Code of Construction Practice

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PHI: Health System Enhancement to Address and Limit COVID-19

Prepared by Department of Health of the Philippines for the Asian Development Bank.

ABBREVIATIONS

ADB	-	Asian Development Bank
AO	-	Administrative Order
BSL	-	biosafety level
COCP	-	Code of Construction Practice
COVID-19	-	coronavirus disease
DENR	-	Department of Environment and Natural Resources
DOH	-	Department of Health
DILG	-	Department of Interior and Local Government
ECC	-	Environmental Compliance Certificate
EMB	-	Environmental Management Bureau
HFSRB	-	Health Facilities and Services Regulatory Bureau
JAO	-	Joint administrative order
JBLRMH	-	Jose B. Lingad Regional Memorial Hospital
LGU	-	local government unit
LTO	-	License to Operate
PD	-	Presidential Decree
PEISS	-	Philippine Environmental Impact Statement System
PMT	-	Project management team
PPE	-	Personal protective equipment
PTC	-	Permit to Construct
RA	-	Republic Act
RITM	-	Research Institute for Tropical Medicine
SPS	-	Safeguard Policy Statement
WHO	-	World Health Organization

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I. INTRODUCTION

1. The Health System Enhancement to Address and Limit COVID-19 will support the Philippines' Department of Health (DOH)—the implementing agency of the project—to strengthen the country's capacity to respond to the coronavirus disease (COVID-19) pandemic. The project will support procurement of medical equipment and commodities, expansion of healthcare facilities such as hospital isolation facilities and completion of subnational reference laboratories. The project includes 3 outputs, as follows:

2. **Output 1: Disease surveillance and diagnostic capacity upgraded**. This output will (i) help maximize the efficiency of at least 10 government molecular laboratories[1] by providing an adequate supply of testing kits, chemicals, personal protective equipment (PPE), and consumables needed for COVID-19 testing, and transport vehicles to efficiently deliver specimens to molecular and similar laboratories; (ii) support the construction or retrofitting of biosafety level (BSL) 2[2] laboratories in two selected molecular laboratories,[3] and the upgrade of the equipment of Research Institute for Tropical Medicine (RITM) laboratory, National Reference Laboratory Complex Phase 1 and six other level 2 laboratories;[4] (iii) install computed tomography scan machines in 33 hospitals to improve the clinical diagnosis of COVID-19 cases; and (iv) ensure through the government that 8,000 or more COVID-19 tests are conducted per day, with data disaggregated by sex, age, and pre-existing medical conditions. The project will ensure the sizes, types, and design of PPE suitable for male and female health workers,[5] the construction of BSL 2 laboratories, and that the computed tomography scan machines are ready. The two molecular laboratories will be designed to comply with level 2 biosafety and biosecurity standards, with the provision of additional staff training for laboratories and testing of equipment, including PCR machines, ovens, centrifuge, and biosafety cabinets.

3. **Output 2: Infection prevention and control measures expanded.** This output will provide PPE for frontline heath workers and laboratory technicians to 70 DOH hospitals, selected local government unit (LGU) hospitals, and national and local government isolation facilities. It will also support renovation and/or new construction of negative pressure isolation wards with equipment to remotely monitor heart rate, blood pressure, respiratory rate, temperature, oxygen saturation level, and other vital signs in 12 DOH hospitals.[6] The project will also strengthen infection prevention capacity and increase the knowledge of healthcare workers in obstetrics,

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[1] The molecular laboratories are in Baguio General Hospital, Bicol Regional Lab, Jose B. Lingad Memorial Regional Hospital (JBLRMH), Lung Center of the Philippines, San Lazaro Hospital, RITM, Southern Philippines Medical Center, University of the Philippines-National Institutes for Health, Vicente Sotto Memorial Medical Center, and West Visayas Medical Center.

[2] The World Health Organization (WHO) Laboratory Biosafety Guidance related to COVID-19 (March 19, 2020) recommends non-propagative diagnostic laboratory work should be conducted at the facility using procedures equivalent to BSL 2. Activities involving handling of high concentration of live virus (such as when performing virus propagation, virus isolation or neutralization assays) are to be performed using BSL 3 practices, but, which are not part of routine diagnostic laboratory work on clinical specimens from patients who are suspected or confirmed to be infected with COVID-19 under Output 1.

[3] The proposed molecular laboratories are in Ilocos Training & Regional Medical Center and JBLRMH.

[4] The proposed molecular laboratories are in Baguio General Hospital, Caraga Regional Hospital, Lung Center of the Philippines, San Lazaro Hospital, Southern Philippines Medical Center, and Vicente Sotto Memorial Medical Center.

[5] PPE will be provided in appropriate sizes for men and women. The design and layout of laboratories and computed tomography scan rooms will consider different heights of men and women when installing counters, or the need for wider doorframes and ramps to accommodate individuals in wheelchairs.

[6] The proposed hospitals are Bataan General Hospital, Davao Regional Medical Center, Dr. Paulino J. Garcia Memorial Research and Medical Center, Ilocos Training & Regional Medical Center, JBLRMH, Lung Center of the Philippines, Luis Hora Memorial Regional Hospital, Mariveles Mental Hospital, Northern Mindanao Medical Center, San Lazaro Hospital, Southern Philippines Medical Center, and Western Visayas Medical Center.

pediatric, and emergency departments of supported hospitals on controlling infectious disease transmission for continuous maternal and child health service delivery during public health outbreaks.[7]

4. **Output 3: Treatment capacity of COVID-19 scaled up.** This output will provide at least 90 ventilators and train respiratory technicians and staff to operate the ventilators in 70 DOH hospitals and 20 Island LGU hospitals. It will also provide associated critical care equipment, including electrocardiography machines, defibrillators, critical care monitoring system, and hazardous waste management autoclaves, in selected DOH hospitals. The project will ensure the sustainability of the ventilators and other critical care equipment by providing training on equipment use and maintenance. The output will strengthen healthcare workers' capacity to detect and prevent gender-based violence and needs for psycho-social support to patients and families including pregnant women and vulnerable women affected by COVID-19.

5. The project supports the Bayanihan to Heal as One Act (Republic Act 11469) which identifies the need to increase capacities of health facilities as one of the strategies to manage the growing number of COVID-19 cases. A Manual of Operations v2.0 for the development of Mega Ligtas COVID-19 Centers was issued by the DOH on April 21, 2020 that provides guidance in the design of treatment/monitoring facilities, space and infrastructure areas, supplies and equipment needed, among others. The DOH manual referred to the Severe Acute Respiratory Infections (SARI) Treatment Centre that was issued by the WHO in March 2020 which provides guidance on the design and basic layout of COVID-19 screening areas and SARI treatment center for health care facilities.

6. The project has been screened and categorized as C for environment per the Asian Development Bank (ADB) Safeguard Policy Statement (SPS) (2009) as the proposed civil works are minor and will all take place within existing hospital compounds. Only minimal impacts are anticipated in relation to temporary disturbances, construction safety, and waste management.[8]

7. Under the Philippines Environmental Impact Statement System (PEISS), primary, secondary, tertiary hospitals, or medical facilities are classified as category B and require an environmental compliance certificate (ECC) from the Department of Environment and Natural Resources (DENR)-Environmental Management Bureau (EMB). The design and operation of these facilities are also required to comply with other pertinent regulations and standards (see Section II).

8. All buildings will be located on land that is construction-ready, with connections to basic utilities. No site clearance, land acquisition, or resettlement is required. The construction of new building expansions is expected in 9 sites. Rehabilitation or refurbishment of existing facilities to accommodate the new isolation facilities is required in 3 sites. Table 1 provides an overview of participating DOH hospitals and the scope of works required under the project. Adverse impacts will be minimal, highly site-specific, limited to the construction period, and can be addressed through sound construction practices.

[7] The activities will be financed by the proposed project as well as on-going technical assistance. ADB. 2019. *Regional Technical Assistance for the Support of Human and Social Development in Southeast Asia*. Manila; and ADB. 2018. *Technical Assistance to the Philippines for Strengthening Social Protection Reforms*. Manila.

[8] The environment category C was confirmed by ADB's Chief Compliance Officer on 11 April 2020.

Table 1: Participating DOH Hospitals, Works Proposed Under the Project

				Land		Environment			
Hospital	**Contacts**	**Project Components**	**Hospital Requests**	**Where to build? Construction issues?**	**Land Ownership**	**With ECC?**	**HW treatment**	**Wastewater Treatment**	**With PCO?**
Cordillera Administrative Region (CAR)									
Luis Hora Memorial Regional Hospital Mountain Province	Dr. Eduardo Calpito – 084-227-3347, 217-3671; 0939-903-8048	Construction of new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment HW treatment equipment	New isolation building (200 sqm) Renovation of 4 rooms and 4 ICU rooms into negative pressure rooms at the new bldgs. extension ward Renovation of old dormitory (with 24 rooms) as COVID-19 ward BSL2 laboratory Construction of deep-well (including pipe lines) Equipment such as mechanical ventilators, video laryngoscope, autoclave, set of cardiac monitoring with central monitor and 8–10 monitors	57,942 sqm compound which includes 1.0 ha for a rehabilitation facility is in the process of being transferred from the DENR to the hospital. There is still 19,585 sqm available land for future development, within the 57,942 sqm compound	The land is owned by the Department of Environment and Natural Resources (DENR) Land ownership is being transferred (57,942 sqm) from the DENR to the hospital. Both are government agencies There is no private land involved	Yes	MRF; shredder, autoclave; incinerator	With STP	Yes
Central Luzon (Region III)									
Bataan General Hospital (only tertiary	Dr. Baltazar – 0920-9116833	Construction of a new isolation building with at least two negative pressure rooms and	5-storey isolation building (with negative pressure rooms) for 80-100 rooms	Within existing compound (1.2 ha) 726 sqm area available for	DOH	Yes (proposed building is not included;	Existing autoclave cannot handle volume of wastes;	STP is under capacity and needs improvement.	Yes

Hospital	Contacts	Project Components	Hospital Requests	Land		Environment			
				Where to build? Construction issues?	Land Ownership	With ECC?	HW treatment	Wastewater Treatment	With PCO?
hospital in Bataan) Bataan		three non-negative isolation rooms, with support facilities and equipment HW treatment equipment	Laboratory BSL2 compliant—no need (already funded by province)	the isolation building.		need to amend ECC)	Outsource offsite HW transport and treatment. Request for improvement of autoclave.	Request for improvement of STP.	
Dr. Paulino J. Garcia Memorial Research and Medical Center Cabanatuan City	Dr. Lapuz – 0917-8601957	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment. HW treatment equipment.	2-storey infectious disease and tropical medicine building (12-bed capacity) with: 4 units negative pressure room 8 units ordinary isolation rooms with provision of emergency rabies room	Outside of existing compound (parking lot of hospital with area of 415 sqm)	Parking lot is owned by hospital	Yes (proposed building is not included; need to amend ECC)	Disposed through DENR-EMB accredited TSD facility	With STP (activated sludge 300 m^3/day capacity)	Yes
Jose B Lingad Memorial Regional Hospital San Fernando, Pampanga	Dr. Chichoco – 09209081509	Construction of BSL2 laboratory facilities with equipment. Construction of new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment. HW treatment equipment	BSL2 laboratory The hospital has retrofitted one floor of the OPD building with 115 beds as isolation wards (negative pressure)	Within existing compound. Minor (construction /renovation confined within existing building)	Provincial Government	With ECC covering all existing and proposed buildings in the compound (as per masterplan)	Autoclave; employs Cleanway Co. Ltd to treat HW offsite	With STP designed for 250 bed cap.	Yes
Mariveles Mental Hospital Bataan	Dr. Evangelista – 0920-928-1859	Construction of a new isolation building with at least two negative	New 2-storey isolation building with 20–40 bed capacity	Within existing compound (3.4 ha)	Mariveles Mental Hospital	Need ECC amendment	Small autoclave for disinfecting utensils; employs	Need STP (existing system is inadequate)	Yes

Hospital	Contacts	Project Components	Hospital Requests	Land		Environment			
				Where to build? Construction issues?	Land Ownership	With ECC?	HW treatment	Wastewater Treatment	With PCO?
		pressure rooms and three non-negative isolation rooms, with support facilities and equipment. HW treatment equipment.	Renovation of room within existing facility BSL2 laboratory	200–400 sqm area available on the southern part of the compound for the isolation building. Dr. Evangelista said that they can either convert the general wards to isolation rooms or build new isolation building			Cleanway to treat HW offsite (₱35/kg)		
Southern Mindanao (Region XI)									
Davao Regional Medical Center Davao del Norte	Dr. Bryan Dalid – 084-216-9127; 084-216-9131	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment. HW treatment equipment.	3-storey Isolation building with negative pressure rooms (20 bed capacity)	Within hospital compound with total land area of 67,954 sqm; available land to be occupied by new building is 759 sqm	Davao Regional Medical Center	With CNC; ECC application to cover existing and new facilities in process at EMB Region XI	Autoclave/steam sterilization; Vials are crushed and stored at MRF; final disposal of color-coded wastes is through city collection system	With STP with capacity of 111.75 cum per day; Discharge Permit has expired (for sampling and renewal)	Yes
Southern Philippines Medical Center Davao City	Dr. Leopoldo Vega – 082-227-2731; 0917-701-2881	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with	4-5 storey infectious institute building with 80-100 bed capacity (negative pressure rooms and ICU rooms);	Within hospital compound with total land area of 113,512 sqm; available land to be occupied by new	Southern Philippines Medical Center	ECC amendment application in process at EMB-Region XI; latest EMB request for	Microwave sterilization and shredder (onsite); offsite disposal through the city collection system	With STP; Discharge Permit on process	Yes

Hospital	Contacts	Project Components	Hospital Requests	Land		Environment			
				Where to build? Construction issues?	Land Ownership	With ECC?	HW treatment	Wastewater Treatment	With PCO?
		support facilities and equipment BSL2 laboratory equipment HW treatment equipment.	CT scan and other equipment	building is 4,445 sqm		clarification sent on April 21, 2020			
National Capital Region									
Lung Center of the Philippines Quezon City	Dr Vincent Balanag – 8924-6010	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment. BSL2 laboratory equipment HW treatment equipment.	Isolation rooms (3-storey building under completion) Laboratory	Within existing compound	DOH	Yes	Has autoclave operated by IWMI within existing hospital compound	Has WWTP with Discharge Permit from LLDA	Yes
San Lazaro Hospital Manila	Edmundo Lopez – 308-9542; 732-3776 local 103	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment. HW treatment equipment.	5-storey Isolation building with 32 rooms . BSL2 laboratory (5-storey ERID Building Extension is part of the hospital's 5-year Development Plan).	Within existing compound (300 sqm available but require demolition of a 1-storey linen building)	DOH	Yes (will secure ECC amendment)	Has autoclave; employs licensed third-party treater (IWMI) to transport and treat HW offsite at IWMI facility in Cavite	With STP (centralized with Jose Reyes Med. Center and DOH offices)	Yes
Ilocos Region (Region I)									
Ilocos Training and Regional Medical Center La Union	Dr. Eduardo Badua III - (072) 607-6418; 607-6422	Construction of BSL2 laboratory facilities with equipment; construction of a new isolation building with at least	Construction of isolation wards/building BSL2 laboratory and equipment	Within hospital compound	Ilocos Training and Regional Medical Center	Yes for existing facilities; need ECC amendment for	Autoclave	With STP	Yes

Hospital	Contacts	Project Components	Hospital Requests	Land		Environment			
				Where to build? Construction issues?	Land Ownership	With ECC?	HW treatment	Wastewater Treatment	With PCO?
		two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment HW treatment equipment				additional facilities			
Northern Mindanao (Region X)									
Northern Mindanao Medical Center Cagayan de Oro City	Dr Surdilla – 0917-706-7787; Dr. Jose Chan – 0908-881-1160	Construction of a new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment HW treatment equipment	Renovation of 3rd, 4th, 5th, and 6th levels of new hospital building originally designed as orthopedic building as COVID19 isolation rooms BSL2 laboratory and equipment	Within hospital compound	Northern Mindanao Medical Center	Yes; need ECC amendment for new building	Autoclave and shredder	With STP	Yes
Western Visayas Region (VI)									
Western Visayas Medical Center Iloilo City	Dr. Joseph Dean Nicolo – (033) 321-2841	Construction of BSL2 laboratory facilities with equipment Construction of new isolation building with at least two negative pressure rooms and three non-negative isolation rooms, with support facilities and equipment HW treatment equipment	Renovation of two-storey Geriatric building as isolation building	Within hospital compound with total land area of 35,576 sqm	Western Visayas Medical Center	Yes	Uses chemical disinfection and then disposed at Iloilo City hospital waste treatment facility (autoclave) at Calajunan sanitary landfill	With STP	Yes

BSL = biosafety level, COCP = Code of Construction Practice, cum = cubic meter, DENR = Department of Environment and Natural Resources, DOH = Department

of Health, ECC= environment compliance certificate, HW = hospital waste , ha = hectare, ICU = intensive care unit, IWMI = Integrated Waste Management Inc., kg = kilogram, LLDA = Laguna Lake Development Authority, MRF = materials recovery facility, m^3 = cubic meter, OPD = outpatient department, PCO = Pollution Control Officer, STP = sewage treatment plant, WWTP = wastewater treatment plant, sqm = square meter.
Source: Asian Development Bank.

6. This Code of Construction Practice (COCP) sets out the standards and procedures to which the design-build contractors must adhere in order to manage the potential environmental impacts of construction works. The COCP identifies necessary procedural requirements during facility design and mitigation measures in respect of anticipated impacts during construction. It also sets out rules, responsibilities, and good environmental management practices. It sets out requirements in relation to noise and dust control; ecology and land protection; temporary traffic management; waste management; construction safety; core labor standards; and consultation/ communication and grievance redress. The COCP will be referred to in the bidding documents of all works packages.

II. LEGAL AND REGULATORY FRAMEWORK

7. The environmental management of the proposed project is governed by the ADB SPS 2009 and relevant laws, regulations, and administrative orders of the Government of the Philippines. SPS 2009 mandates that for category C projects, environmental implications are reviewed.

8. Presidential Decree 1586 established the PEISS in 1978. Its implementing rules and regulations is embodied in DENR AO No. 30, series of 2003. A Revised Procedural Manual was approved in 2007 and several administrative orders and memorandum circulars (MCs) have been issued by the EMB to strengthen its implementation. EMB memorandum circular No. 2014-005 provides the "Guidelines for Coverage Screening and Standardized Requirements under the PEISS."

9. Section 1 of EMB MC 2014-005 states that *"Every proposed project or undertaking which is projected to have significant adverse impact to the quality of the environment is covered by the PEISS. This includes proposed major expansion, rehabilitation, and/or modification of existing projects as well as resumption of projects that have stopped operations for a prolonged period.*" Projects are screened based on their nature or type, identifying environmentally critical projects, and environmentally critical areas for the location. Projects are classified as categories A, B, C or D, with category A being the most environmentally critical and category D, the least.

10. Based on the screening guideline, the new treatment isolation facilities to be constructed in eleven existing DOH hospitals are environment B under EMB MC 2014-005. Additional facilities in existing hospitals or buildings are required to secure or amend its ECC through the submission of an Environmental Performance Report and Management Plan and to comply with other environmental laws and government permitting requirements.

11. A Building Permit must be secured from the local government unit where the facility will be constructed in compliance with Presidential Decree No. 1096 or the National Building Code of the Philippines before any type of building construction or repair work can start.

12. The design of the isolation facilities will refer to relevant guidelines from the World Health Organization (WHO), DOH, and the Department of Interior and Local Government (DILG) such as the general requirements outlined in DOH Memorandum 2020-0123 on the space and infrastructure requirements of the operational areas to be used for COVID-19 treatment and monitoring, the WHO manual on SARI treatment center, Guidelines on Local Isolation and General Treatment Areas for COVID-19 cases and the Community-based Management of Mild COVID-19 cases, DOH Interim Guidelines on Surge Capacity Management of All Health Facilities during the COVID-19 pandemic (April 16, 2020).

The implementation of the project will also refer to Republic Act (RA) 4226 (also known as the Hospital Licensure Act) requires the licensure of all hospitals in the Philippines and also mandates DOH to provide guidelines and technical standards as to personnel, equipment and physical facilities for hospitals, clinics, lying-ins and similar establishments. The DOH issued DOH AO Nos. 2012-0012 and 2016-0042 (amending provisions of DOH AO 70-A) which provides for the registration, licensure, and proper operation of hospitals and other healthcare facilities. Prior to application or renewal of a license, DOH verifies the submission of plans and other design requirements of the following codes, laws, and references:

(i) Presidential Decree (PD) 856—Sanitation Code of the Philippines (1975)
(ii) RA 1378—National Plumbing Code (1955)
(iii) RA 9514—Revised Fire Code of the Philippines (2008)
(iv) PD 1096—National Building Code of the Philippines (1977)
(v) Batas Pambansa 344—Accessibility Law (1982)
(vi) RA 184—Philippine Electrical Code (2017)
(vii) Manual on Technical Guidelines for Hospitals and Health Facilities Planning and Design (DOH), 1994
(viii) Signage Systems Manual for Hospitals and Offices (DOH), 1994
(ix) Health Facilities Maintenance Manual (DOH), 1995
(x) Healthcare Waste Management Manual (DOH), 2012
(xi) Safe Hospitals in Emergencies and Disasters (DOH), 2011
(xii) District Hospitals: Guidelines for Development (WHO Regional Publications, Western Pacific Series), 1992
(xiii) Guidelines for Construction and Equipment of Hospital and Medical Facilities of the American Institute of Architects, Committee on Architecture for Health, 1992
(xiv) Guidelines in the Planning and Design of a Hospital and other Health Facilities (DOH AO 2016-0042)
(xv) WHO Severe Acute Respiratory Infections Treatment Centre (March 2020)
(xvi) DOH Interim Guidelines on Surge Capacity Management of all Health Facilities during the COVID-19 Pandemic (April 16, 2020)
(xvii) DOH-DILG Guidelines on Local Isolation and General Treatment Areas for COVID-19 cases (LIGTAS COVID) and the Community-based Management of Mild COVID-19 Cases (April 15, 2020)
(xviii) MEGA LIGTAS COVID-19 Centers Manual of Operations v2.0
(xix) DOH Interim Guidelines for 2019 Novel Coronavirus Acute Respiratory Disease Response in Hospitals and other Health Facilities (DOH Memorandum 2020-0072)
(xx) Guidelines for Management of Patients with Possible and Confirmed COVID-19 (DOH Memorandum 2020-0108)
(xxi) National Standards in Infection Control for Healthcare Facilities (2009)
(xxii) WHO Laboratory biosafety guidance related to coronavirus disease (COVID-19 (March 19, 2020).

13. The planning and design directives of DOH for hospital and healthcare facilities considers several criteria such as location and the environment, occupancy, safety, security, patient movement, lighting and ventilation, water supply, waste disposal, sanitation, fire protection, signages, and zoning of different areas of the hospital. The requirements for isolation facilities include provision of well-ventilated facilities, with entrance and exits that would allow for unidirectional flow of traffic with directional signages, individual rooms with suitable toilets and baths (if feasible), beds placed two meters apart with a partition for privacy and to minimize droplet spread, male and female changing rooms, emergency services area, and ancillary services area for specimen collection. The triage area is to be divided into zones to manage cases and isolate

patients with mild to moderate symptoms.

14. The issuance of License to Operate (LTO) to primary care facilities, including those providing ambulatory and other modes of health services, is further strengthened in the implementing rules and regulations of the 2019 Universal Health Care Act (RA 11223). The LTO is a prerequisite to the accreditation of a health facility by an accrediting body of DOH and is renewed on an annual basis.

15. A Permit to Construct (PTC) is required for all levels of hospitals including those with substantial alteration, expansion, renovation, increase in number of beds or additional services beyond the approved service capacity. The PTC is processed by the Health Facilities and Services Regulatory Bureau (HFSRB) of DOH. The PTC is a prerequisite for the LTO. A PTC application is evaluated in terms of compliance of the architectural floor plans and with the prescribed planning and design guidelines for hospitals. The submission of progress report/status of construction to HFSRB is required every six months until project completion.

16. The PTC and LTO are independent of permits, registrations, and accreditation by other government offices. Construction of buildings will require the requisite Building Permit, Sanitary Permit, Electrical Permit, among others, from the local government. Fire Safety Evaluation Clearance is required by the city/municipal Fire Marshal prior to construction and a Fire Safety Inspection Certificate is required after completion of construction in accordance with the Fire Code of the Philippines.

17. DOH Memorandum 2020-0072 provided interim guidelines for all health facilities on the necessary precautions, preparations of health facilities and management of suspect, probable and confirmed cases of COVID-19. All hospitals and health facilities are required to maintain an Infection Prevention and Control Committee in the health facility and to follow the National Standards in Infection Control for Healthcare Facilities (2009 edition). The memorandum includes the requirements on provision of appropriate PPE, implementation of universal precautionary measures, patient screening, isolation of patients with COVID-19 systems, notification, and clinical management.

18. In order to reduce potential risks to people's health and the environment due to the operation of health care facilities, DOH has AOs and guidelines on waste management that are consistent with the requirements of environmental laws under the mandate of the DENR that includes the: (i) Toxic Substances, Hazardous and Nuclear Waste Control Act (RA 6969), (ii) Philippine Clean Air Act (RA 8749), (iii) Ecological Solid Waste Management Act (RA 9003), and the (iv) Philippine Clean Water Act (RA 9275). DOH Aos also consider the international environmental agreements and obligations of the country relevant to waste management.

19. In 2004, DOH issued the Healthcare Waste Management Manual[9] to ensure that sound management of wastes is an integral feature of healthcare services. A DENR-DOH Joint Administrative Order (JAO) No. 02, series of 2005, was issued to clarify the mandates of both agencies and provide the policies and guidelines on the handling, collection, transport, treatment, storage and disposal of health care wastes. The JAO also reinforces the implementation of the Healthcare Waste Management Manual.

20. Healthcare wastes such as pathological wastes, infectious wastes, sharps, and expired drugs are classified as hazardous wastes and are regulated by RA 6969. These wastes are to be

[9] The Healthcare Waste Management Manual was under revision as of 1 April 2020.

segregated, properly labelled, and stored in designated areas within the premises of the medical facility until they are transported for off-site treatment through a DENR-licensed hazardous waste transporter and treater. Permits for storage, transport and disposal are required based on DENR AO No. 29, series of 1992, Procedural Manual Title III, or the implementing rules and regulations of RA 6969.

21. Treatment options for infectious wastes, however, is limited to non-burn technologies as provided by Section 20 of RA 8749 which disallows incineration. The allowed non-burn technologies in the destruction of healthcare wastes must comply with the criteria and emission standards on non-burn technologies as provided in Rule 28 of DENR Administrative Order 2000-81. Non-burn technologies include pyrolysis, autoclave, microwave, and sterilization.

22. Philippine laws and regulations applicable to the project are listed in Table 2:

Table 2. Relevant Laws and Regulations of the Philippines

Law	Title/Outline
A. Establishment and Operation of Hospitals and Medical Facilities	
PD 1586 PEISS	Newly established hospitals or existing hospitals that will have expansion are required to secure an ECC from the DENR-EMB as part of the EIA. Hospitals and related medical facilities are classified as non-environmentally critical projects and fall under Category B.
RA 4226 (“Hospital Licensure Act”)	This requires all hospitals and other healthcare facilities in the Philippines to register and secure a License to Operate from DOH.
DOH Memorandum No. 2020-0171	The “Interim Guidelines on Surge Capacity Management of all Health Facilities during the COVID-19 Pandemic” was issued in April 16, 2020 to guide all health facilities in ensuring continuous/uninterrupted operations of hospitals and other health care facilities to address the challenges of COVID-19 pandemic. The memorandum provides instructions in the identification of triage area and system and conversion of extra spaces into treatment areas or isolation units as dedicated rooms for COVID-19 cases.
DOH Administrative Order 2020-0016	The “Minimum Health System Capacity Standards for COVID-19 Preparedness and Response Strategies” was issued on May 4, 2020. Under the order the minimum regional health system capacity for COVID-19 in terms of infrastructure and equipment includes at least one biosafety laboratory 2 (BSL 2) with real time polymerase chain reaction (RT-PCR) testing capacity per region, at least one dedicated referral hospital/facility/floor/wing staffed by dedicated medical support team with the purpose of serving as the region’s primary referral center for severe or critical COVID-19 cases, at least one dedicated intensive care unit (ICU) bed and mechanical ventilator for every 25,000 population, and that at least 30% of all current public and private hospital beds have the capacity to accommodate and service COVID-19 patients or corresponding to the peak day critical care capacity.
DOH-DILG Joint Administrative Order 2020-0001	The DOH-DILG administrative order (Guidelines on Local Isolation and General Treatment Areas for COVID-19 Cases and the Community-based Management of Mild COVID-19 Cases) issued on April 15, 2020, includes guidance on preventing transmission and managing suspect, probable and/or confirmed cases of COVID-19. The order presents the requirements for LIGTAS COVID centers which the local government units can set up as permanent or temporary structures equipped with utilities and basic amenities set by the DOH.

Law	Title/Outline
MEGA LIGTAS COVID-19 Centers Manual of Operations v.2.0	The Operations Manual for Mega Ligtas COVID-19 centers was issued by DOH to serve as a guide for the health facility management team for maintaining and operating facilities to contain and mitigate the COVID-19 pandemic. The manual was based on the WHO strategy to "find, test, isolate and treat every case and trace every contact". It refers to the WHO SARI Treatment Centre manual issued in March 2020 which outlines the standards for building a SARI treatment center to manage epidemics or pandemics caused by respiratory disease events.
DOH Memorandum 2020-0072	The DOH Interim Guidelines for 2010 Novel Coronavirus Acute Respiratory Disease Response in Hospital and other Health Facility provides the guidelines for infection prevention and control, case identification, screening, and isolation, and clinical management of COVID-19 cases.
DOH Administrative Order 2020-0014	The administrative order sets the standards in licensing of COVID-19 testing laboratories, whether hospital-based or non-hospital based. The order prescribes that COVID-19 testing shall only be done in a DOH licensed COVID-19 testing laboratory and that the License to Operate for the COVID-19 testing laboratory shall be subsumed in the LTO of the hospital. The COVID-19 laboratory shall follow the standards, criteria and requirements prescribed in the DOH Assessment Tool for Licensing a COVID-19 testing laboratory, RITM's Biosafety and Laboratory Assessment Room, and the WHO risk assessment guidelines.
National Standards in Infection Control for Healthcare Facilities (2009)	The DOH issued the standards that requires each healthcare facility to have a coordinated institutional infection control program that includes infection control guidelines, policies and procedures on hand hygiene, isolation, decontamination, disinfection, sterilization, environmental care and healthcare waste management, protection of healthcare workers, housekeeping of specific patient care areas, outbreak investigation, testing, surveliillance, and purchase of equipment, medicines and supplies.
RA 11223 ("Universal Health Care Act of 2019")	The Universal Health Care Act of 2019 guarantees equitable access to quality and affordable healthcare services through human health resources, health facilities, and health financing.
RA 3720, as amended by Executive Order 175 and RA 9711	The FDA law strengthens the law enforcement capability of the FDA which regulates the drugs, medical devices, food, cosmetics and toilets and household/urban hazardous substances.
RA 7875 (1995) and RA 9241 (2004) ("Philippine Health Insurance Corporation Law")	The National Insurance Program was created in 1994 to ensure affordable, acceptable, and accessible healthcare services for all citizens of the Philippines. Environmental and occupational health concerns are integrated under the PhilHealth's Benchbook such as safe practice and environment, operating manuals for medical equipment, and proof of implementation of policies, procedures and safety programs on electrical safety, medical device safety, chemical safety, radiation safety, mechanical safety, combustible material, waste management, fire, emergency and disaster preparedness.
DOH Circular 2018-0131 ("Revised Licensing Assessment Tools for Hospitals")	The changes in the assessment tools for the licensing of a hospital include the standards for medical and nursing services, HFSRB-approved floor plan, compliance to electronic medical records, antimicrobial stewardship and other recent laws such as the Anti-Hospital Deposit Law (RA 10932), allocation of charity beds in private hospitals (AO 2007-0041), and RA 9439 which prohibits detention of patients in hospitals and medical clinics on ground of nonpayment of hospital bills or medical expenses.

Law	Title/Outline
DOH AO 2012-0012	This includes rules and regulations governing the new classification of hospitals and other health facilities. The order rescinds DOH AO 70A (2002) in line with the health regulatory reforms to ensure access to safe, quality, and affordable health facilities and services.
DOH AO 2016-0042	This includes guidelines in the application for DOH PTC for all levels of hospitals
DOH AO 2005-0029 (December 2005); Amendment to DOH AO 147 and 70-A	Under Section 10 (Requirements and procedures for application of Permit and License), a hospital is required to present an ECC issued by the DENR-EMB, Waste Management Plan, Building and Fire Permits and other requisites.
DOH MC No. 2006-0008 (January 2006)	Relative to the Philhealth Circular No 12, series of 2005, entitled "Adoption of Benchbook on Performance Improvement of Health Services," standards are presented to ensure provision of quality care. Important areas/aspects to be inspected by DOH are building and sanitation and safety standard such as water supply and water analysis report, electric power (including standby generator, sewage disposal, fire escape, fire extinguisher, and toilet facilities).
DOH AO 2008-0023 (July 2008)	The order prescribes the policy on patient safety in all levels of the healthcare delivery system. The key priority areas in patient safety include but not limited to: proper patient identification, assurance of blood safety, safe clinical and surgical procedures, provision and maintenance of safe quality drugs and technology, infection control, and environment, energy and waste management standards.
EO 674 (1981)	This established the RITM to undertake research activities in the diagnosis, control, and prevention of tropical diseases that are major causes of mortality and morbidity in the Philippines.
DOH Order 393-E	This designated the RITM as the NRL for dengue and other viruses and emerging bacterial diseases. In-house guidelines and training programs were developed on biosafety and biosecurity that refers to the WHO laboratory biosafety manual of 2004.
DOH AO 2007-0027	"Revised Rules and Regulations Governing the Licensure of Clinical Laboratories in the Philippines" The clinical laboratory is required to have policy guidelines on laboratory biosafety and biosecurity.
B. Management of Wastes	
RA 6969 ("Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990")	The law restricts or prohibits the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and wastes that present unreasonable risk and/or injury to health and the environment. The procedural manual Title III of DENR AO 1992-29 (Hazardous Waste Management) of the implementing rules and regulations of RA 6969 outlines the legal and technical requirements of hazardous waste management.
RA 8749 ("Philippine Clean Air Act of 1999")	The law and its implementing rules and regulations (DENR AO 2000-81) allows non-burn technologies for the destruction, treatment and disposal of biomedical (healthcare) and hazardous wastes and that these technologies must comply with the criteria and emission standards as provided in Rule 28 of DENR AO 2000-81. A Permit to Operate is required by the DENR for the operation of the air pollution source installations.
RA 9003 ("Ecological Solid Waste Management Act")	The Act establishes the mechanisms for waste minimization, resource recovery, appropriate collection, transport services, environmentally sound treatment, and disposal of garbage. It also provides mandatory

Law	Title/Outline
	segregation of waste at households, commercial establishments, industries, institutions, hospitals, etc. However, solid waste excludes infectious wastes from hospitals such as equipment, utensils, laboratory wastes, pathological specimens, disposable fomites, and similar materials in accordance with Section 3(2), Article 2, and Section I of DENR AO 2001-34. The collection and transport of segregated general wastes or non-infectious wastes are covered by RA 9003 and may be brought to a landfill for disposal. The collection and transport of infectious biomedical wastes or hazardous wastes are governed by RA 6969 and cannot be disposed in open dumps or landfill. The infectious wastes, once disinfected, may be treated similar to a general waste.
RA 9275 (“Philippine Clean Water Act of 2004”)	The Act provides for a comprehensive management program for water pollution focusing on pollution prevention. Households and establishments (including hospitals) are required to connect to available sewerage systems. If there is no available sewerage system, the establishment is required to provide a wastewater treatment system that complies with the Effluent Standards. A Discharge Permit is issued to the establishment if the effluent complies with the standards.
PD 856 ("Sanitation Code of the Philippines”)	The Code mandates DOH to promote and preserve public health and upgrade the standard of medical practice. In line with this DOH mandate, a Manual on Hospital Management was published in 1997 and the implementing rules and regulations of Chapter XVIII, Refuse Disposal was promulgated. The implementing rules and regulations provides the detailed requirements for the segregation, storage, collection, transportation and disposal of refuse.
Joint DENR-DOH Administrative Order 02-2005	The JAO clarifies the mandates for DENR and DOH and outlines the policies and guidelines on effective and proper handling, collection, transport, treatment, storage, and disposal of health care wastes.
DENR-EMB Technical Guidelines 2015	The guidelines outline the specific categories of TSD facilities.
DENR AO 36 Series of 2004	This is the procedural manual of DAO 92-29, a comprehensive documentation on the legal and technical requirements of hazardous waste management
DOH Healthcare Waste Manual (2004)	The manual provides information and guidance regarding safe, efficiency and environment-friendly waste management options and safety procedures attendant to the collection, handling, storage, transport, treatment and disposal of healthcare waste.
DOH AO 29, series of 2003	The order was issued to prescribe the guidelines on the use of crematoria and other alternative non-burn technology for hospital waste treatment and disposal of healthcare wastes consistent with the provisions of the Philippine Clean Air Act.
DOH AO 2007-0014	This includes guidelines on the issuance of certificate of product registration for equipment or devices used for treating sharps, pathological and infectious wastes. DOH’s Bureau of Health Devices and Technology is mandated to implement guidelines in the issuance of Certificate of Product Registration for equipment and devices used to treat sharps, pathological and infectious wastes in accordance with existing laws. The approved technologies or processes that may be used in the treatment of sharps, pathological and infectious wastes are autoclave, hydroclave, pyrolysis, microwave, and chemical disinfection.

Law	Title/Outline
DOH Circular No. 156-C, series 1993	This includes guidelines for the segregation, treatment, collection and disposal of hospital waste. The circular has specific instructions that all infectious and hazardous waste shall be treated before storage, collection and disposal and that their staff and personnel shall be informed about the proper treatment, segregation (color coding) and storage, collection, and disposal.
DOH Memorandum No. 0145 (2011)	The memorandum prescribes the guidelines for the temporary storage of mercury wastes in healthcare facilities in accordance with DENR AO 21 (2008) on the gradual phase-out of mercury in all healthcare facilities and institutions in the Philippines.
C. Occupational and Community Health and Safety	
PD 442 ("Labor Code of the Philippines")	Article 162 of the Code governs the OSH Standards that applies for healthcare workers. Under the OSH standards, employers, workers and other persons shall furnish his workers a place of employment free from hazardous conditions that can cause or likely to cause death, illness, or physical harm; give complete job safety instructions to all workers, including familiarization with work environment, hazards, and steps to be taken in case of emergency.
RA 11058	An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations
BP 344 (Disability Act)	The law requires certain buildings, institutions, establishments and public utilities to install facilities and other devices to enhance mobility of disabled persons.
Contractors License Law (RA 4566), amended by PD 1746	The law provides that no contractor (including sub-contractor and specialty contractor) shall engage in the business of contracting without first having secured a license from the PCAB.

AO = Administrative Order, BP = Batas Pambansa, DAO = DENR Administrative Order, DENR = Department of Environment and Natural Resources, DOH = Department of Health, ECC = environment compliance certificate, EIA = environmental impact assessment, EMB = Environmental Management Bureau, EO = Executive Order, FDA = Food and Drug Administration, HFSRB = Health Facilities and Services Regulatory Bureau, JAO = Joint Administrative Order, MC = Memorandum Circular, NRL = National Reference Laboratory, OSH = Occupational Safety and Health, PCAB = Philippine Contractors Accreditation Board, PEISS = Philippine Environmental Impact Statement System, PTC = Permit to Construct, RA = Republic Act, RITM = Research Institute for Tropical Medicine, TSD = Treatment, Storage, and Disposal, WHO = World Health Organization.
Source: Asian Development Bank.

III. ANTICIPATED ENVIRONMENTAL IMPACTS AND RISKS

23. The anticipated impacts of proposed civil works include:
    (i) air pollution from dust emissions from on-site excavation and emission from equipment and construction vehicles used for construction;
    (ii) water pollution from run-off or soil erosion from stockpiled construction materials, wastewater from domestic sewage of construction workers, and accidental spillage of oil and other lubricants from washing of construction equipment;
    (iii) noise pollution from construction activities that may disturb nearby communities,
    (iv) generation of solid wastes from construction workers and construction and demolition wastes;
    (v) occupational health and safety risks to construction workers; and
    (vi) community health and safety impacts, primarily as a result of exposure to noise, smell of paints and solvents and dangerous excavated work areas.

IV. CONTRACTOR OBLIGATIONS

24. To address potential impacts and risks to environment, health and safety of workers and communities, each design-build contractor must:

(i) hold a valid Philippine Contractors Accreditation Board license;
(ii) appoint a qualified environment, health, and safety specialist to supervise construction works in compliance with the COCP and the Philippine regulatory and policy framework for environment, health and sanitation;
(iii) execute works and all associated operations on the work sites or off-site in conformity with statutory and regulatory environmental requirements of the Government of the Philippines and the ADB SPS 2009. This includes the provisions embodied in the documents listed under Section II of the COCP;
(iv) take all measures and precautions to avoid any nuisance or disturbance arising from the execution of construction works and their related activities. This will, wherever possible, be achieved by suppression of the nuisance (or unwanted effects to the physical environment and people) at source rather than abatement of the nuisance once generated;
(v) compensate for any damage, loss, spoilage, or disturbance of the properties and health of affected people during execution of the construction works as specified in the bidding documents;
(vi) Keep the construction site clear of stagnant water, food residuals, or any other waste or material that can attract pests and disease-carrying vectors like mosquitoes and rodents;
(vii) recruit local skilled and unskilled labor to increase the direct benefits in the subproject area(s) and to minimize potential environmental issues related to construction camps, disease transmission and socio-cultural disputes;
(viii) ensure that the International Labor Organization Core Labor Standards and the applicable laws and regulations of the Philippines are applied to the contractor's workers (including workers employed by sub-contractors), including laws related to their employment, health, safety, and welfare during the construction of the isolation facilities. More specifically, each contractor shall: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use forced labor; and (e) allow freedom of association and effectively recognize the right to collective bargaining;
(ix) establish a simple system to receive, register, and address community concerns and complaints. Contact number of the contactor including name, position and telephone number will be shared with local authorities and DOH; and
(x) demonstrate how the impacts associated with the construction works as defined in Table 3 below are complied with. For that purpose, conduct weekly monitoring of compliance with the COCP, and include section in the monthly report to the Project Management Team (PMT). The report format defined in Appendix 1 shall be used for monthly reporting to the PMT.

25. The following activities are strictly prohibited on or near the project site:

(i) cutting of trees for any reason outside the approved construction area;
(ii) hunting, fishing, wildlife capture, or plant collection;
(iii) use of unapproved toxic materials, including lead-based paints and asbestos-containing materials;
(iv) discharge of chemicals, sanitary wastewater, spoil, waste oil, and concrete agitator

washings or any liquid requiring treatment in water courses, drainage/runoff systems, or municipal wastewater collection facilities;

(v) disturbance to anything with architectural or historical value;

(vi) employment of workers under the age of 16; persons between age 16-18 can only work in non-hazardous environment; and

(vii) discrimination regarding recruitment, wages and compensation.

Table 3: Contractors' Mitigation/Management Measures for Pre-Construction and Construction

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
Design and pre-construction phase		
Facility design	Failure to comply with Philippine procedures, codes and administrative orders for hospital facility design	• Ensure compliance with relevant design standards for hospitals based on the requirements of RA 4226 and other related DOH administrative orders, circulars, and guidelines, including guidelines from the WHO.
Environmental compliance	Failure to comply with PEISS	• Secure the ECC from the concerned DENR-EMB regional office in coordination with the concerned DOH hospitals.
Permits	Failure to secure necessary permits and clearances prior to construction	• Secure the PTC from the HFSRB of DOH in behalf of the concerned hospitals. • Ensure that the hospitals and laboratory have valid License to Operate (LTO) issued by DOH. • Secure the Building Permit, Sanitary Permit, Electrical Permit, and other clearances from the local government prior to start of construction works • Secure the Fire Safety Evaluation Clearance from the city/municipal Fire Marshal
Construction phase		
Environmental and Social Issues	Complaints, Concerns	• Establish and disseminate effective GRM • Share contractor contact details with local authority leaders and DOH
EHS capacity	Inadequate EHS management capacity	• Assign qualified EHS staff at each construction site to supervise and monitor COCP implementation and report to PMT
Monitoring and Reporting	Failure to comply with DOH requirements; Failure to adequately implement the COCP	• Submit progress reports/status of construction and COCP implementation every three months to HFSRB and the PMT on behalf of the concerned hospitals
Water and soil pollution	Leakage of spills of fuel and lubricants that may contaminate soil, surface water and groundwater	• Prevent pollution of soil, surface water/ groundwater by ensuring the following: o location of storage facilities for fuel/oil/cement/ chemicals are located 200m away from the river, stream and waterways; o soil surfaces where chemicals are stored shall be made impermeable and provided with bunds. Bunds should be sized to hold 110% of the maximum capacity of the largest tank or drum; o vehicles/heavy equipment maintenance and re-fuelling area will prevent spillage of fuel, oil and hazardous materials to seep into soil; o oil traps shall be provided in the maintenance and service areas; and

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
		○ fuel refilling areas must be located > 50 m from water sources and protected by temporary bunds to contain spills. A spill clean-up kit must be present on site.
Air quality	Concentration of machinery working in one area plus haulage vehicle traffic may result in local areas of poor air quality	• Maintain equipment to a high standard to ensure efficient running and fuel-burning; Provide high-horsepower equipment with tail gas purifiers • Ensure that all vehicle emissions comply with relevant emission standards under the Philippine Clean Air Act
Dust	Caused by earthmoving and construction haulage traffic can cause poor air quality and nuisance to householders and farmers.	• Equip material stockpiles and concrete mixing equipment with dust shrouds • Conduct regular water spraying on construction sites, construction roads, and stockpiled material • Maintain driving surfaces clean as a standard site management practice • Cover with tarpaulin sheets vehicles carrying soil, sand, or other fine materials to and from the construction sites
Noise impacts on sensitive receptor	Noise caused by the concentration of machinery working in one area, plus haulage vehicles, can cause a range of impacts from nuisance to health problems. Noise could disrupt ongoing medical services.	• Strictly prohibit construction after 10pm • During construction, ensure installation of temporary anti-noise barriers to shield sensitive receptors
Water Quality	Pollution of local water courses through sediment	• Construct site drainage to ensure that any rainfall will be diverted to a holding pond, or suitable land to prevent localised flooding and sedimentation of surface water • Ensure that in stream works are avoided
Construction waste and spoil	Unauthorized or careless storage and disposal of waste can damage property, vegetation, agricultural land, and block natural drainage.	• Ensure that temporary storage of spoil is located away from rivers, streams, and waterways • Store construction waste securely in containers to prevent uncontrolled disposal • Ensure that final disposal site of waste and spoil will be in a site approved by the district and provincial authorities
Waste from workers	The construction workforce will generate domestic wastewater & garbage (food wastes, paper, and other solid waste including food-laden wash water) which causes impacts if poorly disposed	• Provide sufficient waste bins at strategic locations and ensure that they are: ○ protected from birds and vermin; ○ emptied regularly to prevent overflow; and ○ disposed of in local disposal site as approved by local authorities
Erosion impacts	Facility construction may require earthworks which will leave surfaces liable to erosion, especially	• Ensure that erosion control includes: ○ limiting construction and material handling during periods of rains and high winds;

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
	in heavy rain periods.	○ stabilizing all cut slopes, embankments and other erosion-prone working areas while works are going on; and ○ stabilizing all earthwork disturbance areas within 30 days after completion of earthworks.
Community health and safety	Construction work poses safety hazards and threats to nearby residents and passers-by, including staff, patients and guests of adjacent hospitals. Excavations, loss of access and movements of large machinery and vehicles all potentially impact on existing utilities, community safety and day-to-day operation of existing/adjacent hospitals.	• Ensure that community health and safety will be safeguarded by: ○ planning construction activities to minimize disturbances to residents, passers-by, and utilities; ○ planning temporary land occupation well ahead of construction to minimize its impact and after consultation with the affected community; ○ reinstating land to its original condition after construction; and ○ implementing safety measures around the construction sites to protect the public, including warning signs to alert the public to potential safety hazards, barriers to prevent public access to construction sites, and a watch person, where necessary.
Road safety (through movement of vehicle and equipment for construction)	Increased motorised vehicle movement including heavy goods vehicles to and from the site during construction may increase road safety risks for residents and passers-by.	• Ensure that drivers of all vehicles strictly follow road rules and maintain good road safety standards • Properly supervise deliveries of construction materials to the site by heavy good vehicles using banksmen/traffic marshals
Occupational health and Safety	Workers are subject to safety hazards while operating and/or moving around machinery, as well as dust and noise impacts from extended exposures at the work site.	Ensure that: • All reasonable steps are taken to protect any person on the site from health and safety risks • Construction sites are safe and healthy workplaces • Only certified and tested machineries and equipment is used • Adequate training or instruction for occupational health and safety is provided • Adequate supervision of safe work systems is implemented • Means of access to and exit from the site are without risk to health and safety • A first aid kit will be available on each construction site • All staff members are responsible for first aid and aware of local health care facilities
Human health and environmental pollution – Site Hand Over	Hazardous waste materials, unprotected latrines and organic waste remaining after construction will pose a risk to human health and safety.	• Remove all unused or discarded construction materials from the site before hand-over • Landscape surroundings to reinstate original site conditions • Remove all temporary dwellings, cook houses, and latrines upon completion of the construction; clean the site.
Construction completion	Facility does not conform to approved plans and specifications; Improper site clean-	• Secure a Fire Safety Inspection Certificate from the city/municipal Fire Marshal • Secure an Occupancy Permit from the local government • Submit a completion report together with as-built drawings to DOH hospital during turn-over

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
	up and restoration	• Ensure proper restoration of disturbed areas and clean-up of site

COCP = Code of Construction Practice, DENR = Department of Environment and Natural Resources, DOH = Department of Health, ECC = environment compliance certificate, EHS = environment, health and sanitation, EMB = Environmental Management Bureau, GRM = grievance redress mechanism, HFSRB = Health Facilities and Services Regulatory Bureau, PEISS = Philippine Environmental Impact Statement System, PMT = project management team, PTC = Permit to Construct, RA = Republic Act.
Source: Asian Development Bank

Contractor's Environment, Health and Sanitation Progress Monitoring Report

Contract (*Insert Contract ref/number*)
Completed by *(Insert name of Contractor's Environmental Health and Safety Officer)*
Company name *(Insert name of Company)*

Reporting Frequency: Quarterly

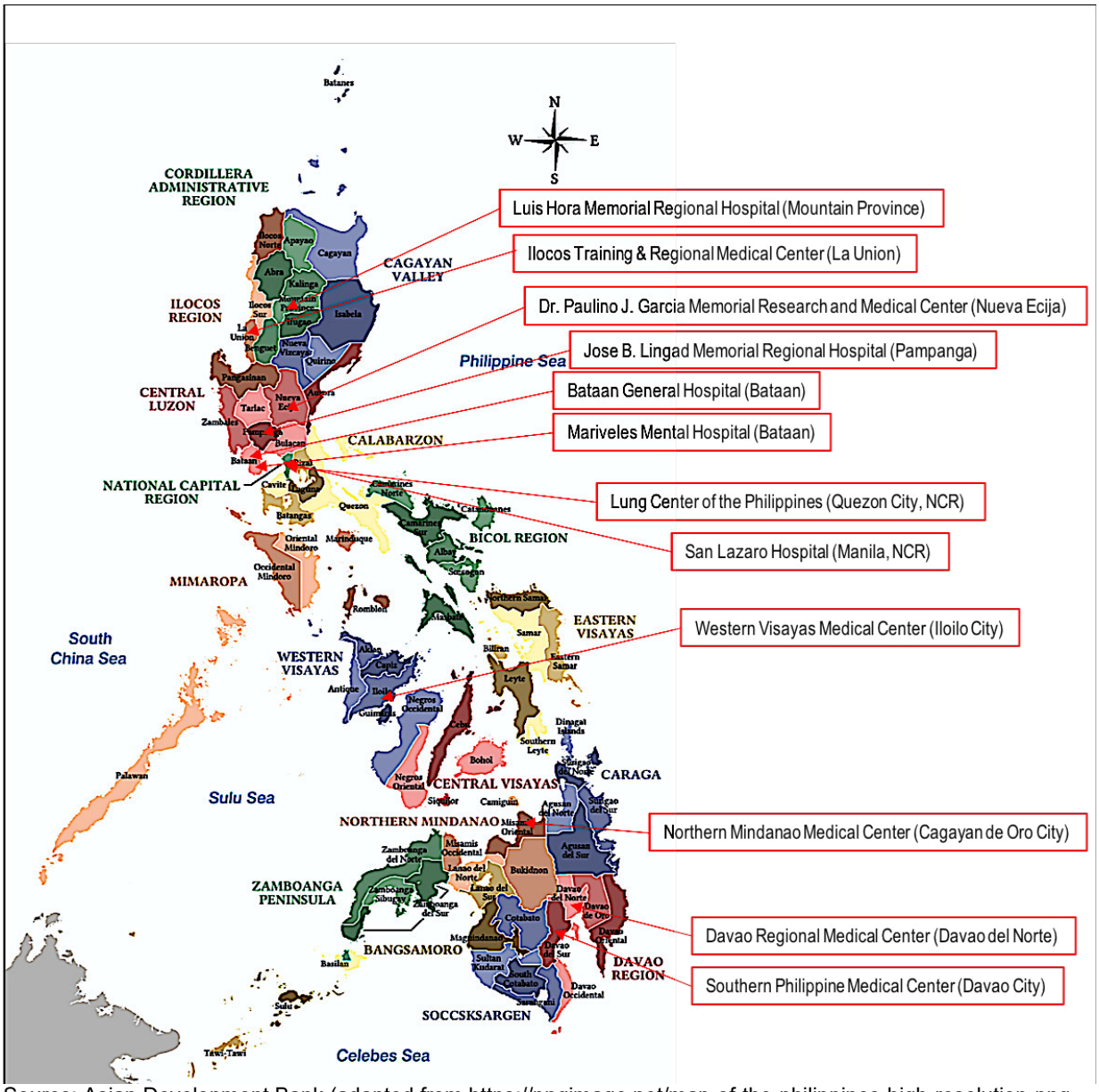
Date of this report	DD-MM-YY	**Reporting Period**	MM/YY – MM/YY
Permits and licenses secured (e.g. ECC, construction permits, licenses)	• Xxx • Xxx • Xxx • xxx		
Key construction activities since last report			
Planned construction activities in next reporting period			

Progress with EHS Activities this month	
Recruitment of construction workers Compliance with labor laws and regulations	• Total number of construction workers as of DD-MM-YY: Xxx women, xxx men; xxx% unskilled labor • Number of new recruitments in reporting period: xxx women, xxx men • We confirm the following: ☐ Adherence to the International Labor Organization (ILO) Core Labor Standards ☐ Compliance with Labor Code of the Philippines (PD 442) ☐ Compliance to Republic Act 6685
Trainings Undertaken *– all training related to EHS*	EHS Training Provided: (type, date) Nos. Participants: xxx women, xxx men Who provided the training:
Personal Protective Equipment	New construction PPEs issued this month: Number of incidents of workers not wearing adequate construction PPE:
Emergency Response	
Use of site accident Book	Accidents reported: Description and Actions taken: Outcome:
Spillages	Number of spills: Description and Actions taken: Impact of spill:
Other incidents	Number of incidents: Description and Actions taken: Impact of incident:
Concerns and Complaints	

	Number of complaints: Action taken for each complaint: Outstanding complaints:
Describe COCP Compliance Issues, Problems or Other issues PMT should be aware of	

Prepared by: _____ **(Contractor)**	**Verified by: _____** **(authorized DOH Hospital Staff)**

Location of Twelve Selected Department of Health Hospitals



Source: Asian Development Bank (adapted from https://pngimage.net/map-of-the-philippines-high-resolution-png-3/).