Health and Safety Guidelines for Sri Lankan Construction Sites to be adopted during COVID-19 outbreak

Version 2.0 (Revised)

26th May 2020

Construction Industry Development Authority
Sri Lanka
Health and Safety Guidelines for Sri Lankan Construction Sites to be Adopted During COVID-19 Outbreak

This guideline for the Sri Lankan Construction Sites has been prepared by the Construction Industry Development Authority which is empowered by the parliamentary ACT, No. 33 of 2014.

********************************************************************************
Publication - Version 1
Date of Publication: 19.04.2020

Compiled by,
Ms. K.A.C. De Alwis – Legal Officer & Board Secretary, CIDA
Eng. E. Vibusshana – Assistant Director (Research & Development), CIDA

Reviewed by,
Archt. H.K. Balachandra – Director General, CIDA
Eng. S.K.S. Amarasekara – Director (Development), CIDA

********************************************************************************
Publication - Version 2 (Revised)
Date of Publication: 26.05.2020

Compiled by,
Archt. K.A.C.K.K. Kulathilaka – Deputy Director (Industry Development), CIDA
Eng. C.S. Karunaratne – Deputy Director (Advisory Services), CIDA

Reviewed by,
Eng (Prof) N.T.S Wijesekera – Chairman, CIDA
Mr. U. Abeyaratna – Working Director, CIDA
Archt. H.K. Balachandra – Director General, CIDA
Eng. S.K.S. Amarasekara – Director (Development), CIDA

********************************************************************************
Health and Safety Guidelines for Sri Lankan Construction Sites to be Adopted During COVID-19 Outbreak

Material contained in this publication is considered as a CIDA Publication which may be reproduced, fully or partially, with the permission of CIDA, and with adequate acknowledgement.

This information will be made available to interested parties upon request, from CIDA Head Office. Tel: 94-11-2699801, Fax: 94-11-2699738, Email: info@cida.gov.lk

Acronyms

CIDA  Construction Industry Development Authority
CDC  Center for Disease Control & Prevention of US
COVID-19  Coronavirus disease of 2019
CSOH  Construction Safety and Occupational Health
EOT  Extension of Time
EU  European Union
GDP  Gross Domestic Product
LD  Liquidated Damages
MOH  Medical Officer of Health
NIOSH  US National Institute for Occupational Safety and Health
OSHA  Occupational Safety and Health Administration
PHI  Public Health Inspector
PPE  Personal Protective Equipment
SARS-CoV-2  Severe Acute Respiratory Syndrome Coronavirus 2
US  United States
USA  United States of America
v/v  Volume per Volume
WHO  World Health Organization
# Health and Safety Guidelines for Sri Lankan Construction Sites to be Adopted During COVID-19 Outbreak

## Contents

<table>
<thead>
<tr>
<th>Part</th>
<th>HEALTH and SAFETY</th>
<th>Sub-Sections</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction</td>
<td>1.1 CIDA Guideline</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>Beware of COVID-19</td>
<td>2.1 About COVID-19</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.2 Symptoms of COVID-19</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.3 Survival of the Virus</td>
<td>7</td>
</tr>
<tr>
<td>4.</td>
<td>Beware of Risks of COVID-19 in Construction Industry</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>5.</td>
<td>Preventive Hygiene at Construction Sites</td>
<td>5.1 Health Checks - Body Temperature</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2 Health Tips - Washing Hands &amp; Sanitization</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.3 Health Tips - Personal Hygiene</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.4 Health tips - PPE</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.5 Exit Procedure After Work</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.6 Transport Facilities</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.7 Accommodation</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.8 Sanitary Facilities</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.9 Lunch Rooms and Canteens</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.10 Changing Rooms</td>
<td>15</td>
</tr>
<tr>
<td>6.</td>
<td>Administering a Construction Site to Prevent a COVID-19 Outbreak</td>
<td>6.1 General</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2 Preparation for Resumption</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.3 Site Cleaning &amp; Maintenance</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.4 Construction Site Meetings</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.5 Using Lift or Elevator</td>
<td>20</td>
</tr>
<tr>
<td>7.</td>
<td>Administering an Emergency COVID-19 Situation</td>
<td>7.1 Preliminaries</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.2 Detecting a Suspected COVID-19 Case</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7.3 Cleansing after a Suspected Case</td>
<td>25</td>
</tr>
<tr>
<td>8.</td>
<td>More Information and Sources</td>
<td>8.1 Information about COVID-19 Infection</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.2 Other Awareness Enhancements</td>
<td>25</td>
</tr>
<tr>
<td>9.</td>
<td>Importance of Immunity</td>
<td>9.1 Traditional Practices</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.2 Personal Immunity</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.3 Conditions which Improves/Boosts Immunity</td>
<td>30</td>
</tr>
<tr>
<td>10.</td>
<td>Suppleenting the Health Directives</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>11.</td>
<td>Day to Day Practice Advice</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>12.</td>
<td>Medicine for COVID-19</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>13.</td>
<td>Bibliography</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>14.</td>
<td>Annex 1</td>
<td></td>
<td>34</td>
</tr>
<tr>
<td>15.</td>
<td>Annex 2</td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>
Part 1—HEALTH and SAFETY
Health and Safety Guidelines for Sri Lankan Construction Sites to be adopted during COVID-19 Outbreak

Part 1: Health and Safety

1. Introduction

1.1. CIDA Guideline

This document on Health and Safety Guideline is prepared by the Construction Industry Development Authority (CIDA) established under the Construction Industry Development Act No.33 of 2014 and is meant to be followed by construction sites operating in Sri Lanka during the critical observation period of Coronavirus COVID-19 epidemic. The guidelines aim to prevent spreading of the virus and to promote good health among construction workers and staff.

This ‘Health and Safety Guidelines’ Version 2 by CIDA, consists of two parts. Part 1 contains good practice guidance including the mandatory requirements of the health authorities and directions from selected guidelines of the Ministry of Health and Indigenous Medical Services for construction sector. CIDA has also carefully considered the guideline that had been developed by the Industrial Safety Division of Department of Labour, Sri Lanka, the WHO interim guidance of 19th March 2020 for infection prevention and control during health care when COVID-19 is suspected, and the guidelines of the Ministry of Health and Indigenous Medical services, Sri Lanka and OSHA of USA.

The Part 2 contains supplementary practices to ensure the sustenance of the sector by enhancing the immunity as recommended by Traditional Native and Ayurveda medical practice. The fervent hope of CIDA is to achieve a steady input from the construction workforce thereby ensuring the much-needed contributions to the national economy.

Sri Lanka and elsewhere in the world, construction sites are places with workers performing a wide variety of tasks in close proximity, by sharing tools, working in groups for efficiency, using machines operated on a shift basis, experiencing frequent labour group transport both horizontally and vertically, etc., etc. These significant differences at construction sites when compared with other factories, business, or work places require a special attention to face the threat of COVID-19. Therefore, CIDA as the apex regulatory institution, has taken a special effort
to develop a comprehensive, detailed, yet easy to practice guideline for the safety and protection of the Sri Lankan construction work force.

This Guideline contains instructions which are both mandatory and advisory. The health authority directives are mandatory while the immunity enhancement practices recommended are advisory. CIDA expects the construction workers to comply with the instructions and the construction site managers to enhance the awareness among the work force. It is expected that each construction site will take extra precautions to be free from recognized hazards likely to cause death or serious physical harm, in case of a COVID-19 outbreak.

CIDA will affect responsible action to update this guideline as new information about the virus, its transmission, and impacts, becomes available. However, it is the responsibility of the managers and others in the workforce to take sufficient steps to refer reliable sources for updates related to the developments associated with COVID-19 to ensure the control of this pandemic.

Due to the diversity of personnel and the economic hardships faced by many, there can be situations where suspected cases would remain hidden due to poor awareness of the danger and also the practices recommended as a preventive measure. In anticipation of such a situation, the construction site managers must ensure that all workers are provided sufficient access to this guideline or to its contents.

### 2. Beware of COVID-19

#### 2.1. About COVID-19

The Coronavirus 2019 (COVID-19) sickness is a highly contagious respiratory disease which is caused by the SARS-CoV-2 virus. Although there are no confirmed sources as to where the virus has originated, it has spread to most of the countries in the world including Sri Lanka. As at present, COVID-19 outbreak has become a pandemic that has infected millions and has become responsible for the death of hundreds of thousands worldwide. The lockdown situations imposed to curb the outbreak has affected the life styles of all around the world and also in Sri Lanka. Since late February 2020, the COVID-19 has prevented free travel, trade, tourism, food supplies, and even functioning of financial markets. In Sri Lanka in the second week of March 2020, the COVID-19 closed down all construction sites of both public and private sectors. Since the COVID-19 virus has adversely affected many human lives causing thousands of deaths, and millions of infected people in the world it is extremely important to
be cautious and take necessary preventive steps to protect our construction industry from this virus.

2.2. Symptoms of COVID-19

Infection triggered by the virus that causes COVID-19, (SARS-CoV-2), can create illness ranging from mild to severe and, in some cases, can be fatal. These symptoms include fever, cough, and shortness of breath. Some infected people have reported experiencing other non-respiratory symptoms. The people, referred to as asymptomatic cases, do not experience symptoms at all. According to the Center for Disease Control & Prevention of US (CDC), symptoms of COVID-19 may appear in a minimum of 2 days up to around 14 days after exposure to the virus.

2.3. Survival of the Virus

The COVID-19 virus is spread out with droplets when coughing or sneezing. The survival duration of virus on surfaces depend on the type of surface. The COVID-19 virus remains in air for approximately 03 hours. The types of surfaces and corresponding survival durations are given in Table 1.

<table>
<thead>
<tr>
<th>Type</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardboard</td>
<td>03 hours</td>
</tr>
<tr>
<td>Copper</td>
<td>24 hours</td>
</tr>
<tr>
<td>Un-tarnished iron</td>
<td>02 days</td>
</tr>
<tr>
<td>Plastic</td>
<td>05 days</td>
</tr>
</tbody>
</table>

Table 1: Survival of COVID-19 on Surfaces

<table>
<thead>
<tr>
<th>Type</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>04 to 05 days</td>
</tr>
<tr>
<td>Wood</td>
<td>04 days</td>
</tr>
<tr>
<td>Glass</td>
<td>04 days</td>
</tr>
<tr>
<td>Aluminum</td>
<td>02 to 08 days</td>
</tr>
</tbody>
</table>


3.1. How COVID-19 Spreads among People

As of today it has been found that the COVID-19 virus spreads mainly from person-to-person. The following are the modes of transmission.
By air and between people who are in close proximity to each other (within an approximate distance of 6 feet or nearly 2 meters).

Through the respiratory droplets produced by an infected person’s cough or sneezing. These droplets can reach the mouths, noses or eyes of other people who are in close proximity. The highest possibility is to get inhaled into the lungs.

By touching a surface or object that is contaminated with the virus and then touching their own mouth, nose, or possibly their eyes, with such contaminated hands.

By shoes and other personal belongings which are exposed to receive the virus.

COVID-19 virus has the potential to spread amongst all age groups ranging from young to old. According to the health officials, persons who are taking regular medicine due to other health diseases such as diabetes, kidney, cardiovascular, etc., are prone to get severely affected from COVID-19.

Construction workers comprise of not only the young, but also middle aged and old. These workers mostly from outstations, estates and from flood prone low-lying urban areas or suburbs are most likely to have many other health diseases thus becoming more vulnerable to COVID-19. Most of the construction workers belong to low socio economic backgrounds and their understanding levels on preventive measures are generally very low. Therefore, there is a very high probability for workers who get infected without symptoms to spread the diseases in their settlements which in turn would propagate to other parts of the country.

Therefore, spreading of the virus among construction workers need to be prevented with utmost care because an outbreak would destroy the Construction Industry and push the country into a dangerous situation.

4. Beware of Risks of COVID-19 in Construction Industry

Infected persons are considered most contagious when they are most “symptomatic” (i.e., experiencing fever, cough, and/or shortness of breath). Spreading might even be possible before people show the symptoms and there have been many reported cases of this type of “asymptomatic” transmission with this new coronavirus.
Though the following has been briefed previously, it is important to stress the risks of spreading COVID-19 in the construction industry. Due to the very nature of work at Sri Lankan construction sites, construction workers often have to work in close proximity, share tools, attend to tough and hard work such as placing shuttering, reinforcements, scaffoldings, receiving and returning of tools, attend to awareness pocket meetings, and adhere to common meal or tea-breaks. These would make it very difficult for the construction workers to keep social physical distancing as required by the authorities. Social physical distancing and preventive measures will become most difficult at the beginning because of the already built up inertia due to the habits which would be impossible to change overnight. Tendency of using the same face mask without replacing or cleaning could be very high. Furthermore, there might be cases, where those with respiratory issues may be unknowingly, assigned to work at dangerous or risky places. In the construction industry workers are commonly transported from site to site in trucks and trailers, packed close to each other. In high rise building construction, the practice is for many workers to use a small cubical for vertical transport. Most of the construction workers are with some common/bad habits such as chewing beetle, smoking and even alcohol consumption. Frequently many workers share the use of mobile phones and chargers.

Due to all these and many more manners that prevailed in the construction sites prior to the COVID-19 attack, the workers at construction sites would become very vulnerable and get exposed to a high risk of getting infected or spreading the disease, unless appropriate remedial measures are taken. Hence, construction workers must be carefully guided to protect them from the risks of getting infected from COVID-19.
5. Preventive Hygiene at Construction Sites

There are many recommendations given by the health authorities to be practiced as preventive measures. Those and others considered vital to prevent an outbreak of COVID-19 at a construction site are explained below. CIDA would like to stress that in the best national interest Sri Lankan construction industry must recognize the dangers of COVID-19 and on their own take sufficient steps to make these practices mandatory.

5.1. Health Checks- Body Temperature

1. Body temperature of the workers shall be checked at the entrance of each construction site, by a hand held equipment that can be used by maintaining social physical distancing. Such Thermal scanners should be of Medical grade.

2. All precautions shall be taken to prevent entry of persons recording a temperature above 98.4°F or 37.0°C. Such persons should be re-checked after 10-15 minutes of rest and if positive for second time then the concerned person must be referred to appropriate medical attention.

5.2. Health Tips –Washing Hands & Sanitization

1. Construction projects are to be provided with soap, running water and hand sanitizers at the entrance of the construction site, for the workers to wash their hands. Facilitation of hand washing and frequent hand washing is mandatory.

2. All efforts must be taken to install foot operated taps in order to ensure water on demand: This is considered as the best for all wash basins.

3. As an additional measure, step can be taken to provide a foot bath with 0.1% sodium hypochlorite solution at the entrance and vulnerable places.

4. Directions must be given to change shoes at the entrance of a work site and provisions must be made for each individual to use a separate set of shoes while inside the premises.
5.3. **Health Tips - Personal Hygiene**

1. Construction workers shall be educated to refrain from touching their face, eyes, nose or mouth. They shall not touch the mask frequently. If the face masks are of disposable type, then must not be used after a single use. Multi use face masks must be of good hygiene for repeated use.

2. If a finger scan machine is used to mark attendance at a work site, then workers shall be instructed to clean their hands. It is necessary to note that, after using the finger scan machine the workers must wash hands or clean with a hand sanitizer. Preferably a hand sanitizer (70% v/v alcohol based) must be placed near the finger scanning machine for easy use.

3. Workers must refrain from sharing mobile phones, pens and other common utilities such as, telephones, fax machines, desks, work tools and equipment unless they are carefully sanitized.

4. Each construction worker shall keep his clothes, suits, towels, shoes, overalls, etc. separately and must refrain or borrowing from each other unless they have been carefully sanitized.

5. Each construction worker shall keep a plate, water bottle glass/cup, tooth paste, tooth brush, razor of their own use. They must keep them separately and shall not make them available for common use.

6. At all times during the outbreak and during the periods under observation, construction workers shall avoid mixing with crowds, keep away from crowded places and evade visiting public places.

7. In order to maintain the body immune system healthy, construction workers shall consume a nutritious and balanced diet and take a good rest after work and ensure a good continuous sleep.

8. Contaminated waste, handkerchiefs, paper tissues, disposable razors, tooth brushes, etc., shall be disposed in a pedal operated closable garbage bin.

9. Disposal of waste shall be carried out hygienically and following the guidelines of a health inspector or an appropriate health authority. The waste of a suspected person shall be managed in accordance with the
guidelines on waste management given by a health inspector. The suspected person must also be carefully taken care of.

10. Construction workers shall not be indulged in smoking or consuming any drugs, which lower their immunity levels.

11. After finishing the day's work, construction workers shall not get together for discussions, group games, and recreation or to consume food, water or alcohol.

12. Construction workers should refrain from physical contacts such as handshakes, embracing, etc., until the COVID-19 threat has been declared as over.

13. Once reported to work, construction workers must refrain from leaving the construction site without obtaining due permission from the person in charge and without taking appropriate health precautions. If a re-entry is required then all steps described earlier as appropriate, must be practiced.

5.4. Health tips - PPE

1. Each construction site must ensure that all construction workers are provided with face masks and hand gloves. Masks and gloves shall not be shared or re-used.

2. It is necessary to make workers aware of the proper use of Personal Protective Equipment (PPE) to avoid cross contamination. These include, removing and placing the face mask once again, taking off and wearing the gloves again.

5.5. Exit Procedure after Work

There are several measures that needs to be taken when returning home from work place, upon returning home and then prior to entering the house or the dwelling unit. All workers must care to adhere to the following to avoid contamination and chances of spreading the decease.

I. Wash both hands thoroughly by using soap and water.

II. Remove the clothing and shoes/slippers and leave them outside, and wash them before taking inside or wearing them again.
III. Leave all your belongings outside. If any item is taken inside the house, either wash it with soap and water or disinfect with alcohol sanitizer. (This applies to your mobile phone, spectacles, wrist-watch etc.). Enter the house only after a bath.

5.6. Transport Facilities

1. Chances of construction worker contamination while using public transport such as buses and trains could be minimized by providing transport facilities to workers from the residence to the construction site and back.

2. Using own bicycle, motor cycle, or a car can be considered as an option to avoid the use of public transport. In case of such an option, the vehicle must be provided with a health-safe location for parking. In case such transport utility has to be brought into a site, then proper disinfection must be carried out.

3. The workers who are compelled to travel by public transport such as buses and trains shall always wear a face mask and gloves.

4. Each worker using public transport must be advised to maintain a fair distance between him/her and others. In isolated cases of a breach in condition, the worker must resort to a sufficient method of disinfection.

5. If site organized and site specific transport facilities are available then workers shall keep the health authority required physical distance and shall always maintain wearing facemasks.

6. The vehicles of a construction site used to provide such transport facilities shall be regularly cleaned and disinfected under the supervision of the health inspector.

7. Resorting to on-site or nearby accommodation is a favorable option to minimize risks of contacting COVID-19 while travelling. Walking to site must be encouraged for the employees residing at close proximity.
5.7. **Accommodation**

Spreading of virus through bed linen, garments in accommodation facilities:

1. Clothing, bed sheets, pillow cases, and other garments of workers shall be washed regularly using a detergent and with water heated to a temperature between 60°C - 90°C. The construction workers must refrain from sharing the garments and linen in places of accommodation.

2. Clothes and bed linen, washed, shall be dried by exposing to adequate heat or under direct sunlight.

3. Hostels, barracks, dormitories, lodges and sleeping areas, used by the construction workers shall be frequently disinfected and kept clean and ventilated.

5.8. **Sanitary Facilities**

1. Adequate sanitary facilities, lavatories, bathing rooms, changing rooms, etc., shall be provided in the worksite/s, and in such facilities/places, the handles, and taps shall be disinfected to minimize the spread of the COVID-19 virus.

2. The number of occasions of disinfection shall be decided by the health inspector by considering the frequency of use and the number of workers in the worksite.

5.9. **Lunch Rooms and Canteens**

1. At each construction site the lunch breaks should be staggered to ensure meaningful and successful implementation of the guidance given to avoid the spreading of COVID-19 due to possible lack of social physical distancing at canteens/lunch rooms.

2. The number of persons using the lunch room at any given time shall be minimized to ensure congestion and social physical distancing requirements. The locations must be suitably ventilated.

3. Lunch rooms or the eating places of each construction site must always be kept clean and disinfected.
4. Water taps of the lunch room be automated or disinfected regularly. Automated taps could be made with the use of a pedal.

5. The chairs/seating arrangements in the eating places and lunch rooms must be kept at distances fulfilling social physical distancing requirements.

6. As much as possible steps must be taken to arrange the chairs in the lunch room ensuring that they are not facing each other but facing the same direction.

7. Construction workers must be encouraged to use disposable wrapping and containers to take or carry meals. Any waste disposal must be carried out according to the guidance of the health inspector and for this purpose foot operated bins are recommended.

8. Catering services deployed at the construction sites must adhere to Hygienic and healthy ways and this should be guided by and ensured by the health inspectors.

5.10. Changing Rooms

1. Changing room/s shall always be kept clean and disinfected. Proper ventilation shall be ensured. Hand-washing must be facilitated at or near the changing rooms.

2. In order to minimize the spread of the virus, clothes and garments of each worker shall be kept separately,

3. The chairs of the changing room must be kept at a distance of one meter, cleaned and disinfected regularly.

4. The number of people using changing rooms at any given time shall be minimized to prevent undesirable social physical distancing.
6. Administering a Construction Site to Prevent a COVID-19 Outbreak

Stakeholders of the construction industry should strictly ensure the practice of preventive measures introduced in this guideline to ascertain the prevention of the spread of COVID-19 in construction sites.

6.1. General

1. Contractor shall suitably appoint Construction Safety & Occupational Health (CSOH) supervisors at site/s to closely monitor whether the instructions are strictly adhered by the occupants of the sites.

2. Every construction site shall facilitate Public Health Inspectors (PHI) to visit the sites to inspect and provide guidance with respect to the adequacy of precautionary measures taken to ensure the safety of the workers and steps taken to curb any possible spread of the COVID-19 virus.

3. Contractor may introduce a suitable system imposing a fine for violators of COVID-19 health guideline to maintain work place discipline.

4. Every construction site must strive to operate only with resident workers. However, if workers are permitted to move in and out of the premises, then it must be done under unavoidable circumstances and by responsibly adhering to health guidelines such as disinfection and social physical distancing.

5. Every construction site must appoint a Health and Safety Committee to ensure that the guideline conditions are met and adhered to. These committees are recommended to meet at least once a week to evaluate the management of the threat due to COVID-19 and then to effect any remedial action if required.

6. Construction sites should arrange a shift work system to limit the number of workers to the required minimum, and also establish specific movement arrangements to minimize interaction.
7. At each construction site there must be sufficient space to ensure safe social physical distancing between people waiting to enter and exit the site. Each site is recommended to use signage such as floor markings, to ensure the maintenance of safe social physical distance between people when queuing. A similar method can be used at applicable work area to avoid contact between worker teams.

8. Each construction site must ensure non-mixing of members in work teams as a precaution of arresting a possible outbreak of COVID-19.

9. While sanitizing hands after use of a finger print machine, disinfecting the machine after each shift may not be necessary.

10. In large projects where the number of workers are high there would be a difficulty to carryout manual body temperature checking procedures. In such situations, it is advisable to acquire equipment using technologies such as Infra-Red Rays. Prior to deciding on the number of equipment, it may be appropriate to evaluate the number of workers entering at a time.

11. Each construction site must take steps to postpone the non-essential training and non-essential site visits from external parties.

12. Each work site is advised to develop a COVID-19 Preparedness plan; considering the occupational exposure level of employees, the individual risk factors and other recommended good practices mentioned in this guideline. Each member of the work force must be aware that this plan will not only enable the prevention/ control of the spread of infection but also prevent panic situations in the event of detecting a suspected case.

13. Safety of each activity to be undertaken must be carefully re-evaluated under the COVID-19 situation. In case any activity cannot be safely undertaken, then such activity should be postponed or cancelled as appropriate.

14. Where loading and offloading arrangements on site is allowed, drivers shall remain in their vehicles. Where drivers are required to get down from their vehicle, they should wash or sanitize their hands before handling any materials.
6.2. Preparation for Resumption

As a pre-requisite to the opening of a site after the closure of construction sites due to COVID-19 lockdown, each site must be prepared and inspected to ascertain the following.

1. It is necessary to verify whether there are any breeding spots likely to have harbored dengue-mosquitoes and implement effective action to curb the situation.

2. Ensure an effective site clearing operation to remove weeds and similar vegetation, dispose undesirable extraneous matter and then perform a disinfection exercise.

3. Verify whether toilet and other sanitary facilities are adequate to fulfill the COVID-19 safety considerations. If necessary, take steps to upgrade the existing or erect new facilities ensuring the adequacy to support the new conditions stipulated for safety from COVID-19 pandemic.

4. Ensure effective communication by clear and specific notices to all potential workers indicating that it is extremely important for them to remain in their locations if they are experiencing either a mild cough or low-grade fever (37.3°C or more).

5. Employees returning from other Districts must be carefully scrutinized by checking with the Health Ministry quarantine requirements such as MOH certificates, and then in case of a clear necessity, further quarantine should be pursued.

6. Proper investigations must be carried out to ensure that any person with symptoms, or having been in contact with a positive case in the last 14 days, or quarantined by health authorities is not allowed to commence work.

7. Each construction site must ensure a clear site plan indicating the key designated locations such as exits, hand-washing facilities, cafeteria/lunch rooms, changing rooms, office of the health inspector locations for washing/temperature check etc. The plan must ensure clear labels, using applicable language(s) for easy understanding of construction workers.
8. At each construction site the order of actions that has to be adhered to after entering the premises must be very clearly stated by using notices and verbal instructions. The following indicates the desired sequence to be ensured.

   a. Handing over personal belongings
   b. Washing hands
   c. Temperature check
   d. Second temperature check (if required)
   e. Finger scan (if available)
   f. Use of Hand-Sanitizer

9. Posters and placards promoting respiratory hygiene, with instructions for wearing masks, washing hands shall be adequately displayed.

10. During the critical period each construction site must take precautions and prior to commencement each site must make arrangements to display notices to prevent the entry of unauthorized visitors.

11. In case of granting permission to allow temporary/short period visitors, then precautionary measures must be arranged prior to the commencement. These arrangements must ensure requirements such as temperature measurements, washing hands, social physical distancing etc., clearly mentioned in this guideline. After the departure of such a visitor, the places occupied must be disinfected to the satisfaction the health inspector.

6.3. Site Cleansing & Maintenance

Cleansing the sites, material and machines also form a very important part when attempting to achieve the desired hygienic conditions in construction sites. There are several tasks that need to be carried out under site cleansing and maintenance. They are as listed below.

1. The construction site, its machines, equipment, tools, stocks of material have to be regularly sanitized using a disinfectant.

2. Metal and plastic surfaces could contain the COVID-19 virus over a number of days. Hence such surfaces shall be properly disinfected. All metal surfaces shall be disinfected with minimum of 70% v/v alcohol solution. All non-metal surfaces shall be disinfected with 0.1% sodium hypochlorite solution.
3. Construction sites must be kept clean and disinfected. The surrounding atmosphere must be kept with clean air to minimize the spreading of the virus.

4. All the doors in buildings and structures of the construction site must be opened as long as possible providing ventilation and fresh air, thereby minimizing the spreading of virus.

6.4. Construction Site Meetings

1. Physical meetings must be called only for essential reasons such as wider discussions, opinion sharing with back and forth idea exchange etc. However physical presence for meetings shall be kept at a minimum. In such essential and unavoidable physical meetings, the participation must be kept low, staggered and preferably held in batches. Safety precautions must be taken by cleansing, disinfection, wearing face masks and gloves, maintaining social physical distancing etc., mentioned earlier as mandatory health requirements. Greetings by means of shaking hands, embracing each other etc., must be avoided. The traditional “Sri Lankan – “Ayubowan” by keeping hands together must be used for greetings.

2. Conducting meetings with a face to face arrangement shall be avoided to the maximum possible extent. Whenever the participants possess the capability, all meetings must be conducted using communication tools such as teleconferencing / video conferencing.

3. Conducting construction site meetings must include a careful selection of meeting location. Each construction site manager must ensure that site meetings are held in wide open spaces where workers can maintain minimum social physical distance. Each meeting must ensure the social physical distancing and safe hygienic measures that have been imposed by health authorities and also clearly described in this guideline.

4. As a prerequisite, each meeting manager or meeting host must pre-order sufficient supplies including face masks tissues, and hand sanitizer dispensers adequate for all participants.

5. As a prerequisite, each meeting manager or meeting host must confirm the availability of the health officer and also ensure the availability of
emergency requirements such as surgical masks for use by anyone who develops respiratory problems or any other COVID-19 symptoms.

6.5. Using Lift or Elevator

1. Minimize the spreading of virus by minimizing the use of the Electric Stairways and Lift/Elevators.

2. The operating buttons and handles of Lifts/Elevators must be regularly disinfected.

3. When using the lift/elevator, the persons so using must face the walls of the same and thereby minimizing the spread of the virus. The number of persons traveling in the elevator shall be minimized. A ground plan must be made for this purpose.
7. Administering an Emergency COVID-19 Situation

7.1. Preliminaries

COVID-19 emergency situations vary from the general construction site emergencies. Hence it is very important for each construction site to plan ahead to ascertain safety of the affected person or persons, the co-workers and also the construction site.

The identification of a COVID-19 suspect case alone is considered as a state of emergency within a construction site. Hence appropriate action as the care for the suspected patient and as measures to arrest spreading of COVID-19 must be affected immediately. The degree of urgency at a construction site after a suspect case had been identified, should also be attributed to the place, elevation and type of work a worker is carrying out at the time of detection.

Following preliminaries are considered as essential for successful handling of a COVID-19 emergency situation,

1. It is fundamentally mandatory for each construction site to nominate a health inspector, maintain an on-site, designated first aid room and an isolation room. These areas must be properly labelled and placed with important notices. Among other notices, there must be clear notices displayed to understand the procedure that must be followed during a COVID-19 emergency situation.

2. At each construction site a register of deployed workforce must be made available. This register must contain name, national identity card(NIC) reference number and other details as in the NIC, current address, name and address of a person to be contacted in case of an emergency, and important telephone numbers etc., corresponding to each person working in the particular construction site. This “Site Workforce” register must be complete, updated and verified on a daily basis.

3. The above register must provide space to note information related to persons who are most vulnerable. This can include a classification according to the age, prior records of other critical illnesses, habits critical in terms of COVID-19, a record of whether a person is from a place known to have COVID-19 cases, whether a person is or had been either directly
or indirectly connected to a COVID-19 patient, consideration of the risk level of residential district, a classification of the vulnerability of the transport arrangement from home up to the worksite etc. Each construction site must use these details to identify employees of concern, ensure continuous vigilance and deploy safety precautions.

4. At each construction site the information in the register must also be used to identify vulnerable workers from a point of view of prior health and age. Persons under vulnerable category must be instructed and monitored for strict adherence of guideline requirements. The following may be used with other considerations to assess vulnerability status of workers.

   I. Persons with respiratory ailments (asthma, etc.)
   II. Persons with single or multiple non-communicative deceases such as diabetes, high cholesterol levels, high blood pressure, etc.
   III. Heavy smokers
   IV. Persons with compromised immunity systems
   V. Persons above 60 years of age.

5. The information required for the register must be captured by using a questionnaire filled and signed by each worker and such records must be kept for inspection and use in incase of a COVID-19 emergency. Such personal information must be handled ensuring confidentiality. All workers should be educated to inform any change of status to ensure their own safety in case of an emergency.

6. Monitoring and Tracking of the construction workforce within the premises must be carried out. Each construction site must deploy a method to track and monitor the geographical position of each worker at any given time. Such tracking details must be used to identify the location of a suspected COVID-19 case, to provide instruction to re-locate in case of an emergency, or to seek help from others to overcome a possible emergency situation. The functioning of a tracking system may be either by using physical/manual methods or by using communication technologies.

7. In extreme situations in which a construction site is compelled to handle a suspected worker, the stipulated procedures must be strictly adhered by using the recommended PPEs. Each site must strictly adhere to the timely provision and use of PPEs for COVID-19, such as respirators, N95 certified or
equivalent face masks, eye protection goggles or a face shields, non-sterile long-sleeved gown and gloves, waterproof aprons. **It is necessary to ascertain that all construction sites are equipped with such items as recommended by health authorities, well before the recommencement of construction activities.**

### 7.2. Detecting a Suspected COVID-19 Case

The following must be adhered to in case of detecting a suspected COVID-19 case at a work site. The health officer of each site must ensure that all members of the work force in that are with enhanced awareness.

1. The COVID-19 suspected worker must be advised to continue wearing the mask and kept in isolation. Until the suspected person(s) are transferred to a hospital, all relevant precautions as mentioned in previous sections must be taken to arrest the spread of the disease. The emergency room and available PPEs must be used to handle the situation. Immediate action must be taken to inform the MOH of the area.

2. Transferring of a suspected case to a designated hospital must be by using an ambulance or as instructed by Health Authorities.

   **‘Suwasariya’ ambulance** service can be contacted by dialing 1990. In case an alternative is required, then the Health officer of the construction site may use any other ambulance or seek assistance from the contact numbers mentioned below to obtain assistance and instructions.

   - The Ministry of Health hotline, available 24 hours – 0113071073
   - The Government media unit hotline – 117
   - ‘SuwaSariya’ Health line – 0710107107
   - Medical Officer of Health of the area or other responsible persons in the area, whose contact numbers are displayed in the emergency room

3. Construction site must take all possible actions to assist the PHI of the relevant area / other authorities / special units appointed by the Health Ministry / Presidential Task Force to trace the contact-persons associated with the suspected case. The details of such contact-persons available with the site must be urgently made available to the relevant authorities. Each construction site must take all possible steps to assist health
authorities the contact tracing exercise and facilitate to enforce self-quarantine.

7.3. Cleansing after a Suspected Case

1. All construction sites must incorporate a recommended site cleansing procedure after the identification of a suspected COVID-19 case.
2. The entire work force must be made aware of the facts to avoid any further danger from new cases of COVID-19
3. The entire work force must be instructed to re-ensure the application of precautionary measures against COVID-19 such as, disinfection, face masks, social physical distancing etc.
4. All general and other waste from a suspected or confirmed case shall be incinerated or disposed by following the guidelines for waste management issued by the Ministry of Health

8. More Information and Sources

CIDA has taken all efforts to include the important information for construction sites of Sri Lanka. However, in case of gaps the construction industry is advised to use the following and other reliable sources to ensure the safety of the industry, the economy of Sri Lanka and our nation.

8.1. Information about COVID-19 Infection

More information about the COVID-19 infection can be obtained by vising the following websites

- [https://www.who.int/srilanka/covid-19](https://www.who.int/srilanka/covid-19)

8.2. Other Awareness Enhancements

1. Definitions of parties to the Contract (Employer/Engineer/Contractor) shall be as defined in CIDA Standard Bidding Documents [http://www.cida.gov.lk/sub_pgs/publications.html](http://www.cida.gov.lk/sub_pgs/publications.html).

2. CIDA from time to time will take steps to publish further developments related to the COVID-19 guidelines in the official website at [http://www.cida.gov.lk/index_en.html](http://www.cida.gov.lk/index_en.html)
3. Composition of Sanitizing liquids, body temperature values and all other medical instructions and general work place safety practices shall be as per the Operational Guidelines on Preparedness and Response for COVID-19 outbreak for work settings - Interim Guidance 17th April 2020 published by the Directorate of Environmental Health, Occupational Health and Food Safety of Ministry of Health and Indigenous Medical Services.

Part 2- SUPPLEMENTARY PROVISIONS
Health and Safety Guidelines for Sri Lankan Construction Sites to be adopted During COVID-19 Outbreak

Part 2: Supplementary Provisions

9. Importance of Immunity

9.1. Traditional Practices

Government directives on “Guidance for Work Place Preparedness for COVID-19”, provide very clear and vital course of action with respect to the prevention of “COVID-19” threat and the Part 1 of this guideline (version 2) elaborates the application of these cautionary activities for the construction industry of Sri Lanka.

The native, traditional and Ayurveda medicine practices of Sri Lanka also provide Supplementary advice to Sri Lankans and others. Most of these advices are known and had been practiced over a long period of time. These advices and practices have bonded with Sri Lankan culture and presently even western nations have embraced many of them. Good examples are the “Ayubowan” method of greeting each other which automatically ensures avoiding physical contact and enables easy social physical distancing, practice of avoiding hugging to show affection, drinking warm plain tea with a drop of fresh ginger etc. Among example practices commonly used by Sri Lankans are, drinking of coriander with ginger, “Veni-vel” in case of an influenza threat, chewing of “Vel-mee” in case of coughs, and drinking a dose or two of “Peyawa”- a commonly known decoction, in case of an advancing cough and a cold.

As the apex agency for the construction industry in Sri Lanka, the prime intention of CIDA is to protect the construction workforce from an attack of COVID-19. After a careful evaluation, CIDA recognized the important need to enhance the immunity of the workforce as a prime role that has to be taken care in parallel to preventive actions required by the Health Department Directives.

Though the native, traditional and Ayurveda medicine practices of Sri Lanka and associated ministries have thus far not made public announcements or issued directives with regards to the practices that can be opted by the public, there are many individuals who have taken the leadership to provide advice over the internet and other methods. In this connection CIDA referred available documentation while consulting registered medical practitioners to obtain
advice. At the same time, CIDA also made attempts to capture the food practices that were administered in some of the quarantine centers. The sources that are used to compile the information of Part 2 are in Annex 2.

9.2. Personal Immunity

‘Immunity’ of a person is the ability of a person’s body to resist diseases through activities of specialized blood cells or antibodies produced by the body. Further it is the ability of the body to recognize and dispose of substances which it interprets as foreign and harmful to its well-being. Generally, each and every person possess natural immunity. Natural immunity is a genetic characteristic of an individual and the immunity level varies from a person to person. In addition, personal immunity can be acquired; Immunity can be acquired by vaccination to get protection from certain diseases. However, as no vaccination has yet been developed for the Corona (COVID-19) virus, the general public and especially the construction workers have to depend on individual immunity or even follow methods to boost self-immunization to be safe from getting infected.

The precautionary methods such as face masks, social physical distancing and washing hands are not meant to enhance personal immunity but to assist one’s system to ensure protection from an attack by either COVID-19 or any other relevant virus.

Ayurveda, Traditional and Native practices which are time tested medical practices in the world has a strong reliance on “the power of the body can prevent or even resist developing diseases “. Hence, if personal immunity enhancement practices of such commonly known practices can be incorporated to the day to day routines of the construction industry, and if they become effective, then it will be a huge bonus for the industrial sector of Sri Lanka.

In this backdrop CIDA has consulted many persons, professionals, documents, internet sources and extracted useful information to recommend the construction industry to practice as a measure of immunity enhancement of construction workers.
9.3. **Conditions which Improves/Boosts Immunity**

As indicated previously, strengthening the immune system of a construction worker is of utmost importance especially because of the economic status of those workers and also because of unique nature of construction activities in Sri Lanka.

Having recognized the importance of the construction sector, the non-western medical practices also recommend that workers should be encouraged to maintain good personal health, hygiene and practice. Accordingly, the construction site managers must facilitate the following to boost immunity of its work force. Then are by encouraging/advising/supporting,

- A healthy lifestyle supported by a good continuous sleeping habit
- Healthy food choices and a balanced diet
- Regular physical exercises and a possible introduction of yoga exercises
- To drink adequate amounts of clean water and preferably warm water.
- To abstain from unhealthy habits such as smoking and alcohol consumption

Apart from the above, the references on Non-Western medical practices enabled the extraction of a daily setting that a construction site manager is able to practice during working hours.

These immunity enhancement recommendations which include steam inhaling, herbal beverages, and add-ons for meals are included in five breaks mentioned in the daily menu in order to ensure ease of application at a construction site. These can be recommended with suitable modifications and further medical advice if required.
10. Supplementing the Heath Directives

The health directives of the government concentrates on preventing a threat of COVID-19. CIDA feels that the construction industry can affect no-risk action to act as an insurance against COVID-19. The situation that has arisen due to this pandemic or the impact from COVID-19 shows a close similarity to climate change impacts. In case of climate change, though the entire globe is affected, many countries are aware of their inability to mitigate impacts. Therefore, such countries contribute by taking adaptation measures for anticipated scenarios. Since most of such adaptation methods are expensive, the common first choices are the “No-risk” options. The advantage of “No risk” options are that even if the intended objective is not fulfilled, the option would still serve as a positive for the country.

Similarly, CIDA feels that in case of COVID-19, the Sri Lanka’s construction industry can take a “No-risk” action path by incorporating an immunity enhancement option that would also may battle and win against the COVID-19. Though the traditional, native and Ayurveda doctors claim to have solutions for the COVID-19 pandemic, the western medical practice shuns such claims by citing the absence of clinical test results for diagnostic decision making.

In this back drop CIDA after an evaluation of the ongoing practices and after consulting an Ayurveda medical practitioner recommends a daily practice advice for the favorable consideration of the construction industry.
11.  **Day to Day Practice Advice**

The CIDA recommendation for construction industry to practice as a daily menu for its work force, which has also been confirmed as suitable by an Ayurveda medical practitioner is as given below.

<table>
<thead>
<tr>
<th>Recommended Daily Work Place Menu for Construction Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Prior to or at the commencement of Work</strong></td>
</tr>
<tr>
<td>- <strong>Steam Inhaling</strong>: Boil water with or without additives such as coriander leaves, citrus leaves, vinegar and inhale steam for approximately 2-3 minutes</td>
</tr>
<tr>
<td>- <strong>Provide a Drink</strong>: a cup of Coriander boiled with Ginger</td>
</tr>
<tr>
<td><strong>2. Morning Tea Time</strong></td>
</tr>
<tr>
<td>- <strong>Provide a Drink</strong>: a cup of Coriander boiled with Ginger</td>
</tr>
<tr>
<td><strong>3. Lunch Time</strong></td>
</tr>
<tr>
<td>- <strong>Provide to Eat</strong>: a few raw red onions and/or 2-3 raw cloves of garlic with the main meal</td>
</tr>
<tr>
<td><strong>4. Afternoon Tea Time</strong></td>
</tr>
<tr>
<td>- <strong>Provide a Drink</strong>: In lieu of tea, prepare a warm beverage using 20 grams of ginger, 10 grams of cinnamon, 5 grams of Turmeric and 50 grams of Garlic for each 90 milliliters of water and boil to provide as a drink for the work force</td>
</tr>
<tr>
<td><strong>5. After work (at the time of leaving site)</strong></td>
</tr>
<tr>
<td>- <strong>Provide a Drink</strong>: the same beverage used for the afternoon tea time.</td>
</tr>
</tbody>
</table>
12. Medicine for COVID 19

There are many documentation and practitioners that have publicly indicated that there are cures for COVID-19. As this is beyond the purview of CIDA guideline, the advice that can be extended is to follow the guidance given by the registered medical authorities. This is because our consultations revealed that the medicine for COVID-19 depends on the stage of the development of the virus within a body at the time of identification.

13. Bibliography

1. WHO- Infection prevention and control during health care when COVID-19 is suspected- Interim Guidance: 19th March 2020
2. Operational Guidelines on Preparedness and Response for COVID-19 Outbreak for Work Settings Interim Guidance 17th April, 2020:
14. Annex 1

**Important web sites for Sri Lankan Government Directives**

- [hpb.health.gov.lk › covid-19](hpb.health.gov.lk › covid-19)
- [https://alt.army.lk/covid19/](https://alt.army.lk/covid19/)
- [www.epid.gov.lk › web](www.epid.gov.lk › web)
- [https://www.who.int/srilanka/covid-19](https://www.who.int/srilanka/covid-19)
15. Annex 2

Contacts that assisted in the Acquisition and Preparation of Information in Part 2

- Dr. Lokuge Jayasiri, Gampaha Siddaurveda Dispensary, Megalle, Galle
- Mr. Ruwan De Silva, Kaluwella, Galle
- Mr. Susantha Ranjith Liyanarachchi, Thalgaspe, Elpitiya
- A set of selected staff members of CIDA
- Web sites local and regional on non-western medicine for covid-19
  - [https://www.google.com/search?client=firefox-b-d&sxsrf=ALeKk022CU3w0btEWuYDxEoXpzPo8ASqOQ:1590211633182&q=C OVID+19+relief+assistance+from+Traditional,+Native+or+Ayurveda+medic al+practice.https://mail.yahoo.com/d/folders/1&spell=1&sa=X&ved=2ahUKEwjjq438n8npAhXlIQ30KHVNFCDIQBSgAegQIIBBAI](https://www.google.com/search?client=firefox-b-d&sxsrf=ALeKk022CU3w0btEWuYDxEoXpzPo8ASqOQ:1590211633182&q=COVID+19+relief+assistance+from+Traditional,+Native+or+Ayurveda+medical+practice.https://mail.yahoo.com/d/folders/1&spell=1&sa=X&ved=2ahUKEwjjq438n8npAhXlIQ30KHVNFCDIQBSgAegQIIBBAI)
For more information:

Construction Industry Development Authority
“Savsiripaya”, 123, Wijerama Mawatha, Colombo 07, Sri Lanka.
www.cida.gov.lk
Tel: 94-11-2699801 Fax: 94-11-2699738
Email: info@cida.gov.lk