



**GUIDELINES FOR ENVIRONMENT, SOCIAL, HEALTH AND SAFETY
MANAGEMENT STRATEGIES AND IMPLEMENTATION PLANS FOR
CONSTRUCTION WORKS UNDER NATIONAL HYDROLOGY PROJECT**

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1. General Requirements

The Contractor shall take all precautions for safeguarding the environment during the construction of works. S/He shall abide by all rules, regulations and laws in force governing pollution and environmental protection that are applicable to the area where the works are situated as per Environment, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP).

All construction material including aggregates, timber, etc., shall be procured from authorized quarries and vendors. The information on the authorized quarries and vendors shall be shared with Project Manager during mobilization period as well as during construction.

All sites including labour camp, camp office, construction site, etc., shall be restored to their original condition, if not improved, on completion of works.

ESHS-MSIP Implementation Arrangements:

- The Contractor, and his Sub-Contractors, has the responsibility of establishing and maintaining contact with the Project Manager and keeping him informed of construction activities likely to affect local environmental and social conditions. This may include regular and frequent reporting and attendance at meetings at the request of the Project Manager. The Contractor and any agents or Sub-Contractors will be contractually required to comply with the requirements as specified in the Code of Conduct and Contractor's ESHS-MSIP.
- The Contractor will be responsible for adherence to Code of Conduct and implementation of the Contractor's ESHS-MSIP, including workplace safety, and will ensure adequate resources throughout the project implementation period.

Each implementing contractor will appoint an Environment, Health and Safety (EHS) qualified person having qualification and experience as indicated in the bid document who will primary be responsible for compliance of workers EHS aspects at camp as well as work site. S/He will also be responsible for implementation of EHS measures for different kind of allied project activities like material transportation, vehicular movement and etc. Summary of EHS compliance and monitoring report shall also be included with "Monthly compliance and monitoring report on ESHS-MSIP implementation" submitted by contractors to the project manager.

2. Non-permissible Activities

- Any activity that involves use of Asbestos Containing Materials (e.g., AC pipes for irrigation, AC sheets for roof). Asbestos containing material shall not be used in any construction related activity
- Any activity that violates the provisions of applicable National and State laws.

3. Permits

Guidance on permits and clearances for various works is presented here. However, certain requirements may vary from State to State. State Project Management Unit (SPMU) is hence advised to update the clearance/ permit requirements and standards applicable for the works.

The following NOCs, but not limited to, are required to be submitted by the Contractor within 30 days of signing of Contract.

**No Objection Certificates (NoC) for Work/ Activities
(to be obtained before initiating respective activities)**

| S. No. | NoC Requirement | Department for NoC | Responsible Agency |
|--------|---|--|--------------------|
| 1 | NoC for Water Source | Water Resource Department/ Water Authority, Ground Water Board, or Irrigation Department (as applicable) of corresponding State depending on jurisdiction. | Contractor |
| 2 | NoC for Electricity | Electricity Board/ Department | IA |
| 3 | NoC for Forest Land/ Tree Cutting | Forest Department | IA |
| 4 | Shifting of Utilities | Concerned Departments | IA |
| 5 | NoC for water abstraction | Groundwater Authority | IA |
| 6 | Use of Diesel Generator sets at any stage during project cycle. | State Pollution Control Board | Contractor |
| 7 | Permission for temporary traffic diversions, hindrances | Traffic Management Organisation | IA |
| 8 | Pollution under Control (PUC) for Vehicle | Transport Department | Contractor |
| 9 | Plants such as Crushers and/ or Batching Plants | State Pollution Control Board | Contractor |
| 10 | Storage, handling and transport of hazardous material(s) | State Pollution Control Board | Contractor |
| 11 | Location/ layout of workers' camp, equipment and storage yards | State Pollution Control Board | Contractor |
| 12 | Discharges from Labour Camp | State Pollution Control Board | Contractor |

| | | | |
|----|---|---|------------|
| 13 | Permission for sand mining from river bed | State Pollution Control Board/ Forest Department | Contractor |
|----|---|---|------------|

Consents and Licences to be Obtained

- As per Water (Prevention and Control of Pollution) Cess Act, 1977; and The Air (Prevention and Control of Pollution) Act, 1981, three types of consents are to be obtained as applicable.
 - I. Consent to Establish
 - II. Consent to Operate
 - III. Renewal of Consent to Operate
- As per Contract Labour (Regulation & Abolition) Central Rules, 1971, Labour license is required from the Department of Labour.
- As per the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, the Contractor who employs or who employed five or more Inter-State migrant workmen needs to register and obtain interstate workmen migrant license from Department of Labour.
- As per Petroleum Rules, 2002 Petroleum and Explosives Safety Organisation, the Contractor to obtain NoC for transportation and storage of diesel, oil and lubricants etc.
- As per Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, for building and other construction work, the Contractor needs to register within 60 days from commencement of work with Department of Labour.

4. Construction Materials Management (including Hazardous Substances)

Construction Materials may be a source of contamination if not properly managed. Improper storage and handling of fuels, lubricants, chemicals and hazardous goods/ materials on-site may harm the environment and may endanger the health and safety of construction workers and host communities.

The Contractor shall

- Not practice any illegal mining of sand, stone, timber etc. and water extraction (unless permitted) from nearby locations
- Source all raw materials (sand, stone, timber etc.) from authentic and approved vendors, possessing valid permits/receipts etc. Relevant supporting documents should be presented for scrutiny on request.
- Ensure safe and covered stockpiling of the construction materials in separate place or a corner in the premises of building. Stockpiled materials should be covered to control dust emissions.
- Be responsible for sourcing water. Minimum quantity of water should be used to meet the essential construction requirements. The contractor should avoid wastage of water during construction. Required permissions should be taken for extraction or use of water from local sources.
- ensure that fuel storage at site is minimum and re-fuelling is arranged at nearby pumps;
- train the relevant construction personnel in handling of fuels and spill control procedures;

- provide appropriate fire-fighting equipment adjacent to the storage area;
- provide protective clothing, safety boots, helmets, masks, gloves, goggles, to the construction personnel, appropriate to materials in use;

5. Management of Construction & Demolition Wastes and Hazardous Wastes

Construction & Demolition (C&D) wastes and Hazardous wastes occupy available site space and hinder with safe movement of workers in and around the site. If not properly managed in designated sites, this often ends up in pristine environmental resources like wetlands, agricultural fields, and paddy fields. It is important to guide the storage, and reuse of construction wastes. It is also important to guide the storage and movement of hazardous waste for proper sanitary disposal.

The Contractor shall

- Inventories the waste streams expected from the project site (e.g., reusable waste, flammable waste, construction debris, food waste etc.) prior to commencing of construction and submit a management plan to Project Manager for approval. The plan shall follow all applicable rules;
- Shall segregate the waste, if generated 20 tons or more in one day or 300 tons per project in a month, into four streams such as concrete, soil, steel, wood and plastics, bricks and mortar and shall submit waste management plan and get appropriate approvals from the local authority before starting construction or demolition or remodelling work and keep the concerned authorities informed regarding the relevant activities from the planning stage to the implementation stage and this should be on project to project basis. Waste generators who generate 20 tons or more in one day or 300 tons per project in a month shall have to pay for the processing and disposal of construction and demolition waste generated by them, apart from the payment for storage, collection and transportation. The rate shall be fixed by the concerned local authority or any other authority designated by the State Government;

Storage of Wastes

- It is important to segregate the wastes at source and store them in separate well-labelled and well-confined areas. Safe storage is essential; broken parts shall not lie around the storage area. Adequate caution/ signboards shall be provided.
- Provide separately labelled refuse containers at each worksite, separate for different waste streams.
- Contract conditions shall give preference to suppliers who deliver materials without packaging or buy back packaging as per EPR,
- Construction site and surrounds shall follow good housekeeping practices. No wastes shall be allowed to spill around and cause traffic disturbances or environmental risks.

Transport

- Transport shall be in covered vehicles, without allowing spill overs on to roads.

Disposal

- Disposal Sites: *IA needs to list the disposal sites for each type of waste*
- Disposal of wastes shall be in an environmentally acceptable way, as per applicable rules. C&D waste shall be sent to a facility where it is reused/ recycled. The generator shall arrange to

deposit it in the facility/ collection area/ dumping area suggested by the local body (eg: State Pollution Control boards/Municipal Corporation).

- Small amount of wet waste (if any) from the site shall be preferably converted into compost using bin composting technique and compost can be used for nurseries or green belt.
- To follow 4 Rs – Recover, Reduce, Recycle, Reuse; best would be to follow ‘zero waste’ approach by reusing all wastes within the premise.
- To prohibit burning of solid waste.
- To train and instruct all personnel in waste management practices and procedures,
- Entrust the site environmental engineer with the responsibility to take stock of waste situation every morning when work commences and evening at work closeout. It would be a good practice to keep a record of material and waste (type-wise quantities) movements in and out of the site.
- **Hazardous** Paints, pigments, flammable liquids, or mixture of liquids, or liquids containing solids in solution or suspension solvents, spent solvents, lacquer, varnishes), cement, glue, resins, textile pieces, Empty barrels/ containers/ liners contaminated with hazardous chemicals/ wastes, Contaminated cotton rags or other cleaning materials, Sludge from treatment of waste water arising out of cleaning/ disposal of barrels/ containers, Chemical sludge from wastewater treatment, Oil and grease, chromium sludge from cooling water etc are typical hazardous wastes easily found in all construction sites. Certain types of batteries, electrical electronic wastes, wires, electric conduits, bituminous materials can also turn hazardous in certain circumstances. Examples of construction waste that are classified as hazardous include lead, tars, adhesives, sealants, asbestos. Hazardous chemicals used in construction are materials with transdermal effects, carcinogens, embryo toxic, mutagens, and neurotoxins including solvents, primers, and adhesives, wood dust, plastic woods, sealing agents, wood protectants, insulation, and products used for structural engineering.
- In India, the management of Hazardous Wastes is governed by Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.8
- The Contractor shall
 - follow the following steps, namely:
 - (a) prevention,
 - (b) minimization,
 - (c) reuse,
 - (d) recycling;
 - (e) recovery, utilization including co-processing, and
 - (f) safe disposal;

6. Construction Camp Management

Siting and Location of Construction Camps

Campsites for construction workers are the important locations that have significant impacts such as health and safety hazards on local resources and infrastructure of nearby communities.

The Contractor shall

- locate the construction camps at areas which are acceptable from environmental, cultural or social point of view;
- consider the location of construction camps away from communities in order to avoid social conflict in using the natural resources such as water or to avoid the possible adverse impacts of the construction camps on the surrounding communities;
- submit to the Project Manager for approval a detailed layout plan for the development of the construction camp within 15 days of award of Contract. The Plan should include relative locations of all temporary buildings and facilities that are to be constructed together with the location of site roads, fuel storage areas (for use in power supply generators), solid waste management and dumping locations, and drainage facilities, prior to the development of the construction camps, vehicle movement.
- duly inform local authorities responsible for health, religious and security on the set up of camp facilities so as to maintain effective surveillance over public health, social and security matters.

Labour Camp Facilities

Lack of proper infrastructure facilities, such as housing, water supply and sanitation facilities will increase pressure on the local services and generate substandard living standards and health hazards.

The Contractor shall provide the plans for Labour Camp within 15 days of award of contract. The Camp shall include the following facilities:

- Adequate housing for all workers
- Safe and reliable water supply.
- Hygienic sanitary facilities and sewerage system. The toilets and domestic waste water will be collected through a common sewerage. Provide separate latrines and bathing places for males and females with total isolation by wall or by location. The minimum number of toilet facilities required is one toilet for every ten persons or as per local building by laws.
- Treatment/ disposal facilities for sewerage of toilet and domestic wastes.
- Storm water drainage facilities.
- Paved internal roads. Shall have grass/ vegetation coverage to be made of the use of top soil that there is no dust generation from the loose/ exposed sandy surface. Pave the internal roads of at least with bricks or porous materials to suppress dusts and to work against possible muddy surface during monsoon. This will help in water penetration and recharge as well.
- Provide child crèches for women working on large construction sites. The crèche shall have facilities for dormitory, kitchen, indoor and outdoor play area. Schools shall be attached to these crèches so that children are not deprived of education while mothers are engaged in construction work.

- Provide in-house community/ common entertainment facilities dependence of local entertainment outlets by the construction camps to be discouraged/ prohibited to the extent possible.

Management of Wastes from Labour camps

The Contractor shall

- ensure proper collection and disposal of solid wastes within the construction camps;
- ensure waste separation by source; organic wastes in one bin and inorganic wastes in another bin at household level;
- store inorganic wastes in a safe place within the house and clear organic wastes on daily basis to waste collector. Establish waste collection, transportation and disposal systems with the manpower and equipment/ vehicles needed;
- dispose organic wastes in a designated safe place on daily basis. At the end of the day cover the organic wastes with a thin layer of sand so that flies, mosquitoes, dogs, cats, rats, are not attracted. If space is available away from water bodies, one may dig a large hole or use a bin to put organic wastes in it; take care to protect groundwater from contamination by leachate formed due to decomposition of wastes. Cover the bed of the pit with impervious layer of materials (clayey or thin concrete) to protect groundwater from contamination. Take care to prevent odour generation as well;
- locate the garbage pit/ waste disposal site min 500 m away from the residence so that peoples are not disturbed with the odour likely to be produced from anaerobic decomposition of wastes at the waste dumping places. Encompass the waste dumping place by fencing and tree plantation to prevent children from entering;
- not establish site specific landfill sites in premises. All solid waste shall be collected and removed from the work camps and disposed in waste disposal sites approved by the local body.

Fuel Supplies for Cooking Purposes

Illegal sourcing of fuel wood by construction workers will impact the natural flora and fauna

The Contractor shall

- provide fuel to the construction camps for their domestic purpose, in order to discourage them to use fuel wood or other biomass;
- made available alternative fuels like natural gas or kerosene on ration to the workforce to prevent them using biomass for cooking;
- conduct awareness campaigns to educate workers on preserving the protecting the biodiversity and wildlife of the project area, and relevant government regulations and punitive measures for wildlife protection.

Health and Hygiene

There will be a potential for diseases to be transmitted including malaria, exacerbated by inadequate health and safety practices. There will be an increased risk of work crews spreading sexually transmitted infections and HIV/ AIDS.

The Contractor shall

- provide adequate health care facilities within construction sites;
- provide first aid facility round the clock. Maintain stock of medicines in the facility and appoint fulltime designated first-aid or nurse;
- provide ambulance facility for the labourers during emergency to be transported to nearest hospitals;
- initial health screening of the labourers coming from outside areas/ migrant labourers;
- provide health camps in coordination with nearby Primary Health Centre/ Clinic;
- train all construction workers in basic sanitation and health care issues and safety matters, and on the specific hazards of their work;
- provide HIV awareness programming, including sexually transmitted infections (STI) and HIV information, education and communication for all workers on regular basis;
- complement educational interventions with easy access to condoms at campsites as well as voluntary counselling and testing;
- provide adequate drainage facilities throughout the camps to ensure that disease vectors such as stagnant water bodies and puddles do not form. Regular mosquito repellent sprays during monsoon;
- carryout short training sessions on best hygiene practices to be mandatorily participated by all workers;
- place display boards at strategic locations within the camps containing messages on best hygienic practices.

Safety for Construction Camp

In adequate safety, facilities to the construction camps may create security problems and fire hazards.

The Contractor shall

- provide appropriate security personnel (police/ home guard or private security guards) and enclosures to prevent unauthorized entry in to the camp area;
- maintain register to keep a track on a head count of persons present in the camp at any given time;
- encourage use of flameproof material for the construction of labour housing/ site office. Also, ensure that these houses/ rooms are of sound construction and capable of withstanding wind storms/ cyclones;
- provide appropriate type of fire fighting equipment suitable for the construction camps;
- display emergency contact numbers clearly and prominently at strategic places in camps, Communicate the roles and responsibilities of labourers in case of emergency in the monthly meetings with contractors;
- encourage kitchen plantations or greenery around the camp.

Site Restoration

Restoration of the construction camps to original condition requires demolition of construction camps.

The Contractor shall

- dismantle and remove from the site all facilities established within the construction camp including the perimeter fence and lockable gates at the completion of the construction work;
- dismantle camps in phases and as the work gets decreased and not wait for the entire work to be completed;
- give prior notice to the labourers before demolishing their camps/ units;
- maintain the noise levels within the national standards during demolition activities;
- hire different contractors to demolish different structures to promote recycling or reuse of demolished material;
- reuse the demolition debris to a maximum extent. Dispose remaining debris at the designated waste disposal site;
- handover the construction camps with all built facilities as it is if agreement between both parties (contractor and land-owner) has been made so;
- restore the site to its condition prior to commencement of the works or to an agreed condition with the landowner;
- not make false promises to the labourers for future employment in Operation & Maintenance (O&M) of the project.

7. Worker Health and Safety

Construction works may pose health and safety risks to the construction workers, hosts and site visitors leading to severe injuries and deaths.

The Contractor shall

- display signs across the camp site;
- Hold tool box meeting preferably once a week in order to brief workers about Safety, do's and don'ts during construction.

provide appropriate personal protection equipment (PPE) for workers, such as safety boots, helmets, masks, gloves, protective clothing, goggles, full-face eye shields, and ear protection which they would use;

Contractor should provide:

- Safety helmets and rubber gloves and boots to the laborers to avoid worksite hazards and accidents.
 - Protective footwear, goggles and clothing to all workers employed on lying of wearing coat, preparing cement mortars for brick work, concreting, painting etc.
 - Welder's protective eye-shields to workers who are engaged in welding works
 - Earplugs to workers exposed to loud noise, and workers working with jack hammer, joint cutting machines etc.
 - Gloves and masks to workers involved in mixing and handling of raw materials.
 - Any other occupation besides above shall be provided adequate protection equipment
- Arrange mechanisms to replace damaged PPEs on time;The Contractor should comply with all regulations regarding safe scaffolding, ladders, working platforms, gangway, stairwells, excavations, trenches and safe means of entry etc.
 - Contractor should install a warning device in the project area to be used to warn the workers in case of mishap/emergency.
 - Contact numbers of police, fire brigade, ambulance, police station, in-charge of monitoring agency etc. should be displayed at project site.
 - In case, the site is in built up areas then, screens made up of GI sheets shall be placed on project periphery.
 - Contractor should have the provisions of laborer's health checkup during induction, and completion (*during construction works to be decided by IA*).
 - Temporary toilet facilities and shade area for rest should be provided at/near construction sites
 - implement suitable safety standards for all workers and site visitors which shall not be less than those laid down on the international standards (e.g. International Labour Office guideline on 'Safety and Health in Construction; World Bank Group's 'Environmental Health and Safety Guidelines') and contractor's own national standards or statutory regulations, in addition to complying with the national standards;
 - provide the workers with a safe and healthy work environment, taking into account inherent risks in its particular construction activity and specific classes of hazards in the work areas;
 - safety procedures include provision of information, training and protective clothing to workers involved in hazardous operations and proper performance of their job;

- appoint an environment, health and safety manager to look after the health and safety of the workers;
- obtain all permits and clearances as per applicable national regulations;
- inform the local authorities responsible for health, religious and security duly informed before commencement of civil works and establishment of construction camps so as to maintain effective surveillance over public health, social and security matters.

The Contractor shall also provide the following facilities in the campsites to improve health and hygienic conditions as mentioned against Construction Camp Management.

- Adequate ventilation and light
- Safe and reliable water supply shall be assured. Contractor shall provide bottled drinking water facilities or good potable water to the construction workers at all the construction sites in sufficient quantities to avoid waterborne/water-related/ water-based diseases to ensure the health and hygiene of workers.
- Hygienic sanitary facilities and sewerage arrangements shall be ensured. The silage and sewage shall be properly disposed and not allowed to flow through open drains.
- Treatment facilities for sewerage of toilet and domestic wastes
- Storm water drainage facilities
- Recreational and social facilities,
- Solid waste collection and disposal system,
- Arrangement for trainings,
- Paved internal roads,
- Security fence at least 2 m height,
- Sick bay,
- Water and sanitation facilities at the construction sites,

Lack of water and sanitation facilities at construction sites cause inconvenience to the construction workers and communities around,

The contractor shall provide normal or portable toilets at the construction sites, if about 25 people are working the whole day for a month. Location of portable facilities shall be at least 6 m away from storm drain system and surface waters. Toilets shall be septic tank modules (which are easily available) and can be disposed at Common Septate/ Sewage Treatment Plants,

Child Labour and Pregnant Labour

The Contractor shall

- not hire children of less than 14 years of age and pregnant women or women who delivered a child within 8 preceding weeks, in accordance with the National Laws

Accidents

- Lack of first aid facilities and health care facilities in the immediate vicinity will aggravate the health conditions of the victims.

- Provide health care facilities which are readily available. Appropriately equipped first-aid stations shall be easily accessible throughout the place of work.
- Document and report occupational accidents, diseases, and incidents,
- Prevent accidents, injury, and disease arising from, associated with, or occurring in the course of work by minimizing, so far as reasonably practicable, the causes of hazards. In a manner consistent with good international industry practice,
- Identify potential hazards to workers, particularly those that may be life-threatening and provide necessary preventive and protective measures,
- Provide awareness to the construction drivers to strictly follow the driving rules,
- Provide adequate lighting in the construction area and along the roads. In case the work site is near around sensitive areas, consult Project Manager to arrive at appropriate lighting standards.

Trainings

Lack of awareness and basic knowledge in health care among the construction workforce, make them susceptible to potential diseases.

The Contractor shall

- train all construction workers in basic sanitation and health care issues (e.g., how to avoid malaria and transmission of sexually transmitted infections (STI) HIV/ AIDS);
- train all construction workers in general health and safety matters, and on the specific hazards of their work and all willing personnel on first aid;
- training shall consist of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate;
- commence the malaria, HIV/ AIDS and STI education campaign before the start of the construction phase and complement it with by a strong condom marketing, increased access to condoms in the area as well as to voluntary counselling and testing;
- implement malaria, HIV/ AIDS and STI education campaign targeting all workers hired, international and national, female and male, skilled, semi- and unskilled occupations, at the time of recruitment and thereafter pursued throughout the construction phase on ongoing and regular basis. This shall be complemented by easy access to condoms at the workplace as well as to voluntary counselling and testing.

8. Site Drainage Management

Improper drainage management may result in erosion and siltation, water pondage and resultant health issues.

The Contractor shall

- prepare site drainage plan and get approved by Project Manager prior to construction;
- reinstate damaged drainage lines on priority if the harm is caused by the contractors' vehicles or work practices;
- prepare local drainage line with wide (rather than deep) drains, network of connected cut off drains, new drains, silt collectors, bunds, manholes attended to frequently;

- check the quality of wastewater from the site before being let out into water bodies.

Ponding of Water (If applicable)

Health hazards due to mosquito breeding

The Contractor shall

- prevent ponding/ storage of water especially near the waste storage areas and construction camps;
- throw away all the storage containers that may store water after use. Do not store them in upright or open position;
- drain or pump out collected water from clogged rain gutters and ditches;
- properly store any open containers in the work area, such as buckets and cans that are not being used;
- create holes to drain water from containers that cannot be thrown out;
- routinely remove garbage and other debris from drains;
- ensure the topography of the final surface of all raised lands (construction yards, approach roads, access roads, bridge end facilities, etc.) are conducive to enhance natural draining of rainwater/ flood water;
- keep the final or finished surface of all the raised lands free from any kind of depression that insists water logging;
- undertake mitigation measures for erosion control/ prevention by grass-turfing and tree plantation, where there is a possibility of rain-cut that will change the shape of topography;
- Cover immediately the uncovered open surface that has no use of construction activities with grass-cover and tree plantation to prevent soil erosion and bring improved landscaping.

9. Top Soil Management

Disturbance due to Land Clearing and Earth Works

- Topsoil is that uppermost layer of soil capable of growing and supporting vegetation. Topsoil contains the essential microorganisms, nutrients, organic matter, and physical characteristics necessary to grow and sustain permanent vegetation. Stripping, stockpiling, and reusing topsoil on construction projects is essential for proper reclamation of disturbed areas.

The Contractor shall

- strip and store top soil for reusing. Topsoil is recommended on all disturbed sites and slopes 2H:1V or flatter, or as a planting medium for plantings or nursery stock. Topsoil may be added to a rock mulch to enhance slope protection and provide soil medium for seed germination and plant growth. Topsoil can be mixed with organic material such as compost or manufactured soil amendments to improve the growing capability of seeded and planted vegetation;
- strip the top soil to a depth of 15 cm and store in stock piles of height not exceeding 2m;
- limit stockpiling limited to less than 6 months' time so that there is no loss or disruption of microorganisms. The use of microorganism inoculates may be necessary to re-establish microorganisms in topsoil material that has been stockpiled for more than 9 months;

- extent practicable, aboveground vegetation, including litter, should be mixed or otherwise incorporated into the topsoil prior to excavation;
- mix top 1 foot of the stockpile material with the remainder of the stockpile to ensure that living organisms are distributed throughout the topsoil material at the time of final placement, if topsoil is stockpiled prior to placement;
- not made topsoil stockpiles near/ along drainage lines. It shall be protected from erosion;
- provide cut-off drains channels and silt bunds around the topsoil stockpiles to prevent erosion of top soil;
- spread the topsoil to maintain the physio-chemical and biological activity of the soil. The stored top soil will be utilized for covering all disturbed area and along the proposed plantation sites;
- prior to the re-spreading of topsoil, the rip ground surface to assist the bonding of the soil layers for better water penetration and revegetation;
- not mix organic material such as wood bark or fibre, grass hay, or grain straw in topsoil unless nitrogen fertilizer is included.

Disturbance due to Vehicular Movement

Vehicular movement outside the right of way of roads or temporary site access roads will disturb top soil and fertility.

The Contractor shall

- mark clearly vehicle access roads and restrict movement to these roads;
- collect and store the topsoil of such access ways for reuse, before initiating movement.

10. Air Quality Management

Construction Vehicular Traffic

Air quality can be adversely affected by vehicle exhaust emissions and combustion of fuels.

The Contractor shall

- Ensure that all vehicles, equipment and machinery to be procured for construction will confirm to the relevant Bureau of India Standard (BIS) norms. The discharge standards promulgated under the Environment Protection Act, 1986 and Motor Vehicles Act, 1988 shall be strictly adhered to.
- fit vehicles with appropriate exhaust systems and emission control devices. Maintain these devices in good working condition;
- operate the vehicles in a fuel-efficient manner;
- cover haul vehicles carrying dusty materials moving outside the construction site;
- impose speed limits on all vehicle movement at the worksite to reduce dust emissions;
- control the movement of construction related traffic;
- water construction materials prior to loading and transport;
- service all vehicles regularly to minimize emissions and get PUC certificates on time;

- limit the idling time of vehicles not more than 2 minutes.
- Proper lubrication of vehicles and machinery will be ensured to reduce emissions
- The Contractor shall maintain a record of PUC for all vehicles and machinery used during the contract period, which shall be produced Monitoring agency's verification whenever required.

Construction Machinery

Air quality can be adversely affected by emissions from machinery and combustion of fuels.

The Contractor shall

- fit machinery with appropriate exhaust systems and emission control devices, maintain these devices in good working condition in accordance with the specifications defined by their manufacturers to maximize combustion efficiency and minimize the contaminant emissions. Proof or maintenance register shall be required by the equipment suppliers and contractors/subcontractors;
- focus special attention on containing the emissions from generators and get permits;
- machinery causing excess pollution (e.g. visible smoke) will be banned from construction sites;
- service all equipment regularly to minimize emissions;
- provide filtering systems, duct collectors or humidification or other techniques (as applicable) to the concrete batching and mixing plant to control the particle emissions in all its stages, including unloading, collection, aggregate handling, cement dumping, circulation of trucks and machinery inside the installations.

Construction Activities

Dust generation from construction sites, material stockpiles and access roads is a nuisance in the environment and can be a health hazard.

- The Contractor shall water the material stockpiles, access roads and bare soils on an as required basis to minimize the potential for environmental nuisance due to dust. Increase the watering frequency during periods of high risk (e.g. high winds). Stored materials such as gravel and sand shall be covered and confined to avoid their being wind-drifted; Water sprinkling shall be done at regular intervals to avoid dust hazards;
- minimize the extent and period of exposure of the bare surfaces;
- reschedule earthwork activities or vegetation clearing activities, where practical, if necessary to avoid during periods of high wind and if visible dust is blowing offsite;
- restore disturbed areas as soon as practicable by vegetation/ grass-turfing;
- store the cement in silos and minimize the emissions from silos by equipping them with filters;
- Store the construction materials in temporarily constructed sheds and covered to avoid dust emissions. Sprinkling of water should be done as and when required to avoid dust from construction activity.
- ensure wet-crushing of rocky and aggregate materials, or performed with particle emission control systems.
- Conduct the soil investigation and submit the report prior to start of construction
- Carry out the demolition and excavation in batches to minimize dust emissions.

- Carry out the diggings, if required for foundation, only in specified area, as per the engineering drawings and excavated earth material should be used for filling and compaction.
- Deposit any chance findings with District Magistrate.
- Provide the protective fencing around the construction sites, excavated areas, and voids. Sign boards should be placed indicating work in progress.
- Take up tree plantation with suitable local species around the periphery of building to enhance the greenery and ambiance
- Permission should be taken from the appropriate authority (State Ground Water Authority) for drilling bore well in notified areas

There should also be a board with contact number in case of any grievances at the site??

11. Noise and Vibration Management

Construction Vehicular Traffic

Noise quality will be deteriorated due to vehicular traffic.

The Contractor shall

- maintain all vehicles in order to keep it in good working order in accordance with manufactures maintenance procedures;
- make sure all drivers will comply with the traffic codes concerning maximum speed limit, driving hours, etc.;
- organize and schedule the loading and unloading of trucks, and handling operations for the purpose of minimizing construction noise on the work site.

Construction Machinery

Noise and vibration may have an impact on people, property, fauna, livestock and the natural environment.

The Contractor shall

- appropriately site all noise generating activities to avoid noise pollution to local residents;
- inform communities on schedule for high vibration/ noise generating activities;
- use the quietest available plant and equipment;
- place vibrating equipment on absorbent platforms or provide buffers;
- modify equipment to reduce noise (for example, noise control kits, lining of truck trays or pipelines);
- maintain all equipment in order to keep it in good working order in accordance with manufactures maintenance procedures. Equipment suppliers and contractors shall present proof of maintenance register of their equipment;
- install acoustic enclosures around generators to reduce noise levels;

- fit high efficiency mufflers to appropriate construction equipment;
- avoid the unnecessary use of alarms, horns and sirens;
- provide PPE to workers.

Construction Activities

Noise and vibration may have an impact on people, property, fauna, livestock and the natural environment.

The Contractor shall

- notify adjacent landholders prior any typical noise events outside of daylight hours;
- educate the operators of construction equipment on potential noise problems and the techniques to minimize noise emissions;
- employ best available work practices on-site to minimize occupational noise levels;
- install temporary noise control barriers where appropriate;
- notify affected people if major noisy activities will be undertaken, e.g. pile driving;
- plan activities on site and deliveries to and from site to minimize impact;
- monitor and analyse noise and vibration results and adjust construction practices as required;
- avoid undertaking the noisiest activities, where possible, when working at night near the residential areas.

Noise from Diesel Generator Sets

It may be required to use DG sets for various power needs during construction/ other activities under the project. The contractor shall take permissions from the State Pollution Control Board (SPCB) for DG set operations. The following Noise Standards for DG sets are recommended for the running of DG sets during the construction:

- The maximum permissible sound pressure level for new diesel generator sets with rated capacity up to 1000 kVA shall be 75 dB(A) at 1 m from the enclosure surface. Noise from the DG set should be controlled by providing an acoustic enclosure or by treating the enclosure acoustically.
- When required, acoustic enclosure should be made of cold rolled close annealed (CRCA) sheets of appropriate thickness and structural/ sheet metal base. The walls of the enclosure should be insulated with fire retardant foam so as to comply with the 75 dBA at 1m sound levels specified by SPCB.
- The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) Insertion Loss or for meeting the ambient noise standards, whichever is on the higher side.
- The DG set should also be provided with proper exhaust muffler.
- Proper efforts to be made to bring down the noise levels due to the DG set, outside its premises, within the ambient noise requirements by proper siting and control measures.
- A proper routine and preventive maintenance procedure for the DG set should be set and followed in consultation with the DG set manufacturer, which would help prevent noise levels of the DG set from deteriorating with use.

12. Protection of Flora

Vegetation Clearance

Local flora is important to provide shelters for the birds, provide products like fruits and/ or timber/ fire wood, protect soil erosion and overall keep the environment very friendly to human living. As such, damage to flora will result in wide range of adverse environmental impacts.

The Contractor shall

- Avoid the removal of mature trees to the extent possible. If unavoidable, it should be done only after the permissions (as applicable in respective states) from concerned departments. Compensatory tree plantation with same species or suitable local species should be carried out in consultation with Forest Department.
- Transit the timber of important species (as per the applicable state regulations) with permission and support from Forest Department.
- reduce disturbance to surrounding vegetation;
- use appropriate type and minimum size of machine for site clearance to avoid disturbance to adjacent vegetation;
- get approval from supervision consultant for clearance of vegetation;
- make selective and careful pruning of trees where possible to reduce need of tree removal, Control noxious weeds by disposing off at designated dump site;
- clear only the vegetation that needs to be cleared in accordance with the plans. These measures are applicable to both the construction areas as well as to any associated activities such as sites for stockpiles, disposal of fill and construction of access roads, etc.;
- do not burn off cleared vegetation; rather chip or mulch and reuse it for the rehabilitation of affected areas, temporary access tracks or landscaping. Mulch provides a seed source, can limit embankment erosion, retains soil moisture and nutrients, and encourages regrowth and protection from weeds. It can also be composted as used as a good manure for landscaping works on site using bin composting;
- return topsoil and mulched vegetation (in areas of native vegetation) to approximately the same area it came from;
- avoid work within the drip-line of trees to prevent damage to the tree roots and compacting the soil;
- minimize the length of time the ground is exposed or excavation left open by clearing and re-vegetate the area at the earliest practically possible;
- ensure excavation works occur progressively and revegetation done at the earliest;
- provide adequate knowledge to the workers regarding nature protection and the need to avoid felling trees during construction;
- follow national (or state) guidelines on replantation if this is suggested;
- use indigenous plants and trees for landscaping the site or compensatory afforestation in consultation with local community, Forest Department and local authorities;
- supply appropriate fuel for labour camps to prevent fuel wood collection;

- use sheets or other lightweight cloth to cover plants and at the same time allow some light and air to enter during construction near existing plants and trees, In the case of delicate plants, make a scaffold around the specimen to prevent the cloth from crushing foliage and stems;
- prevent any spills or hazardous chemicals, paints or tools from harming the plants and trees;
- prevent the release of any materials or wastes into waterbodies which would cause eutrophication or harm the aquatic species.

13. Protection of Fauna

Construction Activities

The location of construction activities can result in the loss of wild life habitat and habitat quality.

The Contractor shall

- limit the construction works within the designated sites allocated to the contractors, and no activity shall spill over;
- limit work activities to day time; avoid nesting/ breeding time for work while scheduling the work;
- check the site for animals trapped in, or in danger from site works and use a qualified person to relocate the animal.

Impact on Migratory Birds, Its Habitat and Its Active Nests

The Contractor shall

- not destruct active nests or eggs of migratory birds;
- minimize the tree removal during the bird breeding season. If works must be continued during the bird breeding season, a nest survey will be conducted by a qualified biologist prior to commence of works to identify and locate active nests;
- minimize the release of oil, oil wastes or any other substances harmful to migratory birds to any waters or any areas frequented by migratory birds;
- control light pollution of nesting/ breeding areas and flight pathways of birds;
- prevent the release of any materials (including plastics, construction materials) or wastes (solid/ liquid from works or camps) into waterbodies which would cause eutrophication or harm the aquatic species;
- prevent sediments from flowing into waterbodies harming the biota.
 - Sediment may be washed into streams from construction works sites. It causes the water to turn turbid ("murky") and reduces light penetration;
 - Construction near streams must be carefully undertaken by a skilled professionals to limit sedimentation. Interceptor ditches, sediment fencing and sediment control ponds are some methods that can limit sediment that flows into waterways.
 - Cover exposed earth with a tarpaulin or geomembranes if rain is expected. Replant exposed areas with grass seed or other fast-growing plants as soon as possible.

Vegetation Clearance

Clearance of vegetation may impact shelter, feeding and/ or breeding and/ or physical destruction and severing of habitat areas

The Contractor shall

- restrict the tree removal to the minimum required; take necessary permissions where required for removal and transit
- retain tree hollows on site, or relocate hollows, where appropriate;
- leave dead trees where possible as habitat for fauna;
- fell the hollow bearing trees in a manner which reduces the potential for fauna mortality;
- felled trees will be inspected after felling for fauna and if identified and readily accessible will be removed and relocated or rendered assistance if injured. After felling, hollow bearing trees will remain unmoved overnight to allow animals to move of their own volition.
- Logging of felled trees will be made as appropriate.

Construction Camps: Illegal Poaching

The Contractor shall

- provide adequate knowledge to the workers regarding protection of flora and fauna, and relevant government regulations and punishments for illegal poaching.

14. Road Transport and Road Traffic Management

Construction Vehicular Traffic

Increased traffic use of road by construction vehicles will affect the movement of normal road traffics and the safety of the road-users.

The Contractor shall

- prepare and submit a traffic management plan to the Project Manager for his approval at least 30 days before commencing work on any project component involved in traffic diversion and management. This shall be presented to Traffic Police Department and other line departments and permissions gathered before start of works;
- include the traffic management plan to ensure uninterrupted traffic movement during construction: detailed drawings of traffic arrangements showing all detours, temporary road, temporary bridges, temporary diversions, necessary barricades, warning signs/ lights, and road signs;
- provide signs at strategic locations of the roads complying with the schedules of signs contained in the Traffic Regulations. Arrange flagmen if required especially near sensitive receptors such as schools, hospitals, commercial areas;
- install and maintain a display board at each important road intersection on the roads to be used during construction, which shall clearly show the following information in local language:
 - Location:
 - Locality name:
 - Duration of construction period:

- Period of proposed detour/ alternative route:
- Suggested detour route map:
- Name and contact address/ telephone number of the concerned personnel:
- Name and contact address/ telephone number of the Contractor:
- Following written “Inconvenience is sincerely regretted”.

Accidents and Spillage of Fuels and Chemicals

The Contractor shall

- restrict truck deliveries, where practicable, to day time working hours;
- restrict the transport of oversize loads;
- operate road traffics/ transport vehicles, if possible, to nonpeak periods to minimize traffic disruptions;
- enforce on-site speed limit.

15. Cultural and Religious Issues

Construction Activities near Religious and Cultural Sites

Disturbance from construction works to the cultural and religious sites, and contractors lack of knowledge on cultural issues cause social disturbances.

The Contractor shall

- communicate to the public through community consultation, informing the peers and newspaper announcements regarding the scope and schedule of construction, as well as certain construction activities causing disruptions or access restriction;
- not block access to cultural and religious sites and sites of importance for livelihood activities, wherever possible;
- restrict all construction activities within the foot prints of the construction sites;
- stop construction works that produce noise (particularly during prayer time) shall there be any mosque/ religious/ educational institutions close to the construction sites and users make objections;
- take special care and use appropriate equipment when working next to a cultural/ religious institution;
- stop work immediately and notify the Project Manager if, during construction, an archaeological or burial site is discovered. It is an offence to recommence work in the vicinity of the site until approval to continue is given by the Project Manager;
- provide separate prayer facilities to the construction workers;
- show appropriate behaviour with all construction workers and community especially women and elderly people;
- monitor and be responsible for the behaviours of construction workers especially migrant workers towards the community and environment and take actions to stop their services after warning in case found necessary. The workers must be debriefed well regarding local

aspects and need to follow good behaviours, and informed regarding unexpected behaviours at the time of employing;

- allow the workers to participate in prayers during construction time;
- resolve cultural issues in consultation with local leaders and Project Manager;
- establish a mechanism that allows local people to raise grievances (directly and indirectly) arising from the construction process;

inform the local authorities responsible for health, religious and security duly informed before commencement of civil works so as to maintain effective surveillance over public health, social and security matters.

16. Management of Asbestos-containing Material:

Asbestos-containing Material (ACM) should be avoided in new buildings or as new material in remodelling or renovation

- **Existing buildings:** ACM Survey and management plan needed
- **Disposal of ACM** shall be carried out by specially trained individuals only following the government rules and regulations.

The contractor shall

- Assess risk to determine extent of problem;
 - survey to abate asbestos exposure;
 - prepare management plan;
 - remove ACM by trained personnel;
 - follow prohibition of ACM;
 - prepare procedures for handling, removal, transport, and disposal of asbestos.
-

‘To Do’ Protocols/Guidance for Construction Sites and Construction Workers in response to COVID-19

In view of COVID-19 outbreak, various guidelines / interim notes for construction sites have been prepared by institutions and organizations, e.g. The World Bank (April 7, 2020), ILO (March 19, 2020), IASC (March 17, 2020), besides by WHO from time to time.

All the Governments in SAR countries would have issued guidelines to combat COVID-19 spread. In case of India, for example, the Ministry of Home Affairs and Ministry of Health and Family Welfare, issued several Orders/Circulars/Guidelines¹ from time to time to be followed by the State governments, sectors and individuals. Further, amendments to these orders are updated from time to time on <https://www.mha.gov.in/media/whats-new>,

The national orders/circulars/guidelines are required to be followed in all operations. In addition, various guidelines / interim notes for construction sites have been prepared by several institutions and organizations, some of which are listed below:

- a. ILO’s Guidance: Considerations for employment intensive works in response to COVID 19 (April 12, 2020). https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_741669.pdf
- b. WB’s ESF/Safeguards interim note: COVID-19 considerations in construction/civil works projects (April 7, 2020).
- c. WHO’s guidelines: Getting your workplace ready for COVID-19 (March 03, 2020) <https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf>; Water, sanitation, hygiene, and waste management for the COVID-19 virus (March 19, 2020) <https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>; Rational use of personal protective equipment (PPE) for coronavirus disease (March 19, 2020): https://apps.who.int/iris/bitstream/handle/10665/331695/WHO-2019-nCov-IPC_PPE_use-2020.3-eng.pdf .
- d. IASC Interim Guidance: Scaling-Up Covid-19 Outbreak Readiness and Response Operations in Humanitarian Situations, Including Camps and Camp-Like Settings (March 17, 2020) <https://interagencystandingcommittee.org/other/interim-guidance-scaling-covid-19-outbreak-readiness-and-response-operations-camps-and-camp>
- e. IDB’s Guidance for infrastructure projects on COVID-19 <https://www.idbinvest.org/en/download/9625>
- f. IFC Guidance: Workers’ accommodation: processes and standards (2009) <http://documents.worldbank.org/curated/en/604561468170043490/pdf/602530WP0worke10Box358316B01PUBLIC1.pdf>

Labor would continue to be the major player in construction activities in coming time. In view of the prevailing COVID-19 pandemic, the contractors and workers would need to take additional measure to avoid the spread of the disease or risk of infection. On the basis of above guidelines/guidance notes, a brief “To Do” list is summarized below (reference numbers in brackets refer to the above-mentioned

¹ <https://www.mha.gov.in/notifications/circulars-covid-19>,
https://www.mha.gov.in/sites/default/files/PR_ConsolidatedGuidelinesofMHA_28032020_0.pdf,
<https://www.mohfw.gov.in/>

guidelines/guidance notes). For details and preparation of COVID Response and Management Plan, the above documents may be referred.

1) 'To Do' List / Protocol

SAFETY OF WORKERS - DAILY DRILL:

- 1) The work timings should be phased for each shift. *There should be a difference of about 1 hour between two shifts* and the sensitive areas of the workplace should be cleaned/sanitized by a defined set of specifically equipped workers. (Ref: b)
- 2) The time between two shifts should be used for cleaning and sanitizing machines, hand tools and areas of regular contact – grab handles, control levers, steering wheels, control panels, etc. shall be regularly cleaned, and at the end of shifts used across shifts (or continuous operations) where operators/helpers change. (Ref: a)
- 3) All workers to report some time earlier before the start of the shift. An attendance register is to be maintained for each shift. Masks are mandatory and social distancing of at least 1m to be followed in the holding area prior to entry into the worksite. The EHS Focal Point to provide information update every day. (Ref: a, c, d)
- 4) The workers need to wash their hands thoroughly (for at least 20-30 seconds) with soap or use sanitizers just before reporting for screening. Adequate provision for hand washing, soaps, sanitizers, water collection and disposal of sullied water needs to be made at the entry of the reporting location. Hand gloves mandatory for teams who are screening workmen, conducting medical checkup, disinfection. (Ref: a, b, c)
- 5) Health screening to be done for all workers in the shift to enter the workplace/worksite - including temperature monitoring using a non-contact thermometer. Any worker reporting with temperature higher than 37.3°C shall be sent to the isolation quarters and periodic observation be made. (Ref: a, b, c, d)
 - i) In case the worker shows symptoms of any disease/ailment (including COVID-19), the procedures as laid down by the national and state laws need to be followed for testing, quarantine of at least 14 days or hospitalization, depending upon individual case.
 - ii) All the co-workers in the shift, and other persons with known contact history in the construction site should be quarantined for a period of at least 14 days, followed by regular checkups/ observation/ examinations as laid down by the national and state laws.
- 6) The workers found fit need to proceed to work with all required personal protective equipment, e.g. masks, gloves, goggles, boots, helmets, harness, etc. (Ref: a, b, c)
- 7) The workers be encouraged to avoid contact with co-workers as far as possible and wash their hands at regular intervals. (Ref: a, b, c)
- 8) Lunch/meal break be staggered into two or more time slots so that workers proceed for lunch/meal at different times (Ref: a).
- 9) There needs to be a provision of separate drinking bottles/cups for each worker, and these need to be cleaned thoroughly after meals. (Ref: a)
- 10) Proper hand washing arrangement (water/soaps/sanitizers) needs to be ensured at eating locations. Hand washing facilities are ideally to be located within 5m of toilets and at close range of eating space. (Ref: a, b)
- 11) The workers returning to the shift after lunch/meal break need to thoroughly wash their hands and follow the same procedure as that followed at the start of the shift. (Ref: a, b)
- 12) At the close of shift, the workers need to thoroughly wash their hands with soap/sanitizers prior to leaving the workplace/worksite. (Ref: a, b)

13) The PPE should be thoroughly washed/cleaned/sanitized (depending upon the type of PPE) after the shift ends. (Ref: a)

OTHER GUIDANCE FOR CONTRACTORS:

- 2) Site specific risk assessment needs to be undertaken and emergency preparedness plan be prepared for all sites, including camp sites and construction sites. (Ref: a, b, d, e)
- 3) Protocols for medical treatment, etc. should be prepared/followed, including for reporting, referral, treatment and discharge as per national and state laws and other guidelines. (Ref: a, b, c, d)
- 4) A health and safety officer to be deployed as the focal point at all project sites, and wherever, the same (or the Environment, health and Safety Officer) is not in place, urgent action needs to be taken by the contractor to recruit and mobilize someone with appropriate qualifications and responsibilities. (Ref: a, b)
- 5) Register for all the workers needs to be maintained, along with their health records. Prepare a profile of the workforce considering the following: (i) total number of workers who live in the labor camps; (ii) total number of workers who commute from their houses; and (iii) number of male and female workers. (Ref: a, b, d).
- 6) Limit the number of workers on site at any one time to minimize contact, including exploring operations for multi-shift working rotation. (Ref: a, b, d)
- 7) Entry/exit to the site should be documented. Transport vehicles used during construction activities to carry construction materials should be sanitized on regular basis (at least once a day). (Ref: a, b)
- 8) Hygienic living conditions need to be ensured in the camp sites with regular/daily cleaning, adequate handwashing facilities. Adequate provision for solid waste management needs to be provided. (Ref: a, b, d, f)
- 9) Provide health and safety training/orientation on COVID19, or any other pandemic, to all workers and staff. Initiatives could include training family members of construction workers to stitch masks and gloves to augment PPE. (Ref: a, b, d)
- 10) Ensure adequacy of necessary supplies of energy, water, food, medical supplies, cleaning equipment, PPE (both for regular use and those for medical exigencies) etc. (Ref: a, b, c, d, f)
- 11) Quarantine and isolation facilities should be established in the camps (as per the WHO Guidelines). The isolation facilities should have separate and dedicated toilets with proper arrangement for cleaning and removal of sewage and wastes. (Ref: c)
- 12) Any medical waste produced during the care of ill workers should be disposed as per the national and state laws or relevant guidelines (e.g. WHO guidelines issued from time to time). (Ref: a, b, c)
 - a) PPE used for medical treatment/care purposes should be stored securely and kept separate from other waste. (Ref: a, b, c)
 - b) Current WHO recommendations are to clean utility gloves or heavy duty, reusable plastic aprons with soap and water and then decontaminate them with 0.5% sodium hypochlorite solution after each use. (Ref: a, b, c)
 - c) Single-use gloves (nitrile or latex) and gowns should be discarded after each use and not reused. (Ref: a, b, c)
- 13) Incentivize workers lodging in the local community to move to site accommodation. (Ref: b)
- 14) The community should be made aware, through posters etc., of procedures put in place at site to address issues related to COVID-19. This should include all measures being implemented to limit or prohibit contact between workers and the community. (Ref: a, b, c, d)

ADDITIONAL GUIDANCE FOR GOOD PRACTICE FOR CONTRACTORS:

- 1) Follow national orders/circulars/guidelines issued from time to time
- 2) Apply the guidelines/guidance notes referred in the documents (a to f)
- 3) Practice the Daily Drill and General Guidance above.
- 4) Camp sites and construction sites may require different approaches to avoid spread of COVID-19.
Special care to be taken for supply chain related vehicles, personnel and material.
- 5) Provide Contactless attendance system