H.G. Infra Engineering Limited

*An **ISO 9001:2015, ISO 14001:2004, OHSAS 18001:2007** Certified Construction Company*

Risk Management Policy

CONTENTS

BACKGROUND

In accordance with Section 134(3)(n) of the Companies Act, 2013, a company is required to include a statement indicating development and implementation of a Risk management policy for the company including identification therein of elements of risk, if any, which in the opinion of the Board may threaten the existence of the company and further as per Regulation 17 read with Regulation 21 of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("SEBI (LODR) Regulations"), the board of directors shall be responsible for framing, implementing and monitoring the Risk management policy/plan for the listed entity. Accordingly, to mitigate and manage risk at "H.G. Infra Engineering Limited" (hereinafter referred to as the "Company" or "HGIEL" or "H.G. INFRA"), the Company has formed the policy (the "Risk management Policy") for the same. This document shall be under the authority of the Board of Directors of the Company. It seeks to identify risks inherent in the operations of the Company and provides guidelines to define, measure, report, control and mitigate the identified risks.

H.G. Infra Engineering Limited is an ISO 9001:2015, ISO 14001:2004, OHSAS 18001:2007 certified construction company engaged in execution of infrastructure sector projects like highways, elevated roads & bridges and Water works. The company also executes other civil construction projects like extension & grading of runways, railways & land development.

The company has become limited adopting more professionalism, modern auditing systems, advanced management software"s.

RISK MANAGEMENT POLICY STATEMENT

- **H.G. INFRA recognizes that it is exposed to a number of uncertainties, which is inherent for the** Infrastructure Construction sector that it operates in. The volatility of the Infrastructure Construction sector affects the financial and non-financial results of the business. H.G. INFRA has developed Risk Management Policy to increase confidence in the achievement of organization"s objectives and to remain a competitive and sustainable organization and enhance its operational effectiveness.

The policy statement is as given below:

1) To establish an integrated Risk Management Framework for identifying, assessing, mitigating, monitoring, evaluating and reporting of all risks.
2) To provide clear and strong basis for informed decision making at all levels of the organization.
3) To continually strive towards strengthening the Risk Management System through continuous learning and improvement and to achieve the objectives of this policy through proper implementation and monitoring.
4) To ensure that new emerging risks are identified and managed effectively.
5) To put in place systems for effective implementation for achievement of policy objectives through systematic monitoring and effecting course corrections from time to time.

OBJECTIVES OF THE POLICY

The objective of Risk Management Policy at H.G. Infra is to preserve shareholder value to the extent practically feasible and to ensure sustainable business growth with stability by identifying and mitigating major operating, and external business risk. In order to achieve the key business objectives, the policy establishes a structured and disciplined approach to Risk Management, including the development of the Risk Register, in order to guide decisions on risk related issues. The specific objectives of the Risk Management Policy are:

1) To ensure that all the current and future material risk exposures of the company are identified, assessed, mitigated, monitored and reported.
2) To establish a framework for the company's risk management process and to ensure

companywide implementation.

3) To ensure systematic and uniform assessment of risks related with construction projects.
4) To enable compliance with appropriate regulations, wherever applicable, through the adoption of best practices.
5) To assure business growth with financial stability.

The effectiveness of Risk Mitigation plans shall be ensured through proper monitoring, evaluation of outcomes of mitigation plans and to look for the scope of its applicability in other areas in order to achieve overall objective of this policy.

To achieve these objectives, H.G. INFRA shall adhere to the following core principles:

1) **Effective Risk Management Process**: The Risk Management Committee constituted by the Board shall have the overall responsibility to ensure effective risk management process within the company.
2) **Everyone's commitment**: Every function/ department/ office in the organization shall work in coordination to ensure effective implementation of this risk management policy.
3) **Proactive Leadership**: Risk identification (including identification of the risk of lost opportunities), risk assessment, risk response and risk monitoring are ongoing activities and shall form an integral part of the company's operations, management and Decision- Making process. All the identified risks shall be updated in the central repository.
4) **Risk Culture**: Informed and consistent risk related decisions shall be taken; non- compliant behaviors shall not be tolerated and risk management shall be dealt professionally.
5) **Transparency and Compliance**: The risk management activities along with the most Significant risks shall be reported and the material failures in mitigation measures shall be escalated through reporting line to the relevant levels of organization structure.
6) **Result Evaluation**: To assess the effectiveness of the Risk Management Policy and its implementation and need for improvement if any.

SCOPE AND APPLICABILITY OF THE POLICY

The policy guidelines are devised in context of the organization's growth objectives, business Profile envisaged and new business endeavors including new projects that may be necessary to achieve these goals and the emerging global standards and leading practices amongst comparable organizations.

The Scope of the Policy shall cover:

- All functions and departments of H.G. INFRA across all Projects.
- All events, both external and internal which shall have an impact on the business objectives of the organization.

Applicability of the Policy: The Risk Management Policy is applicable to the Registered Office, Corporate Office & Liaison Offices and all Construction Projects of H.G. INFRA.

DEFINITIONS OF RISK

Risk

Risk is the effect of uncertainty on objectives. It is expressed as a combination of the probability of an event and its consequence. Events with a negative impact represent risks, which can prevent value creation or erode existing value.

Risk Management

Risk management is a set of coordinated activities to direct and control an organization with regard to risk. Risk management includes risk assessment, risk treatment, risk acceptance and risk communication.

Risk Identification

Risk identification is the process of identifying the organization's exposure to uncertainty.

Risk Assessment

Risk assessment is the overall process of risk analysis and risk evaluation. It allows an entity to consider the extent to which potential risk events have an impact on achievement of objectives.

Risk Treatment

Risk treatment determines the way to deal with risk. Various mechanisms to treat risk are:

I. **Risk avoidance/ termination** – decision not to become involved in, or action to withdraw from, a risk situation.
II. **Risk transfer** –sharing with another party the burden of loss or benefit or gain, for a risk.
III. **Risk reduction/ mitigation** – actions taken to lessen the probability, negative consequence, or both, associated with a risk.
IV. **Risk acceptance/ retention**–the acceptance of the burden of loss or benefit or gain, for a risk.

Risk Appetite

Risk Appetite is the broad-based amount of risk a company or other entity is willing to accept in pursuit of its business objectives and goals.

Risk Register

A Risk Register" is a document for recording the risks in a standardized format.

RISK GOVERNANCE

A well-defined risk governance structure serves to communicate the approach of risk management throughout the organization by establishing clear allocation of roles and responsibilities for the management of risks on a day to day basis. In order to develop and implement a Risk Management framework, a Risk Assessment Team to be supported by Risk Cell has been constituted. Risk Assessment Team shall identify the key risks and report them to the Risk Management Committee which shall ensure that risk management activities are undertaken as per this policy. The main objective of the Risk Assessment Team shall be to provide a wide view of key risks within the organization to the Risk Management Committee.

RISK GOVERNANCE STRUCTURE

Risk Management Committee

The Risk Management Committee comprises the following:

Sr. No.	Name of Member	Designation
1	Mr. Harendra Singh, Managing Director	Chairman
2	Mr. Vijendra Singh, Whole Time Director	Member
3	Mr. Ashok Kumar Thakur, Independent Director	Member
4	Mr. Kailash Chandra Gupta, AVP-Contracts	Member
5	Mr. Satish Kumar Sharma, AVP- Supply Chain Management	Member

Terms of Reference:

The Risk Management Committee is responsible for oversight on overall risk management processes of the Company and to ensure that key strategic and business risks are identified and addressed by the management.

The role of committee shall, inter alia, include the following:

i) To formulate a detailed risk management policy which shall include:
   a) A framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Committee.
   b) Measures for risk mitigation including systems and processes for internal control of identified risks.
   c) Business continuity plan.

ii) To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company;

iii) To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems;

iv) To periodically review the risk management policy, at least once in two years, including by considering the changing industry dynamics and evolving complexity;

v) To keep the board of directors informed about the nature and content of its discussions, recommendations and actions to be taken;

vi) Monitoring and reviewing of the risk management plan;

vii) The appointment, removal and terms of remuneration of the Chief Risk Officer (if any) shall be subject to review by the Risk Management Committee;

viii) Carry out any other function as is mandated by the Board of Directors from time to time and / or enforced by any statutory notification, amendment or modification as may be applicable.

Risk Assessment team

The Risk Assessment Team shall comprise of heads of key departments as nominated by Managing Director ("MD").

Role and Responsibilities of Risk Assessment Team:

The Risk Assessment Team shall have the key role of identifying the key risks, suggest mitigation measures, monitoring and supervising the implementation of the Risk Management Policy and maintain wide view ofthe key risks faced by the organization.

- Identify, evaluate and assess the key risks anticipated for the organization and suggest mitigation measures to the risk coordinators.
- Ensure that effective risk mitigation plans are in place and the results are evaluated and acted upon.
- Report the key risks faced by the organization and their mitigation plans to the Risk Management Team.
- Appoint the Risk Coordinators for the identified risks.
- Ensure that the Risk Management Committee is informed about any new/emerging risks faced by the organization in case of exigencies/emergent conditions.
- Assist the Risk Management Committee in overseeing and monitoring the development and implementation of the Risk Management Policy.
- Prioritize the risks reported according to their risk ratings and assist the Risk Management Committee in decision making for risk management responses for identified key risks.

Roles and Responsibilities of the Head of Risk Assessment Team as nominated by MD:

- Communicating and managing the establishment and ongoing maintenance of risk management policy pursuant to the organization's risk management vision.

- Designing and reviewing processes for risk management.
- Communicating with the Risk Management Team regarding the status of risk management and reporting the key risks faced by the organization.
- Coordinate with all the Risk Coordinators to compile the status of risks and mitigation measures taken.
- Convene the Risk Assessment Team meeting and facilitate discussions among the Team to fulfill its responsibilities.

Risk Cell

The Risk Cell located at corporate office shall be a team of members comprising of one Sr. Manager/Manager with one or two additional members who shall report directly to the head of Risk Assessment Team.

Roles and Responsibilities of the Risk Cell:

- Assist the head of Risk Assessment Team in organizing Risk Assessment Team meetings.
- Compile the status of risks and mitigation measures taken as reported by Risk Coordinators.
- Record the key risks and their mitigation plans in the risk register as agreed by the Risk Assessment Team.

The risk register shall contain:

- Function/ department wise record of key risks
- Risk category wise record of key risks
- Treatment plans for the key risks

RISK COORDINATORS

The Risk Coordinators shall be the nominated representative not below the rank of Manager of respective departments.

The Risk Coordinators shall have the key role of reviewing and assessing the risks identified by the associated department/project heads and to develop and monitor the mitigation measures for the identified risks.

Role and Responsibilities of Risk Coordinators:

Review and assess the risks reported by the department heads.

- Identify any new risks relevant to their respective areas.
- Develop mitigation measures and action plan for all the identified risks.
- Ensure implementation of mitigation plans by coordinating with respective departments.
- Provide status of risks and mitigation measures taken, to the head of Risk Assessment Team for reporting in the Risk Assessment Team.

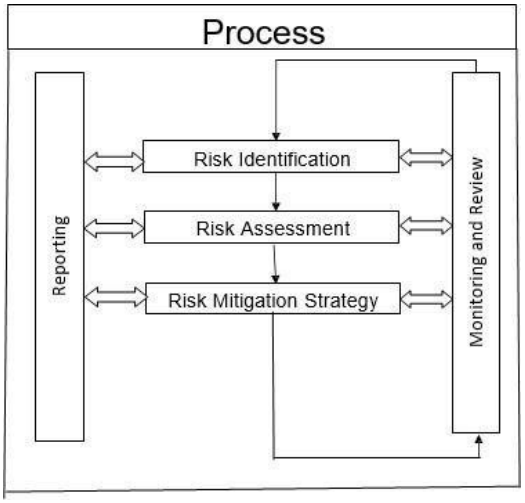
RISK MANAGEMENTAPPROACH

Risk Management is the process which shall enable the organization to identify, assess and treat risks. It is the responsibility of everyone in the organization viz. Board, Management Team and all H.G. INFRA personnel. Risk Management applies to all functions, departments and operations within the organization.

The primary objective(s) of establishing a Risk Management Process is to ensure that:

- Risks faced by the organization shall be identified and recorded in the risk register, enabling the top management to take a comprehensive view of the same
- Risks identified shall be assessed, mitigated, monitored and reviewed on an ongoing basis.

The Risk Management Process is depicted below:



RISK IDENTIFICATION

Risk identification sets out to identify an organization's exposure to uncertainty. This requires an in-depth knowledge of the organization, the market in which it operates, the economic, legal, regulatory, social, political, technological and cultural environment in which it exists, as well as the development of a sound understanding of its strategic and operational objectives, including factors critical to its success and the threats and opportunities related to the achievement of these objectives.

Risk identification shall be approached in a methodical way to ensure that all significant activities within the organization have been identified and all the risks flowing from these activities defined.

The following methodologies can be used to identify risks:

- Brainstorming
- Surveys /Interviews/Working groups
- Experiential or Documented Knowledge
- Risk Lists - Lessons Learned
- Historical risk event information

RISK CATEGORISATION

All the risks that have been identified shall be classified under the following risk categories -

- **Design Risk** - Risk arising because of design issues at various levels.
- **Execution Risk** - Risk of loss resulting from inadequate or failed processes of execution, people and information systems.
- **Contractual Risk** - Risk of loss resulting from Contractual matters. These risks adversely affect the achievement of contractual objectives and may impair overall value. Non-compliance with/ non-fulfilment of legal, Change in law, regulatory and statutory requirements
- **Financial Risk** - Risk directly impacting the balance sheet and access to capital.

RISK ASSESSMENT

Risk assessment allows an entity to consider the extent to which potential events have an impact on achievement of objectives.

The risks identified shall be evaluated on an appropriate risk rating for each risk identified as per the criteria below:

Severity	Score	Finances	Delivery of Operations	Stakeholders
Very Insignificant	<0.25	• Financial implications of the risk are **very low** and are comfortably within the ability of the risk owner to manage locally.	• Minor impact to services or objectives. • Risk occurring would represent a minor revision to planned outcomes.	• Little or no Impact on stakeholder satisfaction. • Short-term and/or localized harm.
Minor	0.25-0.5	• Financial implications of the risk are low (<10% of the budget / turnover). It remains within any contingencies set.	• Some limited impact on services or objectives. • Risk occurring may detract slightly from the desired quality of the outcomes.	• Isolated complaints. • Some impact on stakeholder satisfaction. • Notable contributor to environmental harm.
Significant	0.5-1	• Financial implications of the risk are medium (10% - <25% of the budget / turnover). It may exhaust or be larger than contingencies made but can be managed without additional funds.	• Short-term disruption to services. • Risk occurring would detract from the desired quality of the outcomes but not detract from the overall purpose of the activity.	• Large number of complaints. • Wider impact on Project Progress. • Notable external stakeholder dissatisfaction.
Major	1-2	• Financial implications of the risk are high (25% • - <50% of the budget or Faculty/ Service turnover). It is not possible to meet the cost within the approved budget and further funding would be required.	• Significant disruption to critical services. • Key objectives affected. • Risk occurring would significantly detract from the original desired quality of the outcomes and may reduce the viability of the activity as outcomes require revision.	• Significant impact on Project Progress • Reputational / brand damage is possible. • A major contributor to significant harm. • Regulatory / contractual intervention possible.

Catastrophic	More than 2	• The impact on finance is critical (>50% of the budget or turnover). Increased cost would negate benefits of activity and may destabilize the reporting unit. • Impacts upon Cashflow.	• Total and sustained disruption to critical services. • Significant impact on key University objectives. • Risk occurring would reduce quality of desired outcomes to such an extent that it negates benefits of activity.	• Loss of credibility with stakeholders. • Critical impact to Project Progress • Likely reputational / brand damage. • The major contributor to significant environmental harm.

Likelihood of Risks	Score	Probability
Most Likely	More than 0.75	Almost certain to happen
Likely	0.5 to 0.75	More than 50 / 50
Occasional	0.25 - 0.5	50 / 50
Unlikely	0.1 - 0.25	Less than 50 /50
Remote	Less than 0.1	Almost certain not to happen

RISK MITIGATION STRATEGY

There are four common strategies for treating risk. There is no single "best" response strategy and each risk must be considered on its own merits. Some risks may require a combination of strategies and multiple responses, whereas others may need only one strategy with a single response.

- **Risk avoidance/ termination**: This involves doing things differently and thus removing the risk. This is particularly important in terms of project risk, market risk or customer risk but often wishful thinking in terms of the strategic risks.
- **Risk reduction/ mitigation**: Reduce or Treat the risk. This is the most widely used approach. The purpose of treating a risk is to continue with the activity which gives rise to the risk but to bring the risk to an acceptable level by taking action to control it in some way through either:
- **Risk acceptance/ retention**: Accept and tolerate the risk. Risk Management doesn"t necessarily mean risk reduction and there could be certain risks within the organization

that it might be willing to accept and continue with its operational activities. The organization shall tolerate such risks that are considered to be acceptable, for example

- A risk that cannot be mitigated cost effectively.
- A risk that opens up greater benefits than loss.
- Uncontrollable risk.

The Risk Assessment Team shall take a decision to tolerate a risk as a mitigation measure, and when such a decision is taken, the rationale behind it shall be fully documented. In addition, the risk shall continue to be monitored and contingency plans shall be in place in the event of the risk occurring.

- **Risk transfer**: Transfer some aspects of the risk to a third party. Examples of risk transfer include insurance and hedging. This option is particularly good for mitigating financial risks or risks to assets.

a) The following aspects shall be considered for the transfer of identified risks to the transferring party:
   - Internal processes of the organization for managing and mitigating the identified risks.
   - Cost benefits analysis of transferring the risk to the thirdparty

b) Insurance can be used as one of the instruments for transferring risk.

RISK MITIGATION PROCESS

The risks are identified and if the risk treatment mechanism selected is risk mitigation or risk transfer, the next step shall be to review and revise existing controls to mitigate the risks falling beyond the risk appetite and also to identify new and improved controls.

Identify controls

New control activities are designed in addition to existing controls post assessment of risk exposure at current level to ensure that the risks are within the accepted risk appetite.

Control activities are categorized into Preventive or Detective on the basis of their nature and timing:

- **Preventive controls** – focus on preventing an error or irregularity.
- **Detective controls** – focus on identifying when an error or irregularity has occurred. It also focuses on recovering from, repairing the damage from, or minimizing the cost of an error or irregularity.

Evaluate Controls

The controls identified for each risk event shall be evaluated to assess their effectiveness in mitigating the risks falling beyond the risk appetite.

Implement Controls

It is the responsibility of the Risk Assessment Team to ensure that the risk mitigation plan for each function/department is in place and is reviewed regularly.

RISK MONITORING & REVIEW

The Risk Assessment Team shall work on an ongoing basis within the risk management framework outlined in this policy to mitigate the risks to the organization's business as it may evolve over time.

RISK MONITORING

Frequency of Risk Reviews:

- **Risk Review will be done at Pre-Bid Stage for each Bid**
- **During the execution stage Risk review will be done depending on Project Duration**
    - For Projects duration 18 Months & above, Risk Review will be done at every 6 months
    - For Projects duration less than 18 Months, Risk Review will be done at every 3 months

As the risk exposure of any business may undergo change from time to time due to continuously changing environment, the risks with their mitigation measures shall be updated on a regular basis (Prebid time/ Quarterly/ Half Yearly).

Quarterly

1. The Department Heads/ Project heads shall review and report the status of risks and treatment actions to the Risk Coordinators with a copy to head of Risk Assessment Team on quarterly basis. In addition, Risk Coordinators shall identify and report any new or changed risk to the head of Risk Assessment Team on quarterly basis.
2. The Risk Assessment Team shall monitor and supervise the development and implementation of the Risk Management Policy and maintain wide view of the key risks and their mitigation measures faced by the organization on quarterly basis.
3. The head of Risk Assessment Team along with the other members of the Risk Assessment Team shall identify the key risks and suggest mitigation measures to the concerned risk coordinators on quarterly basis.

Half yearly

1. The Risk Assessment Team shall report the key risks and their mitigation plans to the Risk Management Committee on bi-annual basis.
2. The Risk Management Committee shall apprise the Board on the key risks faced by the organization and the mitigation measures taken on biannual basis.

RISK REVIEW

Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place. Regular audits of policy and standards compliance shall be carried out and standards performance reviewed to identify opportunities for improvement. It shall be remembered that organization is dynamic and operate in dynamic environment. Changes in the organization and the environment in which it operates must be identified and appropriate modifications made to risk management practices. The monitoring process shall provide assurance that there are appropriate controls in place for the organization's activities and that the procedures are properly understood and followed.

The Risk Coordinators along with project heads shall review the progress on the actions agreed to mitigate the risk and make an assessment of the current level of risk including:

- Establishing whether actions have been completed or are on target for completion.
- Report the status of implementation of mitigation plans to the head of Risk Assessment Team. Risk monitoring and review process shall also determine whether:
- The measures adopted resulted in what was intended.
- The procedures adopted and information gathered for undertaking the assessment was appropriate.
- The acceptability of each identified risk and their mitigation plan shall be assessed and risks shall then be ranked to identify key risks for the organization.
- Proposed actions to eliminate, reduce or manage each material risk shall be considered and agreed.
- Responsibilities for the mitigation measures for key risks management of each risk shall be assigned to appropriate departmental heads.

H.G. INFRA RISK REGISTER

Sl	Risk Element	Probability of Risk	Impact of the Risk	Risk Rating	Risk Owner	Risk Mitigation Plan.
Design Risks						
D1	Quantity Variation	Likely	Minor	High	HGIEL	Quantities were calculated based on the schedules provided with multiple crosschecks
D2	Change in Design Assumptions	Likely	Minor	High	HGIEL	
D3	Change in Methodology	Occasional	Minor	Medium	HGIEL	
D4	Insufficient data for quantity calculations	Occasional	Minor	Medium	HGIEL	Considering Standard codal provisions – for quantity calculations
Execution risks						
E1	Identification of Quarry	Occasional	Minor	Medium	HGIEL	A detailed site survey was carried out by exploring various sources
E2	Mining Issues	Occasional	Minor	Medium	HGIEL	
E3	Identification of Borrow Area	Unlikely	Significant	Medium	HGIEL	
E4	Logistics finalization	Likely	Minor	High	HGIEL	
E5	Traffic Diversion	Likely	Minor	High	HGIEL	
E6	Tree Cutting / Utility Shifting	Occasional	Minor	Medium	HGIEL	
E7	Mobilization of Workmen / Plant	Occasional	Minor	Medium	HGIEL	
E8	Overloading	Occasional	Minor	Medium	HGIEL	Risk Retention-monetary contingency considered
E9	Finalization of specialized agencies	Likely	Minor	High	HGIEL	
E10	Interface issues with other agencies	Occasional	Minor	Medium	HGIEL	
E11	Safety standard & Requirement	Occasional	Minor	High	HGIEL	
E12	Poor workmanship	Likely	Minor	High	HGIEL	

Sl	Risk Element	Probability of Risk	Impact of the Risk	Risk Rating	Risk Owner	Risk Mitigation Plan.
Contractual						
C1	Delay in Land Handover / Land Acquisition	Likely	Minor	High	HGIEL	As per new EPC agreement 90% of the land handed over before start date
C2	Payment Terms & Cash Flow	Likely	Minor	High	HGIEL	
C3	Change in Scope / CIL	Likely	Minor	High	HGIEL	
C4	Milestone delay & LD – timely Completion	Occasional	Minor	Medium	HGIEL	A detailed feasibility study has been made
C5	Payment Schedule	Likely	Minor	High	HGIEL	
C6	Misinterpretation of contractual Clauses	Occasional	Minor	Medium	HGIEL	Pre-bid Queries have been raised for clarifications in clauses.
Financial Risks						
F1	Financial Closure	Likely	Significant	High	HGIEL	EPC Contract. Not Applicable
F2	Payment Terms & Cash Flow	Occasional	Minor	Medium	HGIEL	As per EPC milestone - Sch-H, Contract similar to existing EPC Projects, being a greenfield project, Cashflow impact will be there (5-6%). Adv to be taken & Int Charges considered
F3	Price Escalation	Occasional	Insignificant	Low	HGIEL	Covered by the Price Variation Clause
F4	Cash Retention Instead of BG	Likely	Minor	High	HGIEL	Contractually, cannot be avoided. Cashflow impact taken
F5	FOREX Issue	Unlikely	Minor	Low	HGIEL	Not Applicable
F6	Sources of funding	Likely	Minor	High	HGIEL	Not Applicable
Other Risks						
O1	Geographical Risks	Occasional	Minor	Medium	HGIEL	A detailed GTI Investigation has been done for understanding the soil strata.
O2	Unforeseen Weather condition	Unlikely	Minor	Low	HGIEL	
O3	Maintenance after Execution	Occasional	Minor	Medium	HGIEL	Risk Retention- Put monetary contingency
O4	Type of client- Govt / Private	Occasional	Minor	Medium	HGIEL	We are already executing many projects in this model.
O5	Change in Govt. Policies	Occasional	Minor	Medium	HGIEL	Being Govt. Project, client reliability is more

RISK MATRIX

Probability (P) (0-1) A -Most Likely More than 0.75					
B -Likely 0.5 to 0.75					
C –Occasional 0.25 to 0.5					
D –Unlikely 0.10 to 0.25					
E –Remote Less than 0.10					
Severity(S) (As age of Contract Value)	V Insignificant Less than 0.25	IV Minor 0.25 to 0.5	III Significant 0.5 to 1	II Major 1 to 2	I Catastrophic More than 2

Appetite	Mitigation Zone
Critical	Red
High	Amber
Medium	Yellow
Low	Dark Green

Effective Date: May 12, 2021
Date of the approval by the Board: May 12, 2021
Version: 05

STANDARD TEMPLATE FOR PROJECT RISK REVIEW

Execution Risk Review

Project Name: _____

Data shown in this sample presentation is for representation purpose only

Risk Review Background

Sl	Project Reviews	Date
1	Final Pre bid Review	
2	Project Award Date	
3	Execution Review 1	
4	Execution Review 2	

Project Profile

Stake Holders

Client

Contractor

Engineer

Funding Agency:

Owner/Client	
Bid by	
Consortium Partner, if any (break up of SOW)	
Type of Contract	
Brief Scope of Work	
Original Contract Value	
Revised Contract Value	
PMC	

Project Profile

Project Commencement Date	
Contractual Project Schedule - In months	
Contractual Zero/ End date	
Likely completion date	
LD - Completion delay	
LD - Performance	
LD sharing with Consortium Partner if any	
Performance Bank Guarantee	

Commercial Terms - Payment Terms & Schedule

Interim Invoice	
Payment	
Pricing Schedule	
Retention Money	
Mobilization Advance	
Bonus Clause	
Deemed Export Benefits & Other concessions	
Price Escalation	

Contract Price Includes All Taxes and Duties	
Type of Insurance	**Duration**
CAR & Third party Insurance	
Professional Indemnity	

Important changes from Prebid to Post award

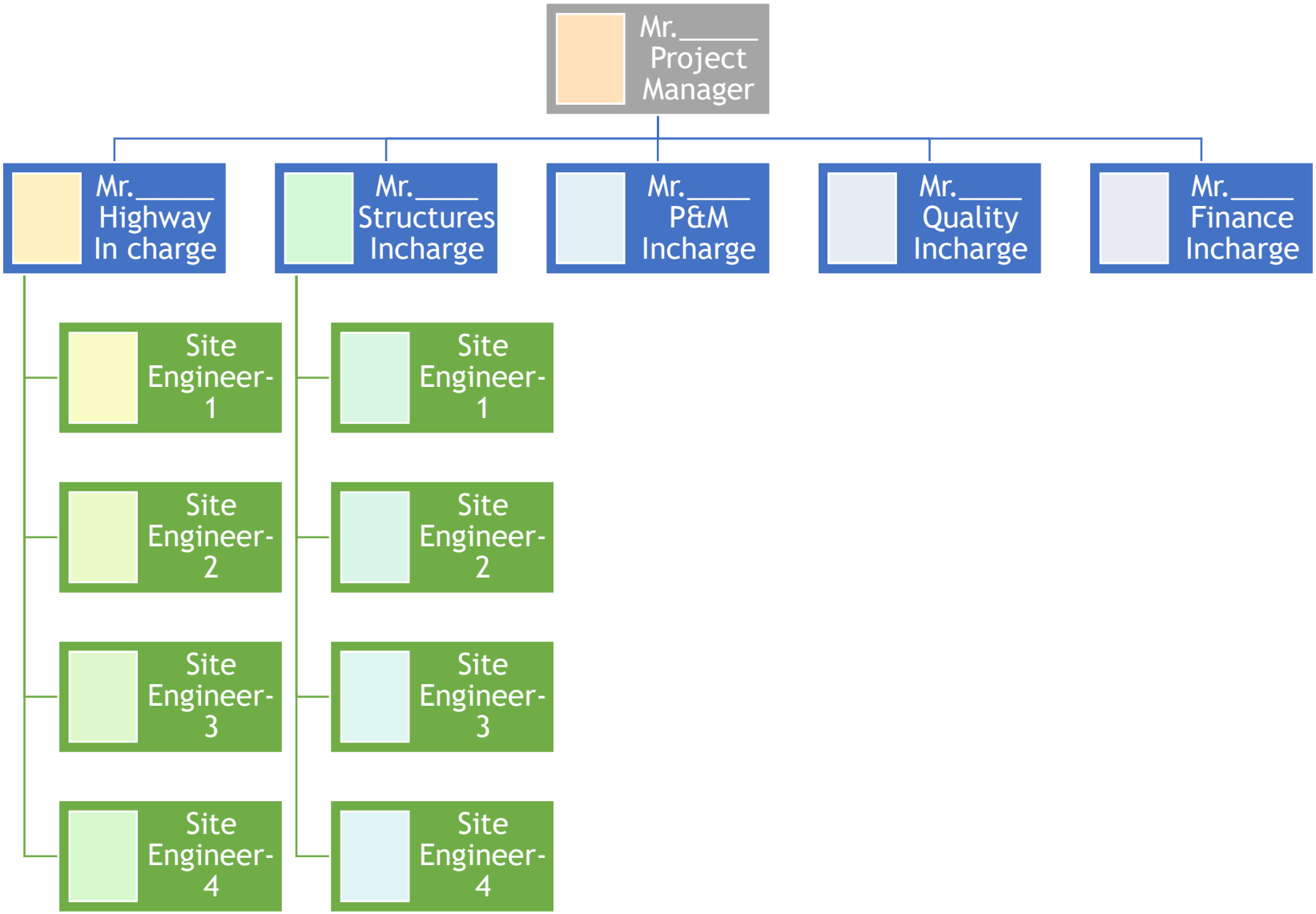
Sr. No	Milestone	Change wrt. Tender	Remarks
1	Scope		
2	Commercial terms		
3	Any Deviations		
4	Cash Flows		

Safety Statistics

Sl No.	Job Desc.	No. of Reportable Lost Time Injuries		Frequency Rate (FR)		Severity Rate (SR)		No. of Fatalities		Safe Man Hours for the month Mn	Man hours worked (Since Inception) Mn	Pkg. Total Safe Hours Mn
		FTY	Cum	FTY	Cum	FTY	Cum	FTY	Cum			
Project Name:__												

Near Miss Cases: __

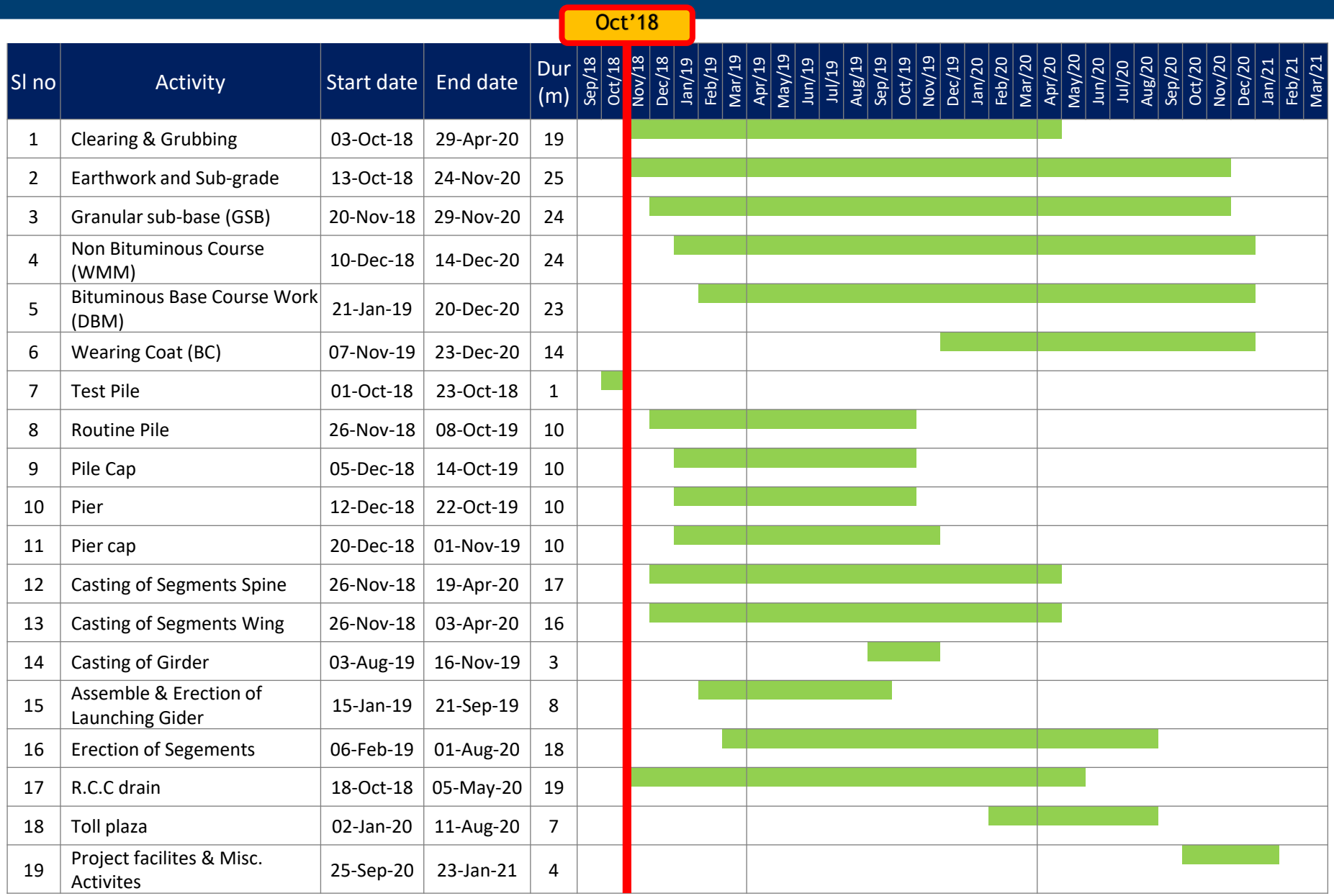
Organization Structure



Major Scope of works

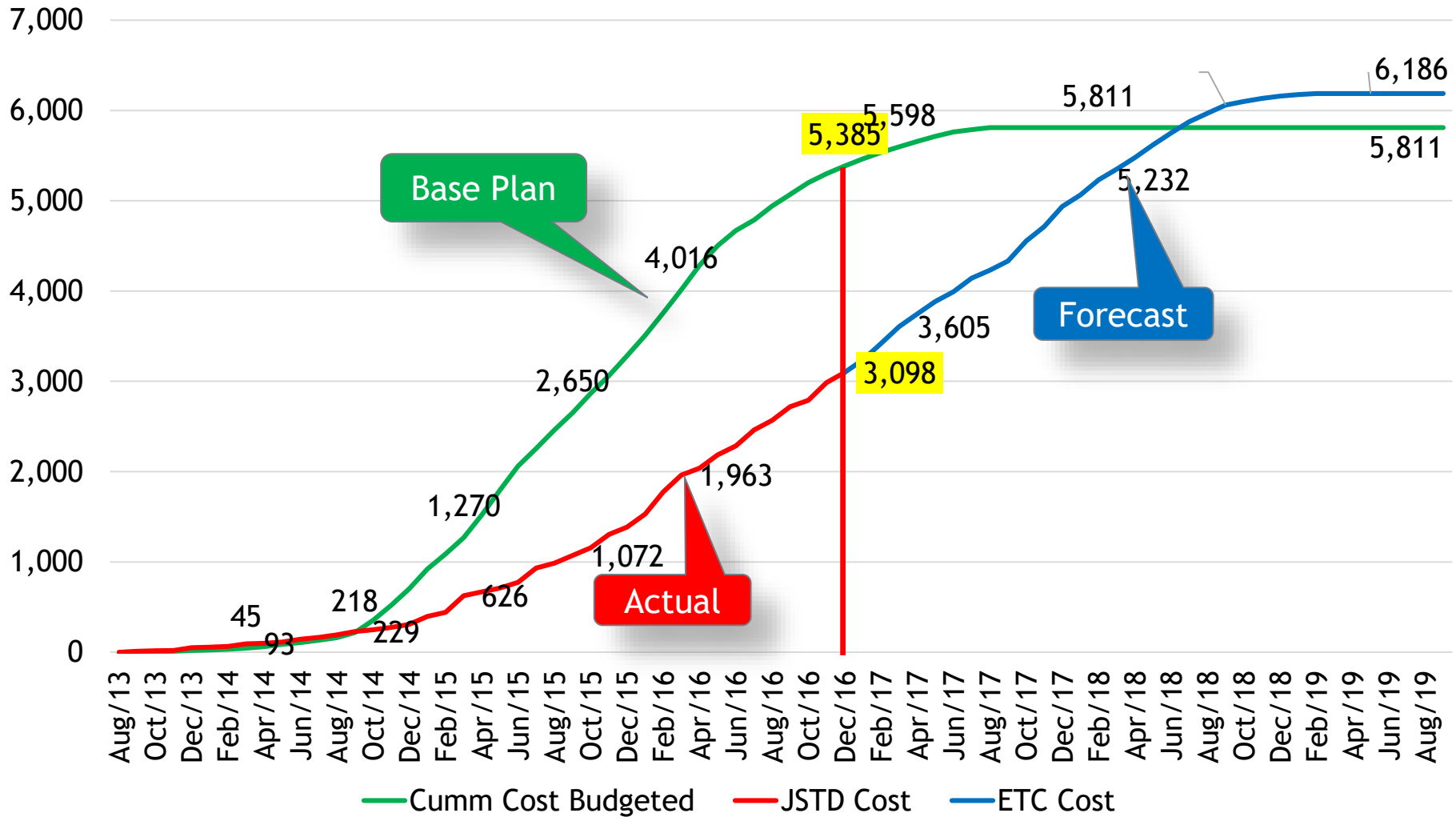
Sr. No	Item Description	Unit	Quantity	Executed Date___	Balance
1	C&G	Ha.			
2	Earthwork & Sub grade	L Cum.			
3	GSB	L Cum.			
4	WMM	L Cum.			
5	DBM	L Cum.			
6	BC	L Cum.			
7	Concrete	L Cum.			
8	Reinforcement	MT			

Baseline Plan and Current Status



Sl no	Activity	Start date	End date	Dur (m)
1	Clearing & Grubbing	03-Oct-18	29-Apr-20	19
2	Earthwork and Sub-grade	13-Oct-18	24-Nov-20	25
3	Granular sub-base (GSB)	20-Nov-18	29-Nov-20	24
4	Non Bituminous Course (WMM)	10-Dec-18	14-Dec-20	24
5	Bituminous Base Course Work (DBM)	21-Jan-19	20-Dec-20	23
6	Wearing Coat (BC)	07-Nov-19	23-Dec-20	14
7	Test Pile	01-Oct-18	23-Oct-18	1
8	Routine Pile	26-Nov-18	08-Oct-19	10
9	Pile Cap	05-Dec-18	14-Oct-19	10
10	Pier	12-Dec-18	22-Oct-19	10
11	Pier cap	20-Dec-18	01-Nov-19	10
12	Casting of Segments Spine	26-Nov-18	19-Apr-20	17
13	Casting of Segments Wing	26-Nov-18	03-Apr-20	16
14	Casting of Girder	03-Aug-19	16-Nov-19	3
15	Assemble & Erection of Launching Gider	15-Jan-19	21-Sep-19	8
16	Erection of Segements	06-Feb-19	01-Aug-20	18
17	R.C.C drain	18-Oct-18	05-May-20	19
18	Toll plaza	02-Jan-20	11-Aug-20	7
19	Project facilites & Misc. Activites	25-Sep-20	23-Jan-21	4

Overall 'S' Curve (Cost)



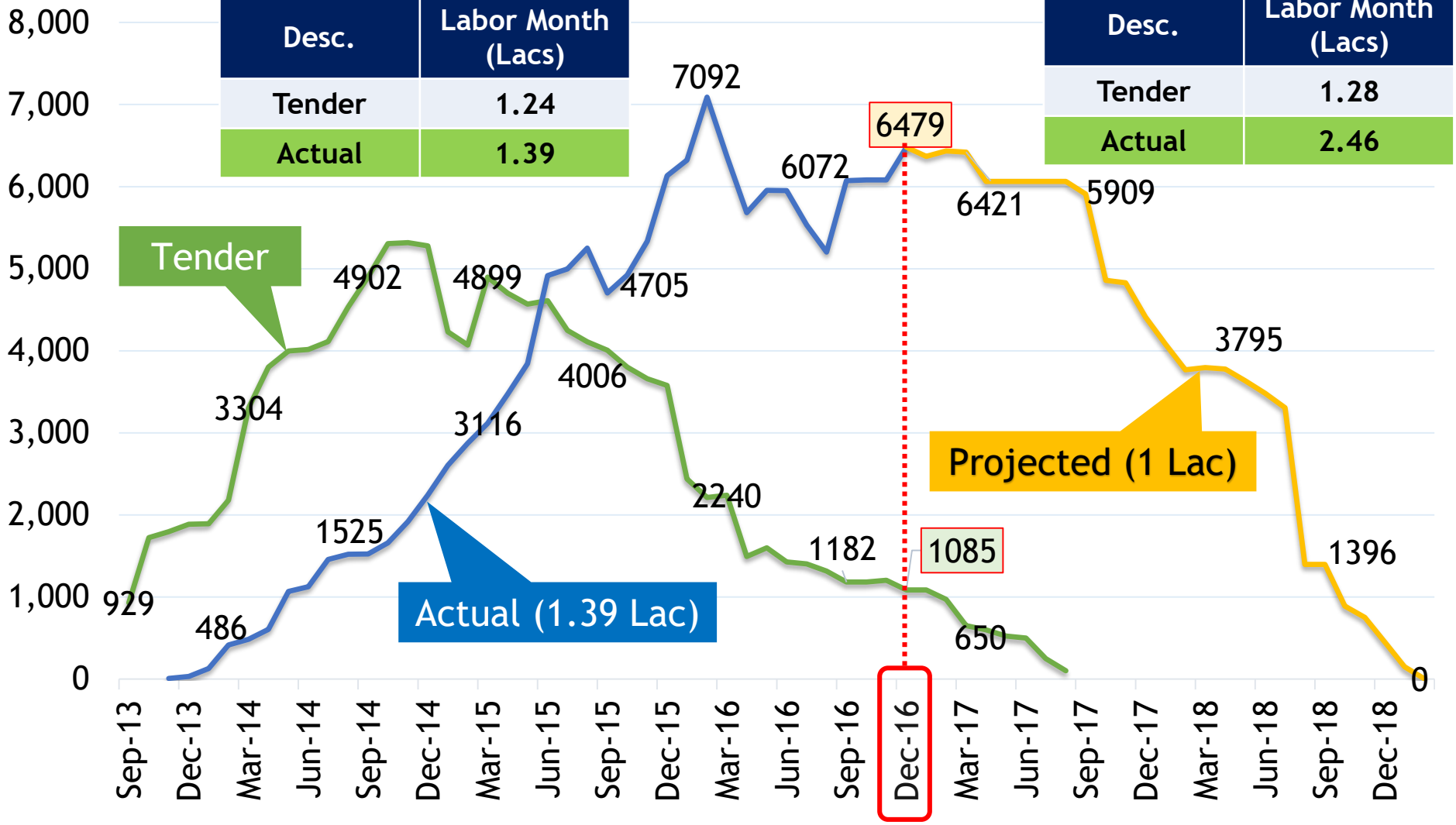
Key Manpower status

Key Positions	Requirement	Available	Gap	Remarks
Project Director	1	1	-	
Deputy Project Director	2	2	-	
Project Manager	7	7	-	
Project Controls Manager	1	1	-	
Contracts Manager	1	1	-	
Engineering Manager	1	1	-	
Procurement Manager	1	1	-	
Construction Manager	76	76	-	
Safety Manager	1	1	-	
QA&I Manager	1	1		
Planning Engineer	57	57	-	
Execution Engineer	344	344	-	
Contract Engineer	3	3	-	
FA&A Engineer	60	60	-	
P&M Enginner	63	63	-	
EHS Enginner	22	22	-	
Cost Controller	3	3	-	
Quantity Controller	70	70	-	
Document Controller	0	0	-	
Others	17	17	-	
Total	728	728	-	0

Labour Requirement

As of Dec-16	
Desc.	Labor Month (Lacs)
Tender	1.24
Actual	1.39

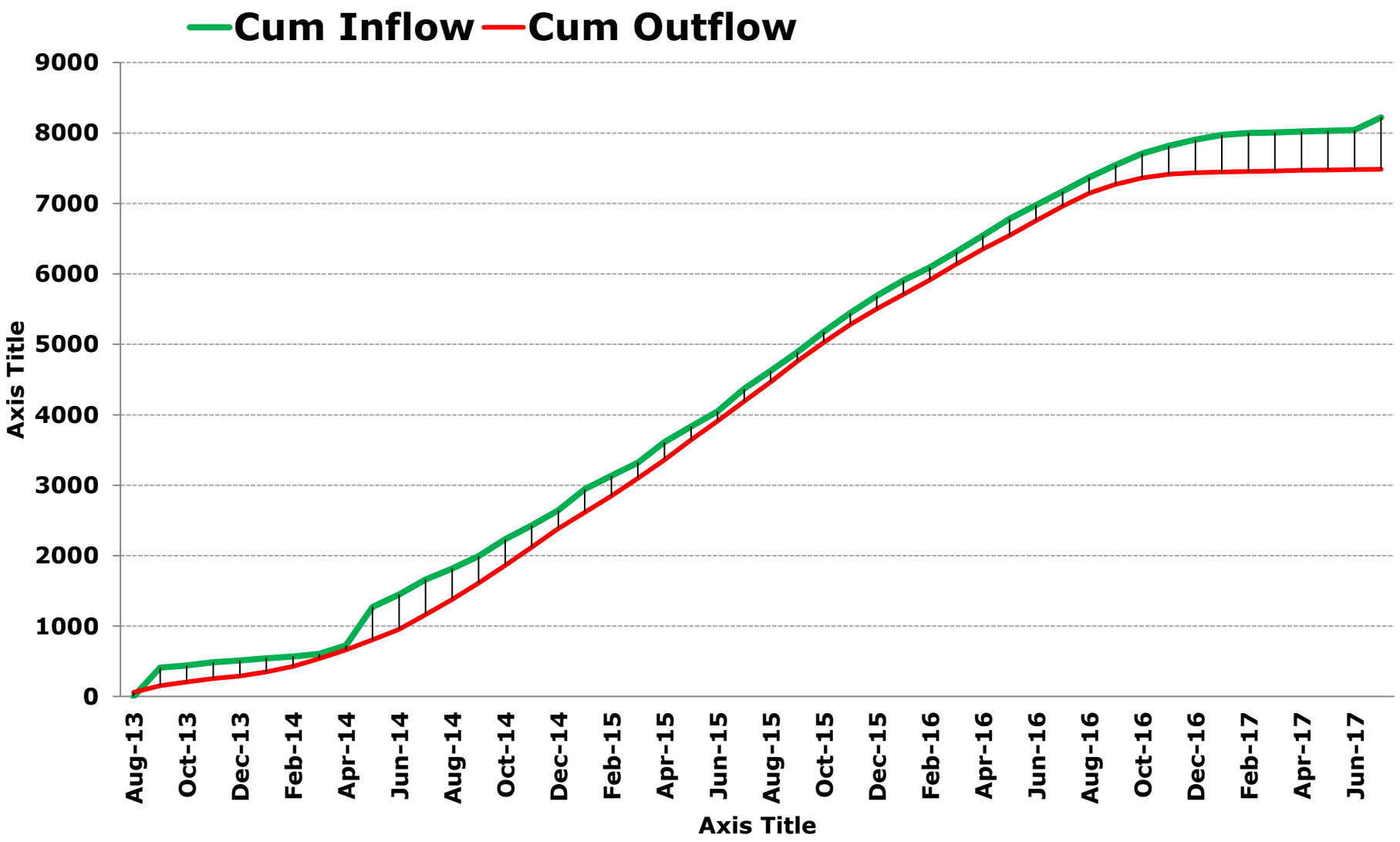
Overall	
Desc.	Labor Month (Lacs)
Tender	1.28
Actual	2.46



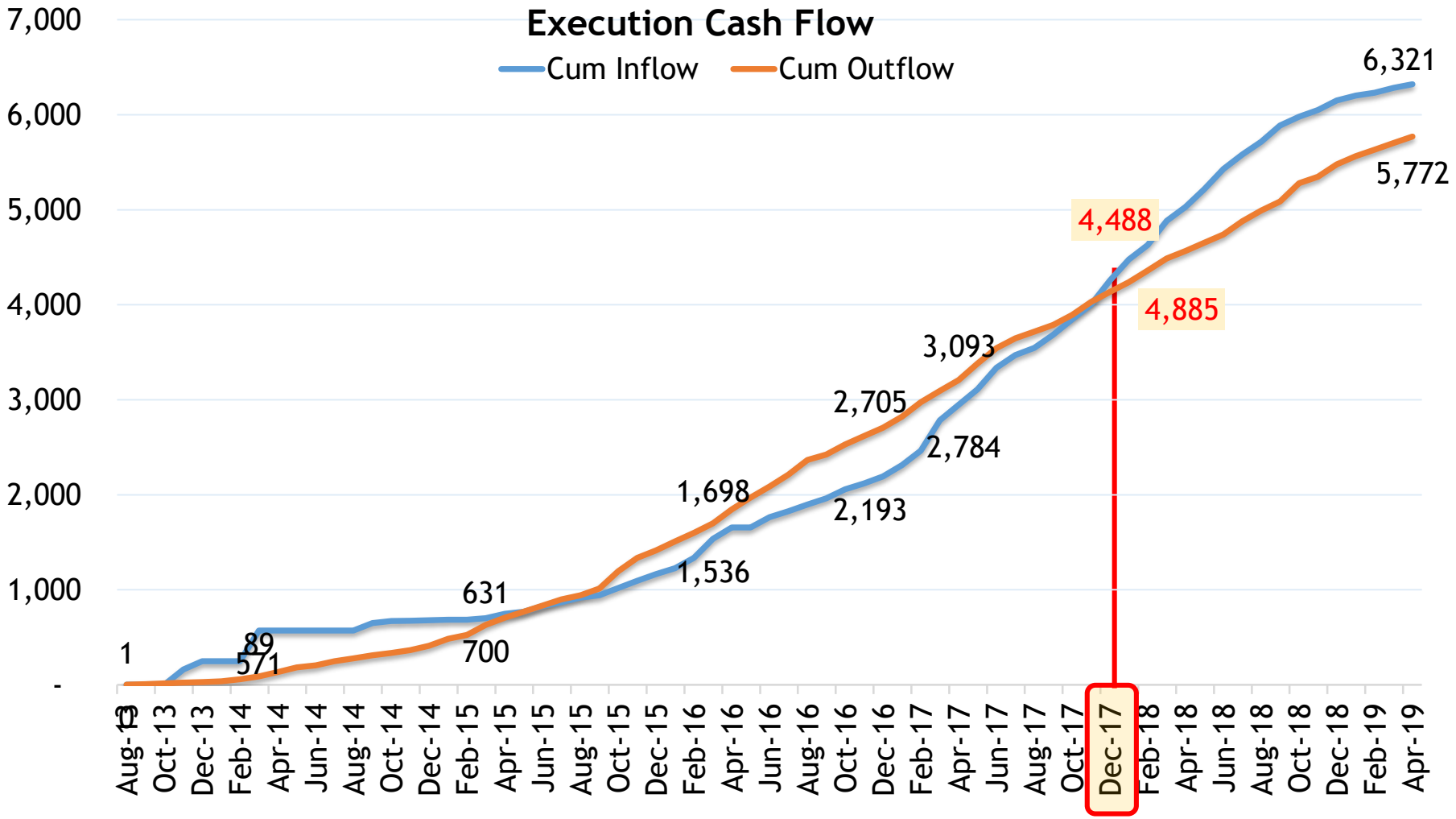
Cash Flow - Prebid

Including mobilization advance

Unit – INR Cr



Cash Flow - Actuals



Pre-Bid Stage Risks - Assessment & Mitigation

Sl. No.	Risk Element	Prebid	Current Status	Risk Owner
A	**Design Risk**			
A1	Delay in approval of GFC drawings		High	
A2	Quantity Variation		Medium	
B	**Execution Risk**			
B1	First time to execute Elevated Structures with Launching Method.	Medium	Medium	
B2	Working in NCR Region.		High	
B3	Identification of Quarry.		High	
B4	Identification of Borrow Area.		High	
B5	Cutting of Trees	Critical	Critical	
B6	Shifting of Utilities	Critical	Critical	
B7	Ban on Overloading for transportation		High	
C	**Contractural Risk**			
C1	Delay in Appointment of IE		High	
C2	Handing Over of Land	Critical	Critical	
C3	Delay in Achieving Milestones		High	
C4	Change in Scope		High	
D	**Financial Risk**			
D1	Financial Closure	High	High	
D2	Cash Flow		High	
D3	Price Escalation		High	

Project Risk Flow (Summary of all Risks)

Risk Rating	No of Risk	No of Risk	No of Risk
Date	Pre-Bid Date_____	Last Risk Review Date_____	Current Date_____
Critical	3	3	3
High	1	11	11
Medium	1	2	2
Low	0	0	0
Total	**5**	**16**	**16**

Current identified risks

Sl. No.	Risk Element	Probability of Risk	Impact of the Risk	Risk Rating	Risk Owner	Risk Mitigation Plan.
Execution risks						
E1	Identification of Quarry	Occasional	Significant	Critical		
E2	Mining Issues	Occasional	Significant	Critical		
E3	Identification of Borrow Area	Likely	Minor	Critical		
E4	Logistics finalization	Likely	Significant	Critical		
E5	Traffic Diversion	Likely	Significant	Critical		
E6	Tree Cutting / Utility Shifting	Likely	Significant	Critical		
E7	Mobilization of Workmen / Plant	Occasional	Minor	Critical		
E8	Overloading	Occasional	Minor	Critical		
E9	Finalization of specialized agencies	Likely	Significant	Critical		
Contractual						
C1	Delay in Land Handover / LA	Likely	Significant	Critical		
C2	Delay in appointment of IE	Likely	Significant			
C3	EOT	Likely	Minor	Critical		Notifying delay events.
C4	Change in Scope / CIL	Likely	Minor	Critical		Submission of variation claims on time/ getting them settled through negotiations.
C5	Milestone delay & LD	Occasional	Significant	High		EOT application to Client by notifying impact of delay events on regular intervals.
Financial Risks						
F1	Financial Closure	Likely	Significant			
F2	Cash Flow	Likely	Significant	Critical		
F3	Price Escalation	Likely	Minor	Critical		
F4	Idling of Resources due to delay.	Occasional	Minor	High		

Risk Matrix (5X5) – Current Status

Probability (P) (0-1)	V Insignificant Less than 0.25	IV Minor 0.25 to 0.5	III Significant 0.5 to 1	II Major 1 to 2	I Catastrophic More than 2
A -Most Likely More than 0.75					
B -Likely 0.5 to 0.75		**E3,C4,F3,C3**	**E4,E5,E6,E9, C1,C2,F2**		
C –Occasional 0.25 to 0.5		**F4, E7,E8**	**E1,E2,C5,F1**		
D –Unlikely 0.10 to 0.25					
E –Remote Less than 0.10					
Severity(S) (As age of Contract Value)					

Critical High Medium Low