Assessment on Impact of Covid-19 on Ethiopian Construction Industry

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Abstract:
Ethiopia is the second-most populous country in Africa with more than 110m people. The country’s real GDP growth in 2019 was 9.0% and it was forecasted to be 6.2% in 2020 pre-COVID-19 and this forecast has now been revised downwards to 3.2% in 2020. The construction industry as the core of the nation’s economy is now facing the headwind from the COVID-19 pandemic and cannot except isolated from its impact. Beyond this, the unorganized and fragmented nature of the industry likely to exacerbate this effect. COVID-19 is having a massive impact on construction projects, but the legal implications vary from country to country and contract to contract. To better understand possible outcomes on construction projects, this study reconnoiters the potential impact of COVID-19 on the industry. At this stage, COVID-19 is not, broadly speaking, rendering projects altogether impossible to complete. But it is slowing them down, causing delay and disruption, even if only because supply chains have been severely disrupted. In construction, the impact will be seen on temporary workers or daily laborers since construction works specifically small and medium projects will face significant loss on demand; hence, daily income will drop to zero for this segment. When we conclude it, scarcity and increasing cost of construction materials, hard currency shortages, reduction productivity, shortages of labors, delay of projects (extension of time), and incurring additional cost are the major impacts of COVID-19 on the Ethiopian construction industry. Social distancing, the supply of PPEs and sanitizers, alternative arrangements for transportation, facilities, working hours for staff, and labor are among the mechanisms that should be done in the construction projects to minimize the impact of the noble corona virus.

Keywords: COVID-19, Construction Industry, Ethiopia, Impacts.

1. INTRODUCTION

The construction industry is a fundamental economic sector that permeates most of the other sectors as it transforms various resources into constructed physical economic and social infrastructure necessary for socio-economic development. It embraces the process by which the physical infrastructure is planned, designed, procured, constructed, or produced, altered, repaired, maintained, and demolished. The construction industry has important contributions to the Ethiopian economy, as demonstrated by its share in the GDP which contributes about 19.5[1]. The sector has registered remarkable growth, over the last 11 years there has been increased investment in the development and expansion of various infrastructure projects[2]. The industry comprises of organizations and persons who include companies, firms, and individuals working as consultants, main contractors, and sub-contractors, material and component producers, plant and equipment suppliers, builders and merchants. The industry has a close relationship with clients and financiers. The Ethiopian government is involved in the construction industry as a purchaser (client), financier, regulator, and operator. The construction and real estate sectors combined contributed about 20.37% to Ethiopia’s GDP in 2019 and now there are 159 major construction projects currently underway in Ethiopia as of 2019 and a further 85 set to go ahead within the next five years[3]. Infrastructural projects are however expected to stall due to a shortfall in revenue collections by the government and reduced FDI inflows into the country. The Construction industry has a great role in the development, social, and economic activities of the country and it is a base for other industries that involve everyone’s life activities. On the other side, in Ethiopia, the construction industry is a huge investment sector for the last many years averagely 58-60% of the capital budget is spent on this industry. It contributes to employment and income creation for the population. It also contributes to government revenue through the generation of corporate profit tax and employee’s income tax which in turn goes to finance public services such as schools and health institutions among others[4]. The growth of this industry is in a young stage it started to arise from the recent 15-20 years facing different challenges. As a business, the construction industry is a risky business because it has predetermined benefits but unknown costs throughout the construction process. Such as when we see from the contractors’ perspective as they pass the tender evaluation cost estimation is calculated based on the project schedule and their payment is known at the beginning but the cost, they spent on the construction process is uncontrolled the exact expense is not determined. There is a gap between legislation and the execution of legal laws of the country. The regulatory body called construction works and supervision authority starts a good step to fill the gap between different construction industry stakeholders and works as external supervisors to evaluate how the industry is going on. From another point of view there is an unbalanced role and responsibilities between the stakeholders, most of the time it is blame oriented of contractors, the consultancy has power for the decision but responsibilities are not clearly defined. Among the challenges of the construction industry one and foremost is the financial problem like inflations, the government did not imply any solution for the inflation, the load was carried by only
 contractors it killed their working capacity, they were survived by borrowing money from banks, using of advance payment of other projects and credit from suppliers. The construction sector plays a key role in the functioning of economies, accounting for a considerable share of GDP and employment opportunities. It generates a significant economic activity through linkages with other sectors of the economy. The nature of the construction business requires local production, importing of raw materials and experts, high labor, and material intensity, and this helps to explain why the industry should mainly be oriented towards the economic growth of the nations. As the construction of sectors in Ethiopia has just begun to bloom, demand for resources has increased rapidly in recent years and is expected to increase further in the near future. But COVID-19 may affect its rapid growth. In today’s globalized world, there is hardly any place that has remained unaffected by the severity of the Novel Coronavirus or the COVID-19 pandemic. Almost every commercial activity is suffering at the hands of the ruthless COVID-19. Because of the inherent nature of the business activity, some industries may unwittingly prosper under the pandemic, while some would weather the storm, albeit with much difficulty, but of the hardest affected, the construction sector is definitely on the wrong end of the curve. The novel coronavirus was discovered on January 9th in Wuhan province in China and the first case of COVID-19 was reported in Ethiopia on March 13, 2020. The cases have since escalated to 10,207 cases, with 170 deaths and 5,127 recoveries as of 20 July 2020. The Ethiopian government has also ordered that certain businesses stop working. However, the construction industry has generally not been the subject of ordered shutdowns.

This is for several reasons, including:

- The importance of the continuation, if possible, of construction projects; and
- The fact that the health and safety risks of COVID-19 vary from project to project. For example, people who are working outside, and are not physically close to each other, maybe in a better position to comply with the new health and safety precautions than people working in an enclosed environment. In all cases, though, where work continues, health and safety risk assessments need to be conducted, consistent with medical, scientific and government guidelines, and contractors’ duty to provide a safe working environment. As a result, this paper amid to assess the different conditions of contracts on the pandemic, impacts of the current corona pandemic on the construction industry, and ways forwarding to the construction project stakeholders during the pandemic.

2. IMPACT OF COVID-19 ON ETHIOPIAN CONSTRUCTION INDUSTRY

Companies across the world irrespective of their size-dependent input from abroad have started experiencing a contraction in productions. Transport has been limited and even restricted among countries has further slowdown of global economic activities[5]. The world’s problem-solvers, engineers worldwide are striving to rise to these challenges with increasingly innovative solutions, aided by advances in technology, to provide short-term and longer-term responses[6]. That is why WFEO calls on engineers worldwide to take rapid action and make emergency plans based on local conditions to address the urgent infrastructure needs to control coronavirus. COVID-19 is having material and global impact on the delivery of construction projects across the world. Following the recommendations of the World Health Organization (WHO), and FDRE Minister of Health, Containment Protocols for construction has been implemented to provide maximum safety for construction workers, enforcing measures for adequate prevention and control of the spread of the virus. Some of the new restrictions that require construction to continue are reducing work hours, implementing shorter shifts, increasing distances between workers, disinfecting tools and equipment between shifts, not having site visits, and having high-risk employees stay at home, among others. The construction sector, the transport sector, and manufacturing are the more vulnerable to economic shocks arising from the pandemic due to a significant drop in the global demand and a high dependency on international markets, and services in urban areas affected by a shock in local supply and demand[7,8]. Construction will be heavily impacted by the crisis, as a direct impact of the global demand shock, as well as the supply shock due to social distancing measures and if the crisis continues for 6 months, an average estimation of 1.76 million jobs threatened (-33%) [8] Depending on the restrictions, construction projects have seen severe productivity impacts, or in most cases, the complete suspension of all construction activities may occur if the pandemic increases. According to [9], Ethiopian GDP will be declined by 2.7% due to a decline in commodity prices could lead to fiscal pressures and it making it impossible to respond to the COVID-19 crisis. The impact of COVID-19 may vary from project to project, region to region, nation to nation, and continent to continent due to deference in project types, project locations, project owners, project duration and complex, type of contract. According to FDRE, Planning & Development Commission[2], May 2020, report, COVID-19 will cause to increase in unemployment rate about 9.8% at the national level and 20%.particularly in construction industry unemployment. Since the pandemic has happened around the globe, it will increase the Ethiopian foreign currency shortage by 60 to 70% and it will reduce construction company’s ability to pay wages and bank loans. That is why almost all Ethiopian governmental, corporate, and private financial institutes state delives of loan return period and interests. According to [3], capital projects such as railway and road construction are expected to gain momentum again from 2022 once the election is over. With industry growth estimated to contract at between 17% to 26% in light of the COVID-19 pandemic, the construction sector is anticipated to witness a 9.9% contraction on its contribution to Ethiopia’ s GDP as the country battles to contain the spread of the virus. Further, a USD 23.3m decline in the income of workers is expected monthly as the country goes through a state of emergency. The consequent aftermath of the pandemic expected is a decline in project financing as lenders would be uneasy to finance construction projects because of the uncertainty surrounding the completion of projects. On the other hand, FDRE, Ministry of Urban Development and Construction, May 2020, report stated that COVID-19 will cause reduction of productivity by 40%, the income of labor, SME, material suppliers, equipment rentals, will be reduced by 2.6%, 11.2%, 18%, 4.4% respectively. In addition to that contractor’s expenditure and the unemployment rate will be increased by 15.1% and 40% respectively. As the wall as GDP may be reduced by 40%.
Generally, some of the possible areas of adverse impacts of COVID-19 on construction industry are:

1. Labors hortaged due to difficulties in mobilization and it will cause 61% of job loss in the only by construction industry[7]. In this case, temporary/daily laborers (that constitute up to 90% of the jobs in this industry) are expected to lose their jobs relatively quickly, and different levels of skilled works will be affected in the waves[8].

2. Disruptions on the supply chain of construction resources due to difficulties in mobilizing especially importing materials like cement, steel, aluminum, and their products. This due to the major countries (China, Turkey, Japan, UAE, UK, USA, Italy, South Africa, India,) that Ethiopia imports for the construction industry are now made lockdown due to this Noble Corona Virus pandemic.

3. Additional cost due to new Safety and Health requirements, foreign currency shortages, in general, because of delivery delays.

4. Delay or additional cost emanated from changes of the law restricting the activities.

5. Reduction in productivity is because of the social distancing of laborers and restrictions by the government.

6. Management becomes intensive because of unfamiliar roles & responsibilities introduced by regulatory bodies and claim administration.

7. Increase expenses due to additional cost for PPEs, and idleness of resources like equipment, machinery, and tools, human resources

8. Materials, plant or equipment are coming from China (or other affected countries) and supply has been delayed

9. Price escalations of a resource like the cost of cement were 210ETB before COVID-19 and now its riches to 500ETB which is 239% of price escalation.

10. Reduction of new investments in the construction industry

Beyond this COVID-19 causing thousands of new cases and fatalities as well as wide scale disruption and fear, both societally and economically[6]. Owners and contractors are carefully analyzing whether they should terminate or suspend projects or portions of projects. Some will opt to press forward while some will opt to terminate or suspend. Virtually every contract and subcontract allow the upstream party to suspend or terminate the project at any time for any reason, without a showing of downstream default. The disputes center on who must pay for lost revenue (including overhead and profit) and who bears the costs to demobilize and remobilize. Those questions can be answered only by looking at the relevant contracts. Many contracts require the contractors and subcontractors to bear the costs; many others allow recovery.

3. COVID-19 AND CONSTRUCTION CLAUSES IN FIDIC AND PPA

On the contractual side, much focus is now being given to the wording of standard forms, where used, such as international FIDIC and the local PPA conditions for more on this topic. The Ethiopian construction industry is one of the industries which is severely affected not only by an international and national lockdown but also by other unforeseen situations related to prevailing conditions that may be related to the COVID-19 pandemic. Most construction projects have become under threat within a short period resulting in unforeseen delays, disruptions, and additional costs, as caused by the COVID-19 pandemic. In the new FIDIC COVID-19 guidance memorandum to users of FIDIC standard forms of works contract, the contractor may explore remedies under SC 8.4(d) of the RB2017, YB2017, and SB2017, SC 8.5(d) of the RB2017, YB2017, and EB, and SC 9.3(d) of the GOB, which provide for an entitlement to an Extension of the Time for Completion (EOT) in case of “Unforeseeable shortages in the availability of personnel or Goods (or Employer-Supplied Materials, if any) caused by an epidemic or governmental actions”[10]. The same to that under SB 2017, the contractor is entitled to an EOT only in the event of unforeseeable shortages in the availability of Employer-supplied materials, if any, caused by an epidemic or governmental action. But the contractor should not forget that the above sub- clauses give an entitlement to an EOT only, and make no mention of any financial remedy, because that would depend upon the particular circumstances and whether the contractor can establish entitlement to financial compensation elsewhere under the contract or at law. According to Ethiopian civil code 1960 of article 1793[11], a force majeure the unforeseeable act of a third party for whom the debtor is not responsible for or an official prohibition preventing the performance of the contract or a natural catastrophe. On the other hand, clause 18.1 of PPA,GCC2011[12], state that force majeure means any event which are beyond the responsibility of a contractor and which make a contractor’s performance of its obligations hereunder impossible or so impractical as reasonable to be considered impossible in the circumstances like an official prohibition preventing the performance the contract or a natural catastrophe. Emergency laws or decrees that are issued right now across the world in different jurisdictions are likely to be treated as a change in laws, given the broad definition of laws provided in FIDIC forms. Such changes in laws may impose specific COVID-19 health and safety measures on construction activities (ongoing or on resumption) such as social distancing, the supply of face masks and sanitizers, alternative arrangements for transportation, facilities, working hours for staff and labor, etc. Those changes may well be treated as a variation owing to the “adjustment to the execution of the works” that they may cause, or to the “changed or new applicable standards” that they may constitute. In the alternative, they may be treated as a claim event. In the construction contracts, parties generally expressly state that time is the essence of the contract. A contractor should be careful about such clause(s), as any breach would make the contract voidable at the cost and consequence of the defaulting contractor. Alternatively, the contractor under the force of law may be obligated to complete the project beyond the stipulated completion date and also pay compensation for delay to the Employer. It is imperative that any delay beyond the stipulated completion date, is condoned by the doctrine of force majeure can be applied in favors of the contractor. It is imperative to evaluate if COVID-19 can be considered as a force majeure event or can be invoked for the frustration of a contract. Force majeure is a contractual term giving refuge to a party to absolve from performing part of the contractual obligations due to reasons beyond its control [12]. Force Majeure or an Exceptional Event as defined under clause 18.1 of FIDIC RB[10], it is an event or circumstance which is beyond a party’s control, the party could not reasonably have provided against before entering into the contract, having arisen, such Party could not reasonably have avoided or overcome and is not
substantially attributable to the other party. To decide whether COVID-19 qualifies as a Force Majeure or an Exceptional Event (as the case may be), under this scenario, COVID-19 may fit the bill of being a Force Majeure since it is a natural catastrophe which lies under clause 18.1(f) of the FIDIC 2017 red book. Clause 18.2 of FIDIC RB, 2017 and Clause 18.5 of PPA; GCC 2011, stated that, if a party is or will be prevented from performing any obligations under the contract due to an Exceptional Event, then the affected party shall give notice to the other party of such an Exceptional Event, and shall specify the obligations, the performance of which is or will be prevented within 14 days after the affected party became aware. Beyond this, clause 18.3 of FIDIC RB, 2017, stated that if the Exceptional Event has a continuing effect, the affected party shall give further notices describing the effect every 28 days after giving the first notice. Then the contractor shall be entitled subject to Sub-Clause 20.2 of FIDIC RB, 2017 which is claims for payment and/or EOT. According to Clause 18.4 of FIDIC RB, 2017, if the execution of substantially all the works in progress is prevented for a continuous period of 84 days because of an Exceptional Event of which notice has been given under Sub-Clause 18.2 of FIDIC RB, 2017 for multiple periods which total more than 140 days due to the same Exceptional Event, then either party may give to the other party a notice of termination of the Contract. Clause 44.1 of GCC of the PPA 2011 states that, if during the execution of the works the contractor encounters artificial obstructions or physical conditions which could not reasonably have been foreseen by an experienced contractor, and if the contractor believes that additional costs will be incurred and/or an extension of the period of implementation of the tasks will be necessary as a result of this, he shall give notice to the Engineer following GCC Clauses 69 and/or 73. The contractor shall specify in such notice the artificial obstructions and/or physical conditions, giving details of the anticipated effects thereof, the measures he is taking or intends to take and the extent of the anticipated delay in or interference with the execution of the works. And also, in clause 20.1 it said that the contractor shall, on the order of the Engineer, suspend the progress of the works or any part thereof for such time or times and in such manner as the Engineer may consider necessary. With regard to extension of the intended completion date of construction projects, Clause 73.1 of GCC of the PPA 2011 mentioned that the contractor may request an extension of the intended completion date if he is or will be delayed in completing the contract by either any suspension of the works which is not due to the contractor's default or force majeure or any other causes referred to in this GCC which are not due to the contractor's default causes. Related with health and safety of workers in the construction site, clause 45.2 of GCC of the PPA 2011 declares, the contractor shall ensure the safety on sites during the whole period of execution and shall be responsible for taking the necessary steps, in the interests of his employees, agents of the Public Body and third parties, to prevent any loss or accident which may result from carrying out the works. In addition to clause 45.4, states if the Contractor is unwilling or unable to undertake the necessary measures, the Engineer may carry out the work at the expense of the Contractor to the extent that the contractor is liable. Subclause 8.5 (Extension of Time for Completion) of FIDIC RB, 2017 provides that, an extension of time is warranted in the case of ‘Unforeseeable shortages in the availability of personnel or Goods caused by an epidemic or governmental action’. This seems to provide a fairly clear entitlement to an extension of time, but it does not provide entitlement to the payment of costs. The matter of costs is dependent on the virus being a force majeure event. And, even if there is consensus amongst the parties that a virus is a qualifying event, there is also another hurdle to overcome. There are of course other considerations before a claim is justifiable.

Some of these include: How has the virus affected the Contractor and his subcontractor’s activities? What activities have been or are likely to face delays? Are the affected activities on the critical path? Can you demonstrate the effect of the delays and predict the effect on the Time for Completion? Have you given appropriate notices in a suitable format? Does the Contractor have contemporary records to substantiate and ascertain the effects of the delays? Generally, post COVID-19, the construction industry could consider the introduction of new clauses in future contracts to set out clear guidelines for action and relief in extreme eventualities, and to minimize disputes that may arise at such a time.

4. HOW CONSTRUCTION PROFESSIONALS CAN ADAPT TO THE CURRENT COVID-19 CRISIS?

In addition to social and health-related measures, the Government of Ethiopia has introduced interventions to safeguard the construction industry including the following.

- Tax exemption for the import of materials and equipment to be used in the sectors.
- National Bank of Ethiopia to avail Birr 15 billion for private banks to enable them to provide debt relief, loan rescheduling, and additional loans to their businesses.
- Banks to avail of foreign currency for importers importing input materials and the construction industry.
- The Ministry of Revenue to expedite VAT returns to support companies with cash flows.
- The Ministry of Trade and Industry to continue strengthening the measures it is undertaking to control price increments and supply shortages of materials like cement.
- The Ministry of Urban Development and Construction prepare guidelines for the industry to prevent the pandemic at the site and made awareness to the stockholders.
- Ethiopian Road Authority launches 27 different road projects with a total budget of 46 billion Ethiopian birr to enhances and support the construction industry in this coronavirus crisis time in across all corner of the country.

Cost and time management are certainly the number one issues for the construction industry, but the human factor is also in great danger, as the number of construction workers that could lose their jobs and livelihood is very high. The best planning under this situation is to find a way to minimize job casualties to companies, projects, and personnel. According to [1], the contractor has a general obligation to be responsible for the safety of all its operations and activities and holds specific health, safety, and environmental obligations.

It also stipulates in particular that the contractor shall:

- Comply with the applicable health and safety regulations and laws which is relevant in the present times where the
government is setting out COVID-19 specific obligations to be complied with on construction sites;

- Ensure that “suitable arrangements are made for all necessary welfare and hygiene requirements and the prevention of epidemics”
- Limit damage and nuisance to people resulting from the contractor’s operations and/or activities.

Beyond this, the Employer is generally responsible for ensuring that its personnel and its other contractors comply to some extent with the same health, safety, and environment obligations which are imposed on the contractors.

5. CONCLUSION

Higher education institutes, national and regional governments, and international bodies must priorities long-term construction capability building to respond to current threats and future-proof economies and societies against a new challenge. COVID-19 will make the performance of many contracts and subcontracts more expensive. Supply chains will be disrupted, material prices like the cost of cement increase, absenteeism will decrease labor efficiency, and general conditions will be extended. As with the question of execut ability, start the analysis by looking at the terms of the relevant contracts. There should be an answer to questions like “Do the contracts allow a contractor or subcontractor to change its price or pass price increases upstream”? Material price escalation clauses are not uncommon, but the application of other contractual provisions is less clear. Carefully examine the differing site conditions clauses to determine whether the conditions on your projects meet the contractual definition of a differing site condition. Some provisions may support a claim. Almost every construction contract requires a claimant to notify the other party in writing as soon as an impact occurs. Anticipate as best you can how the virus will impact your work. Consider not only your obligations to your customer but also your subcontractors’ and suppliers’ obligations to you. As soon as identifying the current or future problems, the contractors must notify the client/customer in writing. As a contractor, you need to state the reasons for the problems by relating the reasons to the virus or impact of the virus, describe how the virus will impact the project’s schedule, costs, and quality. Even if you cannot quantify the impacts, provide the notice, and identify what you can identify. Remember to communicate expectations downstream to subcontractors and suppliers. Let them know your expectations about project compliance, staffing, and health and safety. By anticipating problems and communicating them early, you will not only preserve your contractual rights, but you might also find the other party is sympathetic. Working together you can mitigate the impacts on all stakeholders. Communicating orally or via text is not enough. It should be supported by documents like a letter, change order request, or notice of claim via email or other social media. On the other hand, this outbreak has acted as a catalyst for the construction industry to adopt new digital technologies, due to this we should hopefully see the adoption of new technologies in the future that will yield multiple benefits and increase our efficiency. Working remotely with good digital infrastructure might be easy for designers, consultants, educators, and students but more difficult for large construction site workers. The use of software such as Zoom, Skype, and Microsoft Teams allows the staff of the given construction projects to be more flexible. Not only are these methods more environmentally friendly, but they are also more effective and well-rounded for presentations, discussions, and solutions for issues. Hard copies of documents and drawings could be replaced by the use of digital copies in the coming future.

6. WAYS TO FORWARDING

The contractors are reminded to timely comply with all their communication obligations, such as notices and contemporary records send continuous notices to the Employer, Sub-Contractors, suppliers, etc. An important factor for both owners and contractors is to quantify financial losses by cost category in real-time with periodic updates. COVID-19 restrictions are changing every week in the country although we have seen that these restrictions are generally applicable to an entire country without differences in local jurisdictions. Some of the technical/methods which should be done by the construction industry stakeholders that will be applicable in the industry are:

- Stakeholders should reallocate budget and other resources to the industry.
- Arranging and acquire an application for on-line group meetings/ conference one example is a conference host by Ethiopian Civil Engineers Associations in June2020.
- Ensure enough reserves of PPE and specific equipment in the quantity& quality necessary and are accessible if your office or supplier is locked down.
- Set restrictions of movement on the site for personnel and visitors.
- Consider splitting teams in half to limit exposure to critical personnel resources (Minimum staffing plan) split lunchtime in shifts to minimize the concentration of personnel in designated lunch areas.
- Schedule assessment- subcontractors, and suppliers are experiencing COVID-19 impacts, it is critical to perform a schedule assessment or time-impact analysis, including examining the status of material procurement on your projects, to identify latent delays in the schedule.
- Determine causation and attribute delay as appropriate. Avoid confusion at the end of the project if and when projects shut down about what delays are attributed to forced shutdowns versus delays that existed before the shutdown.
- Resource planning-revisit resource plans across project stakeholders (owner, project manager, architect, engineer, contractor, a subcontractor) and identify current key resources as well as those required for the duration of the project. Obtain updated project organizational charts and track work situations of resources on a regular business.
- Risk analysis-consider different scenarios for how your projects may play out. Include market factors such as disruptions to the supply chain; potential insolvency and bankruptcy of suppliers, vendors, subcontractors, and contractors; and delays in obtaining permits. Assess the costs and benefits of project shutdowns versus slowdowns. Prioritize responses and mitigation activities based on the probability and impact of risks manifesting themselves. Revisit risk registers regularly and consider potential risks and mitigation steps broadly.
- Labor management: the project shall be carried out per the applicable requirements of ESS2, including through, inter alia, implementing adequate occupational health and safety measures.

http:// ijesc.org/
(including emergency preparedness and response measures), setting out grievance arrangements for project workers, and incorporating labor requirements into the ESHS specifications of the procurement documents and contracts with contractors and supervising firms.

- Strengthen contractual provisions: How do we continue to build and not get distracted with litigations/disputes should be answered.
- Budget and cashflow: review budget availability and contingency utilization, the financial impact of lockdown, outstanding and anticipated delayed client payments, ad-hoc vendor/contractor mobilization, advance requirements, enhanced costs of health, and safety norms should be done. “What we're trying to do is reduce the amount of time people spend on site,” “This means that people can make decisions on the project remotely – if they have got up to date and real-time information, they can work remotely”.

**Important things to remember**

- COVID-19 virus can travel in aerosols for some distance and remains viable on surfaces for hours
- COVID-19 is present in sewerage and faces of infected people. Be extra careful around sewerage.
- Take all normal precautions and extra care as per the related authorities’ announcements and declarations
- Take the basics for post-visit sanitation with you (soap and water, clean towel, alcohol gel) and clean up as soon as you are out of any risk area. You can sanitize the outside of your gloves to prevent carrying the virus out of the area while maintaining hand protection •
- Remember to sanitize steering wheel, gear change, keys and door handle of the vehicle when you get home.

7. REFERENCES


“Remember our people are our most valuable asset and the hardest one to replace”