• Provision of spill prevention and detection, bund wall, and secondary containment in the chemical storage area • Provision of chemical spill kits onsite • Regularly check all the pipes and containers of the chemicals			
	Air	Generation of air emissions	• Proper and regular maintenance of heavy equipment • Provision of stacks in the genset	Wyntron Inc.	P 50,000 per quarter	ESMP
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU on scheduling and handling the flow of traffic near the project area	Wyntron Inc.	Minimal	ESMP
Influx of Wyntron Inc.'s workers and employees	Land/Water	Generation of domestic solid wastes	• Implement Solid Waste Management Plan • Segregation of solid waste according to recyclable and non-recyclables • Hauling of discarded/recyclable items by duly licensed traders	Wyntron Inc.	P 15,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	Water	Generation of domestic wastewater	• Implementing basic housekeeping policies • Provision of sanitation facilities (i.e., toilet, shower, etc.) • Installation of septic tanks • Regularly desludge the septic tanks • Secure sewer connection to CEZ	Wyntron Inc.	P 30,000	ESMP, Certificate of Sewer Connection to CEZ
	People	Exposure of workers to physical and chemical hazards Occupational health and safety risks	• Installation of well-ventilated work areas • Provision of proper PPEs to the workers • Provide proper training to all workers • Posting of chemical SDS in the work areas • Provide orientation on the proper handling of the chemicals • Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas	Wyntron Inc.	P 50,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Implementation of COVID-19 safety protocols • Implementation of occupational and community health and safety policies			
	People	Generation of additional employment and livelihood	• Priority hiring of qualified residents of the host communities • Adherence to the local ordinance on hiring prioritization	Wyntron Inc.	Minimal	ESMP
	People	Possible increase in crime incidence	• Coordination with barangay officials to ensure peace and order among workers and community members	Wyntron Inc.	Minimal	ESMP
DECOMMISSIONING/ABANDONMENT PHASE						
Termination of employees' contract	People	Loss of employment	• Provision of 6 months' notice about the impending termination of employment • Provision of compensation for affected personnel • If possible, provision of re-training of personnel in preparation for other job openings	Wyntron Inc.	To be determined	ESMP
	Land	Generation of solid wastes	• Solid Waste Management Plan	Wyntron Inc.	To be determined	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
Decommissioning and pull-out of equipment		and other scraps (including hazardous wastes)	• Proper onsite collection, storage, and disposal of hazardous wastes in safe and sealed containers • Treatment and disposal of wastes through a DENR-accredited treater and TSD facility			
	Land	Generation of demolition spoils and debris	• Segregation of debris according to recyclable and non-recyclables • Hauling of debris by duly licensed traders	Wyntron Inc.	To be determined	ESMP
	Air	Generation of air emission and noise	• Proper and regular maintenance of heavy equipment • Installation of mufflers • Performing of noisy activities during daytime	Wyntron Inc.	To be determined	ESMP
	Air	Generation of dust	• Regular watering of demolition sites that will generate dust • Applying canvas covers where necessary	Wyntron Inc.	To be determined	ESMP
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU on scheduling and handling the flow of traffic near the project area	Wyntron Inc.	To be determined	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	People	Community and occupational safety and health risks	• Requiring all personnel to wear proper PPE • Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas • Implementation of COVID-19 safety protocols (if still applicable)	Wyntron Inc.	To be determined	ESMP

E. Environmental and Social Monitoring Plan

6. The Environmental and Social Monitoring Plan (ESMoP) will allow Wyntron to monitor, verify, and perform the necessary corrective measures towards the mitigation of the identified environmental impacts. The ESMoP presents a set of critical parameters that must be checked regularly to ensure compliance with the applicable national standards

7. The ESMoP implementation will provide significant information on examining the short and long-term effects of the proposed project's various environmental aspects, from which future strategies on environmental enhancement measures can be formulated. This may help ensure the sustainability of operations.

Table ES-3: Environmental and Social Monitoring Plan

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
A. Pre-Construction and Construction Phase						
Solid waste generation	Weight or volume of wastes generated	Weighing/log-book recording	Weekly	Construction areas, waste storage facility	Wyntron Inc./Contractor	Minimal
Hazardous waste generation	Metric ton (solid, liquid)	Weighing/log-book recording	Weekly	Waste storage facility	Wyntron Inc./Contractor	Minimal
Employment	Number of locally employed personnel	Logbook/ database registration	Quarterly	Administration office of the project site	Wyntron Inc./Contractor	Minimal
Occupational health and safety	No. of work-related illnesses/injuries No. of safety man-hours	Logbook/ database registration	Daily	Administration office of the project site	Wyntron Inc./Contractor	Minimal
Traffic	No. of vehicles entering/exiting the project site	Logbook/ database registration	Daily	Entrance/exit	Wyntron Inc./Contractor	Minimal
B. Operations Phase						
Solid waste generation	Weight or volume of wastes generated	Weighing/log-book recording	Daily	Waste storage facility	Wyntron Inc.	Part of OPEX
Hazardous waste generation (used oil etc.)	Metric ton (solid, liquid)	Weighing/log-book recording	Weekly	Waste storage facility	Wyntron Inc.	Part of OPEX

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
Effluent of Septic Tanks	BOD, pH, COD, O&G, Color, fecal coliform	Grab sampling	Quarterly	Septic tanks	Wyntron Inc.	P30,000 per event
Noise	Decibel levels on selected equipment	Digital sound level meter	Quarterly	Project site and within CEZ	Wyntron Inc.	P5,000 per station per event
Ambient Air Quality	NO_x, SO_x, $PM_{10,}$ TSP	DAO 2000-81 Analysis Methods	Quarterly	Project site and nearby communities	Wyntron Inc.	P30,000 per station per event
Source emissions	NO_x, SO_x, $PM_{10,}$ TSP	DAO 2000-81 Analysis Methods	Quarterly	Stacks	Wyntron Inc.	P30,000 per station per event
Occupational health and safety	No. of work-related illnesses/injuries. no. of safety man-hours	Logbook/ database registration	Daily	Administration office of the project	Wyntron Inc.	Minimal
Stakeholder engagement	Number and type of stakeholder engagement meetings and activities	Review of records	Quarterly	Project area	Wyntron Inc.	Minimal
Traffic	No. of vehicles entering/exiting the project site	Logbook/ database registration	Daily	Entrance/exit	Wyntron Inc.	Minimal
C. Abandonment Phase						
Demolition spoils and solid wastes	Weight (kg); no. of items	Weighing/log-book recording	Daily/weekly	Project Site	Wyntron Inc.	Minimal

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
Loss of employment	No. of affected employees	Database registration	Once	Project Site	Wyntron Inc.	Minimal
Air quality	Dust and noise	Air sampler	As needed	Project Site	Wyntron Inc.	To be determined
Soil and groundwater contamination	Heavy metals, TPH and other priority pollutants	Grab sampling and laboratory analysis	Once	Project Site	Wyntron Inc.	To be determined

F. Conclusion and Recommendation

8. An IEE is sufficient for the proposed expansion of Wyntron's EVSE manufacturing plant considering its categorization as Category B for Environment and Category C for both Involuntary Resettlement and Indigenous People.

9. The proposed expansion site is formerly used for the manufacturing of Printed Circuit Boards (PCBs). Before the start of construction activities, Wyntron should coordinate with PEZA to ensure that the previous owner properly cleaned up and decommissioned all the equipment in the site, and that there are no significant environmental concerns in the property due to the previous operations and decommissioning activities. Wyntron may request for a copy of the Certificate of Clearance issued by PEZA to the previous owner once proper decommissioning is completed.

10. During construction, the anticipated project impacts on noise, dust, traffic, health, and safety are localized, temporary, intermittent in nature and can be readily addressed through implementation of the measures outlined in the ESMP.

11. The potential impacts of the operation of the project on water, air emission, noise, health and safety can likewise be minimized and/or eliminated through the implementation of the mitigating measures listed in the ESMP.

12. Wyntron is fully committed to comply to the environmental and social requirements of the ADB SPS requirements and the applicable national and local policies.

13. Should there be changes in the project scope or location of the facilities that would result to significant impacts not included in this assessment, an updated or a new IEE/EIA Report will be prepared.

I. INTRODUCTION

14. Wyntron Inc. (Wyntron) is operating a manufacturing plant for Electronic Vehicle Supply Equipment (EVSE) inside the Cavite Ecozone in Rosario, Cavite. At present, the plant produces 55,333 pieces per year. Due to the increasing demand of the global EVSE market, Wyntron, with assistance from the Asian Development Bank (ADB), intends to expand the EVSE manufacturing facilities to produce 300,000 pieces per year.

15. Based on the information available, the EVSE manufacturing plant is categorized as Category B for Environment and Category C for both Involuntary Resettlement and Indigenous People.

16. The Initial Environmental and Social Examination (IESE) was prepared in accordance with the requirements of the following policies
    - ADB Safeguard Policy Statement, 2009
    - ADB Social Protection Strategy, 2001
    - ADB Access to Information Policy, 2019
    - IFC Performance Standards, 2012
    - World Bank Group General Environment, Health & Safety (EHS) guidelines, 2007
    - Applicable local, national and international laws and regulations including labor laws/child labor laws

II. DESCRIPTION OF THE PROJECT

A. Project Location and Area

17. The existing EVSE manufacturing plant of Wyntron, with production of 55,333 pieces per year, is located inside the Cavite Ecozone (CEZ) in Rosario, Cavite. This existing operation will be transferred to the proposed expansion site that is still located inside CEZ and is adjacent to the existing project site (see Figure 1). CEZ is being operated by the Philippine Economic Zone Authority (PEZA) and has a total land area of 280 hectares.

18. Wyntron Inc. will acquire the existing building adjacent to its existing operations to expand its EVSE manufacturing operations. The building was used for the manufacturing of Printed Circuit Board (PCB) by a different company until 2020. It has a total land area of ~32,370 square meters. The land will be leased by Wyntron from PEZA while the existing building facilities in the project site were purchased to the previous owner.

Table 1: Geographic Coordinates of Project Site

Point	Latitude	Longitude
1	14°24'36.00"N	120°52'26.79"E
2	14°24'36.31"N	120°52'29.37"E
3	14°24'25.41"N	120°52'30.65"E
4	14°24'24.97"N	120°52'27.04"E
5	14°24'30.61"N	120°52'26.40"E
6	14°24'30.76"N	120°52'27.59"E

19. The proposed EVSE manufacturing plant is surrounded by the different locators of the Cavite Ecozone as shown in Figure 2. The nearest residential community is located about ~1 kilometer to the southeast of the project site.

20. The renovation activities will include the following scope of work:

B. Project's Area of Influence

21. In accordance with the ADB SPS 2009, the identified project's area of influence includes the following.

- The ~32,370 square meters project site inside the Cavite Ecozone where the project will be constructed.
- Surrounding areas of the project site (Cavite Ecozone, Rosario, Cavite)
- Maalimango River where the treated effluent of the wastewater treatment plant of CEZ is discharged to.

Figure 1: General Location Map of the Project Site

Figure 2: Vicinity Map of the Project Site

C. Project Size

22. The proposed new EVSE charger manufacturing plant is to produce 300,000 EVSE pieces per year.

D. Project Components

23. The project components of the EVSE charger manufacturing plant are presented in Table 2.

Table 2: Project Components of the Project

Project Component	Line	Annual Capacity (pcs)
Main Project Components		
Surface Mount Technology Process Line - PCB Loading Machine - Solder Paste Printer - SPI Machine - Chip Mounter Machine - Reflow Soldering Machine - AOI Machine - Scanner & Barcode/Label Printer - 3D X-ray Machine	4	360,000
Manual Insertion – Post Waver Soldering Process - Machine Carrier Pallet - Auto-Wave Solder Machine - Selective Soldering Machine - ICT Fixture & Machine - ET Test Fixture & Machine - Programming Fixture	4	420,000
Test (ICT)	3	420,000
Test(ET) – Ford	1	120,000
Test(ET)-UL	2	240,000
Test(ET)-IEC	1	120,000
Test(Car Sim No Load) Ford	1	70,000
Test (Car Sim No Load) UL	3	210,000
Test (car Sim No Load) IEC	1	70,000
Coating - PVA Coating Top - Inverter Machine - PVA Coating Bottom - UV Curing Machine - AOI Machine	4	370,000
Box Build	6	311,000
Paint spray line	3	300,000
Support Facilities		
• PCBA Warehouse • Employees Locker Area • Admin and Office • FA Warehouse • Logistics Area • Materials Recovery Facility • Residual Waste Storage Area • Hazardous Waste Storage Area • Chemical Storage • Diesel fuel storage tanks		

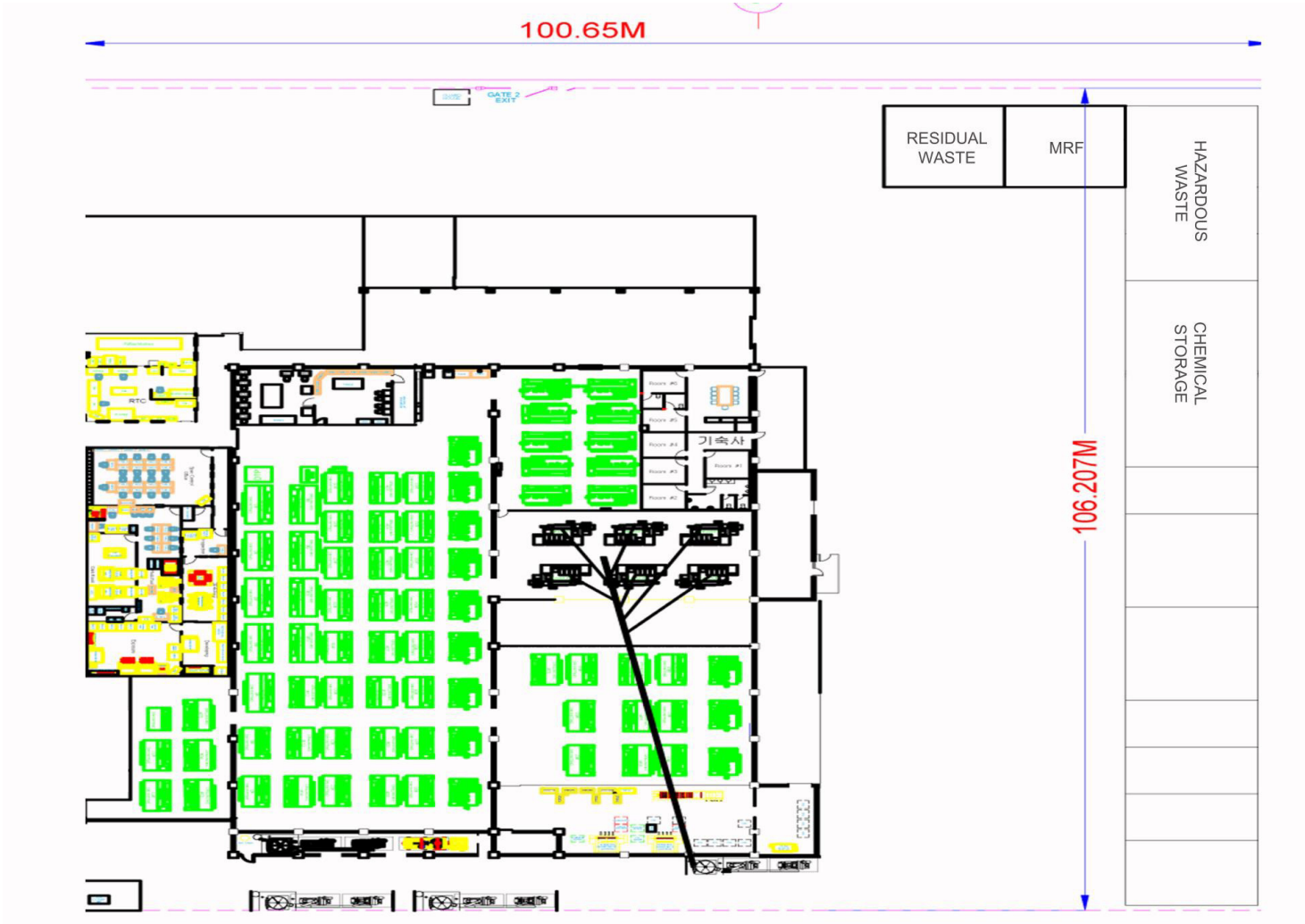


Figure 3: Proposed Site Development Plan

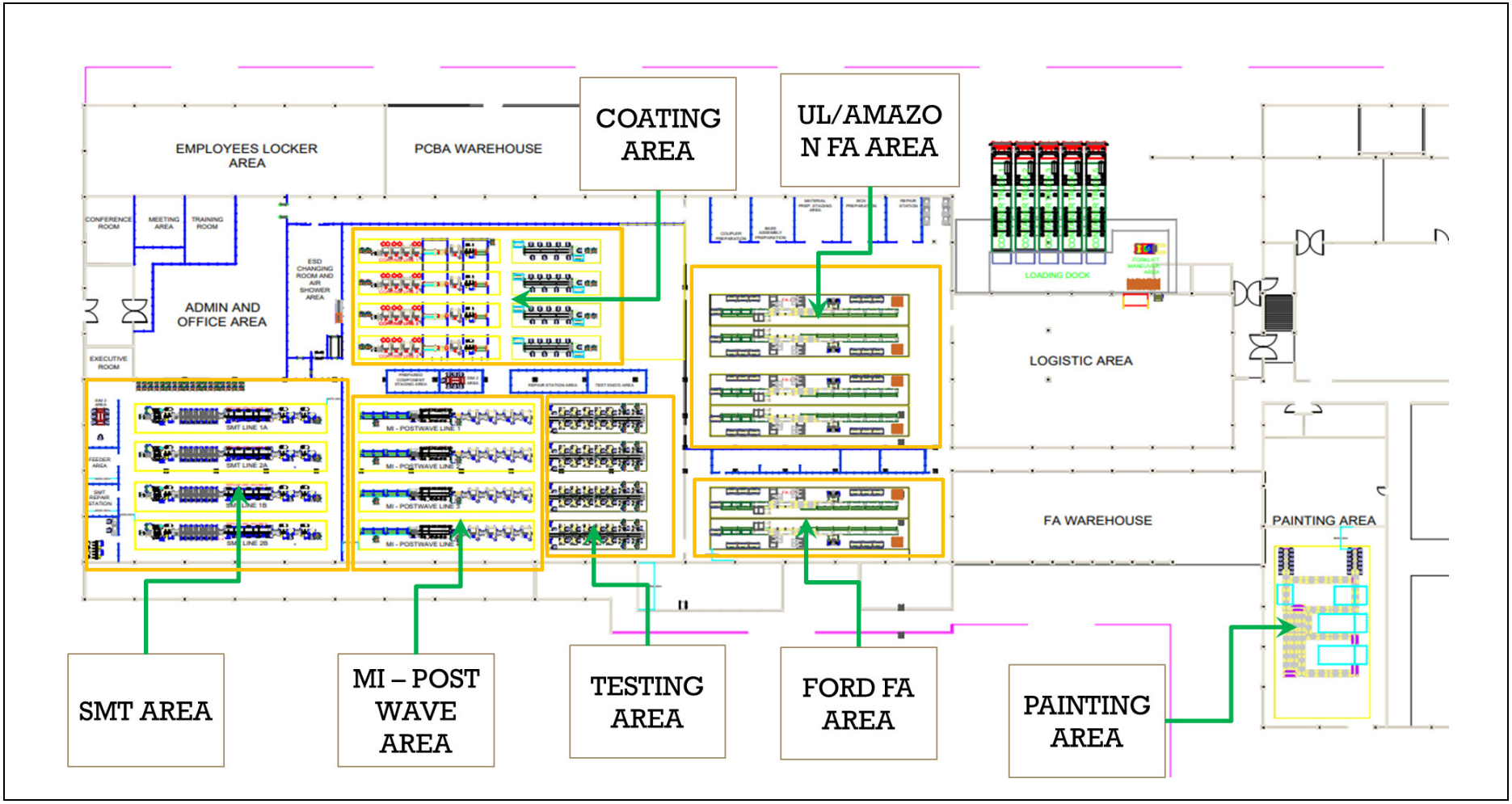


Figure 4: Proposed Plant Layout

E. Process/Technologies

24. There are six major processes involved in the production of the EVSE as presented in Figure 5. Figure 6 to Figure 10 show the activities involved in each process.

(1) Materials Receiving and Pre-Assembly – receiving of the raw materials presented in Table 3.

Table 3: Raw Materials for the EVSE Production

Raw Material	Amount Used (tons/year)	Raw Material	Amount Used (tons/year)
Capacitor	97.80	Power Connector	5.49
Coupler	2,045.48	Resistor	0.13
Crystal	0.07	Screw	1.98
Diode	4.95	Switch	16.53
Housing	1,705.04	Thermistor	2.71
Inductor	0.03	Transformer	21.83
Integrated Circuit	9.05	Transistor	0.12
LED	0.09	Varistor	3.70
PCB	87.26		

(2) Surface Mount Technology Assembly Process – solder paste is applied to the Printed Circuit Board (PCB) then all components are mounted to the PCB.

(3) Manual Insertion-Post Wave Soldering Process – manual insertion of other components at defined locations on PCB then undergoes wave soldering process.

(4) Testing Process – electrical testing of the PCB Assembly to check if the PCB Assembly is properly calibrated and functional. If defects are detected, the unit will be sent to the rework station to touch-up/replace defective component.

(5) PCBA Coating Process – automated coating of the top and bottom of the PCBA then further coated manually in the areas that the machine was not able to coat. The unit then goes to the UV curing machine

(6) Box Build Process - the PCBA is then housed to an enclosure and installed with cables.

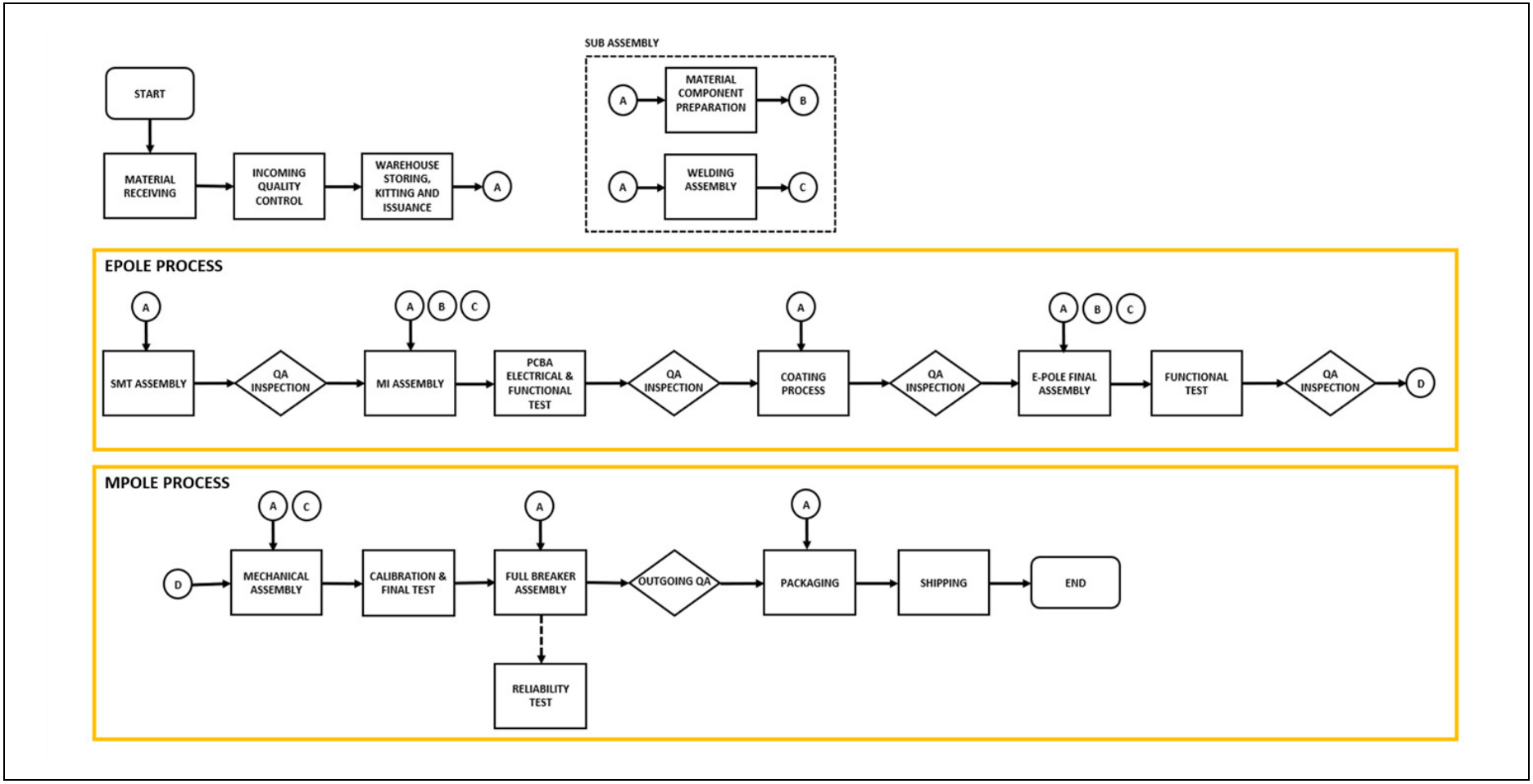


Figure 5: General Process Flow Diagram of EVSE charger Production Process

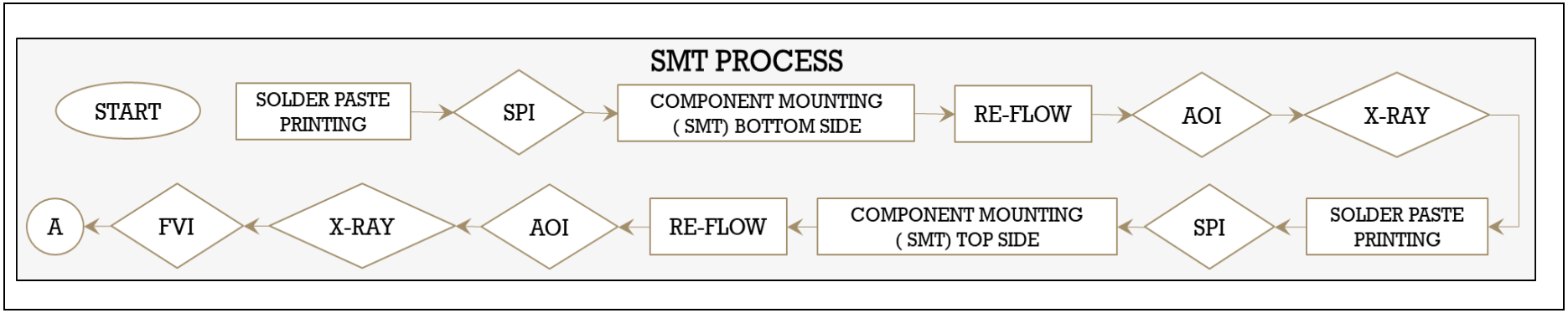


Figure 6: Process Flow Diagram of SMT Process

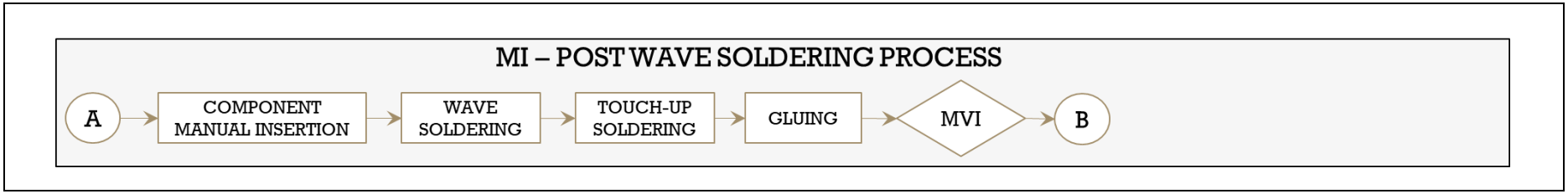


Figure 7: Process Flow Diagram of MI-Postwave Soldering Process

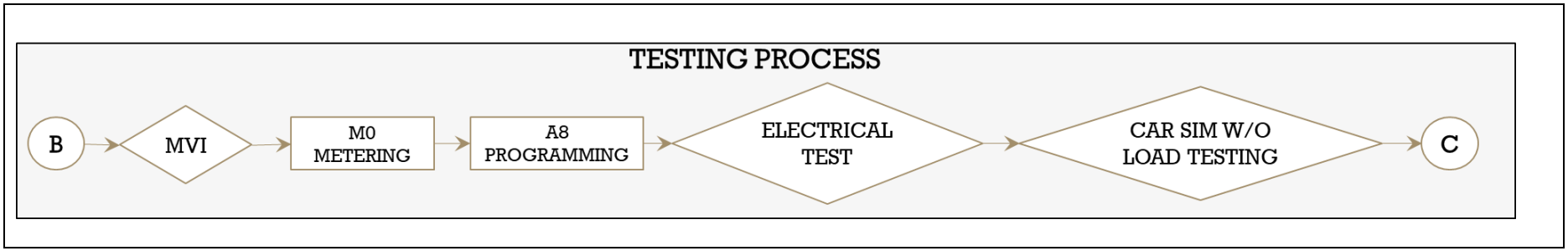


Figure 8: Process Flow Diagram of Testing Process

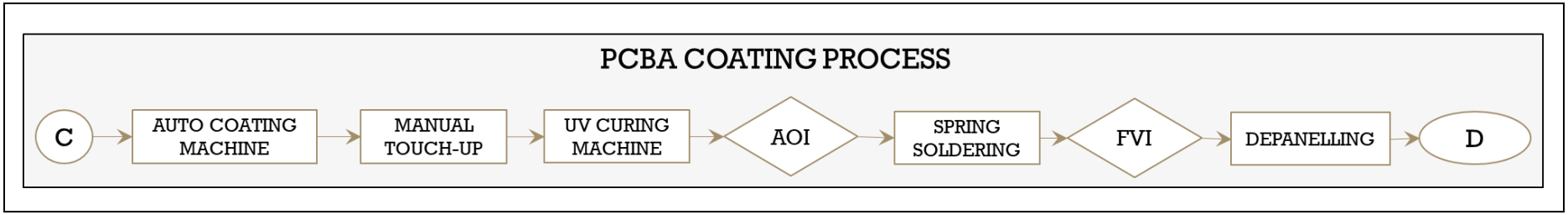


Figure 9: Process Flow Diagram of PCBA Coating Process

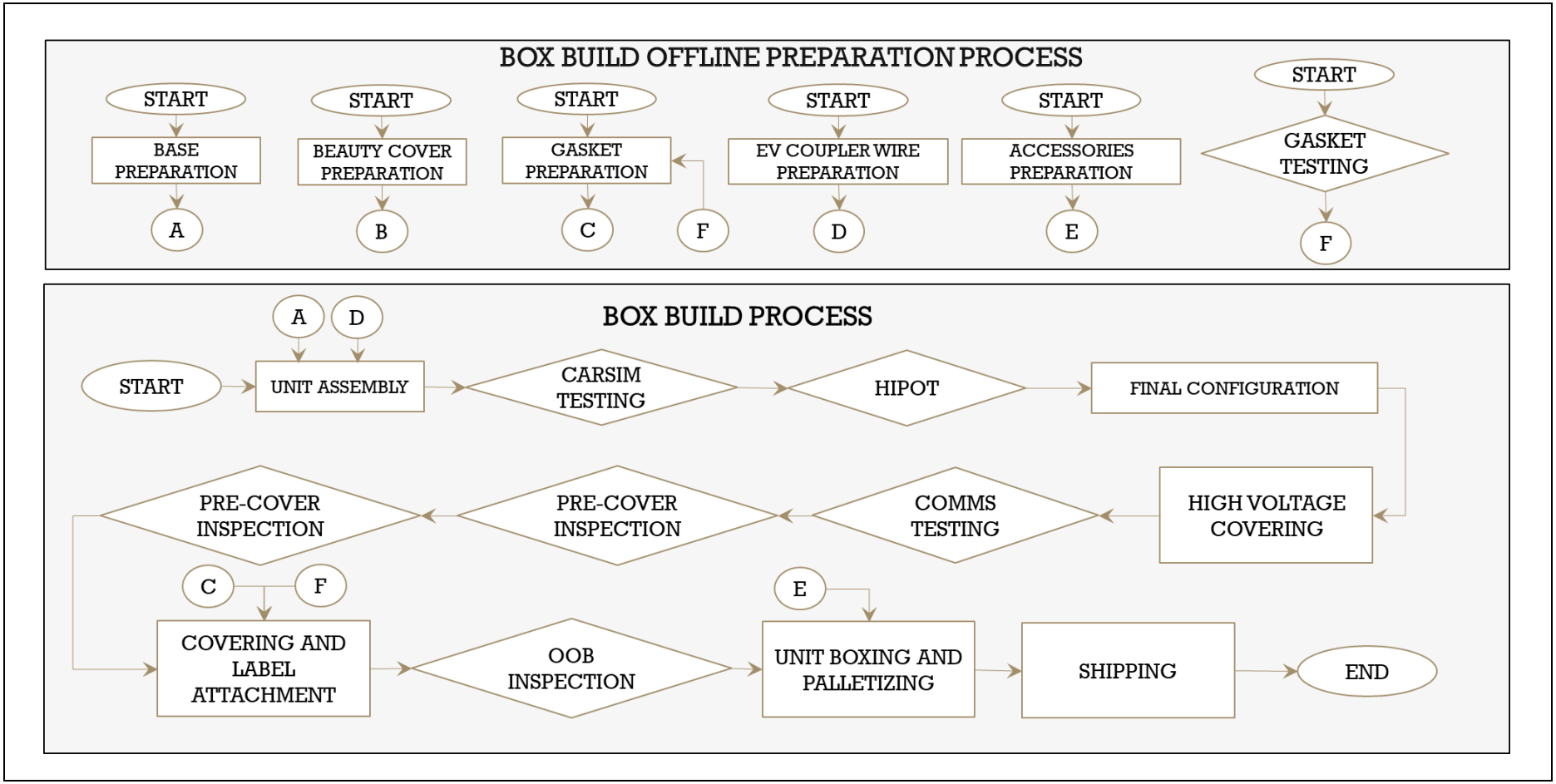


Figure 10: Process Flow Diagram of Box Building Process

F. Project Utilities

1. Power Supply

25. The estimated monthly consumption of the operation of the EVSE manufacturing plant is 539,987 kWh. This will be supplied by Manila Electric Company (MERALCO). In addition, three units of generator sets with capacity of 1,000 KVA each will be installed as back-up power source.

2. Water Supply

26. Manufacturing of EVSE does not require process water. The water requirement of the project will only be used for domestic purposes such as toilet flushing, washing and cleaning. It is estimated that about 3,000 cubic meters per month of water is required during the operation of the project. This will be sourced from the existing water supply of CEZ.

27. The water supply system of CEZ is being operated by the Manila Water Philippine Ventures (MWPV). The water source of CEZ includes 8 deep wells. Water from the deep wells undergoes chlorination for disinfection prior to distribution to the locators.

3. Chemicals

28. Table 4 lists the chemicals that will be used during the operation of the project. A chemical storage facility with estimated capacity of 60 cubic meters will be constructed for the proper storage of these chemicals.

Table 4: Chemicals to be Used during Operation

Chemical	Unit	Estimated Usage per Year
Solder Paste	grams	668,000
Solder Flux	liters	418,760
Solder Bar	grams	2,128,500
Solder Wire	grams	2,653,320
UV 40	milliliters	2,437,600
Glue	milliliters	450,000

G. Pollution Control Facilities

1. Wastewater Treatment Facility

29. Wastewater that will be generated by the project is limited to domestic wastewater only. It is estimated that about 2,700 cubic meters per month of domestic wastewater will be generated. Septic tanks and oil-water separator tanks will be installed to pre-treat the wastewater before discharging to the existing sewerage system of CEZ. A sewer connection certificate should be secured to PEZA prior the operation.

30. The existing sewerage system of CEZ is also being operated by MWPV. The sewerage system in CEZ is a separate sewer system which wastewater is collected separately from the rainwater. The collected wastewater is then conveyed to the raw sewage lift station then pump to the centralized wastewater treatment plant. The WWTP of CEZ has a total treatment capacity of 10,000 cubic meters per day and is composed of two parallel multi-stage aerated ponds. After aeration in the ponds, the wastewater is disinfected using Calcium hypochlorite (CaOCl) then is discharged to the Maalimango River.

31. Before discharging to the existing sewer lines, the interim effluent standards set by CEZ should be met by the locators (see Table 5).

Table 5: Interim Effluent Standards of CEZ

Parameter	Unit	Maximum Concentration Limit
BOD	mg/L	200
COD	mg/L	400
TSS	mg/L	200
Total coliform	MPN/100mL	50,000,000
Other parameters	Should comply to GES (DAO 2016-08 and 2021-19)	

Figure 11: Location of the WWTP of CEZ

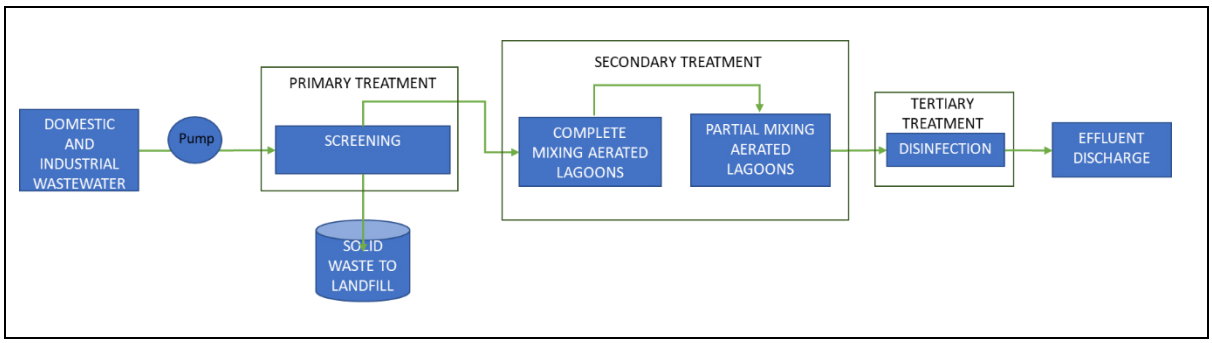


Figure 12: Treatment Process of the WWTP of CEZ

2. Air Pollution Control Facilities

32. The list of air pollution sources that will be installed in the plant is presented in Table 6. However, the only fuel burning equipment that will be used is the diesel power generators. The gensets will be equipped with stacks with adequate stack to ensure proper dispersion of the emissions. Other APSIs are not required to have air pollution control facilities however, these APSIs will be connected to exhaust vents.

Table 6: List of Air Pollution Sources Installation (APSI)

No.	APSI
1	Diesel Generator
2	Exhaust Blower
3	Conformal Coating Machine
4	Reflow Oven
5	Wave Solder
6	Manual Soldering

3. Solid Waste Management

33. Solid wastes that are expected to be generated by the project include domestic wastes from the workers and offices such as papers, plastics and packaging materials. A Materials Recovery Facility (MRF) will be installed in the project site for the storage of the recyclable wastes while a separate storage area will be provided for the residual wastes.

4. Hazardous Waste Management

34. The hazardous wastes that may be generated by the plant is listed in Table 7. An interim hazardous waste storage facility will be constructed within the plant site.

Table 7: List of Hazardous Wastes that will be generated by the Plant

No.	DENR Waste Class	DENR Waste Number
1	Wastes with cyanide	A101
2	Lead compounds	D406
3	Arsenic and its compounds	D402
4	Solvent based	F601
5	Used industrial oil including sludge	I101
6	Containers previously containing toxic chemical substances	J201
7	Waste electrical and electronic equipment (WEEE)	M506
8	Ink formulation	F603

H. Development Plan, Description of Project Phases, and Corresponding Timeframes

35.

36. Table 8 shows the indicative project timeline. The construction, which includes the rehabilitation works and installation of equipment, of the proposed project will start in January 2023 while the target commercial operation is in June 2023.

Table 8: Indicative Project Timeline

Activity/Milestone	2022		2023			
	Q3	Q4	Q1	Q2	Q3	Q4
1. Feasibility, permitting & licensing, detailed engineering						
2. Construction (civil works, installation of equipment)						
3. Commissioning						
4. Commercial Operation						

1. Pre-construction Phase

37. This phase includes acquisition of necessary permits and licenses and the procurement of necessary materials for construction. Plans and designs should be finalized at this time. The construction materials and equipment will be procured to the suppliers of the proponent and to be transported to the project site. Hiring of workers and subcontractors will also be done at this phase.

38. During this phase, Wyntron Inc. may request for a copy of the abandonment plan of the former owner of the existing facilities inside the expansion site and of the Certificate of Closure issued by PEZA to the former owner. This is to ensure that there are no environmental concerns within the site due to the previous operations and/or due to the decommissioning of the existing facilities. Additionally, an environmental and social due diligence will be undertaken to review if there are any project legacy issues.

2. Construction Phase

39. The construction phase includes rehabilitation of the existing buildings in the project site, procurement and shipping of project components, installation of equipment and construction of the additional buildings.

40. Temporary facilities will be installed in the project site to support the construction activities. All the temporary facilities in the project site should be regularly cleaned and maintained.

41. After the construction phase, all the temporary facilities will be decommissioned properly. The proponent will ensure that all wastes generated during the construction will be properly disposed.

3. Operational Phase

42. The EVSE manufacturing facility is expected to operate 24 hours a day and 365 days per year. Proper occupational health and safety and relevant human resource procedures will be strictly observed to ensure labor compliance.

4. Decommissioning/Abandonment Phase

43. The proposed project is not expected to be abandoned in the next 25-30 years. However, ceasing of the plant operations may be necessary due to the following potential scenarios:
    - Unsustainable business operations due to economic downturns;
    - Transfer of operations to other sites;
    - Accidents and emergencies (either natural or man-made) resulting to severe facility damage and/or loss of human life; and
    - Closure order from government agencies.

44. In the unlikely event of abandonment, Wyntron Inc. will initiate an Abandonment, Decommissioning, and Rehabilitation Plan.

I. Workforce and Skills Requirements

45. Table 9 summarizes the workforce and skills requirements throughout the development phases of the project. As shown, around 105 workers are estimated to be employed for the construction phase of the project, and an estimate of 2,000 personnel, of which 800 are additional, will be employed to oversee the entire operation and maintenance of the project.

46. Wyntron shall prioritize hiring local workers whose skills and experience match the specific needs of the project. Wyntron will coordinate with CEZ and the local Pufblic Employment Service Office (PESO) for the hiring of the workers.

Table 9: Workforce and Skills Requirement of the Project

PROJECT PHASE	ESTIMATED MANPOWER REQUIREMENT	TASKS TO BE PERFORMED	SKILLS REQUIREMENT
Construction	105	• Perform civil, architectural, and electro-mechanical works	• Laborers • Masons • Painters • Engineer • Electrician • Foreman
Operation	1,200 (existing) 800 (additional for the expansion)	• Oversee the entire operations of the proposed project, including emergency situations; • Ensuring the safety and welfare of its personnel • Maintain conformity of the proposed project to relevant government regulations, including tax payments, ECC compliance, etc. • Promote and uphold a harmonious relationship with the host community	Management and administration skills; over-all knowledge on the operation including key environmental, labor, and local ordinances • Plant Manager • Team Leader • QC Specialist • HR/Nurse/Staff • Operators • Workers • Warehouse Personnel
Abandonment	10 (as needed)	Implement the abandonment plan	As required

J. Environmental, Health and Safety Committee

47. Wyntron has already established its environmental, health and safety (EHS) committee to monitor and oversee the environmental, social, health and safety issues of its existing operation. The same team shall oversee the operation of the expansion project. The organization structure of the EHS committee of Wyntron Inc. is presented in Figure 13 while the defined roles and responsibilities of each member are presented in Table 10.

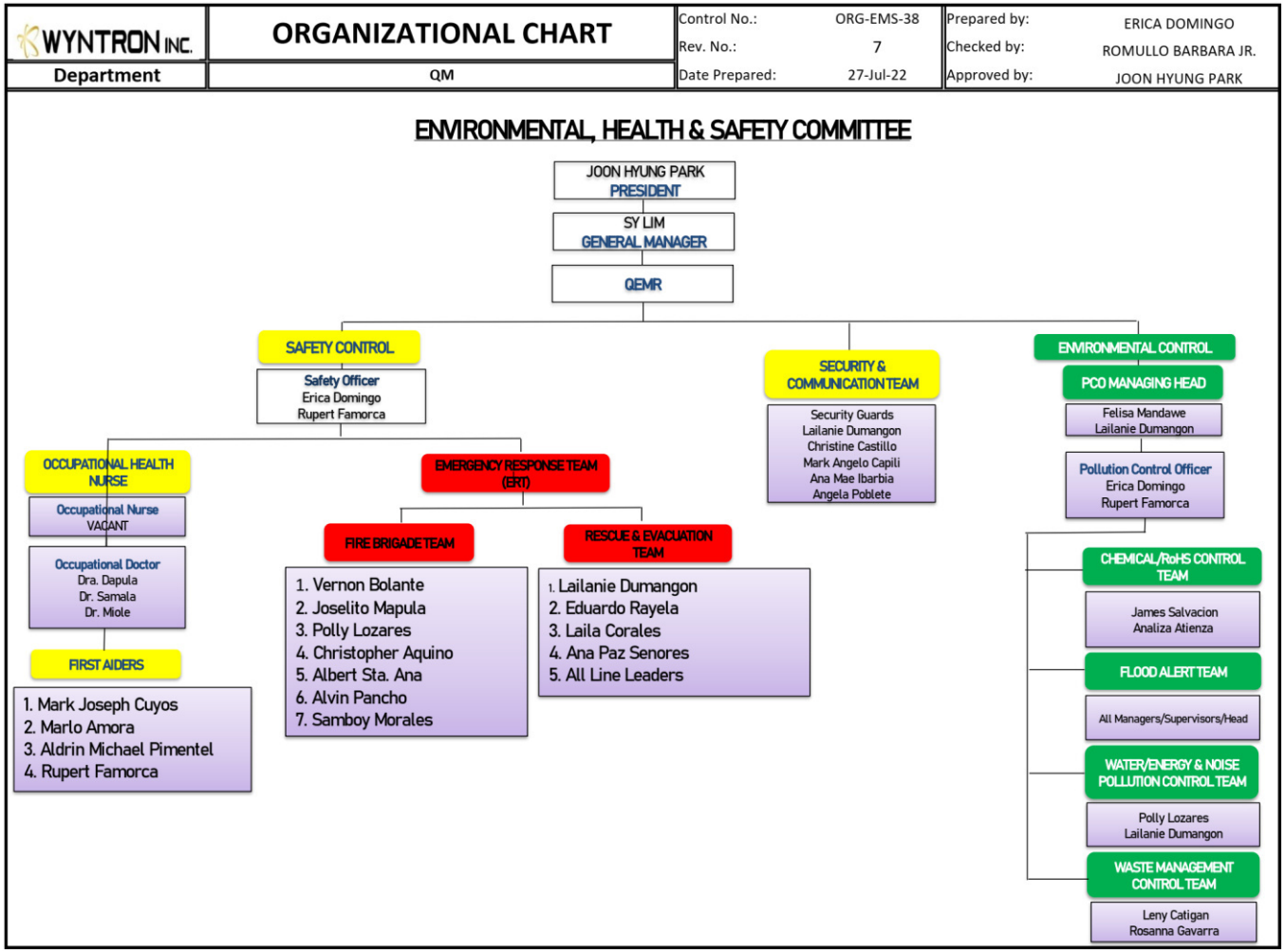


Figure 13: Organizational Chart of Wyntron Inc.'s EHS Committee

Table 10: Roles and Responsibilities of EHS Committee Members

Designation	Roles and Responsibilities
President	• Has the ultimate responsibility for the overall direction of the management.
Director	• Over-all second in command
Management Representative	• Review and ensures that the established environmental, health and safety management system is properly implemented.
Safety Officer	• Over-all in-charge on the implementation of EHS program. Act as secretary of EHS committee.
Occupational Health Doctor	• Performs all clinic/company physician duties which includes attending to health concerns of employees, handling health and wellness programs of the company, recommend policies and programs for improvement of health related services, inspect and monitor work environment for health hazards, establish proper medical supervision over substances used, process and work environment to prevent diseases and injuries in the workplace, maintain and analyze medical cases, prepare and submit necessary reports to the management and government agencies.
First Aiders	• In case of emergency, responsible to administer first aid medical care and lifesaving before arrival of medical help and transport victim to hospital when needed.
Communication Control Committee	• Providing leadership and communication during emergency.
Traffic Control Committee	• Ensures coordinated smooth and safety of inbound and outbound flow of traffic.
PCO Managing Head	• Ensures updated and on time applications of permits, licenses and maintaining the records.
Pollution Control Officer	• Facilitate compliance of the establishment with the requirements prescribed by DENR and other related regulatory agencies
Chemical/ROHS Control Team	• Responsible for proper handling of chemicals, securing and avoiding chemical spills and provide immediate response.
Water/Energy and Noise Pollution Control Team	• Monthly monitoring of energy and water consumption, checking of leaking pipes/faucets. Provide energy and water conservation programs/activities/signages and ensure. Monitor sound level, provide and ensures that appropriate PPEs are properly use.
Flood Alert Team	• Monitoring of the situation especially during rainy days and typhoon. Assess situation in terms of criteria for severe weather warnings.
Waste Management Control Team	• To ensure the proper waste segregations, proper waste monitoring and disposal

K. Project Cost

48. The project cost for the EVSE charger manufacturing expansion project is estimated at around USD 37.9 million.

III. POLICY AND LEGAL FRAMEWORK

A. National Policy, Legal and Regulatory Framework

49. Table 11 provides the list of existing laws, regulations and issuances that are applicable to the project.

Table 11: List of Applicable and Existing Laws, Regulations and Issuances

List of Applicable and Existing Laws, Regulations and Issuances
Environmental Protection
• PD 1586: Philippine Environmental Impact Statement System (PEISS) • PD 1152: Philippine Environment Code • PD 856: Sanitation Code of the Philippines, Chapter 17: Sewage Collection and Disposal, Excreta Disposal and Drainage, Chapter 20: Pollution of the Environment • RA 6969: Toxic Substances, Hazardous and Nuclear Waste Control Act of 1990 • RA 9003: Ecological Solid Waste Management Act of 2000 and its IRR (i.e., DENR Administrative Order No. 2001-34) • RA 9729: Climate Change Act of 2009 and its IRR (i.e., Climate Change Commission Administrative Order No. 2010-10) • Republic Act No. 9275: Philippine Clean Water Act of 2004 • RA 8749: Philippine Clean Air Act of 1999 and its IRR • DENR Administrative Order No. 2016-08: Water Quality Guidelines and General Effluent Standards pf 2016 • DENR AO No. 2021-19: Updated Water Quality Guidelines and General Effluent Standards for Selected Parameters • DENR Administrative Order No. 2013-22: Revised Procedures and Standards for the Management of Hazardous Wastes • DOH Administrative Order No. 2007-0012: Philippine National Standards for Drinking Water of 2007 • NPCC Memorandum Circular No. 002 Series of 1980: Ambient Noise Quality Standards
Gender and Development
• Article II, Section 14, 1987 Constitution • Article XIII, Section 14, 1987 Constitution • Article XIII, Section 11, 1987 Constitution • RA 9710: The Magna Carta of Women in 2009 • RA 7192: Women in Development and Nation Building Act • RA 6725, An Act Strengthening the Prohibition on Discrimination against Women with Respect to Terms and Conditions of Employment, amending 135 of the Labor Code, as Amended • RA 7322: Act Increasing Maternity Benefits in Favor of Women Workers in the Private Sector • RA 8505: Rape Victim Assistance and Protection Act of 1998. • RA 8972: Solo Parent Welfare Act. • RA 9208: Anti-Trafficking in Persons Act of 2003 • RA 9262: Anti-Violence Against Women and their Children Act. • RA 7600: Rooming -In and Breast-feeding Act of 1992 • RA 10028: Expanded Breastfeeding Promotion Act of 2009 • RA 11313: Safe Spaces Act
Labor and Employment
• PD 856: Sanitation Code of the Philippines, Chapter 7: Industrial hygiene, Chapter 2: Water Supply • PD 442: Labor Code of the Philippines • RA 7877: Anti-Sexual Harassment Act • RA 9165: Comprehensive Dangerous Act of 2002

List of Applicable and Existing Laws, Regulations and Issuances
• RA 8504: Philippine AIDS Prevention and Control Act of 1998 • RA 11058 or An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing for Violations Thereof • RA 8282: Social Security Law • RA 7875 as amended- National Health Insurance Act of 1995 • RA 9679 as amended- Home Development Mutual Fund Law of 2009 • Applicable Department of Labor and Employment (DOLE) Department Administrative Orders: o DO 53 Drug Free Workplace o DO 73 TB Prevention and Control o DDO 05 Hepatitis B Prevention and Control o DDO 102 HIV Aids Prevention and Control o DO 208 Guidelines for the Implementation of Mental Health Workplace Policies and Programs for the Private Sector o DO 198 IRR of RA 11058 o DO 174 Implementing Rules and Regulations (IRR) on Contracting and Subcontracting Arrangements

B. ADB Safeguard Requirements

1. ADB's Safeguard Policy Statement (SPS), 2009.

50. The ADB SPS sets out the policy objectives and principles of ADB for the three key safeguard areas: (i) Environment; (ii) Involuntary resettlement; and (iii) Indigenous People. The project must comply to the applicable requirements of the ADB SPS 2009.

51. **Safeguards Requirement 1 (SR1) on Environment**. SR1 ensures the environmental soundness and sustainability of the subprojects and supports the integration of environmental considerations into the subproject's decision-making process. Environmental safeguards are triggered if a subproject is likely to have potential environmental risks and impacts. During the design, construction and operation of a subproject, the Company will apply technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's Environment, Health and Safety Guidelines.

52. **Safeguard Requirement 2 (SR2) on Involuntary Resettlement**. SR2 requires avoidance or minimization of involuntary resettlement by exploring subproject design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels and to improve the standards of living of the displaced poor and other vulnerable groups. The involuntary resettlement safeguards cover physical displacement (relocation loss of residential land or loss of shelter) and economic displacement (loss of land assets, access to assets, income sources, or means of livelihoods) because of involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers them whether such losses and involuntary restrictions are full or partial, permanent or temporary.

53. **Safeguards Requirement 3 (SR3) on Indigenous People**. SR3 requires the design and implementation of subprojects in a way that fosters full respect for indigenous peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the indigenous peoples themselves so that they: (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts because of subprojects directly or indirectly affects the dignity, human rights, livelihood systems or culture of indigenous

peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use , occupy, or claim as an ancestral domain or asset.

54. ADB carries out project screening and categorization of the project at the earliest time possible when sufficient information is available and provided. Screening and categorization are undertaken to (i) reflect the significance of potential impacts or risks that a project might present; (ii) identify the level of assessment and institutional resources required for the safeguard measures; and (iii) determine disclosure requirements.

55. Based on ADB SPS 2009, a project's category is determined by the category of its most environmentally sensitive component, including direct, indirect, cumulative, and induced impacts in the project's area of influence. Each proposed project was assessed as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Once the assessment is completed, the proposed project will be classified as one of the following categories shown in Table 12. The applicable safeguard requirement must also be complied based on the categorization of the proposed project.

Table 12: ADB Environmental and Social Safeguards Categorization Definition and Requirements

Category (Risk Rating)	Environmental Safeguards	Involuntary Resettlement Safeguards	Indigenous Peoples Safeguards
Category A (with potential significant impacts)	Subprojects that anticipate significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. Comply with (i) SR1 of the ADB Safeguard Policy Statement, including ESIA preparation & submission, and (ii) national laws. For subprojects not financed by ADB, EIA needs to be prepared to comply with applicable national laws and aligned with ADB SPS requirement on best effort basis.	Subprojects where 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating). Comply with (i) SR2 of the ADB Safe Safeguard Policy Statement, including Resettlement Plan (RP) preparation & submission, and (ii) national laws. For subprojects not financed by ADB, land acquisition and resettlement should comply with national laws and aligned with ADB SPS requirement on best effort basis.	Subprojects that are expected to significantly affect the dignity, human rights, livelihood systems, or culture of Indigenous Peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use occupy, or claim as ancestral domain or asset. Comply with (i) SR3 of the ADB Safeguard Policy Statement, including IPP preparation & submission, and (ii) national laws. For subprojects not financed by ADB, measures to address impacts in indigenous peoples should comply with national laws and aligned with ADB SPS requirement on best effort basis.
Category B (with less significant impacts)	Subprojects with potential adverse impacts that are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be more readily designed than Category A subprojects.	Subprojects with involuntary resettlement impacts that are not deemed significant Comply with (i) ADB's PIAL and (ii) SR2, including RP	Subprojects that are likely to have limited impacts on Indigenous Peoples. Comply with (i) AD's PIAL and (ii) SR3 of the ADB Safeguard Policy Statement, including IPP

Category (Risk Rating)	Environmental Safeguards	Involuntary Resettlement Safeguards	Indigenous Peoples Safeguards
	Comply with (i) ADB's PIAL and (ii) SR 1 of the ADB Safeguard Policy Statement, including IEE preparation & submission, and (iii) national laws.	preparation, and (iii) national laws.	preparation & submission, and (iii) national laws.
Category C (with minimal or no impacts)	Subprojects that have minimal or no adverse environmental impacts Comply with (i) ADB's PIAL and (ii) national laws.	Subprojects with no involuntary resettlement impacts Comply with (i) ADB's PIAL and (ii) national laws.	Subprojects that are not expected to have impacts on Indigenous Peoples Comply with (i) ADB's PIAL and (ii) national laws.
Review and Information Disclosure Procedures for all Categories	Key relevant Environmental information from EIA/IEE disclosed to affected people during project preparation. ADB to review environmental assessment for subprojects financed under ADB facility. Disclosure of IEE report or Environmental Safeguards Compliance Audit including Corrective Action Plan, reviewed and approved by ADB for subprojects financed under ADB facility.	Environmental and Social Performance Report Key information from RP disclosed to affected people during project preparation. ADB to review RP for subprojects financed under ADB facility. Disclosure of Environmental and Social Safeguards Audit report and Corrective Action plan for subprojects submitted to ADB for review for subprojects financed under ADB facility. Monitoring reports for subprojects financed under ADB facility and disclosed locally in a	Environmental and Social Performance Report Key information from IPP disclosed to affected people during project preparation. ADB to review RP for subprojects financed under ADB facility. Disclosure of Environmental and Social Safeguards Audit report and Corrective Action plan for subprojects submitted to ADB for review for subprojects financed under ADB facility. Monitoring reports for subprojects financed under ADB facility and disclosed locally in a

Category (Risk Rating)	Environmental Safeguards	Involuntary Resettlement Safeguards	Indigenous Peoples Safeguards
	Disclosure of E&S monitoring report for Category A projects on Company website is encouraged.	form and language understandable to affected people. Disclosure of safeguards document documents on Company's website is encouraged.	form and language understandable to affected people.

56. Based on the assessment conducted, the project can be classified as Category B for Environmental and Category C for both Involuntary Resettlement and Indigenous Peoples.
    - The project is determined as Category B for Environment since most of its potential adverse impacts such as generation of wastewater and air emissions are site-specific/localized and can be readily addressed through the implementation of the mitigating measures.
    - In terms of Involuntary Resettlement, the project is considered as Category C since the project is not expected to have any land acquisition, which will result in involuntary resettlement impacts. The project site is already an industrial zone, and the land is to be leased from PEZA.
    - The project is also identified as Category C for Indigenous Peoples since there are no IPs that will be affected by the project. Project site is within an industrial zone, away from areas where distinct and vulnerable IPs/ ethnic minorities can be found.

57. The accomplished Rapid Environmental Assessment (REA) Screening Checklist and Project Categorization Forms (Environment, Involuntary Resettlement, and Indigenous Peoples) of this project are compiled in **Appendix 1** of this IEE Report.

2. ADB Policy on Gender and Development (GAD), 1998.

58. ADB's policy on GAD included mainstreaming as a key strategy in promoting gender equity. With respect to subprojects, the GAD Policy requires:

    - Gender analysis: to assess systematically the impact of a subproject on men and women, and on the economic and social relationship between them.
    - Gender planning: to formulate specific strategies that aim to bring about equal opportunities for men and women
    - Mainstreaming: to consider gender issues in all aspects of Company operations, accompanied by efforts to encourage women's participation in the decision-making process in development activities.

3. ADB Social Protection Strategy, 2001.

59. ADB's Social Protection Strategy 2001 requires Wyntron Inc. to comply with applicable labor laws in relation to ADB funded projects. Subproject companies should take the following measures to comply with the core labor standards.

    - Carry out its activities consistent with the intent of ensuring legally permissible equal opportunity, fair treatment and non-discrimination in relation to recruitment and hiring, compensation, working conditions and terms of employment for its workers (including prohibiting any form of discrimination against women during hiring and providing equal work for equal pay for men and women)
    - Not restrict its workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and
    - Engage contractors and other providers of goods and services (i) who do not employ child labor or forced labor, (ii) who have appropriate management systems that will allow them to operate in a manner which is consistent with the intent of ensuring legally permissible equal opportunity and fair treatment and non-discrimination for their workers, and not restricting their workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and (iii) whose

subcontracts contain provisions which are consistent with paragraphs (i) and (ii) above.

4. ADB Access to Information Policy, 2018

60. ADB's Information Policy recognizes that transparency and accountability are essential to development effectiveness. The objective of the policy is to enhance stakeholders' trust in and ability to engage with ADB. The policy recognizes the right of people to seek, receive, and impart information about ADB operations. It supports knowledge sharing and enables participatory development or two-way communications with affected people. The policy is based on a presumption in favor of disclosure unless there is a compelling reason for nondisclosure. It commits ADB to disclose subproject-related information proactively on its website, following strictly time limits, and provides mechanisms to handle responses and complaints.

IV. DESCRIPTION OF THE ENVIRONMENT

A. Biophysical Aspects

1. Regional Geology

61. The Province of Cavite regionally falls under Southwest Luzon Uplands which is dominated by a sequence of Oligocene to Pliocene marine sediments blanketed by Pio-Pleistocene pyroclastic deposits.

62. The Municipality of Rosario, like most part of the Cavite province, is underlain by Quaternary Volcanic Pyroclastic (QVP) which can be described as volcanic plain or volcanic piedmont deposits.

2. Topography and Slope

63. The whole Municipality of Rosario, including the proposed project site, is relatively flat with slope of 0 to 3%. The elevation within the proposed project site ranges from 8 to 10 meters above sea level.

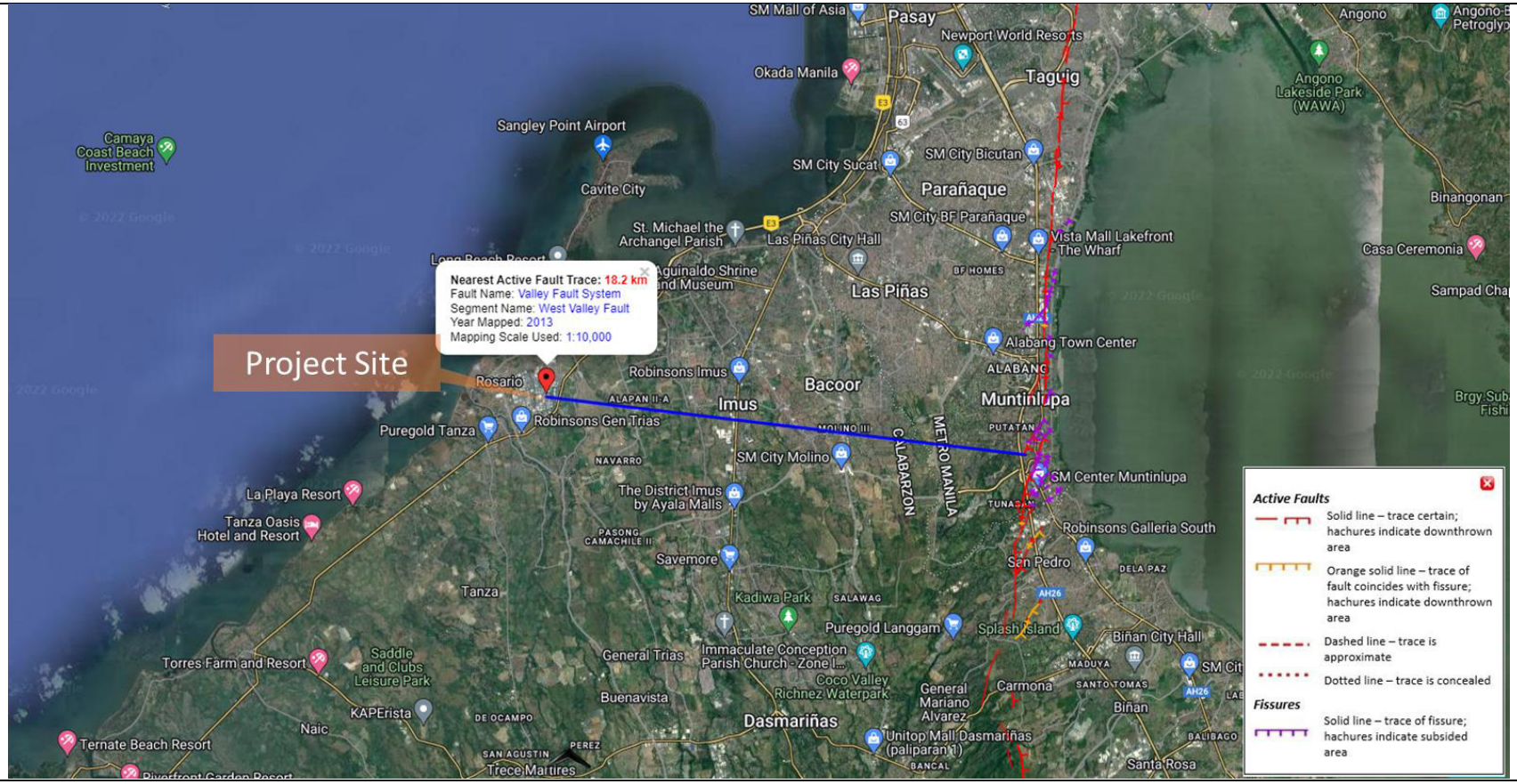
3. Natural Hazards

64. The results of hazards assessment conducted in the project site in terms of seismic, volcanic and hydro-meteorological hazards are summarized in Table 13. The hazard assessments were based on the available susceptibility maps of DOST-PHIVOLCS, DENR-MGB and DOST-PAGASA.

Table 13: Summary of Hazard Assessment in the Project Site

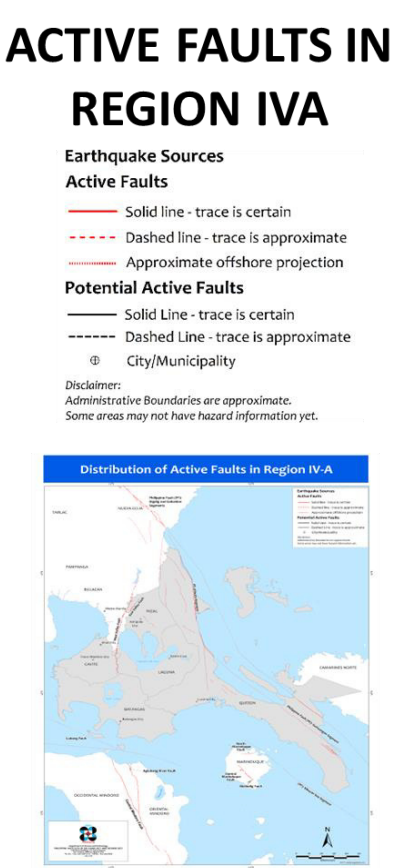
Hazard	Assessment	Remarks
Ground Rupture	Not susceptible	• The nearest active fault in the project site is the West Valley Fault, located approximately 18.2 kilometers east of the project site (see Figure 14 and Figure 15). • Given the distance of the project site to the nearest active fault, occurrence of ground rupture in the proposed project site is not expected
Ground shaking	Susceptible to PSEI VIII	The project site is susceptible to ground shaking with PEIS Intensity VIII and above which is described to be very destructive (see Figure 16).
Liquefaction	Moderately susceptible	See Figure 17
Earthquake-induced Landslide	Not susceptible	Since the project site is relatively flat, the project site is not susceptible to earthquake-induced landslide (see Figure 18).
Volcanic Events	Susceptible to Ashfall	The nearest active volcano in the project site is the Taal Volcano, located 46.1 km to the south of the project site (see Figure 19)

Hazard	Assessment	Remarks
Flooding	Low Susceptible	See Figure 20.
Rain-induced Landslide	Not susceptible	See Figure 21
Storm Surge	Safe	
Source: HazardHunterPH of GeoRisk Philippines		



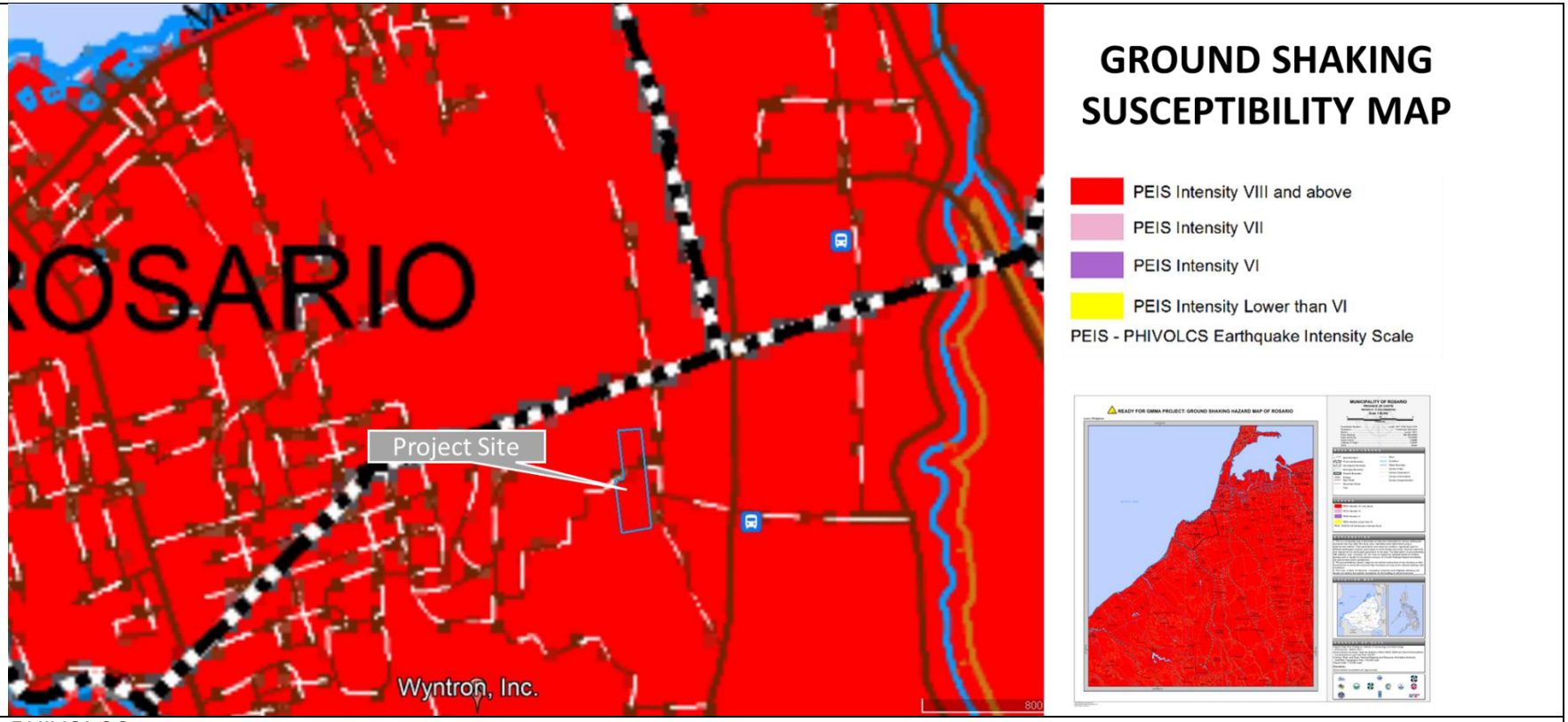
Source: FaultFinder

Figure 14: Distance of Nearest Active Fault Trace in the Project Site



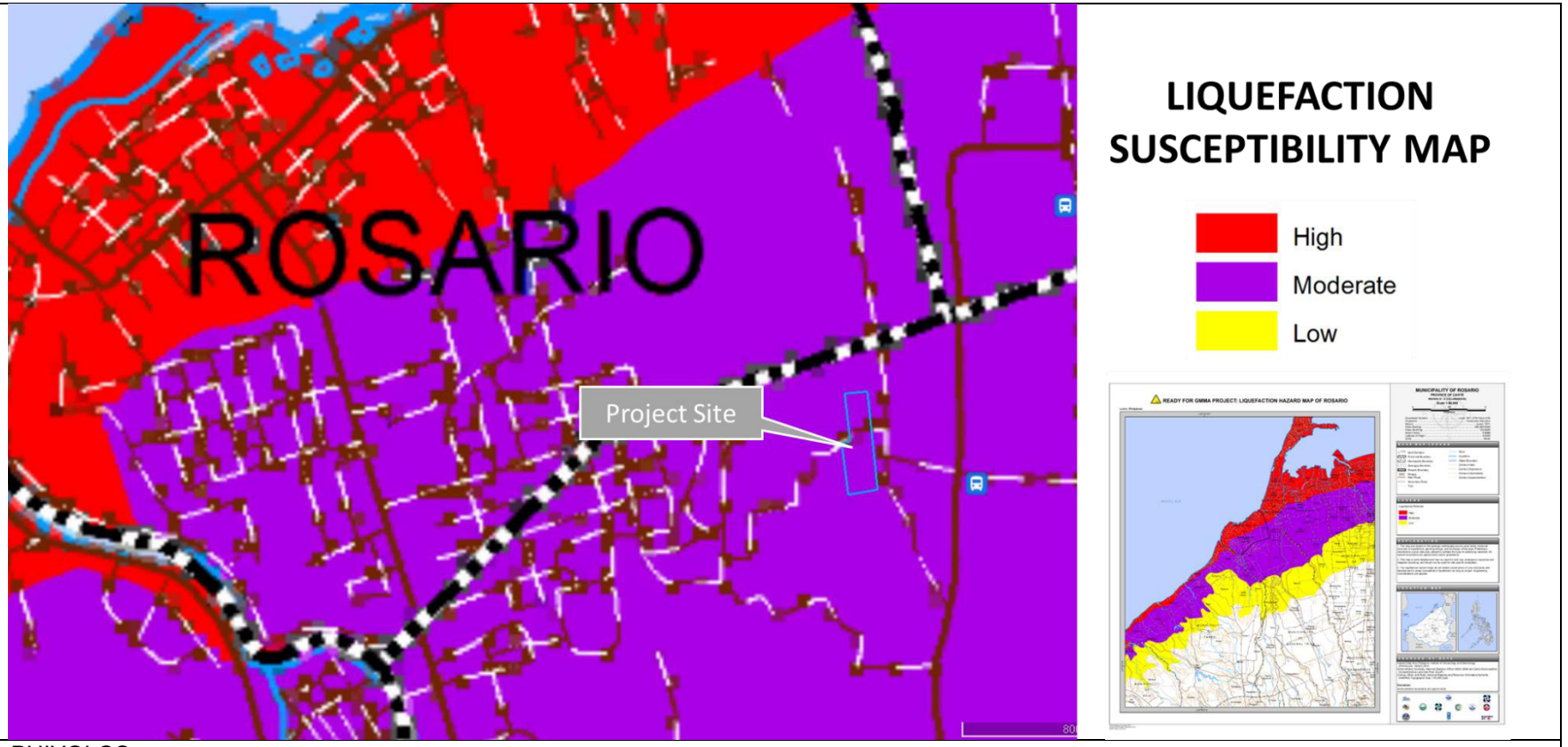
Source: PHIVOLCS

Figure 15: Active Faults in Region IVA



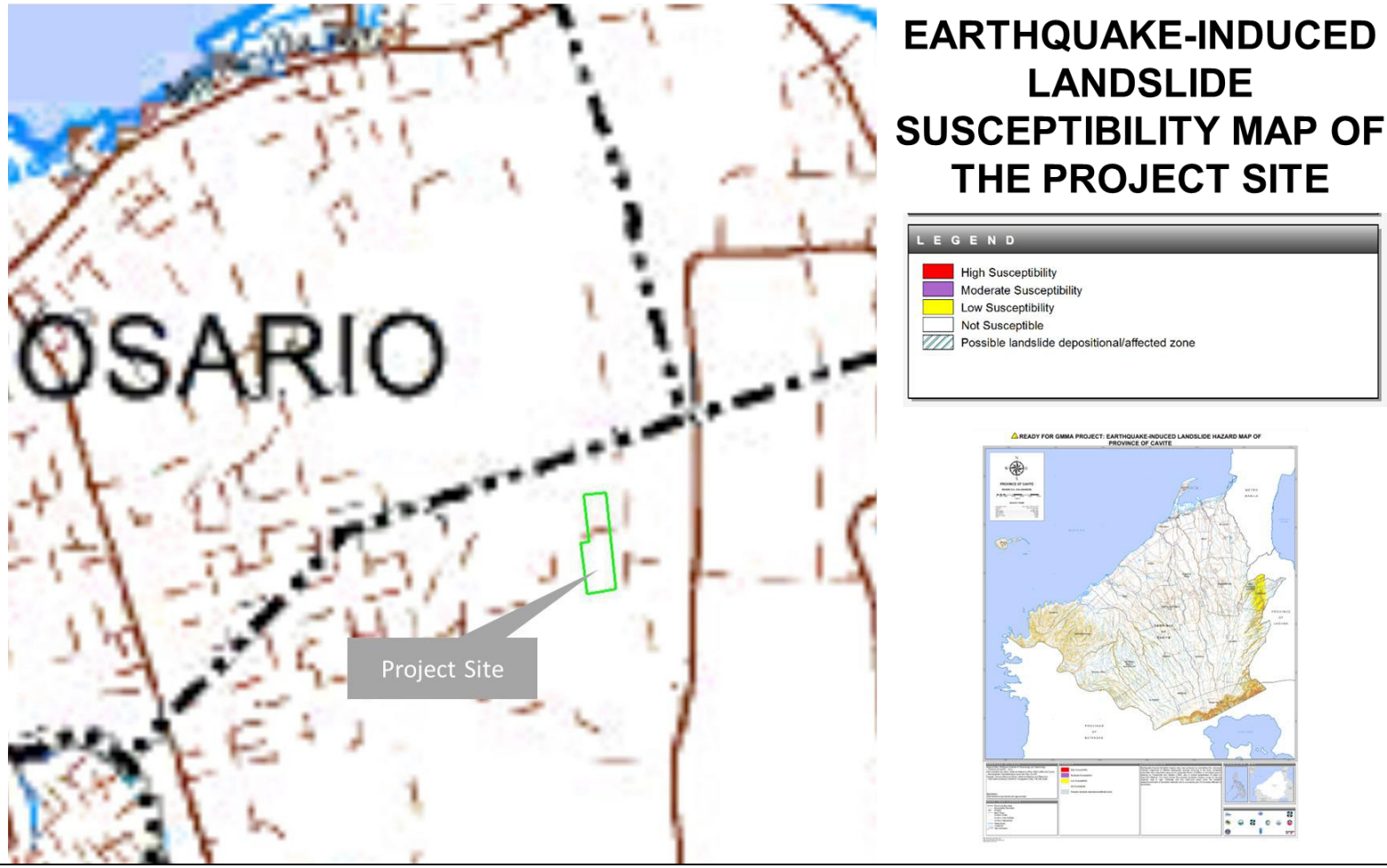
Source: PHIVOLCS

Figure 16: Ground Shaking Susceptibility Map of the Project Site



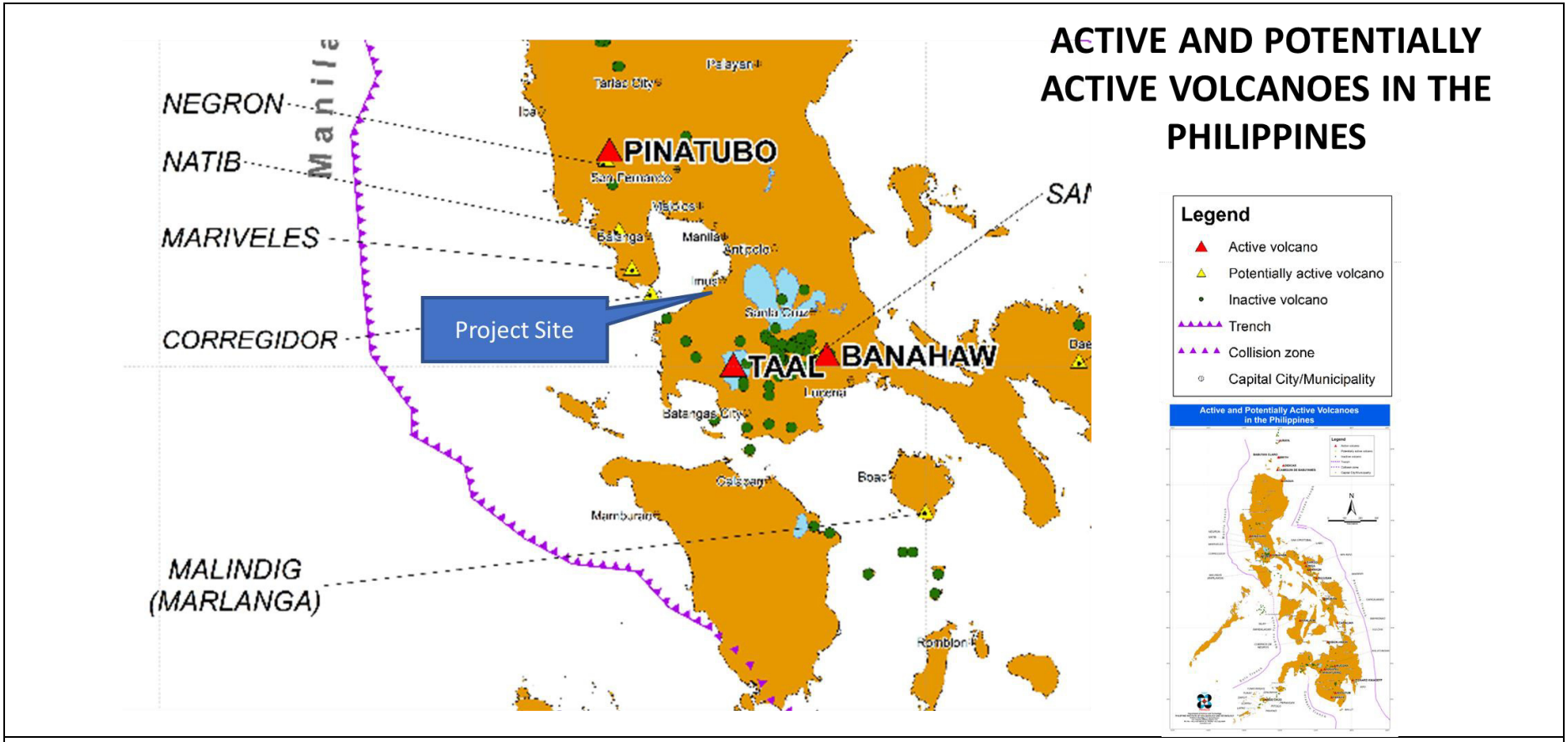
Source: PHIVOLCS

Figure 17: Liquefaction Susceptibility Map of the Project Site



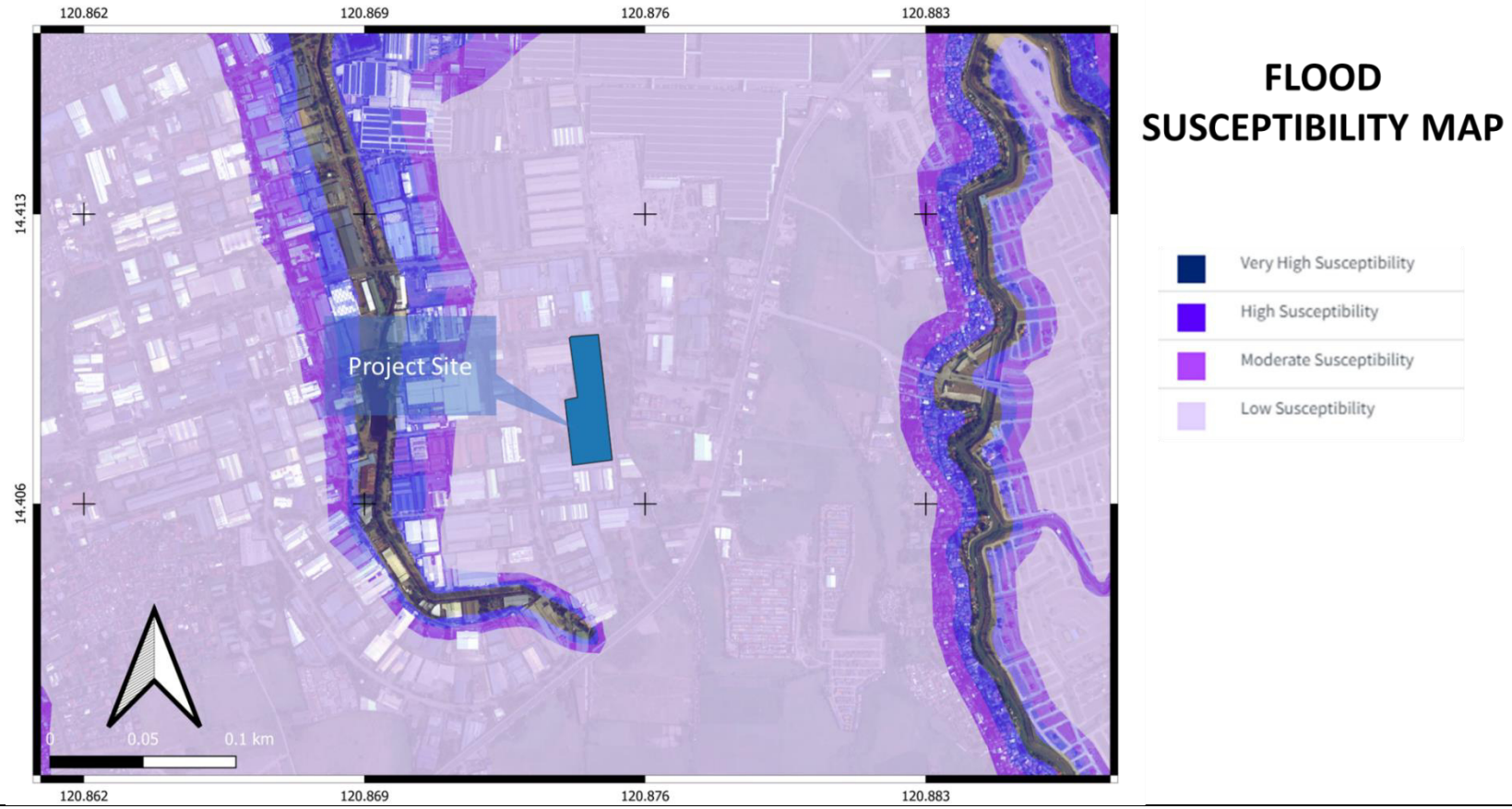
Source: PHIVOLCS

Figure 18: Earthquake-induced Landslide Susceptibility Map of the Project Site



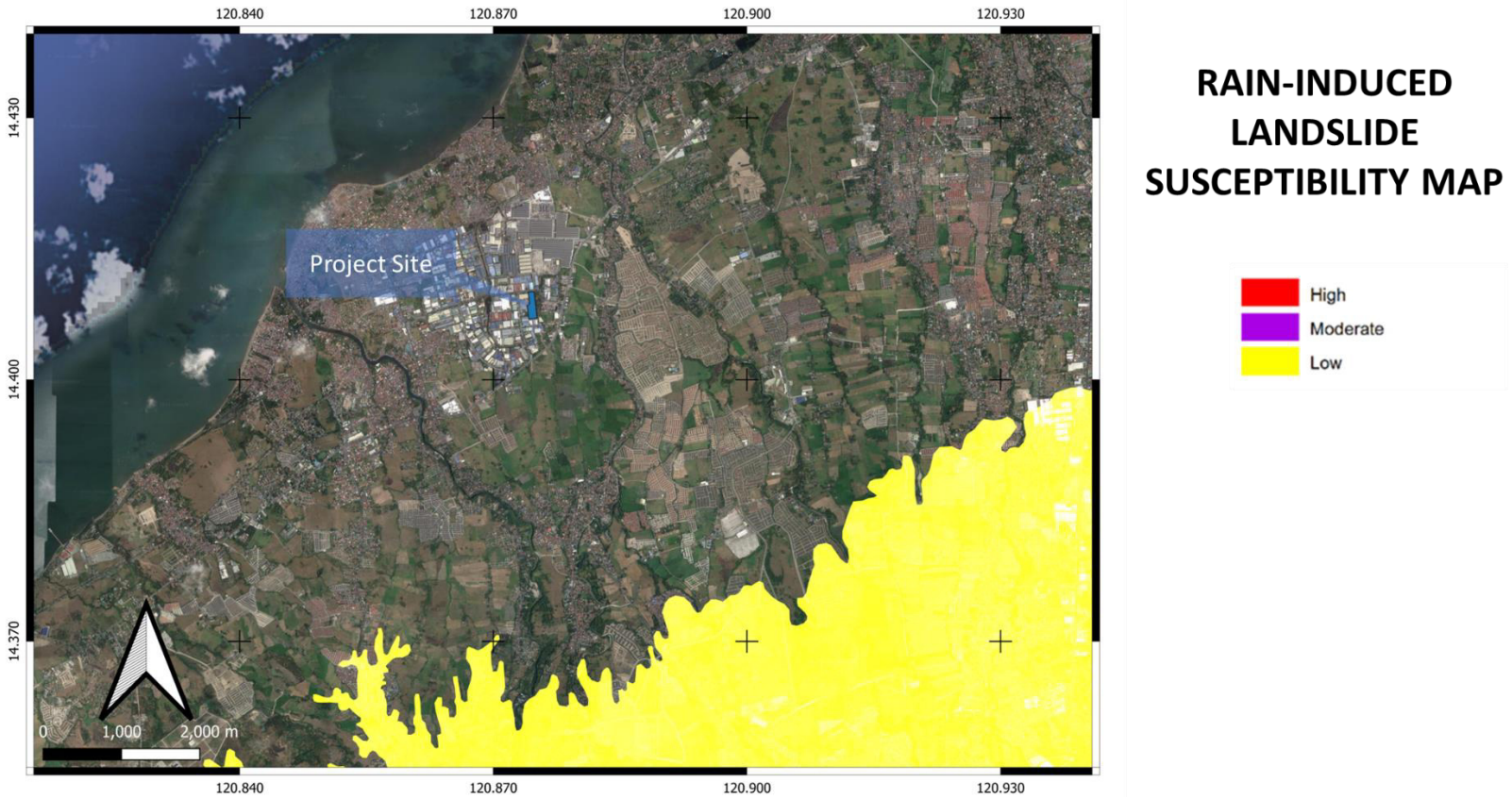
Source: PHIVOLCS

Figure 19: Nearest Active Volcano in the Project Site



Source: GeoAnalyticsPH

Figure 20: Flooding Susceptibility Map of the Project Site



Source: GeoAnalyticsPH

Figure 21: Rain-induced Landslide Susceptibility Map of the Project Site

4. Climate

65. **Climatic Conditions.** The project site falls under Type I climate based on the Modified Coronas Classification of the Philippines (Figure 22) which is characterized by two pronounced seasons, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September.

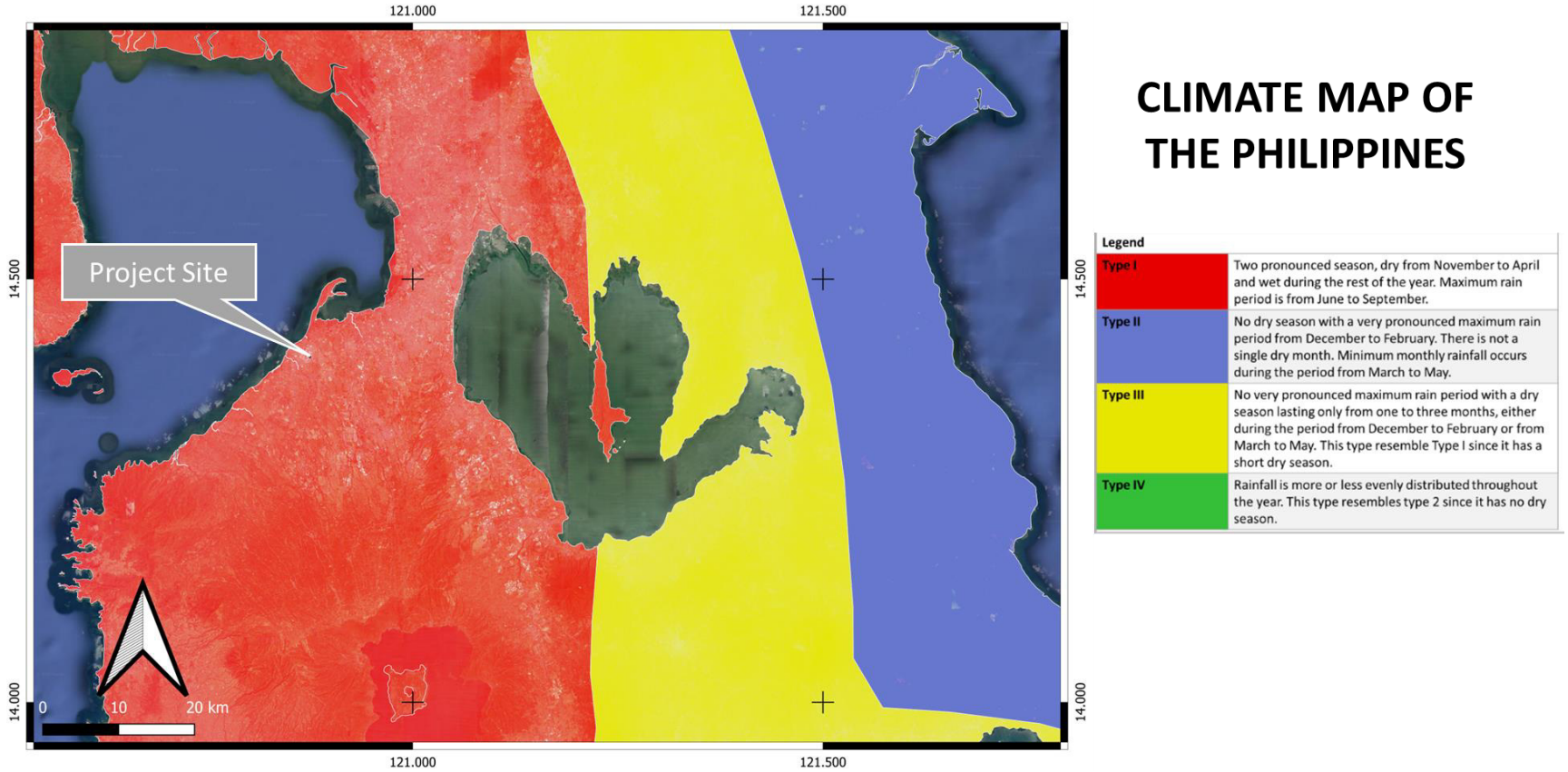
66. The project is within a zone that experiences three cyclones in two years (Figure 23).

67. The closest PAGASA weather station to the project site is in Ninoy Aquino International Airport (NAIA) in Pasay City, Metro Manila. Table 14 and Table 15 presents the climatological normal values and extremes recorded in NAIA from 1981-2010.

68. The area experiences approximately 1,767.8 m of rainfall annually. The greatest amount of rainfall is recorded in August, with about 418.4 m of rainfall and 19 rainy days. The month of March experiences the least amount of rainfall with 4 m and 1 rainy day on average. The greatest daily rainfall recorded in the area was 472.4 m on July 20, 1972.

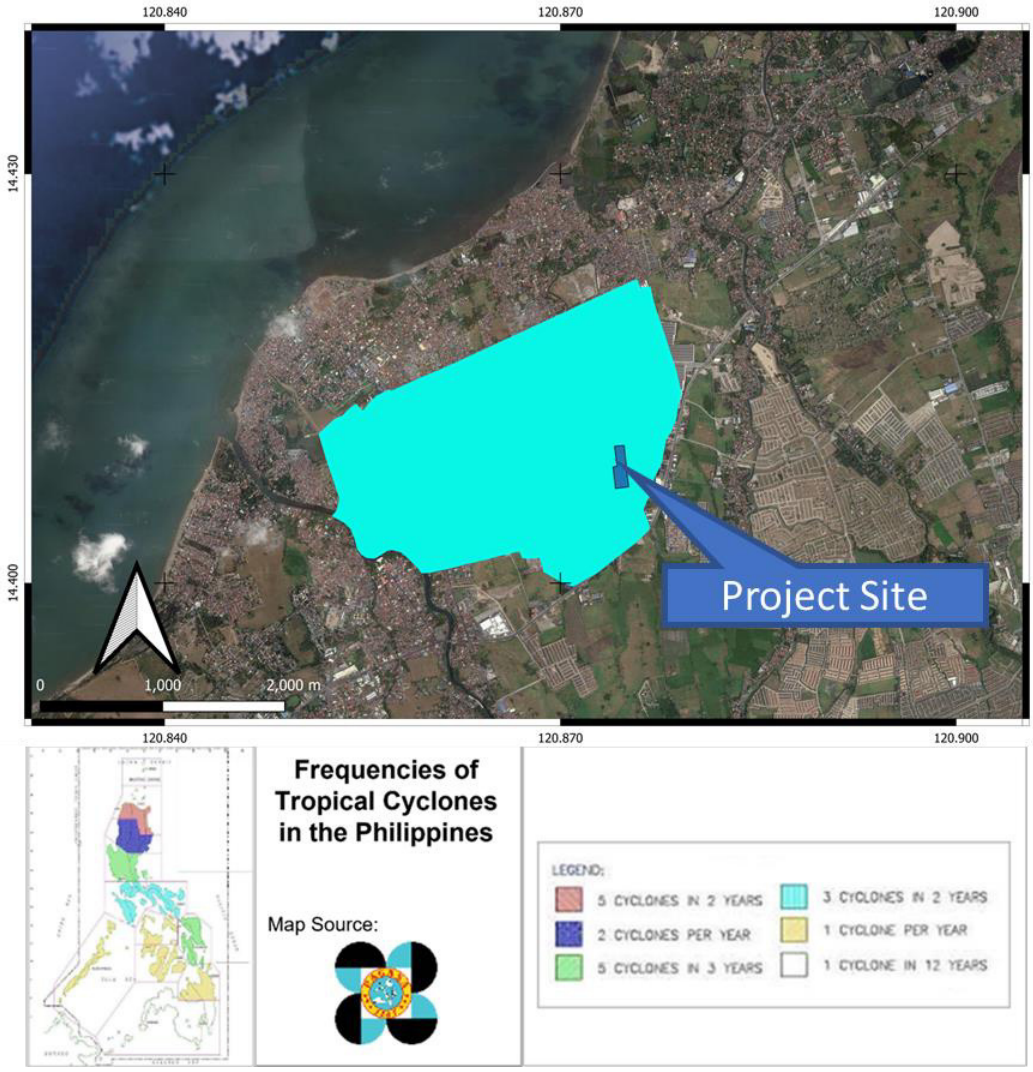
69. The mean annual temperature in the area is 27.8°C. April is the warmest month, with mean temperatures of 29.5°C and maximum temperatures reaching up to 34.1°C. The coolest month is January with mean temperatures of 26.1 °C with minimum temperatures of 22°C. The highest temperature recorded in the area was 38.1°C on May 18, 1969, while the lowest temperature recorded was 14.6°C on February 1, 1962.

70. Easterly wind, which is experienced from October to March, is the prevailing wind direction in the area. Wind direction shifts to east-southeast in March and to westerly winds from May to September. Average annual wind speed is 3 m/s. The greatest wind speed recorded was 56 m/s on November 19, 1970.



Source: PAGASA

Figure 22: Climatological Map of the Philippines



Source: PAGASA

Figure 23: Frequency of Tropical Cyclones in the Philippines

Table 14: Climatological Normal Values in NAIA, Pasay City (1981-2010)

MONTH	RAINFALL		TEMPERATURE			WIND	
	Amount (mm)	*No. of Rainy Days*	*Max (°C)*	*Min (°C)*	*Mean (°C)*	*Prevailing Wind Direction (16 pt)*	*Wind Speed in Prev. Wind. Dir. (mps)*
JAN	6.8	2	30.2	22	26.1	E	3
FEB	4.2	1	31	22.5	26.7	E	3
MAR	4	1	32.5	23.6	28	E	4
APR	16	1	34.1	25	29.5	ESE	4
MAY	70.4	6	33.8	25.5	29.7	W	3
JUN	265.2	14	32.5	25.1	28.8	W	3
JUL	316.7	16	31.3	24.6	28	W	3
AUG	418.4	19	30.8	24.6	27.7	W	3

MONTH	RAINFALL		TEMPERATURE			WIND	
	Amount (mm)	*No. of Rainy Days*	*Max (°C)*	*Min (°C)*	*Mean (°C)*	*Prevailing Wind Direction (16 pt)*	*Wind Speed in Prev. Wind. Dir. (mps)*
SEP	255.2	16	31	24.6	27.8	W	2
OCT	283.4	14	31.1	24.3	27.7	E	2
NOV	99	8	31.1	23.7	27.4	E	2
DEC	28.6	3	30.2	22.7	26.5	E	2
ANNUAL	1767.8	101	31.6	24	27.8	E	3

Table 15: Climatological Extremes in NAIA, Pasay City (as of 2012)

MONTH	TEMPERATURE (°C)				GREATEST DAILY RAINFALL (mm)		HIGHEST WIND (m/s)		
	High	Date	Low	Date	Amount	Date	Speed	Direction	Date
JAN	35.8	1/7/1989	14.8	1/18/1961	55.3	1/3/1970	20	ENE	1/12/1986
FEB	35.1	2/21/1998	14.6	2/1/1962	16.5	2/27/1950	20	E	2/28/1988
MAR	36.5	3/30/1978	16	3/3/1963	36	3/7/2011	26	E	3/29/1992
APR	37.8	4/23/1948	18.7	4/1/1994	63	4/4/1992	22	ESE	4/6/1986
MAY	38.1	5/18/1969	19.1	5/11/1950	229.1	5/27/1960	31	SW	5/22/1976
JUN	38	6/2/1991	20	6/22/1954	353.8	6/1/1958	36	S	6/29/1964
JUL	36	7/6/1991	18.3	7/28/1948	472.4	7/20/1972	36	W	7/8/1986
AUG	35.2	8/29/1989	17.4	8/9/1949	401.8	8/10/1947	30	WSW	8/16/1984
SEP	34.9	9/9/1979	19.1	9/15/1950	228.9	9/8/1963	40	NNW	9/28/2006
OCT	36	10/24/1976	18	10/23/1981	274.5	10/9/1978	27	W	10/18/1985
NOV	35.8	11/17/1972	17.2	11/26/1949	121.7	11/14/1977	56	W	11/19/1970
DEC	34.2	12/29/1978	16.3	12/18/1955	110.5	12/30/1950	25	NW	12/30/1950
Annual	38.1	5/18/1969	14.6	2/1/1962	472.4	7/20/1972	56	W	11/19/1970
Period of Record	1947-2012	1947-2012	1947-2012	1947-2012	1949-2012	1949-2012	1950-2012	1950-2012	1950-2012

71. **Climate Change.** In 2018, PAGASA released the Observed Climate Trends and Projected Climate Change in the Philippines, which condenses the findings on the state of Philippine climate, and the corresponding climate projections. Projections in the latest study used the Representative Concentration Pathways (RCPs), defined by the Intergovernmental Panel on Climate Change as "scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases (GHGs), aerosols, and chemically active gases, as well as land use/land cover."

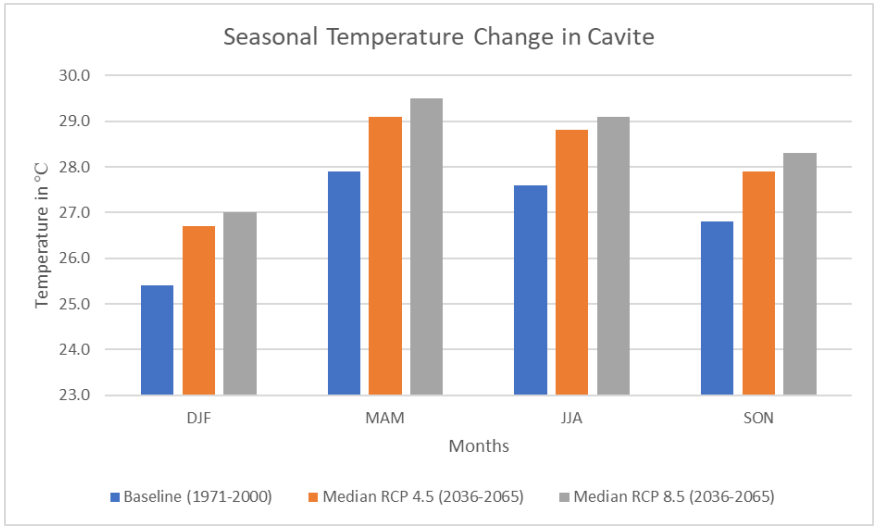
72. The 2018 PAGASA report focuses on Moderate Emission (RCP 4.5) and High Emission (RCP 8.5) scenarios. The Moderate Emission scenario can be described as a future with clean and efficient technologies and with global solutions to economic, social, and environmental sustainability. In contrast, the High Emission scenario can be described as a scenario with rapid economic growth with reliance on fossil fuels.

73. These 2036-2065 projections are relative to the baseline observed from 1971-2000.

74. As shown in Figure 24, the seasonal temperature is projected to increase based on the median range Moderate Emission and High Emission scenarios. Warmer temperatures

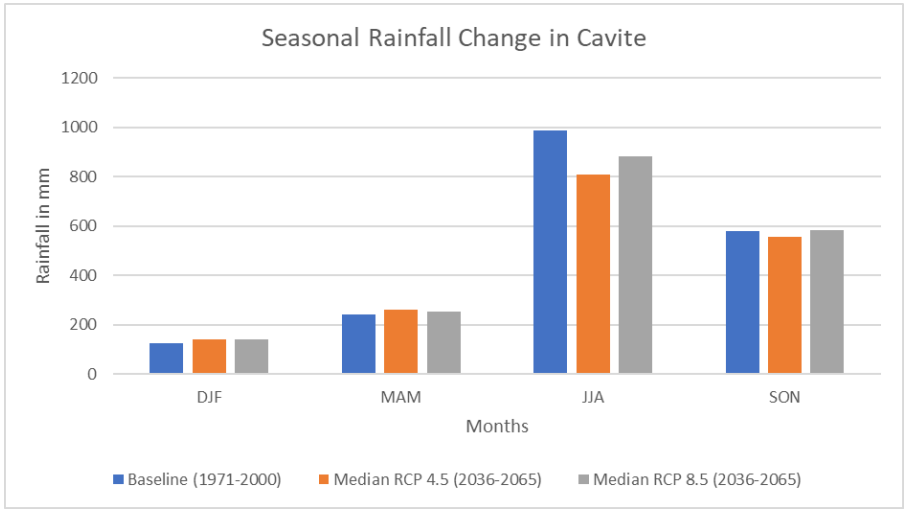
are expected to be experienced throughout the year and is projected to be more intense assuming the High Emission scenario.

75. Figure 25 shows the seasonal rainfall change in Cavite. More rainfall is expected from December to May under the median range of Moderate Emission and High Emission Scenarios. In contrast, less rainfall is expected from June to November.



Source: PAGASA

Figure 24: Seasonal Temperature Change in Cavite



Source: PAGASA

Figure 25: Seasonal Rainfall Change in Cavite

5. Hydrology

76. The project site is within the Cañas-Maalimango Water Quality Management Area (WQMA). The nearest river in the project site is the Maalimango River, located about 400 meters away to the west of project site and passes through CEZ. The treated wastewater of CEZ is discharged to this river.

B. Biological Resources

1. Terrestrial Ecology

77. The terrestrial ecology in the project site is considered as modified habitat. The existing vegetation in the project site consists of shrubs, grass and scattered trees.

78. The existing vegetation in the project site will be maintained to serve as natural buffers.

2. Aquatic Ecology

79. The project is not expected to affect the aquatic ecology in Maalimango River since all the development and operations will be limited on land.

C. Air Quality and Noise Level

80. Air quality and noise sampling for 1-hr period were conducted on August 2, 2022 to determine the ambient air quality and noise levels within the project area.

81. Two stations were assigned within the vicinity of the project site. The first station was located in the main gate of the existing plant of Wyntron Inc. while the second station was in near the proposed expansion site (see Figure 26).

Figure 26: Ambient Air and Noise Monitoring Stations

82. Results of the ambient air monitoring were compared with the Department of Environment and Natural Resources (DENR) Standards under the National Ambient Air Quality Standards (NAAQS) of Republic Act 8749, or the Philippine Clean Air Act of 1999 while the results of noise level monitoring in decibels dB(A) were compared with the DENR Ambient Noise Quality Standards Sec. 78 Chapter IV, Article 1 of the National Pollution Control Commission (NPCC) Rules and Regulations, 1978 standard limits for Category C (light industrial area).

83. As shown in Table 16, the TSP concentrations and noise level were all within the DENR standards.

Table 16: Ambient Air Quality Monitoring Results within the Project Site (August 22, 2022)

Parameter	Unit	A1 (14°24'33.05"N 120°52'22.86"E)	A2 (14°24'35.79"N 120°52'26.68"E)	DENR Standard
TSP	µg/Ncm	17	22	300
Noise	dB	64	65	50
ND – Not detected				

D. Surface Water and Groundwater Quality

1. Surface Water Quality

84. The Environmental Management Bureau (EMB) is regularly monitoring the water quality of Maalimango River as part of the WQMA activities. The nearest monitoring station in the project site and CEZ is in Maalimango Bridge, downstream of Maalimango Bridge (see Figure 27).

85. The monitoring results are presented in Table 17. The results were compared to the water quality guidelines for Class C water bodies (i.e., Fishery Water for propagation and growth of fish and other aquatic resources; Recreational Water Class II – for boating, fishing, or similar activities; and for agriculture, irrigation, and livestock watering) with reference to DAO 2016-08 and DAO 2021-19.

86. As shown in the table, several parameters exceeded the guidelines for Class C waters namely temperature, dissolved oxygen, BOD, phosphate and fecal coliform. This can be attributed to the discharge of untreated domestic wastewater from the nearby communities.

Table 17: Results of the Surface Water Quality Monitoring of EMB (2020)[1]

Parameter	**Unit**	**Results (Values in red exceed the reference standard/s)**	**DENR AO 2016-08/DENR 2021-19**
pH		7.82	6.7-9.0
Temperature	°C	24.2	25-31
Dissolved Oxygen	mg/L	2.63	5
Biological Oxygen Demand	mg/L	14.56	7

[1] https://emb.gov.ph/wp-content/uploads/2021/03/CANAS-MAALIMANGO-River-System.pdf

Parameter	Unit	Results (Values in red exceed the reference standard/s)	DENR AO 2016-08/DENR 2021-19
Color	mg/L	25.56	75
Nitrate	mg/L	1.3	7
Phosphate	mg/L	1.4	0.025
Chloride	mg/L	174.11	350
TSS	mg/L	31.67	80
Fecal Coliform	MPN/100mL	490,000	400

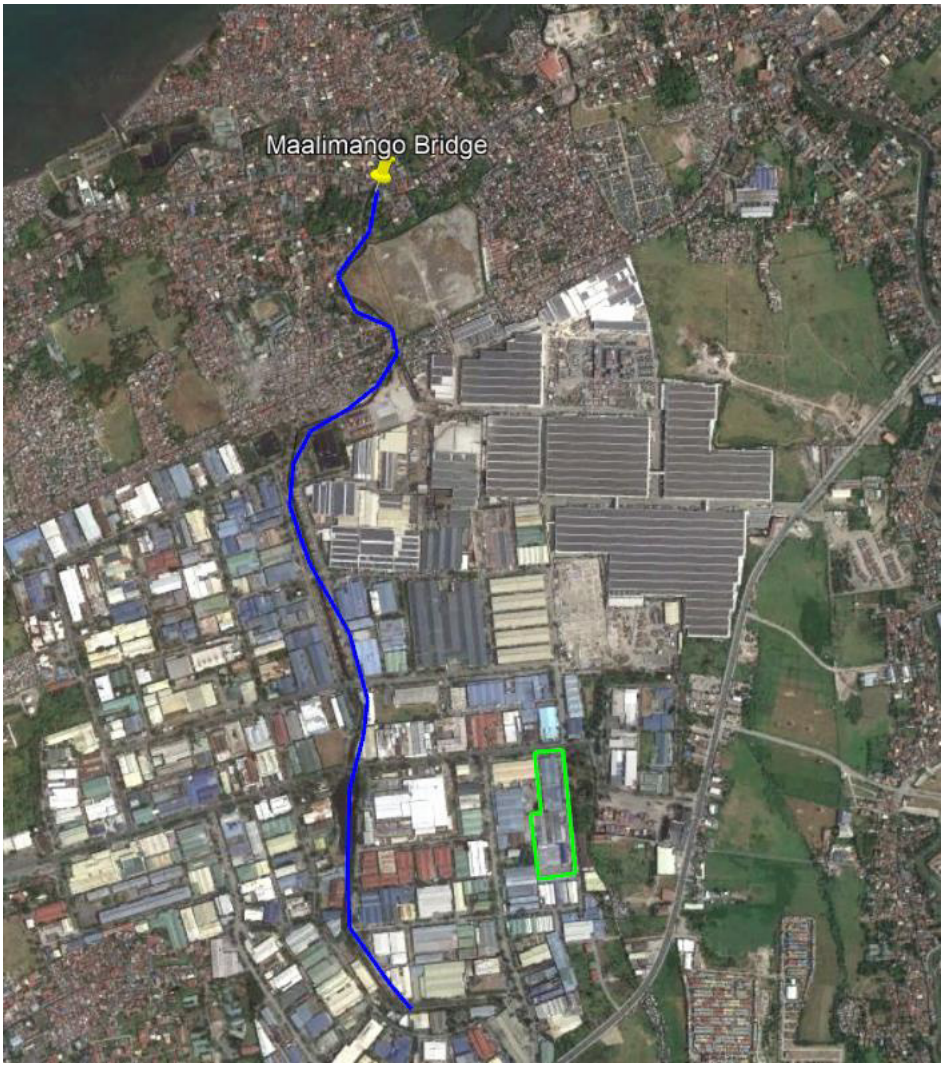


Figure 27: Maalimango Bridge Monitoring Station of EMB

2. Groundwater Quality

87. MWVP is regularly monitoring the water quality of the deep wells used in the ecozone. Table 18 presents the water quality monitoring results of MWVP conducted in September 2022 from the two pumping stations inside CEZ. As shown, only the requirement for the residual chlorine was not met.

Table 18: Results of Groundwater Quality Monitoring of CEZ (September 2022)

Parameter	Unit	Result		PNSDW 2017
		Pumping Station 8	Pumping Station 9	
Copper	mg/L	<0.003	<0.003	1.0
Lead	mg/L	<0.005	<0.005	0.01
Manganese	mg/L	0.07	0.04	0.4
Nickel	mg/L	<0.003	<0.003	0.07
Zinc	mg/L	0.03	0.02	5.0
Aluminum	mg/L	0.01	0.02	0.2
Iron	mg/L	<0.005	0.1	1.0
Sodium	mg/L	57	58	200
Total Coliform	MPN/100 mL	<1.1	<1.1	<1.1
Fecal Coliform	MPN/100 mL	<1.1	<1.1	<1.1
E. Coli	MPN/100 mL	<1.1	<1.1	<1.1
Heterotrophic Plate Count	CFU/mL	12	84	<500
pH	-	8.2	8.2	6.5 to 8.5
Odor	-	No odor observed	No odor observed	No objectionable odor
Color	Apparent CU	10	10	10
Turbidity	NTU	0.45	1.5	5
Total Dissolved Solids	mg/L	317	306	600
Chloride	mg/L	32	18	250
Sulfate	mg/L	39	15	250
Residual Chlorine	mg/L	<0.02	<0.02	0.5 to 1.5
Fluoride	mg/L	1.1	0.6	1.50
Hydrogen Sulfide	mg/L	<0.02	-	0.05
Total Hardness	mg/L	<0.2	-	300

E. Soil Type

88. Soil type within the Municipality of Rosario include Guadalupe clay loam, Guadalupe clay and Quiangua silt loam. The soil type within the proposed project site is belongs to Quiangua silt loam.

F. Economic, Social and Cultural

1. Land Use

89. The project site is within industrial zone since it is located inside the Cavite Ecozone in Rosario, Cavite.

2. Industries

90. As mentioned, the project site is located inside CEZ, a PEZA-operated economic zone that started its operation in 1980. There are about 426 locators in CEZ. Industries located inside CEZ include electronic companies, metal industries, warehouses, plastic-based manufacturing, garments manufacturing and others.

3. Infrastructures

91. **Power Supply.** A dedicated Meralco substation is situated inside CEZ to supply the power requirements of the locators.

92. **Water Supply.** CEZ has eight deep wells, sever reservoirs and seven elevated tanks. Water is disinfected before distributed to the locators.

93. **Wastewater treatment plant.** CEZ also has a centralized wastewater treatment plant to treat wastewater from the locators. It has a design capacity of 10,000 cubic meters per day.

4. Population and Communities

94. Based on the 2020 census of the Philippine Statistics Authority (PSA), the Municipality of Rosario has a total population of 110,808 and 31,510 households with average household size of 3.5. From 2015 to 2020, the municipality has an annual population growth rate of 0.02 percent.

95. In 2015, the population density in the municipality was 14,547 persons per square kilometer.

96. Table 19 presents the 2020 population in the region, province and municipality that cover the project site.

Table 19: Population of Region IVA, Cavite Province, Municipality of Rosario

Area	Population (2015)	Population (2020)	Annual PGR (2015-2020)
Region IVA (CALABARZON)	14,414,774	16,195,042	2.48
Province of Cavite	3,678,301	4,344,829	3.57
Rosario	110,706	110,807	0.02
Sources: Philippine Statistics Authority			

5. Indigenous People

97. There are no indigenous people (IP) in the vicinity of or within the project site.

V. ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION

98. Environmental impacts and risks were analyzed in the context of the project's area of influence. Impacts were also identified for all relevant stages of the project cycle, including pre-construction, construction, operations, decommissioning, and post closure activities such as rehabilitation or restoration.

A. Impacts and Mitigating Measures during Pre-Construction and Construction Phase

1. Impacts on Biophysical Aspects

99. **Impairment of visual aesthetics.** There are no visually significant landforms, landscapes, or structures in the proposed project site that can be potentially affected by the project activities. However, site preparation (i.e., decommissioning of existing structures, excavation) in the project site will take place during the pre-construction phase that may cause temporary and minimal impact on the visual aesthetics on site.

100. All construction activities will be limited within the vicinity of the project site.

101. **Generation of solid wastes.** Domestic solid wastes such as papers, food scraps, plastics will be generated from the offices and worker's camp during construction. Construction wastes such as excess fill materials, scrap woods and metals, packaging materials and other construction debris will also be generated from the rehabilitation works that will be done to the existing buildings.

102. All contractors and subcontractors should strictly observe and implement the existing solid waste management guidelines of Wyntron Inc. in managing the solid wastes that will be generated including construction spoils and debris A temporary storage area for the solid wastes must be provided on site.

103. **Generation of hazardous wastes.** Hazardous wastes such as used oil, grease, aerosols, paint containers and used bulbs will also be generated during construction.

104. All the contractors and subcontractors of Wyntron Inc. must implement a Construction Environmental Management Plan (CESMP) which includes the proper management of hazardous wastes.

105. As required in the DENR AO 2013-22, its EPC contractors and subcontractors should be registered as hazardous waste generator to DENR-EMB.

106. A temporary hazardous waste storage area must also be provided onsite. All hazardous wastes should be properly segregated, packaged and labelled in accordance with DENR AO 2013-22. Only DENR-registered waste transporter or TSD facility will be allowed to collect, treat and dispose the hazardous wastes.

107. **Soil contamination due to oil spills.** The operation and maintenance of heavy equipment during the construction phase may cause soil contamination due to accidental oil spills or leakages. This may also seep underground and contaminate the groundwater table.

108. An oil spill contingency plan must be implemented during this event. All maintenance activities must only be done within the designated areas where the floors are concrete. Oil spill kits should also be provided by the contractors and subcontractors on-site.

2. Impacts on Biological Resources

109. The construction activities of the project will not require removal of vegetation within the project site. Existing vegetation within the project site will be maintained to serve as natural buffers and to also contribute to the mitigation of other perceived project impacts (i.e., air and noise).

3. Impacts on Air Quality and Noise Level

110. **Emission of air pollutants.** Gaseous emissions from heavy equipment and generators used in the construction site produce short-term impacts on the ambient air quality. Concentrations of carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2) in the ambient air may be increased.

111. This impact may not be a primary concern since the construction phase will only take several months until project completion. Nevertheless, all heavy equipment must be kept in prime condition at standard air and fuel ratio to limit emissions and are being regularly maintained.

112. **Generation of noise and ground vibration.** The operation of heavy equipment during construction may generate noise and ground vibration. Although construction works are expected to occur regularly, the impacts may be considered temporary.

113. Table 20 presents the expected noise levels from different construction equipment, which is expected to attenuate with distance. Mitigating measures that are being employed include: 1) proper maintenance of motor engines and other mechanical parts of heavy equipment; 2) installation of exhaust mufflers to the equipment; and 3) putting up of enclosures at the construction site. As much as possible, construction activities were concentrated during normal working hours.

114. To minimize vibrations, the machines should be mounted on shock-absorbing mountings, such as cork or reinforced concrete foundation or a floating isolated foundation set on piles, depending on the machinery.

Table 20: Expected Noise Levels from Heavy Equipment, db(A)

EQUIPMENT	DISTANCE (M)				
	15	30	60	120	240
Front Loader	75	69	63	57	51
Backhoes	85	79	73	67	61
Graders	88	82	76	70	64
Trucks	91	85	79	73	67
Concrete Mixers	82	79	73	67	61
Cranes	83	77	71	65	59
Generators	78	72	66	60	54
Compressors	81	75	69	63	57
Pumps	76	70	64	58	52
Pile Drivers	101	95	89	83	77
Jackhammers	88	82	76	70	64

4. Impacts on Surface water and Groundwater Quality

115. **Siltation of drainage system and nearby river due to soil erosion.** Site clearing, earth moving, and excavation activities may cause soil erosion which may result to increase in the turbidity of the nearby river. Soil erosion may also cause clogging of the drainage system within CEZ due to siltation.

116. Silt traps or erosion barriers should be installed within the project site to avoid this impact.

117. **Generation of domestic wastewater.** Domestic wastewater will be generated by the construction workers. Wastewater, if untreated prior to disposal, can cause water pollution and may pose health hazards to the nearby communities.

118. Adequate sanitation facilities must be provided to all the workers and basic housekeeping policies should be implemented. The sanitary toilet facilities must be gender-separated and be equipped to meet the needs of women. Domestic wastewater from toilets will be discharged to septic tanks then to the existing sewer lines of CEZ for proper treatment and disposal.

5. Impacts on Socioeconomic Environment

119. **Generation of vehicular traffic**. The delivery of construction materials and construction equipment may contribute to the generation of traffic within the project site. This may also increase the risk of accidents due to vehicular traffic within the site. This impact is expected to cause temporary inconvenience and nuisance to the locators of CEZ and to the communities near CEZ.

120. Wyntron Inc. and its contractors and subcontractors should implement a traffic management plan which includes but not limited to the following safety traffic protocols:

- Installation of safety barriers, warning signs and lights in the area
- Provision of adequate parking spaces within the project site to avoid side parking.
- All deliveries of materials and equipment will be done during off-peak hours at designated delivery hubs to avoid blockage of traffic flow along the public roads.
- Coordination with the CEZ on the schedule of the activities and inform or provide notice to the public.

121. **Occupational and community health and safety risks and hazards.** . Construction activities may pose significant hazards to the workers such as physical (i.e., slip and fall, spills, physical injuries), chemicals and fire hazards. Other potential health and safety risks that may arise during the construction phase are exposure to dust, hazardous and wastes materials, noise and vibration.

122. The nearby locators of CEZ may also be exposed from physical, chemical or other hazards associated with the construction activities of the project. Increased incidence of communicable and vector-borne diseases is also a potential serious health threat to both the workers and nearby locators and communities.

123. All contractors of Wyntron Inc. should submit an Occupational Safety and Health Plan (OSHP) to DOLE, based on the DO No. 13 Series of 1998, which covers the safety of the workers and the community. Considering the additional health risks associated with the COVID-19 pandemic, Wyntron Inc. and its contractors must also implement COVID-19 health and safety protocols.

124. Wyntron Inc. and all its contractors should also have designated safety officers on-site. The mandatory 8-hour safety and health training must be provided to all workers prior the start of the activities. All civil and electro-mechanical works must also be supervised by trained engineers.

125. Personal protective equipment (PPE), such as earmuffs, gloves, boots, and hard hats/helmets will be provided to the workers, particularly those operating heavy equipment.

126. First aid stations and kits, safety equipment and proper signages will also be provided in all the working areas.

127. **Additional local employment and business opportunities.** The project is expected to generate additional job opportunities to the local residents during the construction phase. Hiring of qualified workers from the local community must be prioritized.

128. The project will also have a positive impact on the local economy of the host community with an increase in business opportunities, such as food retail, housing rental, and other services to the construction workers.

B. Impacts and Mitigating Measures during Operation Phase

1. Impacts on Biophysical Aspects

129. **Generation of solid wastes**. Solid wastes that are expected to be generated during the operation include papers, plastics, packaging materials, food wastes and other residual wastes.

130. Wyntron Inc. is already implementing solid waste management guidelines in its existing operation. The same procedures will be implemented in the expansion project. The Pollution Control Officer (PCO) and the Solid Waste Committee of Wyntron Inc. are responsible in ensuring the proper segregation, storage and disposal of the solid wastes. They are also responsible in coordinating with PEZA and the PEZA-accredited third-party waste collectors for the collection of the wastes and in keeping records for submission too EMB as part of the SMR.

131. A Materials Recovery Facility (MRF) will be installed for the storage of all recyclable materials and a separate residual waste storage area will also be provided for the storage of residual wastes prior to collection.

132. Information, education and communication (IEC) campaign on proper solid waste management shall also be conducted for all the personnel of Wyntron Inc.

133. **Generation of hazardous wastes**. The hazardous wastes that will be generated during the operation is listed in Table 7. Leakage of the hazardous wastes may cause soil contamination and contamination of the groundwater table and nearby river.

134. Hazardous waste management guidelines were already developed and being implemented by Wyntron Inc. for its existing operation. An interim storage facility in the project site shall be provided for the hazardous wastes and must be equipped with secondary containment. Proper containers and labelling must be observed when storing the hazardous wastes. Designated areas within the storage facility must be provided for each type of hazardous wastes.

135. All hazardous wastes shall be regularly hauled out by a DENR-registered waste transporter or TSD facility for proper treatment and disposal. The TSD facility shall submit to Wyntron Inc. a Certificate of Treatment as proof that the hazardous wastes collected from the plant were properly treated before disposal. Prior the collection and transport of the hazardous wastes, the PCO should initiate the online DENR hazardous waste manifest process and coordinate with PEZA for the gatepass.

136. Wyntron Inc. is already registered as hazardous waste generator and has already secured a hazardous waste generator ID from EMB.

137. **Soil contamination due to accidental chemical and oil spills and leakages.** Accidental oil spills and leakages may occur during the delivery, transfer and storage of diesel fuel in the project site, and during the operation and maintenance of heavy equipment (i.e., gensets, boiler). This may result to soil contamination. As a preventive measure, repair and maintenance shall only be done in a designated area with concrete flooring and canals constructed to channel any oil spills.

138. Chemical spills and leakages may also occur since chemicals will be stored within the project site and will be used during the operation. Wyntron Inc. has already established Chemical Control Procedures which details the proper receiving, storage and handling of the chemicals. The Chemical Committee together with the PCO and Safety Officer are responsible in overseeing the implementation of the proper action and control of the chemicals.

139. Oil and chemical spill contingency plan shall also be developed and implemented. Oil and chemical spill kits will be provided in the project site.

140. Safety measures such as spill prevention and detection system, bund walls and secondary containment shall also be installed in the fuel and chemical storage to avoid potential leakages of the chemicals or oil to the ground.

2. Impacts on Air Quality and Noise Level

141. **Emission of air pollutants**. Combustion of diesel fuel from the operation of the gensets may emit pollutants such as CO, NO_2, SO_2 and PM_{10}.

142. Stacks with adequate height will be installed in the gensets to avoid or lessen the dispersion of the potential air pollutant to the nearby community.

143. Emissions of the stacks should be regularly monitored to ensure that it complies with the required DENR standards.

144. **Noise generation**. The operation of the EVSE charger manufacturing is not expected to generate noise.

3. Impacts on Surface water and Groundwater Quality

145. **Generation of wastewater**. The operation will only generate domestic wastewater from its workers. Wyntron Inc. will install septic tanks and shall connect to the existing sewerage system of CEZ for the treatment and disposal of the wastewater. However, the wastewater shall conform to the required CEZ interim influent standards before discharging to the sewer lines.

146. The septic tanks will also generate septage. A DOH-accredited desludger shall regularly siphon the septic tanks to prevent overflowing.

4. Impacts on Socioeconomic Environment

147. **Generation of vehicular traffic**. The delivery of the raw materials and the shipment of the products may generate additional vehicular traffic within CEZ and the nearby community.

148. A traffic management plan must me developed and implemented during the operation. Wyntron Inc. shall closely coordinate with CEZ for the schedule of the deliveries. Designated parking areas inside the project site must be provided to avoid the influx of vehicles within the highway.

149. **Generation of local employment and livelihood.** The operation of the plant will require skilled and non-skilled workers and employees which can provide local employment and livelihood opportunities for the local residents.

150. Wyntron Inc. shall prioritize hiring qualified residents of the host community. Wyntron Inc. will coordinate with CEZ and the city PESO for the hiring process.

151. **Occupational and community health and safety impacts.** The workers and the nearby locators and community may be exposed to the physical and chemical hazards of the operation of the plant.

152. Strict adherence to health and safety standards is necessary not only to reduce the likelihood of injuries or fatalities that may affect personnel and the general public, but also protect valuable equipment and properties against damages. An occupational health and safety plan and policy must be implemented during the operation and environmental, health and safety protocols shall be observed at all times.

153. The Safety Data Sheet (SDS) of the chemicals must be posted at the designated working areas where the chemicals will be used. The workers must be oriented on the proper handling and usage of these chemicals and must be informed on the potential hazards.

154. Proper ventilation system must be provided in the working areas, specially in the MI process line and coating process, to reduce the exposure of the workers from chemical fumes such as from the soldering paste and coating.

155. Wyntron Inc. also has designated safety officers who has completed the DOLE mandatory OSH training course to oversee the overall management of the OSH program and monitor the safety of the workers during operation.

156. The following details are the basic guidelines that Wyntron Inc. may apply for the project:

- All management, technical, and non-technical personnel shall undergo specialized training courses to familiarize themselves to the operations and maintenance of the project's various facilities;
- All workers must undergo safety and health training prior to any activities;
- Emergency response plan shall be updated regularly, and emergency drills shall be performed regularly to improve personnel's response technique and time;
- Audits shall be conducted by the management and personnel, with possible assistance from various safety consultants;

- Personnel shall undergo scheduled annual health check-ups;
- Safety signage, adequate illumination, anti-skid steps and guard rails, fire extinguishers, first-aid kits, and other safety features shall be established throughout the Project's facilities; and
- Personal protective equipment (PPE), which includes safety boots, hard hats, gloves, safety goggles (in some instances) shall be mandatory to all the workers.

157. With the COVID-19 public health crisis, Wyntron Inc. is implementing COVID-19 health and safety guidelines that is aligned with the recommendations of Inter Agency Task Force (IATF) for the Management of Infectious Disease and DOLE Department Order 224-21: Guidelines on ventilation for Workplaces and Public Transport to Prevent and Control the Spread of COVID -19.

C. Impacts and Mitigating Measures during Decommissioning or Abandonment Phase

1. Impacts on Biophysical Aspects

158. The decommissioning of the project components may generate solid wastes and other scraps, and hazardous wastes. Wyntron Inc. shall ensure that all the wastes (hazardous and non-hazardous) will be properly managed and disposed.

159. All materials that will be removed in the proposed project site shall be loaded and trucked away from the site in such a manner as to not cause any hazard for passersby or damage to any existing facility. Opportunities for the sale and/or re-use of assets and recycling of scrap steel will be maximized where possible. In case of sale or recycling, equipment and machines will be properly cleaned. Items that cannot be sold or recycled will be properly disposed.

160. The decommissioning of the heavy equipment and fuel storage tanks may cause accidental spills or leakages of oil which may result to soil and/or groundwater contamination.

161. As preparation for the actual decommissioning activities, the following will be done:
- Secure necessary permits for the decommissioning activities;
- Perform environmental site assessment, if necessary;
- Protect existing structures, appurtenances, and landscaping which are not to be demolished and/or which are to be salvaged;
- Make inventory of equipment, machines and structures which are to be decommissioned;
- Temporary fencing may be used to enclose the decommissioning site. Unauthorized personnel will be restricted from entering the premises;
- Verify the location of existing above and below ground utilities prior to the start of any decommissioning. This includes, but is not limited to, electric and water lines. Coordinate with utility personnel when disconnecting, removing, capping or relocating a utility within the demolition area;
- Drain or flush all pipelines and tanks;
- A thorough examination and inspection of the current electrical system will be performed for safe decommissioning;
- Remove all electrical conduit and appurtenances from the tanks, machines and equipment prior to dismantling of the equipment and tanks. This will be performed by a licensed electrical contractor only.

2. Impacts on Socioeconomic Environment

162. The main impact of the decommissioning of the project is the termination of employment of the workers. All affected workers shall be properly advised and provided with early notice regarding the impending termination of employment, and all shall be properly compensated. If possible, capacity building and trainings can be provided to the personnel in preparation for other job opportunities.

163. The transport of the decommissioned heavy equipment and other materials may cause additional vehicular traffic within the site.

VI. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

A. Environmental and Social Management Plan

164. The Environmental and Social Management Plan (ESMP) presents the identified mitigating measures that shall be implemented to minimize and/or eliminate the potential impacts of the project to its surrounding environment and community.

165. Table 21 presents the summary of the mitigating and enhancement measures with the corresponding environmental aspects and impacts for the different phases of the project's development. This matrix summary also includes the responsible parties, estimated costs, and guarantees involved

Table 21: Environmental and Social Management Plan

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
PRE-CONSTRUCTION PHASE						
Acquisition of applicable permits and licenses as required by the national and local policies and regulations	People	Disclosure of the project components and activities	• Submission of complete requirements for processing of all permits	Wyntron Inc.	Integrated in pre-construction cost	Pre-construction expenses
Hiring of workers	People	Increased employment opportunities	• Develop and implement a local labor recruitment policy • Coordination with the local Public Employment Services Office (PESO) and host municipal and barangay LGUs for the hiring process	Wyntron Inc.	Integrated in pre-construction cost	Pre-construction expenses
CONSTRUCTION PHASE						
Rehabilitation of the existing facilities in the expansion site	Land	Generation of construction spoils and debris	• Segregation of debris according to recyclable and non-recyclables • Provision on onsite interim storage area • Hauling of debris items by duly-licensed traders	Wyntron Inc.	P 50,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Implementation of solid waste management plan by the EPC contractors			
	Water	Possible siltation and increase of turbidity of Maalimango River Possible clogging of CEZ drainage system due to siltation	• Establishment of silt traps and erosion barriers • Regular removal of silt and sediments • Regular hauling out of excavated materials • Covering of excavated materials to avoid exposure to rainfall	Wyntron Inc.	P 50,000	Contractor's MOA
	Land	Ground vibration	• Notify nearby CEZ admin and the locators about the activity of using heavy equipment • For hauling trucks, comply with road weight limit standards to avoid ground vibration	Wyntron Inc.	Minimal	Contractor's MOA
	Land/Water	Generation of hazardous wastes	• Proper onsite collection, storage, and disposal of hazardous wastes in safe and sealed containers • Provision of onsite interim storage facility	Wyntron Inc.	P 10,000 per month	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Treatment and disposal of wastes through a DENR-accredited treater and TSD facility • Registration of all EPC contractors as hazardous waste generators			
	Air	Generation of air emissions	• Proper and regular maintenance of heavy equipment	Wyntron Inc.	P 10,000 per month	Contractor's MOA
	Air	Generation of noise	• Installation of mufflers • The contractor will be required to identify noisy activities to meet its scope of work and prepare a work plan to limit these activities during daytime	Wyntron Inc.	P 20,000	Contractor's MOA
Influx of construction workers	Land/Water	Generation of domestic solid wastes	• Implementation of solid waste management plan by Wyntron Inc. and all EPC contractors • Segregation of solid waste according to recyclable and non-recyclables • Hauling of discarded/recyclable items by duly licensed service providers	Wyntron Inc.	P 15,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	Water	Generation of domestic wastewater	• Provision of adequate sanitation facilities (i.e. toilets, showers, etc.) • Follow basic housekeeping policies • Delsudging of septic tanks by DENR-accredited service provider for proper treatment and disposal	Wyntron Inc.	P 30,000	Contractor's MOA
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU and CEZ on scheduling and handling the flow of traffic near the project area • Implementation of traffic management plan	Wyntron Inc.	Minimal	Contractor's MOA
	People	Community and occupational safety and health risks	• Requiring all personnel to wear proper PPE • Provision of trainings to all workers • Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas • Implementation of COVID-19 safety protocols	Wyntron Inc.	P 50,000	Contractor's MOA

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Implementation of occupational and community health and safety policies and protocols			
	People	Generation of employment and livelihood opportunities	• Priority hiring of qualified residents of the host communities • Purchasing of local items within the host communities, if applicable	Wyntron Inc.	Minimal	Contractor's MOA
	People	Possible increase in crime incidence	• Coordination with barangay officials and CEZ to ensure peace and order among workers and community members	Wyntron Inc.	Minimal	Contractor's MOA
OPERATIONS PHASE						
Operation of the EVSE charger manufacturing plant	Land/Water	Generation of solid wastes	• Implementation of Solid Waste Management Plan • Segregation of solid waste according to recyclable and non-recyclables • Provision of an onsite interim storage area • Hauling of discarded/recyclable items by duly licensed service providers	Wyntron Inc.	P 10,000 per month	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	Land/Water	Generation hazardous wastes (used oil, empty chemical containers)	• Collect, store and dispose wastes in safe and sealed containers • Proper segregation of hazardous wasres • Provision of onsite interim storage facility • Implementation of hazardous waste management plan • Treatment and dispose wastes through DENR-registered waste transporters or TSD facilities	Wyntron Inc.	P 10,000 per month	ESMP
	Land/Water	Potential contamination of soil and/or groundwater due to accidential oil spills and leakages	• Implementation of oil spill contingency plan • Possible installation of safety features for fuel storage tanks, such as, but not limited to, spill prevention and detection, bund wall, and secondary containment • Provision of oil spill kits onsite • Maintain canal in the maintenance and repair	Wyntron Inc.	P 100,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			area of vehicles and equipment			
	Land/Water	Potential contamination of soil and/or groundwater due to accidential chemical spills and leakages	• Implementation of chemical control procedures • Implementation of chemical spill contingency plan • Provision of spill prevention and detection, bund wall, and secondary containment in the chemical storage area • Provision of chemical spill kits onsite • Regularly check all the pipes and containers of the chemicals	Wyntron Inc.	P 100,000	ESMP
	Air	Generation of air emissions	• Proper and regular maintenance of heavy equipment • Provision of stacks in the genset	Wyntron Inc.	P 50,000 per quarter	ESMP
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU on scheduling and handling the flow of traffic near the project area	Wyntron Inc.	Minimal	ESMP
Influx of Wyntron Inc.'s workers and employees	Land/Water	Generation of domestic solid wastes	• Implement Solid Waste Management Plan	Wyntron Inc.	P 15,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Segregation of solid waste according to recyclable and non-recyclables • Hauling of discarded/recyclable items by duly licensed traders			
	Water	Generation of domestic wastewater	• Implementing basic housekeeping policies • Provision of sanitation facilities (i.e., toilet, shower, etc.) • Installation of septic tanks • Regularly desludge the septic tanks • Secure sewer connection to CEZ	Wyntron Inc.	P 30,000	ESMP, Certificate of Sewer Connection to CEZ
	People	Exposure of workers to physical and chemical hazards Occupational health and safety risks	• Installation of well-ventilated work areas • Provision of proper PPEs to the workers • Provide proper training to all workers • Posting of chemical SDS in the work areas • Provide orientation on the proper handling of the chemicals	Wyntron Inc.	P 50,000	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas • Implementation of COVID-19 safety protocols • Implementation of occupational and community health and safety policies			
	People	Generation of additional employment and livelihood	• Priority hiring of qualified residents of the host communities • Adherence to the local ordinance on hiring prioritization	Wyntron Inc.	Minimal	ESMP
	People	Possible increase in crime incidence	• Coordination with barangay officials to ensure peace and order among workers and community members	Wyntron Inc.	Minimal	ESMP
DECOMMISSIONING/ABANDONMENT PHASE						
Termination of employees' contract	People	Loss of employment	• Provision of 6 months' notice about the impending termination of employment	Wyntron Inc.	To be determined	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
			• Provision of compensation for affected personnel • If possible, provision of re-training of personnel in preparation for other job openings			
Decommissioning and pull-out of equipment	Land	Generation of solid wastes and other scraps (including hazardous wastes)	• Solid Waste Management Plan • Proper onsite collection, storage, and disposal of hazardous wastes in safe and sealed containers • Treatment and disposal of wastes through a DENR-accredited treater and TSD facility	Wyntron Inc.	To be determined	ESMP
	Land	Generation of demolition spoils and debris	• Segregation of debris according to recyclable and non-recyclables • Hauling of debris by duly licensed traders	Wyntron Inc.	To be determined	ESMP
	Air	Generation of air emission and noise	• Proper and regular maintenance of heavy equipment • Installation of mufflers • Performing of noisy activities during daytime	Wyntron Inc.	To be determined	ESMP

Project Phase / Environmental Aspect	Environmental Component likely to be affected	Potential Impact	Options for Prevention or Mitigation or Enhancement	Responsible Entity	Cost	Guarantee / Financial Arrangements
	Air	Generation of dust	• Regular watering of demolition sites that will generate dust • Applying canvas covers where necessary	Wyntron Inc.	To be determined	ESMP
	People	Increased traffic volume along the access roads to the project site	• Coordination with LGU on scheduling and handling the flow of traffic near the project area	Wyntron Inc.	To be determined	ESMP
	People	Community and occupational safety and health risks	• Requiring all personnel to wear proper PPE • Supervision of all civil and electro-mechanical works by trained engineers • Provision of first-aid stations, safety equipment and signage in working areas • Implementation of COVID-19 safety protocols (if still applicable)	Wyntron Inc.	To be determined	ESMP

B. Environmental and Social Monitoring Plan

166. The Environmental and Social Monitoring Plan (ESMoP) will allow Wyntron Inc. to monitor, verify, and perform the necessary corrective measures towards the mitigation of the identified environmental impacts. The ESMoP presents a set of critical parameters that must be checked regularly to ensure compliance with the applicable national standards.

167. The ESMoP implementation will provide significant information on examining the short and long-term effects of the proposed project's various environmental aspects, from which future strategies on environmental enhancement measures can be formulated. This may help ensure the sustainability of operations.

Table 22: Environmental and Social Monitoring Plan (ESMoP)

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
A. Pre-Construction and Construction Phase						
Solid waste generation	Weight or volume of wastes generated	Weighing/log-book recording	Weekly	Construction areas, waste storage facility	Wyntron Inc./Contractor	Minimal
Hazardous waste generation	Metric ton (solid, liquid)	Weighing/log-book recording	Weekly	Waste storage facility	Wyntron Inc./Contractor	Minimal
Employment	Number of locally employed personnel	Logbook/ database registration	Quarterly	Administration office of the project site	Wyntron Inc./Contractor	Minimal
Occupational health and safety	No. of work-related illnesses/injuries No. of safety man-hours	Logbook/ database registration	Daily	Administration office of the project site	Wyntron Inc./Contractor	Minimal
Traffic	No. of vehicles entering/exiting the project site	Logbook/ database registration	Daily	Entrance/exit	Wyntron Inc./Contractor	Minimal
B. Operations Phase						
Solid waste generation	Weight or volume of wastes generated	Weighing/log-book recording	Daily	Waste storage facility	Wyntron Inc.	Part of OPEX
Hazardous waste generation (used oil etc.)	Metric ton (solid, liquid)	Weighing/log-book recording	Weekly	Waste storage facility	Wyntron Inc.	Part of OPEX

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
Effluent of Septic Tanks	BOD, pH, COD, O&G, Color, fecal coliform	Grab sampling	Quarterly	Septic tanks	Wyntron Inc.	P30,000 per event
Noise	Decibel levels on selected equipment	Digital sound level meter	Quarterly	Project site and within CEZ	Wyntron Inc.	P5,000 per station per event
Ambient Air Quality	TSP	DAO 2000-81 Analysis Methods	Quarterly	Project site and nearby communities	Wyntron Inc.	P30,000 per station per event
Source emissions	CO, NO_2, SO2	DAO 2000-81 Analysis Methods	Quarterly	Stacks	Wyntron Inc.	P30,000 per station per event
Occupational health and safety	No. of work-related illnesses/injuries. no. of safety man-hours	Logbook/ database registration	Daily	Administration office of the project	Wyntron Inc.	Minimal
Stakeholder engagement	Number and type of stakeholder engagement meetings and activities	Review of records	Quarterly	Project area	Wyntron Inc.	Minimal
Traffic	No. of vehicles entering/exiting the project site	Logbook/ database registration	Daily	Entrance/exit	Wyntron Inc.	Minimal
C. Abandonment Phase						

Concern	Parameter to be Monitored	Sampling & Measurement Plan			Lead Person	Annual Estimated Cost
		Method	Frequency	Location		
Demolition spoils and solid wastes	Weight (kg); no. of items	Weighing/log-book recording	Daily/weekly	Project Site	Wyntron Inc.	Minimal
Loss of employment	No. of affected employees	Database registration	Once	Project Site	Wyntron Inc.	Minimal
Air quality	Dust and noise	Air sampler	As needed	Project Site	Wyntron Inc.	To be determined
Soil and groundwater contamination	Heavy metals, TPH and other priority pollutants	Grab sampling and laboratory analysis	Once	Project Site	Wyntron Inc.	To be determined

C. Emergency Response Plan

1. Identification of Potential Emergencies

168. Emergencies are unforeseen events or episodes that are caused by natural forces and circumstances that may result to negative effects to people, property, and the surrounding environment. As a preliminary step in developing an effective emergency response policy, it is important to identify the potential emergency scenarios that would most likely occur. Table 23 lists the most probable emergencies that could happen in future operation of the Project.

169. Emergency situations may also require different levels of classification and response procedures, depending on the degree of situations. These levels will be referred to as: 1) Incident; 2) Emergency; and 3) Crisis.

- Incident situations present minor events that may require partial or total mobilization of the proposed Project's resources to effectively deal with an accident. An episode may present very minimal injuries and/or partial damages to property.
- Emergency situations require the utilization of all resources, with the assistance of local emergency responders, and additional resources from Belgrove Power Corporation. main office. This episode may present serious injuries and some fatalities and could result to severe or total damage to the property.
- Crisis situations are the worst conditions, which require the utilization of full resources, and possibly, assistance from the national government to address the event. An episode may present multiple fatalities, destruction of facilities, and severe/total damage to the surrounding community.

Table 23:Emergency Scenarios for the Project

TYPE OF EMERGENCY SITUATION	POSSIBLE CAUSES	POTENTIAL EFFECTS
Fire	• Electrical short-circuits • Overloading of equipment • Accidental ignition of combustible materials	• Partial or total loss of equipment and property • Injuries and fatalities to personnel
Earthquakes	• Movement/rupture of nearby fault lines • Volcanic eruption	• Failure of concrete structures (i.e., collapse, dam breach, etc.) • Injuries and fatalities to personnel and downstream communities
Explosion	• Power outrage • Equipment malfunction	• Partial or total loss of equipment and property • Injuries and fatalities to personnel
Release of toxic substances	• Equipment malfunction • Accidental spillage • Man-made errors	• Health hazards to the employees, workers and nearby communities

TYPE OF EMERGENCY SITUATION	POSSIBLE CAUSES	POTENTIAL EFFECTS
		• Degradation of affected parameter (i.e., contamination of soil and water)
Occupational safety accidents	• Improper training and supervision of personnel • Equipment and facility failure • Lack of full understanding regarding the surrounding environment	• Injuries and fatalities to personnel • Partial and total loss of equipment
Flooding	• Heavy rainfall • Clogged drainage	• Damage to property • Stop operation
Explosion	• Power outrage • Equipment malfunction	• Partial or total loss of equipment and property • Injuries and fatalities to personnel
Landslide	• Heavy rainfall • Man-made errors	• Damage to property • Injuries and fatalities to personnel and downstream communities • Stop operation

2. Emergency Plan

170. The Emergency Plan is a management structure to guide the personnel during emergency situations. The implementation of the Emergency Plan is a standard practice that is currently being integrated as part of company policies. Its objective is to establish an orderly and systematic approach in addressing an emergency, and in turn, decrease further injuries/fatalities and loss of property.

171. The development of the emergency response plan may follow the scheme presented Figure 28 while the emergency response procedures may include those presented in Table 24.

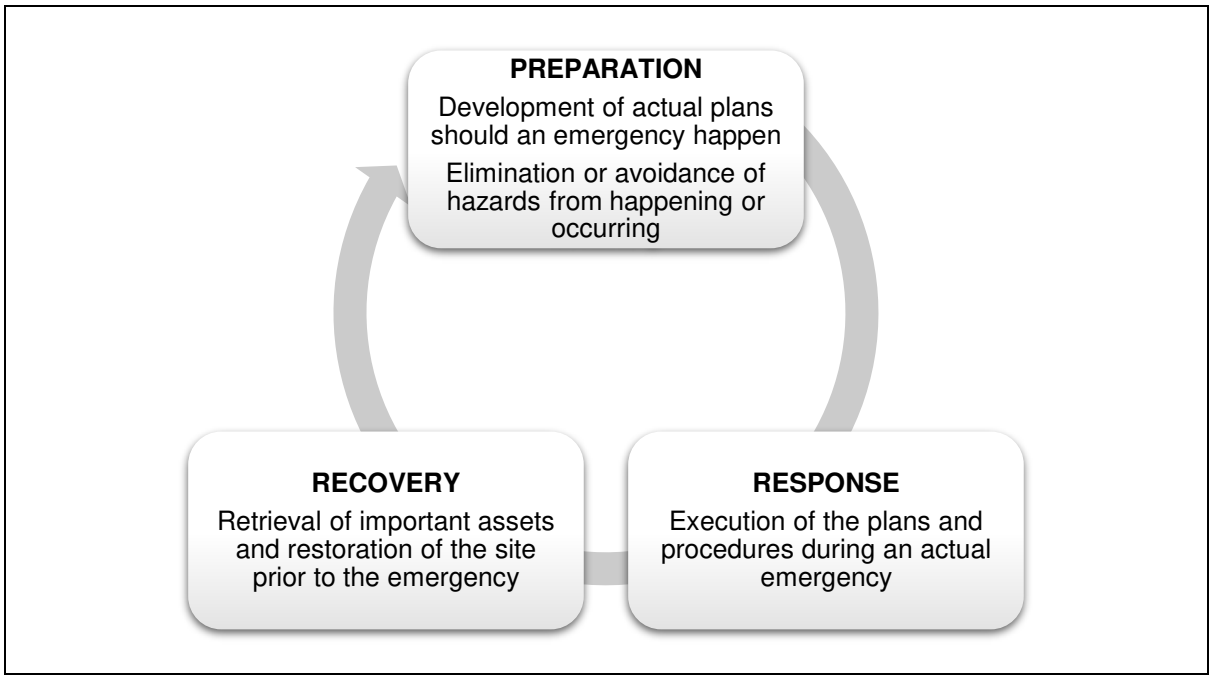


Figure 28: Emergency Response Plan Scheme

Table 24:Emergency Response Procedures for Different Scenarios

PREPARATION	RESPONSE	RECOVERY
A. Fire		
• Orientation and training of personnel on fire safety • Conduct of regular fire drills • Installation and regular testing of firefighting devices (i.e. fire hoses, fire extinguishers, smoke detectors, sprinkler system) • Regular inspection of electrical equipment and lines for any defect or malfunction, and replacement, as necessary • Securing of all flammable items in proper containers and storage facilities • Strict implementation of "No Smoking" policy in plant facilities • Placement of emergency numbers	• Notice for personnel to keep calm and alert to prevent further injuries; to follow emergency evacuation procedures; and to report immediately any presence of smoke, spark, or open flame to authorized personnel • Immediate use of fire extinguishers, only if the fire can still be contained • Disconnection of electrical or fuel connections and shutdown of all affected equipment • Removal of all flammable materials from the fire scene to avoid further contact, if possible • Wearing of proper fire protection attire (i.e. fire suit, boots, breathing	• Prohibition of returning to the fire scene, as long as necessary, unless declared for safe entry • Checking for personnel that may be trapped, injured, or needs further assistance • Reporting of any important incident that require immediate attention • Securing of important items and equipment from unauthorized access from outsiders, after the building is declared safe for re-entry • If fire damage is minimal, or if facility is recoverable, implementation of necessary corrective measures to prevent the

PREPARATION	RESPONSE	RECOVERY
and communication equipment in conspicuous areas for easier notification • Designation of emergency exits (free from obstruction) and evacuation procedures • Regular maintenance of plant equipment	apparatus) by responders • Prohibition of using or pouring of water over fuel or alcohol fires, and electrical fires	accident from re-occurring
B. Earthquakes		
• Conduct of necessary preparations, including equipment and facility checks, to prevent injuries in an event of an earthquake • Securing of all loose items to prevent falling • Placement of heavy materials near the ground • Storage of flammable items in designated safe areas • Orientation of personnel on safe locations, emergency response equipment, and evacuation routes	• Notice for personnel to keep calm and alert to prevent further injuries; to protect themselves by getting under sturdy structures and stay away from sharp, flammable, or heavy items; and to prepare for immediate evacuation of the facility, if necessary • Shutdown of all gas and electric equipment • Move away from immediate danger for safer area such as hallways. Stay away from chemical baths/storage areas, high voltage electrical equipment and compressed gas systems. • Move to the nearest safe assemblt when directed by the Emergency Response Team.	• If there are no threats of aftershocks, checking for personnel that may be trapped, injured, or needs further assistance • Prohibition of returning to the facility if it is deemed structurally unstable, or declared unsafe • Thorough inspection of the facility premises for any unusual crack/gap in the ground or walls • Checking for possible fires and advise authorities for appropriate response • Securing of important items and equipment from unauthorized access from outsiders, after the building is declared safe for re-entry • Inspection of the facility for any major structural defect, crack, unstable item, and other potential hazards • If earthquake damage is minimal or facility is recoverable, implementation of corrective measures to prevent the further hazards from affecting personnel and property
C. Release of Toxic Substances (e.g., fuel, chemicals)		

PREPARATION	RESPONSE	RECOVERY
• Regular visual inspection for potential leaks and corrosion • Inspection of facilities, containers, and equipment for any sign of leaks or spills • Revew SDS of all chemicals	• Notice for personnel to report the occurrence immediately to supervisor; to follow strictly instructions of supervisor in charge of cleaning operations • Ceasing of operations in the area affected by spillage and stop appropriate source • Stop vehicle engines in the affected area • Ceasing of operations or any movement until clearance is given • Remove contaminated clothing immediately. • Put on PPEs as appropriate to the hazards.	• Immediate clean-up of all spills using proper conditions, including stoppage and containment of spill or leak • Implementation of measures to prevent re-occurrence of the incident
D. Occupational Hazards		
• Provision of basic PPE • Formation of an emergency response team for each department • Provision of first-aid kits and emergency equipment on critical workstations • Training of personnel on proper equipment handling and other safety practices • Posting of safety reminders on workstations • Provision of safety features, such as adequate lighting, guide rails, and safety signage	• Immediate reporting of any accident, especially those considered life-threatening • Immediate application of first-aid • Removal of affected personnel from the accident site • Bringing of affected personnel to the nearest first aid station or hospital if necessary	• Performing of corrective measures on equipment and procedures • Provision of additional safety procedures, equipment, and training
E. Flooding		
• Securing of all loose items (i.e. lamp post, roofs, loose planks, and other light materials) by adding extra guy wires or reinforcing materials • Removal of obstructions to the drainage system	• Notice for personnel to avoid staying outdoors; to stay away from items that may be blown away by strong winds and from electrical mains	• Inspection of facility for any major structural defect, crack, unstable item, and other potential hazards • Repair of broken power lines, fuel lines, and

PREPARATION	RESPONSE	RECOVERY
• In case of storm warning from PAGASA, monitoring of important weather forecast/ parameters, such as path and intensity of the storm	• Continuous monitoring of the weather conditions • Shutdown of all gas and electric equipment	other utilities, if necessary • Securing of important items and equipment from unauthorized access from outsiders, after the building is declared safe for re-entry

3. Emergency Response Team

172. Forming the Emergency Plan requires the Proponent to select among the different skills and knowledge of its personnel at the Project. The selection process will involve background checks, training and skills learning, and voluntary application of selected personnel. The proposed members of the emergency response team and the roles and responsibilities of each personnel involved in the are listed in Table 25**.**

173. The designation of the personnel and their corresponding responsibilities may be changed during different types of emergency scenarios that were previously identified in this section. Therefore, if such case will exist, Wyntron will train and designate personnel appropriately to deal with each type of emergency.

Table 25: Emergency Response Team Members with Roles and Responsibilities

EMERGENCY RESPONSE PERSONNEL	ROLES AND RESPONSIBILITIES
Incident Commander	• Overall in-charge of operations during an event of an emergency • Gives direction and orders to the response teams in managing the emergency
Safety Officer	• Supervises the daily safety performance of operations and maintenance procedures, including emergency response procedures
Liaison Officer	• Secures the necessary permits and training certification for the personnel
Public Information Officer	• Performs communication duties in behalf Belgrove Power Corporation to the media, government officials, and the local population • Issues relevant warnings and advisories to concerned authorities
Operations Team	• Performs the actual response, rescue, and retrieval of personnel and equipment during an event of an emergency
Planning/Intelligence Team	• Devices programs and policies for proper response procedures • Informs the operations team regarding the nature and type of response procedure for the Operations Team • Identifies potential hazards and performs recommendations to authorities

EMERGENCY RESPONSE PERSONNEL	ROLES AND RESPONSIBILITIES
Logistics Team	• Provides the necessary supplies and equipment for the Operations Team • Provides additional support/assistance to the Operations Team
Finance and Administration Team	• Provides the assessment of expenses and allocates the necessary financial resources for the other Teams • Performs the disbursement of claims and compensation for affected personnel, property and the community

D. Implementation Arrangements

174. The institutional organization for the proposed Project will involve Wyntron's top-level management, who is responsible for providing the corporate direction and policies of the company. The policies shall then be disseminated to the plant manager and officers for implementation of the plant personnel.

175. Contractors and subcontractors undertaking the works will be responsible for ensuring that their activities comply with the environmental and social safeguard, and labor compliance requirements of the contract including the technical specifications. The contractor will implement the project's EMP and will report regularly to Wyntron EMPs are designed to ensure that appropriate environmental and social management practices are applied throughout the construction period. The contractor will be required to employ a full-time health and safety officer and an environmental officer as necessary to ensure compliance with all requirements concerning environmental, health, safety, social and labor regulations during construction.

176. Wyntron will also establish partnership and maintain a transparent and positive relationship with relevant government agencies, various stakeholders, and local host communities in relation to the project. This partnership is necessary to ensure that the environmental protection and enhancement measures are complied with.

177. The key stakeholders of the proposed project will be identified as the following:
- Cavite Economic Zone Admin
- Cavite Economic Zone Locators
- Municipality of Rosario
- Local peace and order councils (i.e., PNP, Barangay Tanod)
- Concerned national government agencies (i.e., DENR-EMB Region IVA, DOE, DOLE); and
- Concerned local non-government organizations (NGOs).

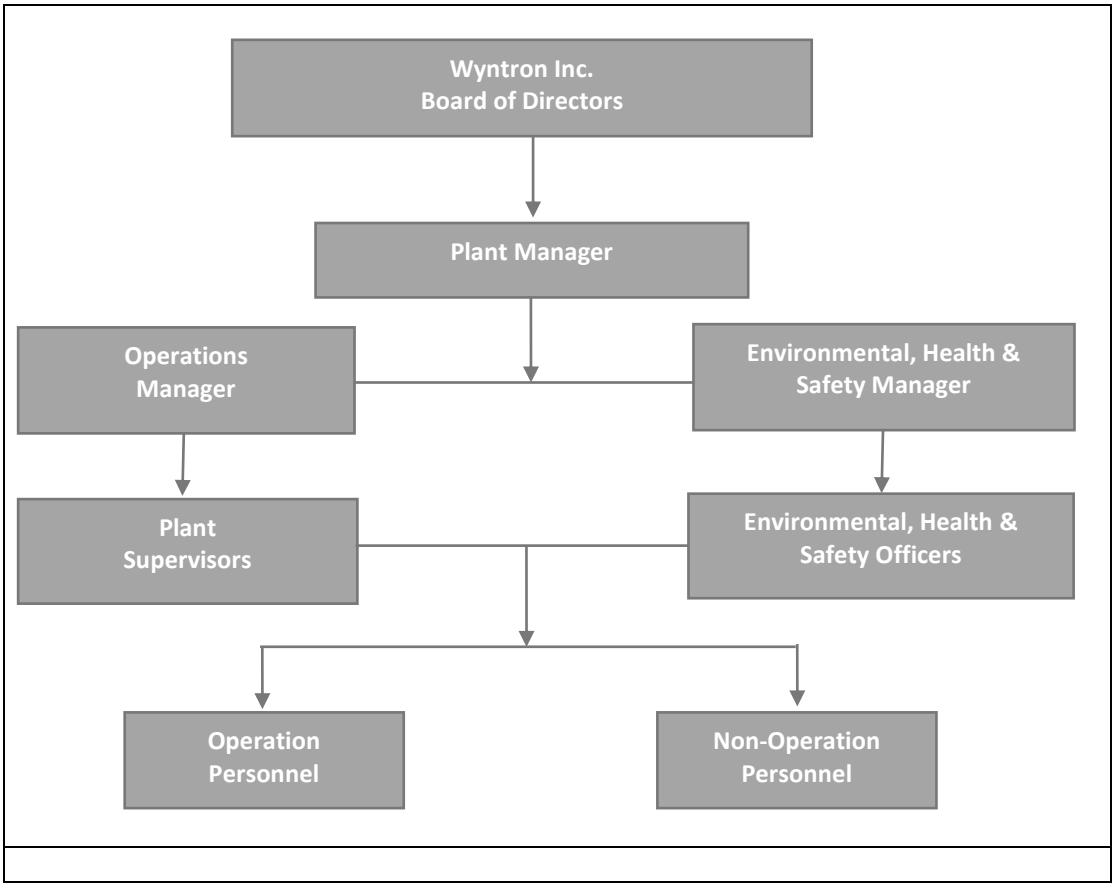


Figure 29: Organizational Chart for the Institutional Plan

VII. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

178. In line with ADB's SPS and ADB Access to Information Policy (2018), Wyntron Inc. shall conduct meaningful consultation with its various stakeholders and local authorities. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (Ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues.

179. Wyntron Inc. shall provide relevant information (whether positive or negative) about social and environmental safeguard issues in a timely manner, in an accessible place, and in a form and language(s) understandable to affected people and to other stakeholders, including the general public, so they can provide meaningful inputs into the project design and implementation.

VIII. GRIEVANCE REDRESS MECHANISM

180. A credible grievance mechanism is necessary for the community, especially the stakeholders, to have confidence that if they lodge a complaint, it will be treated in a fair and objective manner. The fairness of the process is to be understood in the context of the imbalances of power that may exist. The grievance registration or communication process should present no or low barriers in terms of access (e.g., geographic location/education levels/language/ access to modern communication technology) by the stakeholders.

181. Registering a complaint can pose risks for the stakeholders, especially if it concerns issues such as corruption, misconduct, or monetary compensation, or if it interferes with local social and gender norms. Hence, the grievance mechanism should be free of retribution and should proactively consider potential dangers and risks to complainants and incorporate ways to prevent harm. Protection of privacy of the complainant will also be prioritized.

182. The stakeholders must be fully informed of the proper venue to lodge their complaints or grievances, and of their rights to use alternative measures if they choose to do so if they are not satisfied with the response of the Proponent to their complaints.

183. The existing workplace grievance policy and procedure of Wyntron is presented in Table 26.

Table 26: Workplace Grievance Policy and Procedure of Wyntron Inc.

No.	Procedure
1	The employee shall raise the issue to his immediate supervisor. Should the issue not be resolved by having an informal discussion to address the concern, the employee may opt to make the concern or complaint formal and submit details of grievance in writing to the Supervisor or Department Head/Manager. This report shall be handled with seriousness and confidentiality and the immediate superior shall only share information related to the report on a need-to-know basis for the purpose of accurate and through assessment to determine if there is a valid grievance.
2	The concerned Supervisor / Department Head / Manager shall endorse the grievance to HRD-Admin Department.
3	The HRD-Admin Supervisor or Manager shall then call for a Grievance Hearing to address the concern.
4	The HRD-Admin shall then review the concern based on the existing policies and procedures, company Code of Ethics and the Labor laws and summon the Committee on Decorum and Investigation (CODI) as necessary to address it and properly inform the employee. Should the employee not be satisfied of the result of the hearing, the aggrieved employee may opt to appeal, and submit a written notice to the HRD-Admin.
5	The HRD-Admin shall then call for another review and/or hearing with the next higher-level committee consisting of three company senior management and the corporate legal counsel. The decision shall be considered final and executory.

IX. CONCLUSION AND RECOMMENDATIONS

184. An IEE is sufficient for the proposed expansion of Wyntron's EVSE manufacturing plant considering its categorization as Category B for Environment and Category C for both Involuntary Resettlement and Indigenous People.

185. The proposed expansion site is formerly used for the manufacturing of Printed Circuit Boards (PCBs). Before the start of construction activities, Wyntron should coordinate with PEZA to ensure that the previous owner properly cleaned-up and decommissioned all the equipment in the site, and that there are no significant environmental concerns in the property due to the previous operations and decommissioning activities. Wyntron may request for a copy of the Certificate of Clearance issued by PEZA to the previous owner once proper decommissioning is completed. Wyntron and its E&S consultant will undertake E&S due diligence to ensure that there are no legacy issues from the previous operations.

186. During construction, the anticipated project impacts on noise, dust, traffic, health, and safety are localized, temporary, intermittent in nature and can be readily addressed through implementation of the measures outlined in the ESMP.

187. The potential impacts of the operation of the project on water, air emission, noise, health and safety can likewise be minimized and/or eliminated through the implementation of the mitigating measures listed in the ESMP.

188. Wyntron is fully committed to comply to the environmental and social requirements of the ADB SPS requirements and the applicable national and local policies.

189. Should there be changes in the project scope or location of the facilities that would result to significant impacts not included in this assessment, an updated or a new IEE/EIA Report will be prepared.