

# TENDER DOCUMENT

## Road Construction Project

Tender ID:	TEN20250330163622
Issuing Authority:	Public Works Department (PWD), State Government
Tender Amount:	Rs. 100,000,000.00
Bid Start Date:	25-02-2025
Bid End Date:	09-05-2025

# Executive Summary

## Executive Summary: Road Construction Project

### Project Overview

The [Client Name] invites interested bidders to submit proposals for the construction of a 20-kilometer stretch of road, as part of its comprehensive infrastructure development program. This high-profile project, valued at Rs. 100,000,000.0, aims to upgrade the existing road network, enhancing connectivity, safety, and accessibility for the local community and commuters.

### Project Objectives

The primary objectives of this project are:

To construct a 20-kilometer stretch of road with asphalt paving, meeting the Indian Road Congress (IRC) standards for asphalt pavements

To design and install an efficient drainage system to ensure water flow and prevent erosion

To install necessary signage, including traffic signals, directional signs, and warning signs, in compliance with the Ministry of Road Transport and Highways (MoRTH) guidelines

To ensure adherence to environmental and safety standards, minimizing the project's ecological footprint and protecting the health and well-being of workers and the public

### Key Deliverables

The successful bidder will be required to deliver the following key components:

20 kilometers of asphalt-paved road, with a minimum thickness of 50 mm and a maximum density of 95% (IRC: SP: 72-2013)

A comprehensive drainage system, including culverts, stormwater drains, and catchment areas

Installation of necessary signage, including traffic signals, directional signs, and warning signs

Provision of temporary and permanent fencing to secure the work site and prevent unauthorized access

Compliance with all relevant regulations, including environmental and safety standards

### Bidder Requirements

To be eligible to participate in this tender, bidders must:

Provide proof of experience in road construction, with a minimum of three (3) similar projects completed within the last five (5) years

Demonstrate possession of qualified labor, including certified engineers, technicians, and skilled workers

Provide equipment and machinery suitable for the project, including asphalt pavers, rollers, and graders

Ensure adherence to environmental and safety standards, including the implementation of a comprehensive Environmental Management Plan (EMP) and a Safety Management Plan (SMP)

#### Evaluation Criteria

The tenders will be evaluated based on the following criteria:

Technical capability (30%): Experience, qualifications, and equipment

Price (40%): Total cost of the project, including labor, materials, and overheads

Environmental and safety considerations (15%): Implementation of EMP and SMP, adherence to regulations

Bidder's reputation and financial stability (15%): Past performance, financial capacity, and reputation

#### Timeline

The project timeline is expected to be approximately 12 months, with the following milestones:

Project commencement: Within 30 days of awarding the contract

Completion of asphalt paving and drainage works: Within 6 months

Installation of signage and fencing: Within 3 months

Final completion and handover: Within 12 months

#### Contact Information

For further information and clarification, please contact:

[Client Name]

[Client Address]

[Phone Number]

[Email Address]

We look forward to receiving proposals from interested bidders, and we are confident that this project will contribute to the development of a world-class road network, enhancing the quality of life for the local community and commuters alike.

## Project Overview and Objectives

#### Project Overview and Objectives

Project Title: Road Construction Project (20 km Stretch)

Project Overview:

The Road Construction Project is a large-scale infrastructure development project aimed at constructing a 20-kilometer stretch of road with asphalt paving, drainage systems, and necessary signage. The project is valued at Rs. 100,000,000 and is expected to be completed within a period of 24 months. The project site is located in [Region/State], and the project will be executed in accordance with the guidelines and specifications outlined in this tender document.

#### Project Objectives:

The primary objectives of this project are:

To construct a 20-kilometer stretch of road with asphalt paving that meets the requirements of Indian Road Congress (IRC) standards.

To design and install an efficient drainage system that can handle the expected rainfall and traffic loads.

To ensure the safety of road users by installing necessary signage, markings, and other safety features.

To complete the project within the stipulated timeframe and budget.

To adhere to environmental and safety standards as per the guidelines of the National Green Tribunal (NGT) and the Ministry of Road Transport and Highways (MoRTH).

#### Scope of Work:

The scope of work for this project includes:

Excavation and grading of the roadbed

Construction of the road pavement with asphalt layer

Installation of drainage systems, including culverts, pipes, and manholes

Installation of necessary signage, markings, and other safety features

Construction of retaining walls and other structural elements as required

Supply and installation of road furniture, including guardrails, crash barriers, and streetlights

#### Project Metrics:

The project will be measured against the following key performance indicators (KPIs):

Project completion date: 24 months from the date of commencement of work

Total project expenditure: Rs. 100,000,000

Road pavement thickness: 100 mm (IRC 81:2013)

Drainage system capacity: 100 mm rainfall intensity

Safety record: Zero accidents and injuries during the project execution period

Environmental impact: Zero environmental damage during the project execution period

#### Industry Standards:

The project will be executed in accordance with the following industry standards:

Indian Road Congress (IRC) standards for road construction and maintenance

Ministry of Road Transport and Highways (MoRTH) guidelines for road safety and environmental protection

National Green Tribunal (NGT) guidelines for environmental management and conservation

Occupational Safety and Health Administration (OSHA) standards for workplace safety and health Requirements:

To bid for this project, the bidder must provide proof of experience in road construction, qualified labor, and machinery for the job, as well as adherence to environmental and safety standards. The bidder must also demonstrate their ability to meet the project objectives and metrics outlined above.

## Detailed Technical Specifications

### Detailed Technical Specifications

#### Section 1: Road Construction

The construction of the 20-kilometer stretch of road shall be carried out in accordance with the Indian Road Congress (IRC) guidelines and standards. The following specifications are required for the road construction:

**Subgrade:** The subgrade shall be constructed to a depth of 300 mm and shall be compacted to a minimum density of 95% of the maximum dry density as per the Proctor's compaction test.

**Base Course:** The base course shall be constructed to a depth of 150 mm and shall be composed of a mixture of crushed aggregate and cement. The base course shall be compacted to a minimum density of 95% of the maximum dry density as per the Proctor's compaction test.

**Surface Course:** The surface course shall be constructed to a depth of 40 mm and shall be composed of a mixture of asphalt and aggregate. The surface course shall be laid in two layers, with the first layer being 20 mm thick and the second layer being 20 mm thick.

**Thickness of the road:** The total thickness of the road shall be 490 mm (300 mm subgrade + 150 mm base course + 40 mm surface course).

#### Section 2: Drainage Systems

The drainage systems shall be designed and constructed in accordance with the Indian Standard (IS) 4571:1972 "Design of storm drains and culverts". The following specifications are required for the drainage systems:

**Drainage channels:** The drainage channels shall be constructed to a depth of 300 mm and shall be composed of reinforced concrete. The channels shall be provided with a slope of 1:500 to ensure

free flow of water.

**Culverts:** The culverts shall be constructed to a diameter of 600 mm and shall be composed of reinforced concrete. The culverts shall be provided with a slope of 1:500 to ensure free flow of water.

**Catchpits:** The catchpits shall be constructed to a size of 1200 mm x 1200 mm and shall be composed of reinforced concrete. The catchpits shall be provided with a slope of 1:500 to ensure free flow of water.

### Section 3: Signage

The signage shall be designed and constructed in accordance with the Indian Standard (IS) 1465:1999 "Road signs - Specifications". The following specifications are required for the signage:

**Signage material:** The signage shall be constructed from high-density polyethylene (HDPE) or aluminum alloy.

**Signage size:** The signage shall be constructed to a size of 1200 mm x 1200 mm.

**Signage color:** The signage shall be colored in accordance with the Indian Road Congress (IRC) guidelines.

### Section 4: Environmental and Safety Standards

The contractor shall adhere to the following environmental and safety standards:

**Environmental impact assessment:** The contractor shall conduct an environmental impact assessment and submit a report to the client.

**Noise pollution control:** The contractor shall take measures to minimize noise pollution during construction.

**Dust control:** The contractor shall take measures to minimize dust generation during construction.

**Safety equipment:** The contractor shall provide safety equipment to all laborers, including helmets, gloves, and safety glasses.

**First aid facility:** The contractor shall provide a first aid facility on site.

### Section 5: Quality Control

The contractor shall ensure that the following quality control measures are implemented:

**Material testing:** The contractor shall conduct regular material testing in accordance with the Indian Standard (IS) 383:1970 "Specifications for coarse and fine aggregates from natural sources for concrete".

**Workmanship:** The contractor shall ensure that all work is carried out in accordance with the Indian Road Congress (IRC) guidelines.

**Documentation:** The contractor shall maintain accurate records of all work carried out, including material testing reports, work certificates, and safety records.

### Section 6: Labour and Machinery

The contractor shall provide the following labor and machinery:

Labor: The contractor shall provide a team of skilled laborers, including carpenters, masons, and asphalt layers.

Machinery: The contractor shall provide the following machinery:

- + Asphalt paver
- + Roller compactor
- + Excavator
- + Grader
- + Truck-mounted crane

#### Section 7: Performance Guarantee

The contractor shall provide a performance guarantee of 12 months from the date of project completion.

#### Section 8: Warranty

The contractor shall provide a warranty of 24 months from the date of project completion against any defects in workmanship or materials.

#### Section 9: Testing and Inspection

The contractor shall allow the client to inspect and test the work at any stage of construction. The client reserves the right to reject any work that does not meet the specifications.

#### Section 10: Compliance with Laws

The contractor shall comply with all relevant laws and regulations, including environmental and labor laws.

#### Section 11: Insurance

The contractor shall provide insurance coverage for public liability, employer's liability, and workmen's compensation.

#### Section 12: Payment Terms

The payment terms shall be as follows:

Progress payment: 80% of the total contract value shall be paid in installments as the work progresses.

Final payment: 20% of the total contract value shall be paid on completion of the project.

By signing this tender document, the bidder confirms that they have read, understood, and agree to comply with the detailed technical specifications outlined above.

## **Implementation Methodology**

## Implementation Methodology for Road Construction Project

This section outlines the detailed implementation methodology for the proposed Road Construction Project with a total value of Rs. 100,000,000.0. The scope of work includes the construction of a 20-kilometer stretch of road with asphalt paving, drainage systems, and necessary signage.

### Phase 1: Pre-Construction (Weeks 1-4)

Conduct thorough site investigation and topographic survey to identify potential obstacles and environmental concerns.

Develop a detailed project plan, including timelines, milestones, and resource allocation.

Obtain necessary permits and approvals from local authorities and regulatory bodies.

Conduct environmental impact assessment and develop a mitigation plan to ensure adherence to environmental standards.

Establish a project management team, comprising experienced professionals, including a project manager, engineers, and quality control specialists.

### Phase 2: Site Preparation (Weeks 5-8)

Clear the site of debris, vegetation, and other obstacles.

Conduct geotechnical investigation to determine soil stability and optimize pavement design.

Excavate and prepare the subgrade, ensuring compacted and stable base course.

Install drainage systems, including culverts and stormwater management structures.

Implement safety measures, including erection of fencing, signage, and warning systems.

### Phase 3: Asphalt Paving (Weeks 9-16)

Lay down a layer of aggregate base course, compacted to ensure stability.

Apply a layer of asphalt binder, followed by a layer of asphalt concrete.

Perform multiple passes of compaction to ensure even density and surface finish.

Install traffic management systems, including signage, markings, and traffic cones.

Conduct regular quality control checks to ensure compliance with industry standards.

### Phase 4: Drainage and Signage Installation (Weeks 17-20)

Complete installation of drainage systems, including culverts, stormwater management structures, and catch basins.

Install necessary signage, including directional signs, warning signs, and information signs.

Conduct final inspections to ensure compliance with regulatory requirements and industry standards.

### Phase 5: Testing and Commissioning (Weeks 21-24)



Conduct thorough testing of the completed road, including pavement strength, drainage, and safety features.

Obtain necessary certificates and approvals from local authorities and regulatory bodies.

Conduct final inspections to ensure compliance with project specifications and industry standards.

Obtain a completion certificate from the project management team.

#### Metrics and Performance Indicators

Project completion rate: 20 km of road constructed within 24 weeks.

Quality control checks: regular inspections to ensure compliance with industry standards.

Environmental impact assessment: regular monitoring to ensure adherence to environmental standards.

Safety performance: zero incidents or accidents reported throughout the project duration.

Cost control: budget adherence within  $\pm 5\%$  of total project value.

#### Industry Standards and Regulations

Adhere to Indian Road Congress (IRC) standards for road construction and maintenance.

Comply with the Environmental Protection Act, 1986, and the Indian Penal Code, 1860.

Ensure safety standards conform to the Factories Act, 1948, and the Occupational Safety, Health and Working Conditions Code, 2020.

#### Resource Allocation and Management

Project team: experienced professionals, including project manager, engineers, quality control specialists, and laborers.

Equipment and machinery: heavy machinery, such as graders, rollers, and excavators, as well as light equipment, such as generators and compressors.

Materials: asphalt, aggregate base course, drainage materials, and signage.

Subcontractors: engaged as necessary, with clearly defined scopes of work and payment terms.

#### Risk Management

Identify potential risks, including environmental hazards, safety concerns, and construction delays.

Develop a risk mitigation plan, including contingency planning and emergency response procedures.

Monitor and review risk mitigation measures regularly to ensure effectiveness.

By following this detailed implementation methodology, the proposed Road Construction Project will be completed within the specified timeframe, ensuring quality, safety, and environmental sustainability while meeting the requirements and standards outlined in this tender document.

# Quality Control and Standards

## Quality Control and Standards

### 1.0 Introduction

The Quality Control and Standards (QCS) section of this tender outlines the requirements and expectations for the Road Construction Project. The bidder must ensure that all work is carried out in accordance with the specifications, standards, and procedures outlined in this document. The QCS section is divided into three main sections: Quality Control, Quality Assurance, and Environmental and Safety Standards.

### 2.0 Quality Control

The bidder shall establish and maintain a Quality Control (QC) system that ensures all work is carried out to the required standards. The QC system shall include the following components:

Documentation: The bidder shall maintain accurate and detailed records of all work carried out, including but not limited to:

- + Daily progress reports
- + Material inspection records
- + Testing and certification records
- + Equipment maintenance records

Material Control: The bidder shall ensure that all materials used for the project are of the required quality and are properly stored, handled, and transported.

Workmanship: The bidder shall ensure that all work is carried out to the required standards, including but not limited to:

- + Asphalt paving: The bidder shall ensure that the asphalt pavement is laid to a minimum thickness of 50 mm and is compacted to a density of not less than 95% of the maximum density.
- + Drainage systems: The bidder shall ensure that the drainage systems are designed and constructed to prevent water accumulation and erosion.
- + Signage: The bidder shall ensure that all signage is installed to the required standards and is clearly visible.

Testing and Inspection: The bidder shall conduct regular testing and inspection of all work carried out, including but not limited to:

- + Material testing: The bidder shall conduct regular testing of materials to ensure they meet the required standards.
- + Workmanship inspection: The bidder shall conduct regular inspection of work to ensure it meets the required standards.

### 3.0 Quality Assurance

The bidder shall establish and maintain a Quality Assurance (QA) system that ensures all work is carried out to the required standards. The QA system shall include the following components:

**Audit and Review:** The bidder shall conduct regular audits and reviews of all work carried out to ensure it meets the required standards.

**Certification:** The bidder shall ensure that all personnel working on the project are certified to the required standards.

**Training:** The bidder shall ensure that all personnel working on the project receive regular training to ensure they are competent to carry out their tasks.

#### 4.0 Environmental and Safety Standards

The bidder shall ensure that all work is carried out in accordance with the following environmental and safety standards:

**Environmental Impact Assessment:** The bidder shall conduct an Environmental Impact Assessment (EIA) to identify potential environmental impacts and develop strategies to mitigate them.

**Waste Management:** The bidder shall ensure that all waste generated during the project is properly disposed of in accordance with environmental regulations.

**Safety Management:** The bidder shall establish and maintain a Safety Management System (SMS) that ensures all personnel working on the project are safe and healthy.

**Personal Protective Equipment (PPE):** The bidder shall ensure that all personnel working on the project wear PPE to prevent injury or illness.

**Emergency Response Plan:** The bidder shall establish and maintain an Emergency Response Plan (ERP) that ensures all personnel working on the project are prepared to respond to emergencies.

#### 5.0 Metrics and Industry Standards

The bidder shall meet the following metrics and industry standards:

**Indian Roads Congress (IRC) Standards:** The bidder shall ensure that all work is carried out in accordance with IRC standards.

**Ministry of Road Transport and Highways (MoRTH) Standards:** The bidder shall ensure that all work is carried out in accordance with MoRTH standards.

**International Organization for Standardization (ISO) Standards:** The bidder shall ensure that all work is carried out in accordance with ISO standards.

#### 6.0 Compliance

The bidder shall comply with all relevant laws, regulations, and standards, including but not limited to:

Environmental Protection Act, 1986

Factories Act, 1948

Occupational Safety, Health and Working Conditions Code, 2020

## 7.0 Documentation

The bidder shall maintain accurate and detailed records of all work carried out, including but not limited to:

Quality Control Plan (QCP)

Quality Assurance Plan (QAP)

Environmental Impact Assessment Report (EIAR)

Safety Management Plan (SMP)

## 8.0 Conclusion

The Quality Control and Standards section of this tender outlines the requirements and expectations for the Road Construction Project. The bidder must ensure that all work is carried out in accordance with the specifications, standards, and procedures outlined in this document. The bidder shall establish and maintain a Quality Control (QC) system, Quality Assurance (QA) system, and Environmental and Safety Standards to ensure all work is carried out to the required standards.

## Appendix

Indian Roads Congress (IRC) Standards

Ministry of Road Transport and Highways (MoRTH) Standards

International Organization for Standardization (ISO) Standards

Environmental Protection Act, 1986

Factories Act, 1948

Occupational Safety, Health and Working Conditions Code, 2020

# Risk Management Framework

## Risk Management Framework

### Introduction

The Road Construction Project is a significant undertaking with a value of Rs. 100,000,000.0. To ensure the project's success and mitigate potential risks, [Company Name] proposes the following comprehensive Risk Management Framework. This framework outlines the identification, assessment, prioritization, mitigation, and monitoring of risks associated with the project.

### Risk Management Policy

[Company Name] is committed to managing risks effectively to ensure the project's delivery within the predetermined timeframe, budget, and quality standards. The Risk Management Framework is aligned with the company's overall risk management policy and adheres to international standards,

including:

ISO 31000:2018 (Risk Management - Guidelines)

OHSAS 18001:2007 (Occupational Health and Safety Management Systems)

Risk Management Process

The Risk Management Process involves the following stages:

1. Risk Identification: Identify potential risks associated with the project, including:

Construction hazards (e.g., accidents, injuries, fatalities)

Environmental risks (e.g., pollution, damage to ecosystems)

Operational risks (e.g., delays, cost overruns)

Quality risks (e.g., non-compliance with specifications)

Financial risks (e.g., cash flow, budget overruns)

2. Risk Assessment: Assess the likelihood and potential impact of identified risks using the following metrics:

Likelihood: Low (L), Medium (M), High (H)

Impact: Low (L), Medium (M), High (H)

Risk Priority: Low (L), Medium (M), High (H)

3. Risk Prioritization: Prioritize risks based on their likelihood and potential impact, focusing on High and Medium-risk items.

4. Risk Mitigation: Develop and implement strategies to mitigate or eliminate identified risks, including:

Hazard control measures (e.g., safety protocols, personal protective equipment)

Environmental mitigation measures (e.g., pollution prevention, waste management)

Quality control measures (e.g., inspection, testing)

Financial mitigation measures (e.g., contingency planning, budget allocation)

5. Risk Monitoring: Regularly monitor and review the risk management process to ensure its effectiveness and identify areas for improvement.

Risk Categories

The following risk categories have been identified for the Road Construction Project:

Construction Risks:

+ Accidents and injuries to personnel

+ Damage to equipment and infrastructure

+ Delays and cost overruns

#### Environmental Risks:

- + Pollution and damage to ecosystems
- + Non-compliance with environmental regulations

#### Operational Risks:

- + Delays and cost overruns
- + Quality control issues
- + Disruptions to traffic and transportation

#### Quality Risks:

- + Non-compliance with specifications
- + Defects in construction

#### Financial Risks:

- + Cash flow and budget overruns
- + Non-payment by clients or contractors

#### Risk Mitigation Strategies

The following risk mitigation strategies have been developed for the Road Construction Project:

#### Construction Risks:

- + Develop and implement safety protocols and procedures
- + Provide personal protective equipment (PPE) to personnel
- + Regularly inspect equipment and infrastructure

#### Environmental Risks:

- + Implement pollution prevention measures
- + Develop a waste management plan
- + Ensure compliance with environmental regulations

#### Operational Risks:

- + Develop a project schedule and timeline
- + Allocate resources and budget accordingly
- + Regularly monitor progress and adjust as needed

#### Quality Risks:

- + Develop and implement quality control procedures
- + Regularly inspect and test construction materials and work

#### Financial Risks:

- + Develop a contingency plan and budget
- + Regularly review and adjust the project budget

#### Risk Management Roles and Responsibilities

The following roles and responsibilities have been assigned for the Risk Management Framework:

Risk Manager: Responsible for developing and implementing the Risk Management Framework

Project Manager: Responsible for monitoring and reviewing the project's progress and identifying areas for improvement

Safety Officer: Responsible for ensuring compliance with safety regulations and procedures

Environmental Officer: Responsible for ensuring compliance with environmental regulations and procedures

Quality Controller: Responsible for ensuring compliance with quality control procedures and specifications

#### Risk Management Metrics

The following metrics will be used to measure the effectiveness of the Risk Management Framework:

Risk-based key performance indicators (KPIs):

- + Number of accidents and injuries
- + Environmental incidents and non-compliances
- + Delays and cost overruns
- + Quality control issues and defects

Risk-based metrics:

- + Likelihood and potential impact of identified risks
- + Risk priority and mitigation effectiveness

#### Conclusion

The Risk Management Framework outlined in this document is designed to ensure the successful delivery of the Road Construction Project. By identifying, assessing, prioritizing, mitigating, and monitoring risks, [Company Name] can minimize potential risks and ensure the project's success within the predetermined timeframe, budget, and quality standards.

## Financial Terms and Conditions

Financial Terms and Conditions for Road Construction Project

This Financial Terms and Conditions section outlines the financial obligations and responsibilities of the successful bidder (hereinafter referred to as "the Contractor") in the execution of the Road Construction Project (hereinafter referred to as "the Project"). The Contractor shall strictly adhere to the terms and conditions specified below.

#### ### 1. Payment Terms

**Payment Method:** The Client (hereinafter referred to as "the Client") shall make payments to the Contractor upon satisfactory completion of the Project milestones, as per the Payment Schedule outlined in the contract.

**Payment Schedule:**

- + Milestone 1 (Completion of Design and Planning): 10% of the Project value (Rs. 10,000,000.0)
- + Milestone 2 (Commencement of Site Work): 20% of the Project value (Rs. 20,000,000.0)
- + Milestone 3 (Completion of Asphalt Paving): 30% of the Project value (Rs. 30,000,000.0)
- + Milestone 4 (Completion of Drainage Systems): 20% of the Project value (Rs. 20,000,000.0)
- + Milestone 5 (Final Completion and Commissioning): 20% of the Project value (Rs. 20,000,000.0)

**Payment Frequency:** Payments shall be made within 30 days from the date of receipt of the Contractor's invoice.

#### ### 2. Pricing and Invoicing

**Pricing:** The Contractor shall provide a detailed breakdown of the Project costs, including labor, materials, equipment, and other expenses.

**Invoicing:** The Contractor shall submit invoices to the Client on a monthly basis, detailing the work completed and the corresponding costs.

**Pricing Variations:** Any variations to the original Project scope, price, or schedule shall be agreed upon in writing by both parties and reflected in the updated Project schedule and budget.

#### ### 3. Insurance and Bonds

**Performance Bond:** The Contractor shall provide a Performance Bond in the amount of 10% of the Project value (Rs. 10,000,000.0) to guarantee the successful completion of the Project.

**Equipment Insurance:** The Contractor shall maintain adequate insurance coverage for all equipment, tools, and plant used in the Project.

**Public Liability Insurance:** The Contractor shall maintain adequate Public Liability Insurance to cover any damages or losses caused to third parties during the Project.

#### ### 4. Taxation and Statutory Compliance

**Taxation:** The Contractor shall comply with all applicable tax laws and regulations in the country, including the payment of Goods and Services Tax (GST) and other applicable taxes.

**Statutory Compliance:** The Contractor shall comply with all applicable labor laws, environmental regulations, and other statutory requirements related to the Project.



### ### 5. Delays and Disruptions

**Delay Penalties:** The Contractor shall pay a daily penalty of Rs. 500,000.0 for any delay in the completion of the Project beyond the scheduled date.

**Disruption Costs:** The Contractor shall reimburse the Client for any costs incurred due to disruptions or delays caused by the Contractor's actions or omissions.

### ### 6. Termination and Cancellation

**Termination:** The Client reserves the right to terminate the contract in the event of the Contractor's default, non-performance, or failure to comply with the terms and conditions.

**Cancellation:** The Client reserves the right to cancel the contract in the event of unforeseen circumstances, including but not limited to, changes in government policies, natural disasters, or other external factors.

### ### 7. Dispute Resolution

**Dispute Resolution Mechanism:** Any disputes arising out of or in connection with the contract shall be resolved through arbitration in accordance with the Indian Arbitration and Conciliation Act, 1996.

**Arbitration:** The arbitration shall be conducted by a single arbitrator appointed by the Client, and the award shall be final and binding on both parties.

### ### 8. Governing Law and Jurisdiction

**Governing Law:** This contract shall be governed by and construed in accordance with the laws of India.

**Jurisdiction:** Any disputes arising out of or in connection with this contract shall be subject to the jurisdiction of the courts of India.

By signing the contract, the Contractor acknowledges that they have read, understood, and agreed to abide by the Financial Terms and Conditions outlined above.

## **Legal and Compliance Requirements**

### **Legal and Compliance Requirements**

The successful bidder for the Road Construction Project shall be required to comply with all relevant laws, regulations, and standards as outlined below.

#### **1. Company Registration and Licensing**

The bidder must be a registered company in India with a valid Tax Identification Number (PAN) and Goods and Services Tax Identification Number (GSTIN).

The bidder must hold a valid contractor's license from the relevant state government or the Ministry of Road Transport and Highways (MoRTH), Government of India.

The bidder must provide a copy of the license and registration certificate along with the bid.

## 2. Environmental Compliance

The bidder must comply with the Environmental Protection Act, 1986, and the Environment (Protection) Rules, 1986.

The bidder must ensure that all environmental aspects of the project are addressed and managed in accordance with the Environmental Impact Assessment (EIA) Notification, 2006.

The bidder must implement measures to minimize waste generation, reduce water consumption, and prevent air and noise pollution.

The bidder must provide a detailed Environmental Management Plan (EMP) as part of the bid.

## 3. Safety Compliance

The bidder must comply with the Factories Act, 1948, and the Occupational Safety, Health and Working Conditions Code, 2020.

The bidder must ensure that all workers employed on the project are provided with personal protective equipment (PPE) and are trained in safety procedures.

The bidder must implement a comprehensive safety management system, including regular risk assessments and incident reporting.

The bidder must provide a detailed Safety Management Plan (SMP) as part of the bid.

## 4. Labour Laws and Regulations

The bidder must comply with the Minimum Wages Act, 1948, and the Payment of Wages Act, 1936.

The bidder must ensure that all workers employed on the project are paid as per the applicable minimum wages and are provided with benefits such as gratuity, leave encashment, and pension.

The bidder must provide a detailed Labour Management Plan (LMP) as part of the bid.

## 5. Quality Management

The bidder must comply with the Bureau of Indian Standards (BIS) specifications for road construction.

The bidder must implement a quality management system, including regular inspections and testing of materials and workmanship.

The bidder must provide a detailed Quality Management Plan (QMP) as part of the bid.

## 6. Intellectual Property Rights

The bidder must ensure that all intellectual property rights (IPRs) related to the project, including patents, trademarks, and copyrights, are respected and protected.

The bidder must obtain all necessary permissions and licenses to use third-party IPRs.

#### 7. Anti-Corruption and Bribery

The bidder must comply with the Prevention of Corruption Act, 1988, and the Prevention of Money Laundering Act, 2002.

The bidder must ensure that all employees and agents are trained in anti-corruption and bribery procedures.

The bidder must implement a robust anti-corruption and bribery policy, including regular audits and monitoring.

#### 8. Confidentiality and Data Protection

The bidder must ensure that all confidential and sensitive information related to the project is protected and handled in accordance with the Information Technology Act, 2000.

The bidder must implement a data protection policy, including regular audits and monitoring.

#### 9. Project Schedule and Milestones

The bidder must provide a detailed project schedule and milestones, including key timelines and deliverables.

The bidder must ensure that all project deadlines are met and that regular progress reports are submitted to the client.

#### 10. Warranty and Liability

The bidder must provide a comprehensive warranty and liability clause, including a minimum warranty period of 2 years.

The bidder must ensure that all defects and issues are addressed promptly and that necessary rectifications are carried out.

#### 11. Compliance with Government Regulations

The bidder must comply with all relevant government regulations, including those related to taxation, customs, and foreign exchange.

The bidder must ensure that all necessary permits and approvals are obtained from the relevant authorities.

#### 12. Insurance

The bidder must provide proof of public liability insurance and worker's compensation insurance.

The bidder must ensure that all insurance policies are up-to-date and that necessary deductibles are met.

#### 13. Record Keeping and Reporting

The bidder must maintain accurate and detailed records of all project-related activities, including financial transactions, progress reports, and quality control measures.

The bidder must provide regular reports to the client, including progress reports, quality reports, and safety reports.

#### 14. Termination and Cancellation

The bidder must comply with the terms and conditions of the contract, including provisions related to termination and cancellation.

The bidder must ensure that all necessary steps are taken to mitigate losses and minimize disruption in the event of termination or cancellation.

By submitting a bid for the Road Construction Project, the bidder acknowledges that it has read, understood, and agrees to comply with all the requirements outlined in this Legal and Compliance Requirements section. The bidder shall be required to provide proof of compliance with all relevant laws, regulations, and standards as part of the bid evaluation process.

## Performance Metrics and SLAs

### Performance Metrics and Service Level Agreements (SLAs)

As part of this Road Construction Project, the successful bidder is expected to meet and maintain high standards of performance, safety, and environmental responsibility. The following Performance Metrics and SLAs have been established to ensure that the project is completed efficiently, effectively, and in accordance with the requirements specified in the tender document.

#### Performance Metrics:

The following performance metrics will be used to evaluate the bidder's performance and progress throughout the project:

##### 1. Progress Milestones:

Completion of site preparation and excavation work within 120 days from the commencement of the project

Completion of asphalt paving and drainage systems within 180 days from the commencement of the project

Completion of signage and other infrastructure works within 210 days from the commencement of the project

Project completion within 240 days from the commencement of the project

##### 2. Quality Standards:

All road construction work shall be carried out in accordance with the Indian Road Congress (IRC) standards and the specifications mentioned in the tender document

All materials used shall meet the required specifications and quality standards

The bidder shall ensure that all work is carried out in a manner that ensures the durability and longevity of the road

### 3. Safety and Environmental Standards:

The bidder shall comply with all applicable safety and environmental regulations, including the Factories Act, 1948, the Environment (Protection) Act, 1986, and the Indian Road Congress (IRC) standards

The bidder shall maintain a safe working environment and ensure that all personnel working on the project are properly trained and equipped

The bidder shall implement measures to minimize environmental impact and ensure that all waste is disposed of in an environmentally responsible manner

### 4. Machinery and Equipment:

The bidder shall ensure that all machinery and equipment used on the project are in good working condition and meet the required specifications

The bidder shall maintain a record of all machinery and equipment used, including their maintenance and repair history

### 5. Labor and Training:

The bidder shall ensure that all personnel working on the project are properly qualified and experienced

The bidder shall provide training to all personnel working on the project to ensure that they are aware of their responsibilities and the requirements of the project

### Service Level Agreements (SLAs):

The following SLAs have been established to ensure that the project is completed efficiently, effectively, and in accordance with the requirements specified in the tender document:

#### 1. Response Time:

The bidder shall respond to all queries and concerns within 24 hours of receipt

The bidder shall provide regular progress updates to the client on a weekly basis

#### 2. Quality of Work:

The bidder shall ensure that all work is carried out to the highest quality standards

The bidder shall ensure that all defects are rectified within 7 days of notification

#### 3. Safety and Environmental Compliance:

The bidder shall comply with all applicable safety and environmental regulations

The bidder shall maintain a safe working environment and ensure that all personnel working on the project are properly trained and equipped

#### 4. Machinery and Equipment Maintenance:

The bidder shall ensure that all machinery and equipment used on the project are in good working condition

The bidder shall maintain a record of all machinery and equipment used, including their maintenance and repair history

#### 5. Communication:

The bidder shall maintain open and transparent communication with the client throughout the project

The bidder shall provide regular progress updates to the client on a weekly basis

#### Consequences of Non-Compliance:

Failure to meet the performance metrics and SLAs specified in this document may result in the following consequences:

##### 1. Warning Letters:

The bidder shall receive a warning letter from the client for any non-compliance

The bidder shall be given a reasonable time to rectify the issue

##### 2. Penalties:

The bidder shall be liable to pay penalties for any non-compliance

The penalties shall be in accordance with the rates specified in the tender document

##### 3. Project Termination:

In the event of repeated non-compliance, the client reserves the right to terminate the project

The bidder shall be liable to pay all costs and expenses incurred by the client in relation to the project.

By submitting a bid for this project, the bidder acknowledges that they have read, understood, and agreed to the terms and conditions specified in this document, including the performance metrics and SLAs.

## Testing and Acceptance Criteria

### Testing and Acceptance Criteria

#### 1. Pre-Construction Testing

Prior to the commencement of construction, the successful bidder shall be required to conduct and provide proof of the following pre-construction tests:

Geotechnical investigation to assess the soil conditions and bearing capacity of the site.

Topographical survey to confirm the alignment and profile of the road.

Environmental impact assessment to identify potential hazards and develop mitigation strategies.

Compliance with relevant Indian standards and regulatory requirements, such as the Indian Road Congress (IRC) and the Ministry of Road Transport and Highways (MoRTH).

## 2. In-Progress Testing

During the construction phase, the successful bidder shall be required to conduct and provide proof of the following in-progress tests:

Compaction Testing:

- + Conduct regular compaction tests using a nuclear density gauge or sand cone test to ensure adequate compaction of the subgrade and base course.
- + Record and submit compaction test results to the Engineer's Representative (ER) for verification.

Pavement Testing:

- + Conduct regular pavement tests using a falling weight deflectometer (FWD) or a Benkelman beam to assess the pavement's structural integrity.
- + Record and submit pavement test results to the ER for verification.

Drainage System Testing:

- + Conduct regular inspection and testing of the drainage system to ensure proper functioning and capacity.
- + Record and submit drainage test results to the ER for verification.

## 3. Final Acceptance Testing

Upon completion of the construction phase, the successful bidder shall be required to conduct and provide proof of the following final acceptance tests:

Pavement Testing:

- + Conduct a comprehensive pavement test using a FWD or a Benkelman beam to assess the pavement's structural integrity and ensure compliance with Indian standards (IRC: 83-2012).
- + Record and submit pavement test results to the ER for verification.

Drainage System Testing:

- + Conduct a comprehensive inspection and testing of the drainage system to ensure proper functioning and capacity.
- + Record and submit drainage test results to the ER for verification.

Asphalt Paving Testing:

- + Conduct a comprehensive test of the asphalt paving to ensure compliance with Indian standards (IRC: 35-2017).

- + Record and submit asphalt paving test results to the ER for verification.

#### Signage Testing:

- + Conduct a comprehensive test of the signage to ensure compliance with Indian standards (MoRTH).
- + Record and submit signage test results to the ER for verification.

#### 4. Quality Control and Assurance

The successful bidder shall be responsible for maintaining a quality control and assurance program throughout the project, including:

Conducting regular audits and inspections to ensure compliance with project specifications and Indian standards.

Maintaining accurate records of testing and inspection results.

Providing training to labor and personnel on quality control and assurance procedures.

#### 5. Acceptance Criteria

The project shall be considered complete and ready for final acceptance when the following criteria are met:

All testing and inspection results are satisfactory and comply with Indian standards.

The successful bidder has submitted all required documentation and records to the ER for verification.

The completed project meets the project specifications and requirements as outlined in the tender document.

#### 6. Defects Liability Period

The successful bidder shall be responsible for rectifying any defects or deficiencies identified during the testing and inspection process within a period of 12 months from the date of final acceptance.

#### 7. Compliance with Industry Standards

The successful bidder shall ensure compliance with relevant Indian standards and regulatory requirements, including:

Indian Road Congress (IRC) standards.

Ministry of Road Transport and Highways (MoRTH) standards.

Other relevant national and international standards.

#### 8. Reporting and Documentation

The successful bidder shall maintain accurate and detailed records of testing and inspection results, including:

Test reports and certificates.



Inspection reports and certificates.

Quality control and assurance records.

Compliance with industry standards and regulatory requirements.

The successful bidder shall submit all required documentation and records to the ER for verification and approval.