

Brihanmumbai Municipal Corporation

E –Tender (2022-23)

VOLUME-I

FOR

Name of Work:

**“EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM
FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN
EXPRESS HIGHWAY”**

Website: portal.BMC.gov.in/tenders

Office of: Chief Engineer (Bridges),
Engineering Hub Building,
Dr. E. Moses Road,
Worli Naka, Worli,
Mumbai- 400 018.

**Name of Work: “EPC TENDER FOR CONSTRUCTION OF BRIDGE
FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO
WESTERN EXPRESS HIGHWAY”**

(Bid No. 7200035590)

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SECTION 1

E-TENDER NOTICE

BRIHANMUMBAI MUNICIPAL CORPORATION

Chief Engineer (Bridges)

No. Ch E/ 5897 /Bridges dated 29/08/2022

E-TENDER NOTICE

Bid No. 7200035590

SUBJECT: -“EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY”

The Brihanmumbai Municipal Corporation (BMC) invites e-tender to appoint Contractor for the aforementioned work from contractors of repute, multidisciplinary engineering organizations i.e. eminent firm, Proprietary/Partnership Firms/ Private Limited Companies/ Public Limited Companies/Companies registered under the Indian companies' act 2013, the contractors registered with the Brihanmumbai Municipal Corporation, (BMC) in **Class I(A) as per new registration** (excluding those who are blacklisted or against whom FIR has been filed) or Those having equivalent or more work experience from Central or State Government/Semi Govt. Organization/Central or State Public Sector Undertakings, will be allowed subject to condition that, the contractors who are not registered with BMC will have to apply for registering their firm within three months from date of issue of work order failing which their Bid security i.e. EMD (Earnest Money Deposit) will be forfeited/ recovered and a penalty of 0.1 % of contract cost OR Rs.10,000/- whichever is more will be recovered / deducted from the Contractors payment / bill by the executing department.

Bidding Process will comprise of THREE stages.

Joint Venture (JV) is allowed.

Refer section (3.d.) of Standard General Condition of Contract for Construction Work 2016. Please refer Circular No. CH.E./BM/15600/HIC dt. 09/01/2019 for Financial Eligibility Criteria (Circular attached herewith).

The bidder shall note the guidelines for Provisions incorporated in circulars under no. प्र.ले. / वित्त/ प्रकल्प/ शहर/17/ dt.06.09.2017, प्र.ले./वित्त/ प्रकल्प/ शहर/19/ dt.15.09.2017 and प्र.ले. / वित्त/प्रकल्प/शहर/28/ dt.10.11.2017 are attached herewith in the Draft Tender.

The application form can be downloaded from BMC's portal (<http://portal.BMC.gov.in>) on payment of Rs.10,400 + applicable GST). The applicants not registered with BMC are mandated to get registered (Vendor Registration) with BMC for e-tendering process & obtain login credentials to participate in the online bidding process.

- i) To download the application form, for those applicants not having vendor registration, need to apply first for vendor registration at the office of Account Officer (FAR), 3rd floor, Municipal Headquarter.
- ii) Followed by SRM login ID and password to be obtained from Central Purchase Department (CPD), Office at Byculla, Bakariadda, Mumbai.
- iii) For e-Tendering registration, enrollment for digital signature certificates and user manual,

please refer to respective links provided in ‘Tenders’ tab. Vendors can get digital signature from any one of the Certifying Authorities (CA's) licensed by controller of certifying authorities namely, Safes crypt, IDRBT, National informatics center, TCS, CUSTOMS, MTNL, GNFC and e- Mudhra CA.

Name and location of work	Contract period	Earnest Money Deposit
“EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY”	24 months Excluding monsoon	Rs. 2,38,01,400/-

In terms of the 3-stage system of e-tendering, a Bidder will be required to deposit, along with its Bid, an **Earnest Money Deposit of Rs. 2,38,01,400/- (Rupees Two Crore Thirty Eight Lakhs One Thousand Four Hundred Only)**, refundable in accordance to the relevant clause of bid document, from the Bid Due Date, except in the case of the selected Bidder whose Bid Security/EMD shall be retained. The Bidders will have to provide Earnest Money Deposit through the payment gateways while submitting the bids. The Bid shall be summarily rejected if it is not accompanied by the Earnest Money Deposit. The e-tender is available on BMC portal (<http://portal.BMC.gov.in>) as mentioned in the Header Data of the tender.

As per THREE Packet systems, the document for Packet A, B & C is to be uploaded by the bidder in vendors’ document online in Packet A, B & C. Packet A, B & C shall be opened on dates as mentioned in header data. All the responsive and eligible bidders if they so wish can be present at the time of opening of bids, in the office of Chief Engineer (Bridges). The Packet C shall be opened if bids submission in Packet A& B satisfies/includes all the requirements and same are found acceptable to the Authority.

The Municipal Commissioner reserves the right to reject all or any of the e- tender(s) without assigning any reasons at any stage.

The dates and time for submission and opening the bids are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the BMC Portal. (<http://portal.BMC.gov.in>)The Applicants interested for the above referred works may contact the Chief Engineer (Bridges) at the following address on any working day during office hours. Office of: Chief Engineer (Bridges), BMC, Zero Floor, Engineering Hub Building, Dr. E. Moses Road, Worli Naka, Worli, Mumbai- 400 018.

The applicants may wish to visit the site under reference located **near Fisherman Colony, Senapati Bapat Marg towards Western Express Highway** for the Project named “**EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY**” and can collect the information of the present status from the department who have invited the bids.

Note:1) Bidder shall note that any unforeseen additional permanent work for protection of embankment, merging of proposed bridge with Western Express Highway and

Clover leaf junction, Construction of cofferdam, Construction of Retaining wall, also any other supportive works, etc. may be required as per the site condition or as per the instructions / requirement of external agencies such as MMRDA, MSRDC, PWD, Forest department, etc. to be executed on site. The Bidder shall study the site condition thoroughly & accordingly quote the rate in anticipation of the above.

2) The Bidder shall note that before the commencement of this project work on site Environmental Studies will have to be carried out and the permissions / NOCs from various departments such as MOEF clearance, MCZMA, SEIA, Forest department, Collector, MSRDC, MMRDA, PWD, Maritime Board, Ward office, etc. may be required. The bidder shall be entirely responsible for availing the permissions / NOCs from these respective authorities in the name of BMC.

Indian Remote Sensing (IRS) Map charges, Statutory Fee, Scrutiny fees for availing various permission / NOCs from above authorities will be borne by BMC but the responsibility of availing all clearances will rest with the bidder.

3) Note : Date of commencement of the work will be the date on which all the above permissions / NOCs from various authorities are in place, however the bidder may be required to carry out Total station survey, soil investigation so as to prepare tentative design for fixing the location of piers which in turn will be required to be submitted to various Authorities while seeking their NOCs/ Permissions. The payment for these will be made as per the schedule of payment attached as Volume-II, SECTION – VIII – SCHEDULE – A1 TO A10, after all the permissions / NOCs are in place.

4) The bidder shall note that design and drawings prepared by his appointed consultant shall be got proof checked through the BMC appointed Consultant. The fees for proof checking will be borne by BMC.

The BMC reserves the rights to accept any of the application or reject any or all the application received for above works, without assigning any reasons thereof. The information regarding above subject matter is available on Website of BMC. (<http://portal.BMC.gov.in/tenders>)

Sd/-
Chief Engineer (Bridges)

HEADER DATA

Tender Document No.	7200035590
Name of Organization	Brihanmumbai Municipal Corporation
Subject	EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY
Cost of Tender	Rs. 10400/- + applicable GST
Office Estimated Cost	Rs. 238,01,39,589/-
Bid Security Deposit/ EMD	Rs. 2,38,01,400/-
Date of issue and sale of tender	30.08.2022 From 11:00 Hrs.
Last date & time for sale of tender	20.09.2022 From 12:00. Hrs.
Submission of Packet A, B & Packet C (Online) & Receipt of Bid Security Deposit	20.09.2022 Up to 16.00 Hrs.
Pre-Bid Meeting	06.09.2022 at 15:00 Hrs. in conference room Of Ch. Eng. (Bridges) as applicable.
Opening of Packet, A	20.09.2022 after 16:15 Hrs.
Opening of Packet B	20.09.2022 after 16:20 Hrs.
Opening of Packet C	29.09.2022 after 15:00 Hrs.
Address for communication	Office of the: - Ch.E.(Bridges) BMC, Ground floor, Engineering Hub Building, Dr. E. Moses Road, Worli Naka, Worli, Mumbai-400018
Venue for opening of bid	On line in Ch.Eng.(Bridge)'s office.

This tender document is not transferable.

The BMC reserves the right to accept any of application or reject any or all the application received for above subject without assigning any reason thereof.

Sd/-
Chief Engineer (Bridges)

SECTION 2
DISCLAIMER

DISCLAIMER

The information contained in this e-tender document or provided to Applicant(s), whether verbally or in documentary or any other form, by or on behalf of the Brihanmumbai Municipal Corporation (BMC), hereafter also referred as “The Authority “, or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this e-tender and such other terms and conditions subject to which such information is provided.

This e-tender includes statements, which reflect various assumptions and assessments arrived at by the Brihanmumbai Municipal Corporation (BMC) in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require. This e-tender may not be appropriate for all persons, and it is not possible for the Brihanmumbai Municipal Corporation (BMC), its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this e-tender. The assumptions, assessments, statements and information contained in this e-tender may not be complete, accurate, adequate or correct. Each Applicant should therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements and information contained in this e-tender and obtain independent advice from appropriate sources.

Information provided in this e-tender to the Applicant(s) is on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Brihanmumbai Municipal Corporation (BMC) accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed here.

The Brihanmumbai Municipal Corporation(BMC), its employees and advisors make no representation or warranty and shall have no liability to any person, including any Applicant or Bidder, under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this e-tender or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the e-tender and any assessment, assumption, statement or information contained therein or deemed to form part of this e-tender or arising in any way with pre-qualification of Applicants for participation in the Bidding Process. The Brihanmumbai Municipal Corporation (BMC) also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in these-tender.

SECTION 3
INTRODUCTION

INTRODUCTION

INTRODUCTION :

The Brihanmumbai Municipal Corporation covers an area of 437.71sq.kms.with a population of **1.24 Crores as per census of 2011**. The metropolis accounts major portion of India's international trade and government's revenue, from being one of the foremost centers of education, science and technological research and advancement.

The Mumbai Metropolis has historic tradition of strong civic activism dedicated to the cause of a better life for all its citizens. And it's the Brihanmumbai Municipal Corporation (BMC), hereafter called the "corporation", the primary agency responsible for urban governance in Greater Mumbai.

BMC (The Authority) is one of the largest local self-governments in the Asian Continent. In observance of historic traditions of strong civic activism, with the change in time and living conditions to match with the urbanization, BMC has mainly focused in providing almost all kinds of Engineering services viz, Hydraulics, storm water drain, sewerage, water supply projects, roads, bridges, solid waste management, and environmental services. Beside this, the BMC is also providing dedicated services in various segments such as Health, Primary Education as well as the construction and maintenance of Public Markets and Slaughter Houses.

BMC is an organization having different departments, right from engineering depts. to health depts. Moreover, we have other dept. like education, market, fire brigade dept., Octroi and other such departments where quite a good number of staff members are working.

Scope of Work:

BMC is primarily an organization, which in the interest of citizens and with the speed of urbanization deals with the variety of the infrastructure services and delivered to the public by different departments like Water Supply Projects, Sewerage Projects, Hydraulics, Storm Water Drain/Roads and bridges and Building Construction etc.

BMC is keen to take up the "**WORK FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY.**" by inviting EPC tender as per the General Arrangement layout / alignment drawings attached with this bid document.

SECTION 4
ELIGIBILITY CRITERIA

2.1 Technical Capacity (Project Experience):

The tenderer(s) in their own name should have satisfactorily executed the work of **#similar nature** BMC /Semi Govt. /Govt. & Public Sector Organizations during last **seven (7) years** ending last day of month previous to the one in which bids are invited as a prime Contractor (or as a nominated sub-Contractor, where the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied)

a) Three similar completed works or currently executing three works of similar nature each costing 30% of estimated cost.*

OR

b) Two similar completed works or currently executing two works of similar nature each costing 40% of estimated cost.*

OR

c) One completed work or currently executing one work of similar nature of aggregate 60% of estimated Cost.*

The value of executed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

Note: - **“Similar nature means at least one single project involving Design & Construction of PSC/Composite Vehicular Bridges, Flyover, ROB, Steel Girder Structure Vehicular Bridge with RCC deck slab or Vehicular bridge which involves placement of steel girders”** satisfying following requirements :

1 “The Tenderer(s) should have successfully completed that bridge work of length exceeding 400 m over river/creek/sea/ any water body/Railway/Road

and

2 At least one special structural steel composite span not less than 75 m in length of the bridge work.”

***In case of ongoing works to be considered, the bidder must have received payment bills of 80% of the contract sum for the work/works executed last day of month previous to the one in which bids are invited.**

2.1 Financial Capacity

Achieved a average annual financial turnover as certified by ‘Chartered Accountant’ (in all classes of civil engineering construction works only) equal to 30% of the estimated cost of work in **last Five (5) financial years** immediately preceding the Financial Year in which bids are invited.

- To ascertain this, tenderer(s) shall furnish /upload the financial statement

(Audited balance sheet) duly certified by Chartered Accountant.

- The turnover can be enhanced by 10% every year to bring the present level

2.2 The value of completed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum calculated from the date of completion to last date of receipt of applications for tenders

2.3 Similar Experience:

“Similar nature means at least one single project involving Design & Construction of PSC/Composite Vehicular Bridges, Flyover, ROB, Steel Girder Structure Vehicular Bridge with RCC deck slab or Vehicular bridge which involves placement of steel girders” satisfying following requirements :

2 “The Tenderer(s) should have successfully completed that bridge work of length exceeding 400 m over river/creek/sea/ any water body/Railway/Road

and

3 At least one special structural steel composite span not less than 75 m in length of the bridge work .”

3.1 Bid Capacity:

The bid capacity of the prospective bidders will be calculated as under:

Assessed Available Bid Capacity = (A* N* 2 - B)

Where,

A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the last five years (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the Project/Works, excluding monsoon period, for which these bids are being invited. (E.g.12months = 12/12 year) For every intervening monsoon 0.33 shall be added to N.

B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.

Note: The statement showing the value of existing commitments and on-going works as well as

the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer-in Charge, not below the rank of an Executive Engineer or equivalent.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- Made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements and/or

- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, financial failures etc.

The Brihanmumbai Municipal Corporation (BMC) may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this e-tender.

The issue of this e-tender does not imply that the Brihanmumbai Municipal Corporation (BMC) is bound to select and short-list pre-qualified Applications for Bid Stage or to appoint the selected Bidder or Concessionaire, as the case may be, for the Project and the Brihanmumbai Municipal Corporation (BMC) reserves the right to reject all or any of the Applications or Bids without assigning any reasons whatsoever.

The Applicant shall bear all its costs associated with or relating to the preparation and submission of its Application including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by The Brihanmumbai Municipal Corporation (BMC) or any other costs incurred in connection with or relating to its Application. All such costs and expenses will remain with the Applicant and the Brihanmumbai Municipal Corporation(BMC) shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by an Applicant in preparation or submission of the Application, regardless of the conduct or outcome of the Bidding Process.

SECTION 5
**E-TENDERING ONLINE SUBMISSION
PROCESS**

E-TENDERING ONLINE SUBMISSION PROCESS

The terminology of e-Tendering is solely depending upon policies in existence, guidelines and methodology adopted since decades. The SRM is only change in process of accepting and evaluation of tenders in addition to manual. The SAP module to be used in this E-tendering is known as Supplier Relationship Module (SRM).SRM is designed and introduced by ABM Knowledge ware Ltd. who will assist BMC in throughout the tendering process for successful implementation.

NOTE: This tendering process is covered under Information Technology ACT & Cyber Laws as applicable

(1) In e-tendering process some of the terms and its definitions are to be read as under wherever it reflects in online tendering process.

Start Date read as “Sale Date”

End Date read as “Submission Date”

Supplier read as “Contractor/bidder”

Vendor read as “Contractor/bidder”

Vendor Quotation read as “Contractors

Bid/Offer” Purchaser read as “Department/BMC”

I. Before entering in to online tendering process, the contractors should complete the registration process so as to get User ID for E-tendering links. For this, the contractors can access through Supplier registration via BMC Portal.

There are two methods for this registration :(II and III)

II. Transfer from R3 (registered contractors with BMC) to SRM

a. Contractors already registered with BMC will approach to Vendor Transfer cell.

b. Submit his details such as (name, vendor code, address, registered Email ID, pan card etc.) to Vendor transfer cell.

c. BMC authority for Vendor Transfer, transfers the Vendor to SRM application from R3 system to SRM system.

d. Transferred Vendor receives User ID creation link on his supplied mail-Id.

e. Vendor creates his User ID and Password for e-tendering applications by accessing link sent to his mail ID.

III. Online Self Registration (Temporary registration for applicant not registered with BMC)

- a. Vendor fills up Self Registration form via accessing BMC portal.
- b. Vendor Transfer cell (same as mentioned above) accesses Supplier Registration system and accepts the Vendor request.
- c. Accepted Vendor receives User ID creation email with Link on his supplied mail Id.
- d. Vendor creates his User ID and Password for e-tendering application.

IV. CONTRACTORS BIDDING: Applicant will Quote and Upload Tender Documents

1. Access e-tender link of SRM Portal
2. Log in with User ID and Password
3. Selects desired Bid Invitation (he wants to bid)
4. To download tender documents contractors will have to pay online Tender fee. The same can be done by accessing Pay Tender Fees option. By this one will be able to pay Tender fee through Payment Gateway-If transaction successful, Contractors can register his interest to participate. Without Registration one cannot quote for the Bid/Tender.
5. Applicant will download Tender Documents from Information from purchaser tab by accessing Purchaser document folder through collaboration 'C' folder link.
6. Applicant will upload Packet A related and Packet B related Documents in Packet A and Packet B folder respectively by accessing these folders through "My Notes" Tab and collaboration folder link.
7. All the documents uploaded have to be digitally signed and saved. Contractors can procure there digital signature from any certified CA's in India.
8. Bid security deposit/EMD and ASD, if applicable, should be paid online as mentioned in tender.
9. For commercial details (in Packet C) contractors will fill data in Item Data tab in Service Line Item via details and quotes his "Percentage Variation" (i.e.% quoted) figure.(If entered '0' it will be treated as at par. By default the value is zero only.
10. Applicants to check the bid, digitally signs & save and submit his Bid Invitation.
11. Applicants can also save his uploaded documents/commercial information without submitting the BID for future editing through 'HOLD' option.
12. Please note that "Hold" action do not submit the Bid.

13. Applicants will receive confirmation once the Bid is submitted.

14. Bid creator (BMC) starts Bid Opening for Packet A after reaching End Date and Time and Bid Evaluation process starts.

As per Three Packet system, the document for Packet A, B & C are to be uploaded by the tenderer in 'Vendor's document' online in Packet A, B & C. Before purchasing/downloading the tender copy, tenderer may refer to post- Qualification criteria mentioned in e-Tender Notice.

The tenderer shall pay the EMD/Bid Security through payment gateways before submission of Bid and shall upload the screenshot of receipt of payment in Packet 'A' instead of paying the EMD at any of the CFC centers in BMC Ward Offices.

The e-tender is available on BMC portal, <http://portal.BMC.gov.in>, as mentioned in the Header Data of the tender. The tenders duly filled in should be uploaded and submitted online on or before the end date of submission. The Packet 'A', Packet 'B' & Packet 'C' of the tenderer will be opened as per the time-table shown in the Header Data in the office of Ch. Eng (Bridges).

The Municipal Commissioner reserves the right to reject all or any of the e-Tender(s) without assigning any reason at any stage. The dates and time for submission and opening the tenders are as shown in the Header Data. If there are any changes in the dates the same will be displayed on the BMC Portal (<http://portal.BMC.gov.in>).

BARRING PHYSICAL SUBMISSIONS

As the entire tendering procedure is online process, the physical submission of documents shall not be entertained.

SECTION 6
INSTRUCTIONS TO APPLICANTS

INSTRUCTIONS TO APPLICANTS

➤ **Scope of Application**

The Authority wishes to receive Applications for Qualification in order to SELECT experienced and capable Applicants for the Bid Stage.

➤ **Eligibility of Applicants**

The Brihanmumbai Municipal Corporation (BMC) invites e-tender to appoint Contractor for the aforementioned work from contractors of repute, multidisciplinary engineering organizations i.e. eminent firm, Proprietary/Partnership Firms/ Private Limited Companies/ Public Limited Companies/Companies registered under the Indian companies' act 2013, the contractors registered with the Brihanmumbai Municipal Corporation, (BMC) in **Class I(A) as per new registration** (excluding those who are blacklisted or against whom FIR has been filed) or Those having equivalent or more work experience from Central or State Government/Semi Govt. Organization/Central or State Public Sector Undertakings works, will be allowed subject to condition that, the contractors who are not registered with BMC will have to apply for registering their firm within three months from date of issue of work order failing which their Bid security ie EMD (Earnest Money Deposit) will be forfeited recovered and a penalty 0.1 % of contract cost OR Rs.10,000/- whichever is more will be recovered / deducted from the Contractors payment / bill by the executing department.

To be eligible for pre-qualification and short-listing, an Applicant shall fulfill the following conditions of eligibility:

A) Technical Capacity (Project Experience):

The tenderer(s) in their own name should have satisfactorily executed the work of **#similar nature** BMC /Semi Govt. /Govt. & Public Sector Organizations during last **seven (7) years** ending last day of month previous to the one in which bids are invited as a prime Contractor (or as a nominated sub-Contractor, where the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied)

a) Three similar completed works or currently executing three works of similar nature each costing 30% of estimated cost. *

OR

b) Two similar completed works or currently executing two works of similar nature each costing 40% of estimated cost.*

OR

c) One completed work or currently executing one work of similar nature of aggregate 60% of estimated cost. *

The value of executed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

Note: -

“Similar nature means at least one single project involving Design & Construction of PSC/Composite Vehicular Bridges, Flyover, ROB, Steel Girder Structure Vehicular Bridge with RCC deck slab or Vehicular bridge which involves placement of steel girders” satisfying following requirements :

2 “The Tenderer(s) should have successfully completed that bridge work of length exceeding 400 m over river/creek/sea/ any water body/Railway/Road.

and

3 At least one special structural steel composite span not less than 75 m in length of the bridge work .”

B) Financial Capacity

Achieved an average annual financial turnover as certified by ‘Chartered Accountant’ (in all classes of civil engineering construction works only) equal to 30% of the estimated cost of work in last five (5) financial years immediately preceding the Financial Year in which bids are invited.

- To ascertain this, tenderer(s) shall furnish /upload the financial statement (Audited balance sheet) duly certified by Chartered Accountant.
- The turnover can be enhanced by 10% every year to bring the present level
- The value of completed works shall be brought to current costing level by enhancing the actual value of work at compound rate of 10 % per annum; calculated from the date of completion to last date of receipt of applications for tenders.

C) Bid Capacity:

The bid capacity of the prospective bidders will be calculated as under:

Assessed Available Bid Capacity = (A* N* 2 - B)

Where,

A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the last five years (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the Project/Works, excluding monsoon

period, for which these bids are being invited. (E.g.12 months = 12/12 year) For every intervening monsoon 0.33 shall be added to N.

B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.

Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer-in Charge, not below the rank of an Executive Engineer or equivalent.

The Time Period for Completion of Work shall be Twenty four Months excluding monsoon.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, financial failures etc.

D) Equipment Capabilities as required for this work:

New and Original Works: The bidder should, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder will ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an **undertaking on Rs.500 stamp paper** to be submitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.

Note:

1. Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs.500/- stamp paper.
2. Insistence of availability of equipment's/plants at particular distance from site should not be made in the tendered document.
3. In case any requirement of machinery is felt necessary to be mentioned in tender document for a Regular and Routine works or New and original works, approval of concerned AMC shall be obtained.

E) Technical Personnel:

The contractor and/or its managerial staff should have qualification/experience appropriate to the function they fulfill. The minimum standard shall be increased by asking that at least one number or more of the contractor or its managerial staff have acquired qualifications or work

experience to the needs of the contract. The minimum standard may also state that the person or persons responsible for managing the works must have a minimum of no's of years' experience working on similar nature of projects.

Cost of work (Rs in Crore)	Requirement of Technical Staff (of Major +Minor Component)		Minimum Experience (years)	Designation
	Qualification	Number		
More than 100	i) Graduate Engineer (Major Component)	1	20	Project Manager in Major discipline of Engineering
	ii) Graduate Engineer	2+1	12	Deputy Project Manager in Major discipline of Engineering
	ii) Graduate Engineer or Diploma Engineer	4 2	5 10	Project/Site Engineer
	iii) Graduate Engineer	1+1	8	Quality Engineer
	iv) Diploma Engineer	1	8	Surveyor
	v) Graduate Engineer	1+1	6	Project Planning/Billing Engineer

NOTE:

1. The minimum suggested Personnel, with the prescribed construction schedule prior to bidding of this bid are shown in the above list.
2. The tenderer(s) should upload general information on the Organizational set up of the firm, to allow the employer to review their proposals.
3. "Cost of work", in table above, shall mean the agreement amount of the work.
4. Rate of recovery in case of non-compliance of the clause be stipulated at following rates:-

Sr. No	Qualification	Experience (years)	Rate of Recovery
1	Project Manager with degree	20	Rs.60000/-p.m.
2	Deputy Project Manager with Degree	12	Rs.40000/-p.m
3	Project/Site Engineer (Degree/Diploma)	5 or 10 respectively	Rs.25000/-p.m.
4	Quality Graduate Engineer	8	Rs.25000/-p.m.
5	Surveyor	8	Rs.15000/-p.m.
6	Project Planning/Billing Engineer	6	Rs.20000/-p.m.

5. Nothing extra need to be added while preparing market rate justified amount of the work if stipulation is made as per above recommended scale of technical staff.
6. Requirement of technical staff and their experience can be varied depending upon cost and complexity of the work by competent authority i.e. Chief Engineer with recorded reasons.
7. The failure in providing experienced technical and professional ability personnel and even ignoring the instruction of the Engineer-in-charge shall be linked to penalization. Such disobeying attitude of the contractor shall also be reported to Vigilance/Registration & Monitoring department.

F) Time period of the project:

Entire project should be completed and delivered within **24months** (Excluding Monsoon) of time from the date of which all the Statutory permissions / NOCs are availed by the bidder in the name of BMC.

The time allowed for carrying out the work as entered in the Tender shall be strictly observed by the Contractor and shall be reckoned from the date on which the Letter of Acceptance is given to the Contractor. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence as time being deemed to be the essence of the contract on the part of the Contractor. On failing to do so, the Contractor shall pay as compensation an amount which shall be governed as per Clause - 8(e) of Standard General Conditions of Contract.

The Contractor should complete the work as per phase given below:

¼ of the workin	.. ¼ of the time
½ of the workin	.. ½ of the time
¾ of the workin	.. ¾ of the time
Full of the workin	.. Full of the time

Full work will be completed in 24 months (Excluding Monsoon)

The programme for completion of work shall be a part of the Contract Document in the form of Bar Chart / Gantt chart. The Contractor is supposed to carry out the work and keep the progress as per Bar Chart/GANTT Chart. The Contractor shall complete the work as per the Schedule given in the Contract and the programme submitted by the Contractor.

G) Contract Execution:

All required documents for execution of the contract shall be submitted within 30 days from the date of issue of letter of acceptance. If the documents are not submitted within the stipulated time, a penalty of Rs 5000/- per day will be applicable to the contractor. All contract documents need to be duly affixed with stamp duty properly signed along with evidence/proof of payment of security/contract deposit/ within 30 days from the date of letter of acceptance received by him

H) If the amount of the Contract Deposit to be paid above is not paid within 30 days from the date of issue of Letter of Acceptance, the Tender / Contractor already accepted shall be

considered as cancelled and legal steps be taken against the contractor for recovery of the amounts. The amount of Security Deposit retained by the BMC shall be released after expiry of period up to which the contractor has agreed to maintain the work in good order is over. In the event of the contractor failing or neglecting to complete the rectification work within the period up to which the contractor has agreed to maintain the working good order, the amount of security deposit retained by BMC shall be adjusted to-wards the excess cost incurred by the Department on rectification work.

I) Action when whole of security deposit is forfeited:

In any case in which under any Clause of this contract, the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit whether paid in one sum or deducted by installments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Engineer on behalf of the Municipal Commissioner shall have power to adopt any of the following process, as he may deem best suited to the interest of BMC -

- (a) To rescind the contract (for which recession notice in writing to the contractor under the head of Executive Engineer shall be conclusive evidence) and in that case, the security deposit of the contract shall stand forfeited and be absolutely at the disposal of BMC.
- (b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged establishment employed for getting the un-executed part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.
- (c) To order that the work of the contractor be measured up and to take such part thereof as shall be un-executed out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the un-executed work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under Clause (a) above, the contractor shall not be entitled to recover or be paid any sum for any work therefore actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in Clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of

such work credited to the contractors amount of excess shall be deducted from any money due to the contractor, by BMC under the contract or otherwise, howsoever, or from his security deposit or the sale proceeds thereof provided, however, the contractor shall have no claim against BMC even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a), (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials or entered in to any engagements or made any advance on account of or with a view to the execution of the work or the performance of the contract.

J) Contract may be rescinded and security deposit forfeited for bribing a public officer or if contractor becomes insolvent:

If the contractor assigns or sublets his contracts or attempt so to do, or become insolvent or commence any proceeding to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents through any public officer, or person in the employ of BMC/Govt. in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract the Engineer In-charge may thereupon, by notice in writing rescind the contract and the Security Deposit of the Contractor shall thereupon stand forfeited and be absolutely at the disposal of BMC and the same consequences shall ensure as if the contract had been rescinded under above clause J hereof; and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

K) It will be entirely responsibility of the contractor to provide and install secure barricades on work site; wholly at his cost. The barricading shall be provided as per specifications and as per site requirements and the circular issued u/no. MGC/F/6342 dated 05.05.2018 shall be applicable. BMC will not make any payments towards barricading, contractor shall quote accordingly.

L) All the excavated material belongs to the Municipal Corporation of the Greater Mumbai and therefore shall be the property of BMC. The excavated material shall be removed from site and dump to suitable dumping ground at the risk and cost of the contractors. The payment of transportation charges shall not be paid by the BMC. The bidder has to consider all the cost above and have to quote accordingly.

M) Contractor against those penal action of deregistration has been taken / initiated OR Debarred from tendering by any Govt./ semi govt. organization / Public sector undertakings and corporations / ULB, etc. will not be allowed to participate in this tender. Also bidder shall submit duly filled forms and Affidavit.

N) Note: Date of commencement of the work will be the date on which all the above permissions / NOCs from various authorities are in place, however the bidder may be required to carry out Total station survey, soil investigation so as to prepare tentative design for fixing the location of piers which in turn will be required to be submitted to various Authorities while seeking their NOCs/ Permissions. The payment for these will be made as per the schedule of payment attached as Volume-II, SECTION – VIII – SCHEDULE – A1 TO A10, after all the permissions / NOCs are in place.

Categories and classes available for Civil Contractors

A. New registration.(2016)

Minimum Financial requirements for Civil Engineering Discipline

(Rs. In Lakh)

Class	Amounts upto which work can be taken up	Min. Solvency	Average turnover of work done during last 3 years	Estimated cost of work in hand during current year
I(A)	Without Limit	150	300	450
I(B)	2500			
I(C)	1500			
II	750	75	200	300
III	300	30	90	150
IV	150	15	60	80
IV(A)	90	9	40	60
V	50	5	25	30
V(A)	30	3	15	10
VI	15	2	7.5	10
VII	7	1	1.5	3
VIII	3	0.50	1	1.5
IX	2	0.25	0.5	1

Submission of Tenders

PACKET – A

The Packet ‘A’ shall contain scanned certified copies of the following documents

Scrutiny of this packet will be done strictly with reference to only the scanned copies of Documents uploaded online in packet ‘A’

- a) Valid Registration Certificate.
- b) Valid Bank Solvency Certificate of Minimum Solvency amount as governed by Registration Rules in force for respective Class of Contractor for Civil and M&E works.
- c) Valid GST Registration Certificate.
- d) Certified copies of valid 'PAN' documents and photographs of the individuals, owners, Karta of Hindu undivided Family, firms, private limited companies, registered co-operative societies, partners of partnership firms and at least two Directors, if number of Directors are more than two in case of Private Limited Companies, as the case may be. However, in case of Public Limited companies, Semi Government Undertakings, Government Undertakings, no 'PAN' documents will be insisted.
- e) Latest Partnership Deed in case of Partnership firm duly registered with Chief Accountant (Treasury) of BMC.
- f) The bidders shall categorically provide their Email-ID in Packet‘A’.

NOTE:

- If the tenderer(s) withdraw tender offer during the tender validity period, his entire E.M.D shall be forfeited.
- If it is found that the tenderer has not submitted required documents in Packet “A” then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of **three working days** otherwise they will be treated as non-responsive.

PACKET – B

The Packet ‘B’ shall contain scanned certified copies of the following documents –

a) The list of similar type of works as stated in Technical Capacity of Eligibility Criteria successfully completed during **the last Seven (7) years** in prescribed proforma, in the role of prime contractor (or as a nominated sub-Contractor, where the subcontract had involved similar nature of work as described in the scope of works in this bid document, provided further that all other qualification criteria are satisfied). Information furnished in the prescribed proforma (Proforma – I) shall be supported by the certificate duly self-attested. Documents stating that it has successfully completed during the last seven years at least one contract of similar works as stated in Eligibility Criteria.

b) Annual financial turnover for preceding five financial years as certified by Chartered Accountant preceding the Financial Year in which bids are invited. **Copies of Applicants duly audited balance sheet and profit and loss account for the preceding five financial years preceding the Financial Year in which bids are invited. (Proforma –II)**

c) Documents stating that, it has access to or has available liquid assets, unencumbered assets, lines of credit and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements for the subject contract in the event of stoppage, start-up, or other delay in payment, of the minimum 15% of the cost of the work tendered for, net of the tenderer's commitment of other contracts (Certificate from Bankers / C.A./Financial Institution shall be accepted as a evidence).

d) The bidder shall give undertaking on Rs 500/-stamp paper that it is his/their sole responsibility to arrange the required machineries either owned/on lease or hire basis, at site before start of the work

i) New and Original Works: The bidder should, undertake their own studies and furnish with their bid, a detailed construction planning and methodology supported with assessment study of requirements of equipment/plants & machineries to allow the employer to review their proposal. The bidder shall ensure his commitment to make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge on an undertaking on Rs.500 stamp paper to be sub-mitted along with the Bid in Packet B. However, this condition in no way shall dilute the respective condition in Registration Rules of BMC.

e) Details of works in hand (Proforma VI-A & VI-B) (original), along with copies of work orders & attested copies of percentage of works completed or part thereof.

f) Statement showing assessed available Bid Capacity.

g) The undertaking of Rs.500/- stamp paper as per the proforma annexed in ‘Annexure B &C’

Note: Bidders shall submit the undertaking for equipment capability and other undertakings as such on a single Rs.500/- stamp paper.

h) The tenderers shall upload work plan as per the following outline:

1. GANTT chart/ PERT/ CPM/Bar chart showing the completion of work within prescribed time period, considering major activities.
2. Organizational set up envisaged by the contractors.
3. Plant & equipment proposed to be deployed for this work.
4. Site Offices and Laboratories proposed to be setup.
5. A note on how the whole work will be carried out (work plan including methodology).
6. Quality management plan.
7. All the activities included in the Scope of Work shall be covered in the work plan.
8. The tenderer shall submit the signed copies of all addendums & corrigendum's, if any.
9. Information of the litigation history

Note:

- 1) The Electrical / Mechanical work shall be got carried out by the civil contractors through the contractors registered with BMC. in Electrical Category. Information about the registered contractors shall be obtained from the office of the Ch.E. (M&E)/ E.E. (Monitoring & Registration Cell). Attested scanned copy of the valid registration certificate in Electrical Category shall be uploaded with the tender along with the undertaking from the registered Electrical Contractor stating his willingness to carry out the tender work.
- 2) The successful bidder shall submit valid registration certificate under E.S.I.C., Act 1948, if the tenderer has more than 10 employees /persons on his establishment (in case of production by use of energy) and 20 employees/persons on his establishment (in case of production without use of energy) to BMC as and when demanded. In case of less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 500 stamp papers as per circular u/no. CA/FRD/I/65 of 30.03.2013.
- 3) The successful bidder shall submit valid registration certificate under E.P.F. &M.P., Act 1952, if tenderer has more than 20 employees/persons on his establishment, to BMC as and when demanded. In case if the successful bidder has less employees/persons mentioned above then the successful bidder has to submit an undertaking to that effect on Rs. 500 stamp papers as per circular u/no. **CA/FRD/I/44 of 04.01.2013.**

Note: If it is found that the tenderer has not submitted required documents in Packet "B" then, the shortfalls will be communicated to the tenderer through e-mail only and compliance required to be made within a time period of three working days otherwise they will be treated as nonresponsive.

PACKET – C

a) Online tender filled in either percentage plus or minus (above or below), or at par. (There is no separate provision to quote % in physical form, this is a part in Header Data of online Tendering). For Packet 'C' tenderer(s) will fill data in 'Item Data Tab' in Service Line Item via Details and quotes his percentage variation figures. **(If entered '0' it will be treated as 'at par'. By default, the value is zero only).**

Note: In case of rebate/premium of 15% and above as quoted by the tenderer, the rate analysis of major items shall be submitted by L1 and L2 bidder after demand notification by e-mail to bidders by concerned Dy. Ch. Eng. The format for rate analysis is annexed at Annexure D.

As per GCC 2016, Clause No.13.d) Settlement of Disputes:

If any dispute or differences of any kind whatsoever other than those in respect of which, the decision of any person is, by the Contract, expressed to be final and binding) shall arise between the Employer and the Contractor or the Engineer and the Contractor in connection with carrying out of the Works(Whether during the progress of the Works or after their completion and whether before or after the termination, abandonment or breach of the Contract) it, the aggrieved party may refer such dispute within a period of 7 days to the concerned Add. Municipal Commissioner who shall constitute a committee comprising of three officers i.e. concerned Deputy Municipal Commissioner or Director(ES&P), Chief Engineer other than the Engineer of the Contract and concerned Chief Accountant. The Committee shall give decision in writing within 60 days. Appeal on the Order of the Committee may be referred to the Municipal Commissioner within 7days. Thereafter the Municipal Commissioner shall constitute a Committee comprising of three Addl. Municipal Commissioners including Addl. Municipal Commissioner in charge of Finance Department. The Municipal Commissioner within a period of 90 days after being requested to do so shall give written notice of committee's decision to the Contractor. Save as herein provided such decision in respect of every matter so referred shall be final and binding upon both parties until the completion of the works and shall forthwith be given effect to by the Contractor who shall proceed with the works with due diligence, whether he requires arbitration as here in after provided or not. If the Commissioner has given written notice of the decision to the Contractor and no Claim to arbitration has been communicated within a period of 90 days from receipt of such notice the said decision shall remain final and binding upon the Contractor.

APPOINTING OF DESIGNATED OFFICER FOR CONTRACTORS' GRIEVANCES

The Appellate Authority for Redressal of Contractors' Grievances shall be as follows:

- i. I' St Appeal by the bidder against the decision of C.E./HOD/Dean can be made to concerned DMC/Director who should decide appeal in 7days.
- ii. II' Nd Appeal by the bidder can be made to concerned AMC for decision and his decision will be final.

BID SECURITY OR EMD

1. The Bidder shall furnish, as part of the Bid, Bid Security/EMD, in the amount specified in the Bid Data Sheet. This bid security shall be in favor of the authority mentioned in the Bid Data Sheet and shall be valid till the validity of the bid.
2. The tenderers shall pay the EMD online instead paying the EMD at any of the CFC centers in BMC Ward Offices.
3. Any bid not accompanied by an acceptable Bid Security and not secured as indicated in sub-clause mentioned above, shall be rejected by the Employer as non-responsive.
4. The Bid Security of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the required Security Deposits.
5. The The Bid Security/ EMD of L-2 and downward bidders shall be refunded immediately after opening of financial bid but, the EMD/ASD submitted by the L-2 bidder will be returned after obtaining Standing Committee Resolution as per circular no. CA/F/Project/32 dated 26.10.2020.
6. The Bid Security may be forfeited:
 - a) If the Bidder withdraws the Bid after bid opening (opening of technical qualification part of the bid during the period of Bid validity
 - b) In the case of a successful Bidder If the Bidder fails within the specified time limit to:
 - i. signs the Agreement; and/or
 - ii. Furnish the required Security Deposits

1. The cases wherein if the shortfalls are not complied by a contractor, will be informed to Registration and Monitoring Cell. Such non-submission of documents will be considered as 'Intentional Avoidance' and if three or more cases in 12 months are re-reported, shall be viewed seriously and disciplinary action against the defaulters such as banning/de-registration, etc. shall be taken by the registration cell with due approval of the concerned AMC.

2. No rejections and forfeiture shall be done in case of curable defects. For non-curable defects the 10% of EMD shall be forfeited and bid will be liable for rejection

1. FORFEITURE OF EMD FOR BEINGNON-RESPONSIVE

1. The practice of forfeiting 10% of EMD on non-compliance of the shortfalls is continued. However, no rejections and forfeiture shall be done in case of curable defects. **For non-curable defects the 10% of EMD shall be forfeited and bid will be liable for rejection.**

2. The forfeiture of EMD in the cases wherein if these submissions are not followed by a contractor, shall be informed by the user department to Registration and Monitoring Cell so as to make a data-base of such defaults of the contractors.

3. In case of non-submission of documents be considered as 'Intentional Avoidance' and if three or more cases in 12 months are reported, it shall be viewed seriously and disciplinary action against the defaulters which includes demotion, suspension, etc shall be taken by Registration cell as governed by relative provision in Registration Rules of BMC and Standard

General Conditions of Contract.

4. Incentive and penalty:

Please refer the GCC condition no.84

Note:

i) Curable Defect shall mean shortfalls in submission such as:

a. Non-submission of following documents,

i. Valid Registration Certificate

ii. Valid Bank Solvency

iii. Valid GST Certificate

iv. Certified Copies of PAN documents and photographs of individuals, owners, etc.

v. Partnership Deed and any other documents

vi. Undertakings as mentioned in the tender document.

ii) Non-curable Defect shall mean

a. In-adequate submission of EMD/ASD amount,

b. In-adequacy of technical and financial capacity with respect to Eligibility criteria as stipulated in the tender.

c. No proper submission of experience certificate and other documents etc.

Please refer circular Ch.E./BM/01991/II/7.01.2019

d. Wrong calculation of Bid Capacity,

BID VALIDITY

Bids shall remain valid for a period of not less than one eighty (180) days after the deadline date for bid submission specified in Bid Data Sheet. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.

1. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing or by cable. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the re-quest will not be required or permitted to modify his bid, but will be required to extend the validity of his bid security for a period of the extension.

DEFECT LIABILITY PERIOD

1. The Contractor is expected to carry out the construction work in Workmen like manner so as to meet the requirement and specification for the project. It is expected that the Workmanship and materials will be reasonably fit for the purpose for which they are required.
2. Defects or defective work is where standard and quality of workmanship and materials as specified in the contract is deficient. Defect is defined as a failure of the completed project to satisfy the express or implied quality or quantity obligations of the construction contract. Defective construction works are as the works which fail short of complying with the express descriptions or requirements of the contract, especially any drawings or specifications with any implied terms and conditions as to its quality, workmanship, durability, aesthetic, performance or design. Defects in construction projects are attributable to various reasons.
3. Some of the defects are structural defects results in cracks or collapse of faulty defective plumbing, inadequate or faulty drainage system, inadequate or faulty ventilation, cooling or heating systems, inadequate fire systems etc. The defects could be various on accounts of different reasons for variety of the projects.
4. The Engineering In charge/Project Officer shall issue the practical completion certificate for the project. During the Defect Liability Period which commences on completion of the work, the Engineering In charge shall inform or the contractor is expected to be informed of any defective works by the Employer’s representative of the defects and make good at contractor’s cost with an intention of giving opportunity to the contractor of making good the defects appeared during that period. It is the contractor’s obligation under the contract to rectify the defects that appear during Defect Liability Period and the contractor shall within a reasonable time after receipt of such instructions comply with the same at his own cost. The Engineering In charge/Project Officer shall issue a certificate to that effect and completion of making good defects shall be deemed for all the purpose of this contract to have taken place on the day named in such defect liability certificate.
5. If defective work or workmanship or design have been knowingly covered-up or conceived so as to constitute fraud, commencement of the Defect Liability Period may be delayed. The decided period may be delayed until discover actually occurs on at least the defect could have been discovered with reasonable diligence, whichever is earlier.
6. The DLP shall be as below:

Dept	Type of works	DLP
Roads / Bridge	For cement concrete road	10 years
	Mastic Work	5 years
	Asphalt work	3 years
	Paver Block	3 years
	Structural work	5 years
	General works	5 years

7. Also, in case of defect, the Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice. The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report.
8. It is the Completion Stage when the contractor has completed all of the works and fixed all of the defects that were on the list of issue by Engineer-in-charge. When this happens, the engineer must issue a 'Certificate of Completion'. On the issue of 'Certificate of Completion', the 'Defect Liability Period' starts. The contractor also must issue a 'Certificate statement' as an acknowledgment to the engineer not later than 14 days after the 'Certificate of Completion' has been issued. During the 'Defect Liability Period', the contractor has to obey all written instructions from the engineer to carryout repairs and fix any defects which appear in the Permanent Works. If the contractor does not ,due to his own faults finish the repair works or fix the defects by the end of 'Defect Liability Period', the 'Defect Liability Period' will continue until all works instructed by engineer is done.

SECURITY DEPOSIT AND PERFORMANCE GUARANTEE

A. Security Deposit

The security deposit shall mean and comprise of

- I) Contract Deposit and
- II) Retention Money.

I) **Contract Deposit** – The successful tender, here after referred to as the contractor shall pay an amount equal to two (2) percent of the contract sum shall be paid within thirty days from the date of issue of letter of acceptance.

II) **Retention Money**–The contractor shall pay the retention money an amount equal to two (2) percent of the Contract Sum which will be recovered from the contractors every bill i.e. interim/ running / final bill. The clause of retention money will not be applicable M. & E. Department.

B. Additional Security Deposit

Note :- As per recent circular of Additional Security Deposit u/no.CA/F/42 dated 09.01.2021 is applicable for this tender.(Please see Circular in Tender Section No. 16)

C. Performance Guarantee

The successful tender, hereafter referred to as the contractor shall pay in the form of “Performance Guarantee” at different rates for different slabs as stated below:

Offer	PG applicable %
For Premium, at par and rebate 0 to 12%	PG= 0.92% x contract sum rebate 0 to 12% applicable for rebate of 12%
For rebate of 12.01%	P.G. = {0.92% x contract sum applicable for rebate 0 to 12%} + (X) x

Note: Contract sum shall mean amount after application of rebate/premium as quoted by the contractor with contingencies only and excluding price variation.

The PG shall be paid in one the following forms.

- I) Cash (In case guarantee amount is less than Rs.10,000/-
- II) Demand Draft (In case guarantee amount is less than Rs.1,00,000/-) III)
Government securities
- IV) Fixed Deposit Receipts (FDR) of a Schedule Bank.
- V) An electronically issued irrevocable bank guarantee bond of any Schedule bank or f
in the prescribed form given in Annexure.

Performance Guarantee is applicable over and above the clause of Security Deposit. Performance Guarantee will have to be paid & shall be valid till the defect liability period or finalization of final bill whichever is later.

This deposit will be allowed in the form of I to V as mentioned above and shall be paid within 15 days after receipt of Letter of Acceptance.

Note: Following exceptions shall be adopted for ‘Demolition Tenders’:

- Irrespective of the offer (Rebate/ at par/ premium), ASD shall be differed and only PG of 10% of contract sum be taken from the successful bidder on award of contract only.
- MCGM departments shall ensure to incorporate specific condition regarding above in bid document and e-tender notice.

A. Refund of Security Deposit

I. Refund of Contract Deposit-

The Contract Deposit shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of ‘Defect Liability Certificate’ (in case of 1 or 2 or 3 years DLP) subject to no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. No claim shall be made against the Balance Contract Deposit after the issue of Defects Liability Certificate.

II. Refund of Retention Money

One-half (50%) of the Retention Money shall be released within 30 days of issue of ‘Certificate of Completion’ with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

The balance Retention Money shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of ‘Defect Liability Certificate’ (in case of 1 or 2 or 3 years DLP) provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. In the event of different Defects Liability Periods have been specified or become applicable to different sections or parts of the Permanent Works, the said moneys will be released within 30 days on expiration of the latest of such Defects Liability Periods.

Payment of the above mentioned 50% is exclusive of the amounts to be withheld as stated in

and that amount shall be paid as per condition stated therein.

III. Refund of Additional Security Deposit

The additional security deposit shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

IV. Refund of EMD/ASD

EMD /ASD of the bidders from L2 and downwards will be released immediately in next three days without asking any application from the applicant, at the level of A.E. / Ex. Eng. through SRM system and without any insistence of the sanction of the competent authority as the EMD/ASD is a deposit to be refunded immediately of unsuccessful bidder and should not be kept on hold for any reason. Once the system is IT enabled, the same shall be done automatically

The refund of EMD/ASD of Unsuccessful Tenderer is applicable as per Circular under CAF/Project/32 dt.26.10.2020.

*Note: a) It shall be clearly mentioned that the BG shall be applicable for individual work/contract and clubbing of various contracts of the said contractor will not be allowed. In case of obtaining Bank Guarantee, it is necessary to mention that the same shall be valid further 6 months from the completion of defect liability period/ warranty period. b) It shall be the responsibility of the bidder to keep the submitted B.G. "VALID" for the stipulated time period in the tender & in case of its expiry it will attract penalization. c) Bank Guarantee should be issued by way of General Undertaking and Guarantee issued on behalf of the Contractor by any of the Nationalized or Scheduled banks or branches of foreign banks operating under Reserve Bank of India regulations located in Mumbai up to Virar & Kalyan. List of approved Banks is appended at the end of Instructions to Bidders (ITB). The Bank Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Bank Guarantee is countersigned by the Manager of a Regional Branch of the same bank within the Mumbai City Limit categorically endorsing thereon that the said Bank Guarantee is binding on the endorsing Branch of the Bank or the Bank itself within Mumbai Limits and is liable to be enforced against the said Branch of the Bank or the bank itself in case of default by the Contractors furnishing the Bank Guarantee. The Bank Guarantee shall be renewed as and when required and/or directed from time to time until the Contractor has executed and completed the works and remedied any defects therein.

V. Refund of PG

The Deposit on account of performance guarantee shall be released within 30 days of completion of Defects Liability Certificate subject finalization of final bill whichever is

later and no recoveries are pending against the saidwork, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

□ Summary of time of Refund of deposit is tabulated as follows:

a) **Time of Refund for works having 5 years DLP**

Deposits refunded after Completion	After 3 Yrs of DLP	After Completion of DLP
ASD + 50% of RM	CD + 50% of RM	PG

b) **Time of Refund for works having 1 or 2 or 3 years DLP**

Deposits refunded after Completion	After Completion of DLP
ASD + 50% of RM	CD+50% of RM + PG

*Note:

- a) It shall be clearly mentioned that the BG shall be applicable for individual work / contract and clubbing of various contracts of the said contractor will not be allowed. Incase of obtaining Bank Guarantee, it is necessary to mention that the same shall be valid further 6 months from the completion of defect liability period/ warranty period.
- b) It shall be the responsibility of the bidder to keep the submitted B.G.“VALID” for the stipulated time period in the tender & in case of its expiry it will attract penalization.
- c) Bank Guarantee should be issued by way of General Undertaking and Guarantee issued on behalf of the Contractor by any of the Nationalized or Scheduled banks or branches of foreign banks operating under Reserve Bank of India regulations located in Mumbai upto Virar & Kalyan. List of approved Banks is appended at the end of Instructions to Bidders (ITB). The Bank Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Bank Guarantee is counter signed by the Manager of a Regional Branch of the same bank within the Mumbai City Limit categorically endorsing there on that the said Bank Guarantee is binding on the endorsing Branch of the Bank or the Bank itself within Mumbai Limits and is liable to be enforced against the said Branch of the Bank or the bank itself in case of default by the Contractors furnishing the Bank Guarantee. The Bank Guarantee shall be renewed as and when required and/or directed from time to time until the Contractor has executed and completed the works and remedied any defects therein

B. Legal + Stationary Charges: (As per applicable circular)

Successful tender shall pay the Legal Charges + Stationary charges as per Circular no Legal dept/10318 Dated 24.03.2022

Contract Value	Legal + Stationery Charges from date 01.04.2022 to 31.03.2023
Upto Rs. 50,000/-	Nil
From Rs. 50,001/- to Rs 1,00,000/-	Rs. 6290 /-
From Rs. 1,00,001/- to Rs. 3,00,000/-	Rs. 10380/-
From Rs. 3,00,001/- to Rs. 5,00,000/-	Rs. 12470 /-
From Rs. 5,00,001/- to Rs. 10,00,000/-	Rs. 14510 /-
From Rs. 10,00,001/- to Rs. 20,00,000/-	Rs. 16570 /-
From Rs. 20,00,001/- to Rs. 40,00,000/-	Rs. 18660 /-
From Rs. 40,00,001/- to Rs. 1,00,00,000/-	Rs. 20720 /-
From Rs. 1,00,00,001/- to Rs. 10,00,00,000/-	Rs. 24450 /-
Rs. 10,00,00,001/- to Rs. 20,00,00,000/-	Rs. 28220/-
Rs. 20,00,00,001/- to Rs. 30,00,00,000/-	Rs. 31980/-
Rs. 30,00,00,001/- to Rs. 40,00,00,000/-	Rs. 35740/-
Rs. 40,00,00,001/- to Rs. 50,00,00,000/-	Rs. 39470/-
Rs. 50,00,00,001/- to Rs. 1,00,00,00,000/-	Rs. 47000/-
Rs. 1,00,00,00,001/- to Rs. 2,00,00,00,000/-	Rs. 58270/-
Rs. 2,00,00,00,001/- to Rs. 3,00,00,00,000/-	Rs. 65770/-
Rs. 3,00,00,00,001/- to Rs. 4,00,00,00,000/-	Rs. 75120/-
Rs. 4,00,00,00,001/- to Rs. 5,00,00,00,000/-	Rs. 84510/-
From Rs. 5,00,00,00,001/- to Any Amount	Rs. 93920/-

The tenderers are requested to note that stationary charges as given in the table above will be recovered from the successful tenderer for supply of requisite prescribed forms for preparing certificate bills in respect of the work.

C. Stamp Duty: (As per circular No. Ch. Eng/ BM/ 17800/II dated 07.01.2016)

It shall be incumbent on the successful tenderer to pay stamp duty on the contract. as per the provision made in Article 63, Schedule I of Maharashtra Stamp Act 2015, stamp duty is payable for “works contract” that is to say, a contract for works and lab our or services involving transfer of property in goods (whether as goods or in some other form) in its execution and includes a sub-contract, asunder:

(a)	Where the amount or value set forth in such contract does not exceed rupees ten	Five Hundred rupees stamp duty
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	lakh.	
(b)	Where it exceeds rupees ten lakhs	Five hundred rupees plus one hundred rupees for every Rs.1,00,000/- or part thereof, above rupees ten lakh subject to the maximum of rupees twenty-five lakh stamp duty.

ii for stamp duty in B.G. 0.50% on original B.G as well as 0.50% on extended B.G.

refer Letter of मुद्रांक जिल्हाधिकारी यांचे जा.क्र./अमल-01
कार्यकंत्राट/896/2016.

- iii. The successful bidder shall enter into a contract agreement with M.C.G.M. within 30 days from the date of issue of Work Order and the same should be adjudicated for payment of Stamp Duty by the successful bidder.
- iv. Further shortfall if any, in amount of stamp duty paid as against prescribed amount for the documents executed in Mumbai City & Mumbai Suburban District be recovered from the concerned work contractors and to deposit the deficit or unpaid Stamp Duty and penalty by two separate Demand Draft or Pay Order in favor of “Superintendent of Stamp, Mumbai” within 15 days from intimation thereof.
- v. All legal charges and incidental expenses in this respect shall be borne and paid by the successful tenderer.

IMPORTANT DIRECTIONS

1. All the information uploaded shall be supported by the corroborative documents in absence of which the information uploaded will be considered as baseless and not accepted for qualification criteria. All the documents shall be uploaded with proper pagination. The page No. shall be properly mentioned in the relevant places. The information shall be uploaded in the sequence as asked for with proper indexing etc. The Bidder shall be fully responsible for the correctness of the information uploaded by him.
2. Applicants/Bidders shall refer portal.BMC.gov.in\tenders for “The Manual of Bid-Submission for Percentage Rate/Item Rate Tender Document.” The detail guidelines for creation and submission of bid are available in the referred document

Any queries or request for additional information concerning this TENDER shall be submitted by e-mail to che.br@BMC.gov.in The subject shall clearly bear the following identification/ title "***Queries/ Request for Additional Information: EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY.*** Any changes in mail ID will be intimated on the portal.

3. ALLOTMENT OF WORKS IN CASE OF EQUALPERCENTAGE

- a) In case of **Equal Percentage** of lowest bidders (L1), the allotment of work shall be done by giving 48 hrs.(**2 working days**) from the day of opening of packet C **on same BID Document number for re-quoting** and such development needs to do by IT department in BMC’s SRM system. **Till such development is made; ‘Sealed Bids’ shall be called from the bidders quoting the same rates.i.e.L1.**
- b) In case of equal percentage of lowest bidders is obtained even after re-quoting, then the successful bidder will be decided by lottery system by concerned Ch. Engineer in presence of Bidder/Bidder’s representative and Accounts Officer.
- c) The lowest bidder shall have to submit the additional ASD if applicable within 7 days after receipt of notification issued by concerned Chief Engineer.

Note: This process of re-quoting online shall be carried only after development in SRM system by IT Department.

- d) It will be entirely responsibility of the contractor to provide and install secure barricades on work site, wholly at his cost. The Barricading shall be provided as per specification and as per site requirements and the circular issued u/no AMC/ES/679/II dated 06.10.2015 shall be applicable. BMC will not make any payment towards barricading, Contractor shall quote accordingly.
 - In case of any surplus excavated material is required to be removed from the site, the cost shall be borne by contractor and is deemed to be included in the contractors offer. No payment on this account will be made separately. (As per the circular MGC/F/7867 dated 12.10.2015)
 - The surplus excavated material from the site shall be removed free of cost to the municipal dumping ground within 24 hours, as directed. The necessary tipping charges at dumping ground, as applicable, shall be borne by the contractor or at designated unloading site, as per circular No. Dy.Ch.Eng./SWM/3957 Op. dated 28.09.2018 for which no extra payment will be made.

SECTION 7

EMPLOYERS REQUIREMENTS

SUB SECTION – 1

SCOPE OF WORK

SCOPE OF WORK

1. SCOPE OF WORK–

1.1 BRIEF NOTE ON PROJECT:

Brihanmumbai Municipal Corporation (hereinafter called BMC) is planning to Construct 4 Lane Flyover with one iconic span (Network Arch) bridge near Fishermen Colony, Senapati Bapat Marg over Mithi River, Mumbai for establishing additional North South connectivity with Western Express highway and Swami Vivekanand Road.

Description:

EPC Item Rate tender is invited for the “**CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY**”. This is a lump sum contract with its scope of work as defined in Tender Document- **Volume-I, II & GAD** but and not limited to the following:

1. The brief scope of project is asunder:

- i) Design and Construction 4 lane Vehicular traffic bridge over Mahim creek (Mithi River) including approaches as per General Arrangement Drawing and other Tender drawings/Tender documents. Providing suitable construction methodology of bridge for facilitating permanent construction over Mithi River by providing temporary staging as per the requirement within marine condition.
- ii) Bi-absorbent noise barrier for Arm-1 LHS approach.
- iii) The Project is affected by mangroves. Tenderer(s) shall have to obtain all the permissions of the concerned authorities outside the M.C.G.M. required for carrying out the work. Only recommendatory letters will be issued by M.C.G.M.
 - a) If required, the contractor shall appoint liaison officer for pursuing matters with the MMRDA, MCZMA, MRDPA, concerned Dy. Collector (Encroachment), concerned Municipal authorities, City Survey office, Reliance Energy, Tata power, Traffic Police or any other concerned offices for expediting encroachment / hurdles removal work for bridge work.
 - b) Tenderer(s) shall have to obtain all the MOEF clearance , all the relevant permissions/ NOC from MCZMA SEIA, Forest department, Collector, MSRDC, MMRDA, PWD, Maritime Board, Ward office, etc. or any environmental and forest authority if the construction site falls under coastal Regulation zone or affected due to CRZ, the tenderer(s) has to get it done by approaching / liaison officer for pursuing the same. Only recommendation letters will be issued by the Corporation. The construction work affected due to CRZ will be allowed to be continued subject to clearance of environmental point of view.

IRS Map charges, Statutory Fees, Scrutiny fees for availing various permission / NOCs from above authorities will be borne by BMC but the responsibility of availing all clearances will rest with the bidder.

- iv) Preparing detailed design and working drawings for all components of the works and obtaining approval in respect thereof from the BMC/ BMC approved Panel of Consultant. Inclusive of incorporation of all modifications, alterations, changes, etc. that may be required to be carried out, as specified and as directed.

Details of the Flyover along with Network Arch Bridge as per tender GAD are as follows-

ITEMS	FLYOVER PORTION
Total Deck Width	
Arm-1	7m + 1m median + 7m = 15m (4 lane)
Arm-2	7.5m overall width (2 lane)
Arm-3	7.5m overall width (2 lane)
Length + (Solid approach)	
Arm-1	285m + (190m)
Arm-2	515m
Arm-3	190m + (120m)
Carriageway width	
Arm-1	(2 x 6.5m) = 13m
Arm-2 and Arm-3	6.5m
Slip Road and DP Road	
i) Slip Road	0+000 to 0+190 BHS (5.5m carriageway Width+0.8m Width of Drain cum Footpath = 6.3m)
ii) DP Road	0+190 to 0+350 RHS (24.4m carriageway Width+2 sides x1.5m Width of Drain cum Footpath = 27.4m)
Span configuration	
Arm-1	30m x 3 + 35 m x 2 + 125m x 1
Arm-2	25m x 5 + 35m x 3 + 30m x 4 + 60m x 2 + 45m x 1
Arm-3	30m x 1 + 40m X 2 + 80m X 1
Max. Design Speed for Vertical and Horizontal Alignment Flyover	80 kmph. for straight portion & As per actual design speed on curve portion
Width of Median Flyover	1m open Median for 15m deck width
Type of superstructure for Viaduct	Pre-Cast Post Tensioned Pre-Stress Segmental/cast-in-situ Box Girder, Structural Stainless Steel composite Girder, Network Arch Balance cantilever

	One Span in Network Arch as per the drawing attached with this Tender is Compulsory
Foundation	1.2m/1.5m dia RCC bored in situ pile
Obligatory requirements & Type of Superstructure	<p>Vertical clearance of 5.5 m below the Girder soffit to the existing ground level as marked in the drawing.</p> <p>One span with 125m Iconic Network Arch over Mithi River (this span is Compulsory to design and construct, no deviation in the design and aesthetics will be acceptable, photographs enclosed with Tender copy)</p> <p>Balance Cantilever (40m+80m+40m=160m)</p> <p>Structural Stainless Steel composite Girder (1 no. span of 45m, 2nos. span of 60m),</p>

- v) The bidder shall indicate his approach towards design, construction, assembly and erection methodology (including provision for access for inspection) for the Flyover in his technical proposal along with his submission of tender, which shall form part of the bid.
- vi) The successful bidder should engage personnel/agency who are well conversant with Precast Prestressed Segmental/cast-in-situ box girder design and construction, Network Arch Bridge design and construction, and flyover with special structural stainless steel composite span bridge and having experience of executing similar bridges in the past. As the portion of flyover including Network Arch bridge is to be carried out over creek land and nearby mangroves, it is essential for the contractor to obtain the required special NOC/Permissions of Competent Authority and undertake suitable safety and construction measures to ensure least damage to the same. The intending tenderer should also carefully examine the site to understand the constraints at the site and restrictions on availability of space. This would help to determine an appropriate methodology for construction over Mithi River and its island.
- vii) The bidder should conduct a complete Total Station survey, fixing locations/extents of proposed structures and corresponding locations for geological investigation. The structures affecting the alignment shall be mapped with proper dimensions, so that the same can be got removed from the concerned ward office/any other relevant authority. Man machinery for the same be made available by the bidder. The debris generated thus shall be cleared by the Bidder at his risk and cost.
- viii) Hydrographic survey and sub-soil investigation in land and water shall be carried out prior to start of construction and levels of bed recorded carefully. Clearing & cleaning of all construction materials / cofferdam/ temporary works and reinstating the original bed level after all construction is completed shall be included in the scope of work. Final Bill shall be paid only after completion of this work to the satisfaction of the BMC.

- ix) Provision for access to site for maneuvering of men, material and machinery including preparation and maintaining of temporary access platform/working platform.
- x) Site clearance and dismantling of obstructions, utilities, etc. before commencement of work as specified and as directed;
- xi) True and proper setting out and layout of the works, bench marks and provision of all necessary labour, instruments, and appliances in connection therewith as specified and as directed. All Engineering surveys and joint records / documentation for the same shall be maintained by the contractor duly attested by Employer. All Engineering surveys and joint records / documentation for the same shall be maintained by the contractor duly attested by BMC.
- xii) Conducting detailed subsurface exploration and taking adequate number of bore holes at every foundation location, including analysis, interpretation and reporting of results thereof in accordance with IRC:78 (Indian Roads Congress Standard Specifications and Code of Practice for Road Bridges – Section VII Foundations and Substructure) required for preparation of design of foundations.
– the depth of bore holes should be based on the recommendation of the geotechnical consultant appointed by the Contractor, but extending at least 5m below the proposed founding level as specified and as directed. Minimum 1 bore shall be carried out for each pier location and minimum 1 number bore per 50m shall be carried out in solid approaches portion. On the basis of soil investigation report, ground improvement required if any in the solid approaches portion shall be carried out to resolve any settlement related issues while designing the Ramp /solid approaches.
- xiii) Provision of suitably designed foundations for piers up to the minimum founding depths in accordance with actual soil parameters as obtained from the detailed subsurface exploration – all as specified and as directed.
- xiv) Provision of suitably designed precast prestressed segmental/cast-in-situ box girder, prefabricated composite stainless steel girder superstructure and network arch , as specified /shown in the Tender GAD for the complete length of the bridge.
- xv) Providing precast RC deck slab panels with cast-in-situ joints or providing cast-in-situ deck slab over sacrificial metal deck.
- xvi) Providing suitably designed drain cum footpath, cement concrete wearing coat, crash barriers, expansion joints, bearings, approach slabs, drainage spouts / down take pipes, water mains, utilities, inspection galleries, fenders etc., approach roads including retaining structures, pavement crust, anti-erosion works, highway appurtenances etc., as specified and as directed. Providing decorative lighting for iconic Network Arch Bridge after obtaining approval from BMC.
- xvii) Suitably designed arrangement to inspect and reach pier top along with an inspection platform if required shall be provided for inspection of bearings at each pier location

of Network Arch Bridge. Suitable arrangement for under deck inspection shall also be provided.

- xxviii) Providing anti-corrosive treatment / painting to exposed surfaces of bridge & surface in contact with soil & water as specified and as directed.
- xix) Provision of Thermoplastic road marking paint with 30% glass beads shall be applied as directed by BMC.
- xx) 1 no. 75 mm dia. PVC pipe shall be provided through the crash barriers and 2 nos. 75mm for Median Crash Barriers.
- xxi) All aspects of quality assurance (including load testing) for various components of the works, as specified and as directed.
- xxii) Clearing of site and handing over of all the works, as specified and as directed.
- xxiii) Providing instrumentation for Flyover portion as detailed in specifications and monitoring during Defect Liability Period and thereafter.
- xxiv) Provision of office premises and vehicles arrangement for the Employer staff separately.
- xxv) Provision of full-fledged laboratory as per the provision of MoRTH specifications.
- xxvi) Maintenance of the completed work during the defect liability period as directed.
- xxvii) Submission of completion drawings and other related documents, as specified & as directed.
- xxviii) Any other item of work as may be required to be carried out for completing the project in all respects in accordance with the provision of the contract and / or to ensure the structural stability and safety of the bridge during and after construction.
- xxix) Design & installation of Illumination of Network Arch Bridge & Electrical system (under lump sum part of contract) as approved by BMC / BMC proof consultant.
- xxx) The value of the work shall be limited to a fixed lump sum amount named in the letter of acceptance (hereinafter referred to as the 'Contract Price') subject to such additions thereto or deductions there from as may be made under the provisions of the contract.
- xxxi) The work shall, inter alia, include the following **under lump sum part of contract**:
 - Traffic Safety during execution
 - Removal of existing structure or part of the existing structure which may obstruct the new construction, e.g., dwelling units, compound walls, parapets, hutments, trees pedestals, electric poles, piers, concrete or stainless steel structures, ramps, canopy, bus sheds, kerbs, pipe railing, RCC parapet etc. This will also include removal & disposal of debris/rubbish from site as directed by BMC. Royalty for excavation & disposal shall be borne by contractor and reinstated at his own cost.
 - If utilities have been found during execution of work, the same shall be shifted by the contractor and reinstated at his own cost.

While the broad scope of work is described in different parts as above, the work also includes all such details of construction which are obvious and fairly intended and which may not have been referred to in these documents, but which are essential for the entire completion of the Works.

2. OBLIGATORY REQUIREMENT:

2.1 BRIDGE PARAMETERS

General Arrangement Drawing (GAD) showing Flyover along with Network Arch bridge portion and Solid approach Ramps contemplated by the Employer are given in Drawings for the guidance of the Bidders. These are indicative except for mandatory requirements in terms of Length, Width, Vertical and Horizontal clearances etc.. However, the Contractor shall quote his lump sum offer based on his own design.

The mandatory requirements are as follows,

- 1) Overall length of the viaduct shall not be less than that shown in Tender drawings.
- 2) Span arrangement shall be as indicated in the Tender drawing.
- 3) The Vertical geometry of the finished surface of the roads shall be in the form of a smooth curve as per the summit and valley curve profile in GAD. The design of curves shall be got approved from the Employer. The design of curves shall comply with relevant IRC codes/guidelines. The design speed on curves shall be as stipulated in design data.
- 4) The radius of horizontal curves shall not be less than as shown in the Tender drawing.
- 5) Longitudinal gradients shall not be steeper than those shown in the Tender drawing with properly designed vertical curves for a design speed as per the Design Data.
- 6) Roadway particulars & carriageway widths shall be as per tender drawings.

It should be clearly understood that,

- i. This is essentially a 'Design & Construction' tender on **ITEM RATE** basis for the Flyover including One Network Arch Span and allied works.
- ii. The tenderer is deemed to have understood and visualized the nature and type of work contemplated with due consideration to the qualitative and quantitative requirements of the job consistent with the site conditions, complexities of work which have a bearing on the actual execution/construction etc. While doing so, however, he must strictly adhere to certain salient parameters which are indicated herein.

2.2 ITEMS OF WORK UNDER THE CONTRACT

The Lump sum amount to be quoted by the tenderers shall include the cost for Design, Engineering, Procurement, Construction, etc. of the complete project work

satisfying the various requirements /mandatory & obligatory requirements as indicated in this Section and in other sections of tender document.

The various items involved are indicated as below:

a) Traffic related issues:

The Contractor shall obtain all necessary permissions from the concerned departments for any traffic related issues. Also contractor should provide traffic diversion boards, barricades and deployment of traffic warden as per requirement of traffic police department. Contractor shall provide towing van, crane for shifting of heavy vehicle 24X7 days during throughout construction period if required to.

No compensation shall be considered on account of delays in getting permission from the concerned departments for this purpose.

b) SITE CLEARANCE/SETTINGOUT:

Marking out the center line of the Bridge and approaches and complete lining out with masonry and concrete pillars for proper lines and levels with precision total survey, including constructing control stations, bench marks, etc. as directed. This includes all the allied works like clearing the road, other existing utilities like signals, electrical poles, telephone ducts, hoarding, etc. dwelling units, compound walls, parapets, hutments, trees pedestals, electric poles, piers, concrete or stainless steel structures, ramps, canopy, bus sheds, kerbs, pipe railing, RCC parapet etc. side line removing and stacking of the existing kerb stones, obstructing bushes, trees etc. as directed by Employer.

The surveying instruments used on the work shall be modern electronic equipment like Total Station / DGPS.

c) FOUNDATION:

Providing Pile Foundations, taking foundations through all strata up to required foundation level as per design including embedment as per Specifications / Design Criteria and soil investigation report /geotech consultant's recommendation.

Pile Foundation:

- i) Initial vertical load test on pile (Static)- Providing and casting test pile and

carrying out load test conforming to I.R.C. 78 latest edition.

- ii) Initial horizontal load test on pile (Static) - Providing and casting test pile and carrying out horizontal load test conforming to I.R.C. 78 latest edition.
- iii) Routine load test on pile (Dynamic) - Carrying out routine load test on pile (on 2% of total piles) conforming to I.R.C. 78 latest edition using ASTM method(CAPWAP)
- iv) Pile Integrity Tests should be conducted on each pile to verify integrity of concrete along the pile shaft; before casting pile cap.
- v) Sonic Pipe Testing shall be done for all piles of the obligatory span's.
- vi) Pile cap - Providing R.C.C. pile caps. The top of the pile caps shall be at least 0.5 m below existing ground/road level for piles on land or as directed by BMC.
- vii) All rebars to be of Stainless Steel as per the specifications mentioned in the Tender.

g) STRUCTURE:

i. Sub-structure:

Substructure components such as **pier, pier caps**, piles, Pile caps etc., shall be suitably designed as specified in tender drawings or as per design and Site requirements.

ii. Superstructure:

Superstructure shall be suitably designed for Precast Prestressed segmental/cast-in-situ box girder, Composite Stainless Steel Girders and network arch as specified in tender drawings.

iii. Other Appurtenances:

Providing necessary bearings, pedestals for bearings, expansion joints, wearing coat, road kerbs & anti-crash barriers, Noise barriers, etc. as per Design Criteria.

h) OTHER PROVISIONS:

- i) Structure of suitable architectural design to define the ends of flyovers and approach ramps, with suitable pedestals to house the Granite tablets as per details approved by BMC.

i) APPROACHES: PROVIDING APPROACH STRUCTURES ASFOLLOWS:

- i. Providing vertical retaining structure with outer face of the retaining wall of the ramp in plumb for in situ construction or as per manufacturer's specifications in case of RE wall for embankment of approaches at ends of ramp structures as shown in drawing comprising of RE wall/RCC Retaining Wall, RCC Anti Crash Barrier and RCC approach slab of minimum 3.5 m length, back fill with required properties as per approved design and as per specifications enclosed in the tender resting on strata of required bearing capacity and as per provisions of the design criteria. In case of RE wall option, due precautions and measures need to be adopted by ensuring that the entire RE wall structure is at least 500mm above the HFL.

- ii. Providing granular filling, filter media, subgrade etc. in the approaches & ramps as per specifications. Adequate draining Arrangement shall be provided as per site conditions/design requirement.

- iii. Providing crust & wearing coat for solid ramps asunder:

(All the thicknesses mentioned in this clause are compacted thicknesses. Bitumen for all grades shall be procured from Govt. refineries only).

 - a. Granular subbase: 250 mm thick (above sub grade)
 - b. Dry lean Concrete: 150 mm thick
 - c. PQC(M40Grade): Minimum 300 mm thick
 - d. Construction Joints: As per design

- iv. Providing wearing course over the superstructures of flyover/bridges as follows:
 - a) Providing and laying 75 mm thick cement concrete wearing coat of M30 grade.

- j) PIER PROTECTION / ROAD SIDE Crash Barrier/LANE MARKING, ZEBRA CROSSING-:**
 - i. RCC Crash Barrier along with Solid Ramps (under lump sum part of contract):**
Providing and fixing continuous R.C.C. Crash barrier at the edge of RE wall.

ii. LANE MARKING, ZEBRACROSSING:

Contractor should provide lane strip/edge strip marking on the deck and approaches using thermoplastic.

k) Site Office (under lump sum part of contract):

1. Providing and maintaining furnished site office semi-permanent type made up of steel (Porta-cabin) or aerated concrete paneled and provided with false ceiling for the supervisory staff of the Employer. It shall have **50 Sq. m.** floor area each for BMC and shall include all items like electric supply, electrical items, telephone, lights, fans, air conditioners and complete wiring, drinking water supply and toilet facilities complete along with furniture listed below in each site office:

- i Executive table (for the Employer) - Make: Godrej Model: 2 Numbers.
- ii Executive Chair (for the Employer) - Make: Godrej Model No.PCH-701 or equivalent: 2 Numbers.
- iii Table (for Site Employer, Accountant & Head Clerk) - Make: Godrej Model No. T-104 or equivalent: 6 Numbers.
- iv Ordinary chair type 1 (for the Employer, Accountant, Head Clerk and visitors) – Make: Godrej Model No.CHR-6 or equivalent. : 10Numbers.
- v Table (for all other staff) - Make: Godrej Model No. T-101 or equivalent: 6Numbers.
- vi Ordinary chair Type –II (for all other staff and visitors): 10 Numbers
- vii Steel Almira 1980 mm x 915 mm x 485 mm Make: Godrej Model or Equivalent: 2 Numbers.
- viii Steel Almira 1270 mm x 765 mm x 440 mm Make: Godrej Model Minor plain or equivalent: 2 Numbers.
- ix Racks -5 Tier 1800mmx900mmx375mm - made of slotted angles and M.S. sheets of Godrej make: 6Numbers.
- x Ceiling Fans - 1400 mm size. Ceiling fans shall be of approved make and colour: 10Numbers.
- xi Computer with Printer: (4 Computers and 2 Printers) Intel Core i7 (10th Gen.) 2.8 GHz processor, 16 GB RAM, hard disc capacity 1 T.B., 19” size LED monitor, 1no. - HP/Laser Printerof80columns,104 keyboard with multimedia, Optic Mouse with mouse pad and HP Scanner and 1no.of A3 size inkjet printer and 1no. All in one printer.
- xii Laptop 2 Numbers and printer – 2 Number each shall be delivered to BMC within one month after Work Order is given to Contractor.

Specification of laptop, , desktop, printer shall be as given below:

1. Laptop specification – 2numbers

Operating system Genuine Windows® 8 Home installed
Premium 64-bit Processor Intel Core™ i7- 3320MProcessor
2.66 GHz Standard memory 8GB memory, Display 35.6 cm
(14.0”) Diagonal High- Definition LED HP Bright-view
Display Internal drives 500GB SATA (7200 rpm) Optical
drives Graphics ATI Mobility Radeon™ HD 6370 (1GB
DDR3 dedicated or NVIDIA®GeForce® G210 with Pure-
Video®HD technology One GB RAM Weight of laptop2.10
kg Max2. All in one Laser Printer with Wi-Fi facility of ink
cartridge type.

The expenditure on account of payment towards electric bills, telephone bill sand any other local taxes shall also be borne by the Contractor. The above facilities shall be maintained by the Contractor for the entire duration of the contract. At the end of contract, the structure shall be dismantled / removed if so directed by the Employer.

The site office with all services, furniture and fixtures provided at site offices shall be the property of Contractor at the end of the job.

2. All consumables like cartridges, stationary etc. used for office work has to be given by contractor till end of the work.

l) CAR FACILITY FOR BMC: Contractor shall make available two cars throughout construction period in 2 working shift with driver for BMC staff and Project Management Consultant each. Estimated running will be 3000 km per month. The car model shall be Maruti Swift Desire/Toyota Etios with A.C. and other is Innova / Maruti Ertiga (7 Seater) or equivalent.

m) Laboratory :

- a) Providing and maintaining adequately equipped field laboratory as required for

site control on the quality of material and the works. It shall have minimum area of **60 Sqm** for the entire project.

- b) The field laboratory shall be located as directed by the BMC. It shall be provided with amenities like water supply, electric supply etc. and including one personal computer of configuration comprising Intel core i7 (10th Generation) with colored monitor and desk jet printer.
- c) The laboratory shall be established as per the MoRTH specifications with all services, furniture, and equipment shall be the property of the Contractor.

n) Miscellaneous Items and Road Appurtenances etc. (under EPC part of Contract).

a) Providing Traffic Safety Devices as per the following brief particulars:

- i. During Construction Stage – Temporary: - Providing barricading using as per Circular u/No. **U/No.MGC/F/6342 dated 5.5.2018**
- ii. On the Structure – Permanent:-Providing traffic lane line strips 100 mm in width with Conipur TC 458/459 coating (BASF) including primer coat of master seal P 2525 @ 0.35 to 0 .40 per kg/sqm on tacky surface of primer on sand broadcasting @ 1 kg/sq.m Also providing Zebra crossing, with white coating made on blue background using above material for pedestrians at location indicated in the drawings. Informatory boards of required shape and size made out of 14 gauge MS sheet with retro-reflective sheeting of high intensity grade as per the Tender specifications of total area of 100 m2 including supporting columns gantries / trusses etc. and other arrangements as per MOST specifications. Traffic signpost including sign boards as per MOST specifications and traffic requirement. The gantries and trusses shall be required to span over the road and be supported only at two points outside the ROW width which shall be up to 30 M as directed by Employer. Total number of such gantries shall be 4 Nos. The locations of gantries and trusses shall be as per the drawing attached in Volume-IV. The supporting structure of the gantry should be galvanized.

2.3 ELECTRICAL:

Supply and installation of Decorative Lighting System, specific to Network Arcj Bridge located at Senapati Bapat Marg having lighting fixtures with Rangers from 28W to 120W including programming and commissioning of DMX Controller and DMX splitter, Adress writer,

instruction forwarder Ranger / Compass (AC), Beldon DMX 2 pair cable, power supply cables, Automatic Voltage Stabilizer, Complete as directed by Engineer in charge.

a) Broadly the scope of work for Network Arch portion Electrical part is as under:

- i. Design and detailed Engineering for illumination of the Flyover Bridges. The bidder will have to present the Illumination scheme with images, photos, pictures, 3D Modelling, etc. for the approval of BMC / BMC proof consultant.
- ii. Designing the lighting scheme for the complete flyover including solid ramps.
- iii. Providing, Installation & Commissioning of the Electrical Illumination & Lighting scheme.
- iv. Maintenance of the electrification & Illumination system during defect liability period. This will not be applicable to damages due to thefts & vandalism.

Illumination Criteria:

- V) Supply, installing and commissioning of 40 W, Integral Surface Mounted Device (SMD), IP 66, LED wall washer with Die Cast Aluminum Housing and Frame, for better heat dissipation. Product comprising of 3000K / 6000K / RGB LEDs. Fixtures should have toughened glass with 30° & 15° Beam. The luminaire shall have IP66 protection. The LED shall be compliant with Useful L70 life of >35000 Hrs. LED Make : OSRAM. Operating temperature 0 to 40°C. LED Driver shall be isolated type, Constant Voltage topology driver in metal enclosure with IP 66 Protection. Driver efficiency should be 85% & proper heat sink for heat dissipation suitable to operate in input voltage range of 150V to 270V (nominal rated voltage – 240V) with 3 KV internal surge protection. LED driver shall have output short circuit & over voltage protection inbuilt. Luminaire shall have 3 channel main 360 W DMX controller to programme the RGB product to provide different colors as per requirement. Provision of Driver, DMX Controller and Connectors along with DMX Controller shall be done shall be made. Better schemes may be acceptable subject to approval of BMC / BMC proof consultant.
- vi) Decorative RGB Lighting shall be provided by the contractor for Network Arch bridge. Design and methodology shall be got approved by the contractor prior to commencing the lighting works.

The Defect liability period will be 5 years after completion of project and shall include maintenance, repair, replacement of fixtures, lights, etc. at no extra cost to the BMC. The Electricity consumption charges shall be borne by BMC.

2.4 DOCUMENTATION, INSTRUMENTATION:

The following items shall be deemed to be included in the lump sum tendered cost.

- a. All final drawings and Microfilms and Compact Discs of all approved drawings and “as built” drawings and two sets of final design calculations along with computer inputs/output files shall be supplied by the Contractor free of cost. In case a server or SAP module is generated the contractor has to upload the relevant drawings on the same.
- b. The installation of **Structural Health Monitoring System** on various elements and locations of the bridge shall be the responsibility of the bidder. Further the operation, maintenance and Monitoring of the complete system for the 5 years maintenance period shall be the responsibility of the bidder. No extra payment shall be made for the installation Commissioning, O&M and monitoring of the Structural health monitoring system. The scheme for structural Health Monitoring system shall be got approved from BMC / BMC Proof consultant appointed consultant before installation.
- c. Three Video film cassettes of 180-minute duration each and colored photographs in three sets of photo-albums (photo size not less than 4” x 6”) of the bridge covering the different phases of construction from start to finish shall be supplied by the Contractor free of cost.
- d. A “Maintenance Manual” describing access arrangements, important obligatory precautions from the point of view of structural safety, and procedure for minor and major repairs of each component of the bridge, renewals of finishes and treatments periodically shall be supplied by the Contractor free of cost. Operation and maintenance manuals, equipment and system catalogues, factory and site test certificates, list of spares etc., in hard as well as soft copy.
- e. A “Quality Assurance Manual” covering all aspects of designs and drawings, mix-designs, materials, testing, soil and rock properties, statistical quality control, etc. shall be prepared by the Contractor free of cost well before starting the work.
- f. A “Construction manual” covering various aspects of construction methods, difficulties faced and how they were overcome during execution etc. shall be supplied by the contractor free of cost at the time of finalization of work.
- g. The Contractor shall install fixtures and fastenings provided by the Department for housing any instrumentation that may be useful for the Department at his cost.
- h. Fixing arrangement for internal and external lighting shall be got approved from competent authority and executed.

EMPLOYERS REQUIREMENTS

SECTION – 2

DESIGN CRITERIA

DESIGN CRITERIA

1. GENERAL

The purpose of this document is to highlight the general requirements, guidelines and design philosophy and design parameters for the design of bridges for this Project. The structural design shall be based on relevant IRC codes. International standards shall be followed in case the relevant specification is not found in Indian codes.

In order that the tenderer's proposal qualifies for acceptance it shall generally fulfill the following requirements:

- 1.1 It shall ensure soundness of the structure and its durability.
- 1.2 It shall ensure speedy construction and lead to appreciable economy.
- 1.3 It shall be accompanied by preliminary but fairly detailed drawings and detailed description of work and specifications of materials and items. The detailed design assumptions and method statement (technical proposal note) shall also be given. If called upon, tenderer shall furnish any additional information necessary for appreciation and comparison with other alternative proposals received from other tenderers.
- 1.4 At the time of detailed design, normally the Contractor shall not deviate from the basic scheme proposed by him for the purpose of tender.
- 1.5 Due importance shall be given to aesthetics of the Network Arch bridge structure. The shape of structure should have a pleasing appearance and architectural beauty as a whole in harmony with the surroundings. The structure shall be generally symmetrical, the viaduct shall have uniform aesthetical appearance to enhance the overall look and thereby the vicinity.
- 1.6 Sudden changes in geometry of the structure shall generally be avoided as such points are susceptible to stress concentration. However, if such sudden changes in geometry become unavoidable, rigorous analysis shall be provided.

2. DESIGN CODES AND STANDARDS

- 2.1 The design of all structural components shall conform to the criteria laid down in the latest edition of the codes of IRC / IS published up to one month prior to last date of receipt of tender.
- 2.2 For any item not covered by 2.1 above, MORTH specifications for road & bridge works (Fifth Revision) published by IRC, New Delhi in 2013 along with subsequent amendments on behalf of Govt. of India, Ministry of Surface Transport shall be used.
- 2.3 British Standards (BS) or Eurocode or AASHTOLRFD

2.4 For items not covered by any of standards & specifications as stated above as well as sound Engineering practice, provision of relevant codes of other countries shall be referred. However, in this regard, decision of the Employer / Employer's Representative shall be final & binding.

2.5 Order of precedence in case of conflicts

In case of conflicts between the different parts of the tender, the following order of precedence shall prevail.

- a) Contract Agreement
- b) Special Conditions of Contract
- c) General Conditions of Contract
- d) Scope, Employer's requirement & Design Criteria as specified in the Tender.
- e) Tender GAD/Tender Drawings.
- f) MORT&H / IRC specifications.
- g) Standard codes of practice.
- h) The Tender at any other documents for being part of the Contract including all BMC's Circular

3. DESCRIPTION ABOUT STRUCTURE

3.1 General

It is recommended to use Precast prestressed segmental/cast-in-situ box girder and Composite stainless steel Girder construction methodology for relevant elements of Bridge. The deck slab may be cast-in-situ over metal deck. Majority of the superstructure in the reference design of the project is of Precast prestressed segmental/cast-in-situ box girder. The shape, height and configuration of piers shall be aesthetic and pleasing to the eye. The Erection method must be developed during the design process to ensure compatibility between design and erection and viability of the former. The guiding principles shall be Simplicity and Repetition / Modularity. Furthermore, it is recommended that the Designer should develop schemes that seek to minimize whole life cycle cost, namely construction plus maintenance cost rather than just initial construction cost. Due attention shall be given to developing a scheme for providing ease for future replacements of bearings and Support system. The main bridge comprises of 2 lane carriage way in each direction. Other allied and miscellaneous structures such as RE wall/RCC Retaining Wall, friction slab, crash barrier, approach slab, railings etc. shall conform to relevant IRC Codal requirements and MORTH specifications.

3.2. Span arrangement

Span arrangement shown in Employer's Drawings shall be as shown in the Tender GAD.

4. ANALYSIS, DESIGN AND DRAWING SOFTWARE

The computational and structural analysis software for the design of the Bridge shall be approved by the Employer prior to commencement of the design works. All of the Contractor's drawing for submission to the Employer shall be prepared using the Autodesk of the version approved by the Employer. One license copy of computational and structural analysis software to Employer and another one to Proof Consultant approved by employer shall be provided by Contractor.

5. DESIGN CRITERIA AND LOADS

5.1 Design Service Life

The bridge structures shall be designed for the service life of one hundred (100) Years on the conditions that regular inspection and maintenance is properly conducted during the operation period. Certain elements may require replacement during the design service life. The minimum Target design services life of the main bridge components are given in the following table:

Table 5.1 - Design Service Life Required as Target

Bridge Component	Design Service Life (years)
Foundations	100
Piers	100
Deck	100
SS Tension Rod (replaceable)	75
Bearings	40 (20 years for minor components only)
Expansion Joints	20 (10 years for minor components only)
Parapets (metal parts only)	40
Parapets (concrete parts only)	100
Drainage system	20

Every 6 months during Defects Liability Period joint Inspection be done and defects may be recorded and get rectified. Also, before expiry of the Defects Liability Period, a joint visit to the Works by the Contractor, his design consultant and the BMC/ BMC Proof Consultant shall be organized and conducted by the Contractor. In case any of the elements, including but not limited to the bearings, expansion joints, parapets and drainage system, are found defective and need repair or replacement, the repair or replacement as agreed with the Employer shall be done by the Contractor at no additional cost to the BMC.

6. BRIDGELOADING

6.1. Dead Loads

The unit weights of the construction materials shall be as defined in IRC: 6- 2017, unless otherwise confirmed using weights of representative samples.

Material	Density
Plain Cement Concrete	24 kN/cu.m
Wet concrete	26 kN/cu.m
Reinforced Cement Concrete (RCC)	25 kN/cu.m
Pre-stressed concrete	25 kN/cu.m
Structural stainless steel	78.5 kN/cu.m
Earth compacted	20 kN/cu.m
Asphaltic concrete in wearing coat	22 kN/cu.m

6.2. Super Imposed Dead Load

Superimposed Dead Load (SIDL) due to Wearing coat, Crash barrier, median, kerbs, services etc., shall be taken based upon density of materials and cross sections as specified in IRC codes. Adequacy of all SIDL's shall be re-confirmed in the detailed design against actual loads involved in the Works.

6.3. Live Load

Live Loads with appropriate impact & congestion factors and all associated loads like braking, centrifugal forces etc. to be calculated as stipulated in IRC 6- 2017.

Reduction in the longitudinal effect as specified in Cl. 205 in IRC 6-2017 shall not be considered. Footpath live load as stipulated shall be considered if any. The design of the Bridge shall also be checked for vehicular lanes loading without any footpath. For 4 lane carriage way, the following load configuration shall be adopted.

- i Four lanes of IRC Class A
- ii Two lane of IRC Class 70R (wheeled)
- iii Two lanes of IRC Class A with one lane of IRC Class 70R(wheeled)
- iv Minimum clear distance between 70R vehicle and Class A vehicle, when placed side by side in combination shall be 1.2m for design.
- v Impact factor shall be as per Cl. 211 of IRC: 6 2017 for the relevant load combinations.

6.4. Earth Load

The Engineering properties of backfill materials shall be as per MORTH specifications. Dry and saturated condition of the soil will be considered for design.

- a) All earth retaining structures (Bridges) shall be designed for earth pressure as per Cl. No 214 of IRC6- 2017.
- b) Earth pressure due to surcharge on account of live load and dead loads shall be

considered as per Cl. No. 214 of IRC6-2017.

- c) Increase in the earth pressure due to earthquake effect, i.e., dynamic effect will be calculated as per IRC 6 – 2017. Provisions While calculating the earth pressure, both saturated backfill condition and submerged condition (for structures not provided with drainage arrangements) of earth shall be considered and pressure from outside shall also be considered at submerged condition.

Parameters	Values
Type of soil assumed for backfilling	Dry density of 2.00 t/cu.m submerged density of 1.0 t/cu.m.
Angle of Internal Friction	$\Phi = 30$ degree
Angle of Wall Friction	$\delta = 20$ degree
Coefficient of Friction 'P' at base	Tan (2/3 Φ), while Φ is the angle of internal friction of substrata immediately under the foundations.

6.5. Centrifugal Forces

Centrifugal forces shall be calculated as per the provisions of IRC: 6-2017 for road bridges for a design speed applicable at horizontal curves.

6.6. Wind Loads

Wind loads shall be based on basic wind speed for Mumbai region which shall be availed by the bidder from Airport Authority of India and as defined in the latest version on IRC:6.

6.7. Temperature Loads

The temperature loads shall be considered as per Cl. 215 of IRC 6-2017. Temperature effects shall be considered as follows:

- i For effects of non-linear profile of temperature (diurnal variation) full value of 'E' shall be considered for concrete and stainless steel components
- ii For effects of seasonal fall and rise of temperature 50% value of 'E' shall be considered for concrete components and 100% for stainless steel components.

6.8. Seismic Actions

The seismic force on structure shall be calculated as per SP 114-2018 "Guidelines for seismic design of Road Bridges". After publication of this Guideline, the existing provision for seismic design in Clause 219 of IRC: 6 - 2017 stands superseded.

The location of the bridge is over Mithi River, Mumbai. As per the IRC-SP-114 the location of the bridge falls under zone III of the seismic zone classification of India with Importance factor of 1.2.

6.9. Longitudinal forces due to Live Load

Longitudinal forces due to Live load shall be considered in the design IRC: 6 2017.

6.10. Construction Loads

Construction loads shall be considered according to the method to be used for construction/erection.

In addition, for deck structures subject to mobile construction plant and/or equipment essential for the assumed method of construction, the structures shall also be designed for the assumed temporary loads of the construction plant and/or equipment at each construction stage. However, a uniformly distributed load of 3.6 kN/m² of the form area shall be considered to account for construction stage loadings in the design of superstructure elements, wherever applicable, as per IRC: 87-2011.

A minimum dynamic amplification of 50% of the loads during normal lifting operations shall be assumed, unless a lower factor can be justified to the approval of the Employer considering the specific construction method and the actual construction plant and/or equipment which will be used.

Where precast or pre-fabricated segments are installed, the consequences to the stability of the structure due to sudden loss of a segment (failure of the lifting equipment) shall be determined. The consequences shall not be disproportionate to the event. A minimum dynamic amplification of 100% of the loads due to the sudden loss of a deck segment (as a construction condition) shall be assumed.

6.11. Creep & Shrinkage Effects

Effect of creep and shrinkage on structures shall be considered as per IRC 112 latest revision provisions.

7. LOADCOMBINATION

All members shall be designed to sustain safely the most critical combinations of various loads and forces that can coexist as per IRC: 6 and IRC: 78.

8. GENERAL REQUIREMENTS OF BRIDGE STRUCTURE DESIGN

8.1. Restriction on Flyover Type/Structure

- a) Superstructure with hinges / half joints /articulations.
- b) Any proposed use of new solutions and technologies which have not been used over a long period and not been used successfully for a large number of projects may be allowed subjected to the Notice to Proceed by the Employer and liable to rejection by the Employer at his sole discretion.

8.2. Aesthetic Requirements for Flyovers/Viaducts

8.2.2. Aesthetic Strategy Report

Overall aesthetics and architectural detailing of the structural and non- structural members shall be given proper attention. The Tenderer shall develop an Aesthetic Strategy Report for the bridge presenting a Comprehensive aesthetic strategy and theme, together with supporting design guidelines. The theme concept shall include architectural elements such as railings, fences, lighting standards, finishes, aesthetic lighting and other significant visual elements. An architect experienced with similar major public development shall develop the Aesthetic Strategy Report with the bird's-eye animation showing the aesthetic appearance for the bridge. Appointment of the architect/aesthetic designer shall be subject to prior Notice to the BMC. No separate payment will be made for this work.

8.2.2. Aesthetic Design Requirements

In general, the aesthetic design of the bridge should comply with the following requirements.

- Lighter and visually pleasant structural profile shall be proposed. All proposed structures shall ensure a simple and elegant structural form.
- The visual experience from the main carriageway by users and outside of the Bridge shall be considered in the aesthetic design of the via duct structure.

9. REQUIREMENTS FOR SUPERSTRUCTURE, SUBSTRUCTURE, AND FOUNDATION

9.1. Substructures and Foundations

- a. The following requirements shall apply to the design and construction of the piers and foundations
 - (i) At the time of Tender, for the purpose of preparing the preliminary/bidding design, the Contractor has to follow the levels of founding strata/founding levels as shown on tender GAD /drawings.

After award of the Contract, the Contractor shall determine the final bearing stratum elevations at the proposed locations of the piers based on additional geological/subsoil investigation to be performed by the Contractor at his own cost. The Contractor is expected to carry out sufficient geotechnical investigations as per IRC requirements to design the foundations during the Detailed Design stage. The Contractor shall carry out geotechnical/subsoil investigations involving boreholes as per soil investigation as carried out by the Contractor, to assess the nature and characteristic of founding strata to finalize the pile/base design. Additional boreholes shall also be taken, at no additional cost to the Employer, as may be directed by the Employer, as needed to confirm the strata as per requirement emerging during the design stage or execution of the Works.

(ii) Pile End Bearing Capacity and Rock Socket Friction Capacity

The pile end bearing capacity and rock socket friction capacity in the founding strata shall be finally verified based on Dynamic loading test (2% of the total number of piles) as specified in the relevant clauses in IRC 78 & IS 2911. The pile end bearing capacity and rock socket friction capacity analysis shall be submitted to and Noticed by the Employer before commencing the permanent piling work.

(iii) The concrete piles shall be verified for the integrity by sonic echo test. Sonic tubes shall be installed in all of piles, and the test shall be carried out for all piles.

(iv) Foundation types shall generally be end bearing pile foundation on rock. Skin friction within the socket in rock may be considered depending on the site conditions and geology. Skin friction along soil shall not be allowed in the design.

(v) Spread foundation shall be permitted on the land area if founding stratum is at a shallow depth. Other types of foundation can be proposed to the Employer by the Contractor for his approval, but no raker pile will be accepted.

(vi) Piles shall be provided with permanent steel liners which thickness shown as follows;

- Up to and including 1.0m dia. : 6mm
- Greater than 1.0m dia and up to 1.5m dia. : 8mm
- Greater than 1.5 m dia. and up to 2.0m dia. : 12mm
- Greater than 2.0mdia. : 16mm

The liner plate shall be embedded in concrete to at least 50mm from the bottom of the pile cap. The structural design of the piles shall not rely on any structural capacity contribution from the permanent steel liners in its structural design of the piles.

(vii) Rock/soil anchors of prestressed or non-prestressed type should not be applied for resisting tension and/or anchoring foundations to rock/soil for piers.

9.2. Superstructure

The following requirements shall apply to the design and construction of superstructure:

- (i) Precast Prestressed Segmental/cast-in-situ Box Girder
- (ii) Prefabricated composite stainless steel girder.
- (iii) The minimum thickness of concrete deck slab shall be 250mm.
- (iv) For Network Arch span, minimum span to depth ratio shall be 5.5 and hangers shall be of Stainless Steel. Hangers must cross each other at least twice as shown in tender drawing.
- (v) Stage-by-stage analysis of the Network Arch Bridge shall be performed considering all stages including construction, service and tension rod replacement.

10. SPECIFIC REQUIREMENTS

10.1. Reinforced Concrete

10.1.1 Concrete Grades

All the concrete to be used in the Works shall be of a minimum grade of M40. The minimum concrete grades to be used for components of the bridge shall be as per the following table.

Table 10.1 Concrete Grades

Structural Elements	Minimum Grade, MPa
Concrete for foundation including bored pile, pile caps	M40
Piers	M50
Pier Cap, Girder, Deck slab, Pedestals	M50
Parapets, Approaches slab, Friction slab, Crash Barrier, Dirt Wall	M40
Leveling course	M20

10.1.2 Density of Concrete

Mass concrete – 24 kN/m³

Reinforced / pre-stressed concrete - 25kN/m³

Green Concrete - 26 kN/m³

10.1.3 Elastic Modulus of Concrete

Elastic modulus of concrete for short term & long term shall be calculated depending upon the shrinkage & creep parameter as specified in IRC 112 latest revision.

10.1.4 Shrinkage

Shrinkage shall be calculated as per IRC 112 latest revision.

10.1.5 Creep

The creep shall be calculated as per IRC: 112 latest revision.

10.1.6 Exposure condition

“Very severe exposure” conditions shall be considered while designing of superstructure and substructure (pier and pier cap) and “extreme exposure” condition for design of foundation (pile and pile cap). For durability conditions the provisions stated in section 14 of IRC: 112 latest revision shall be followed.

10.1.7 Coefficient of Thermal expansion

The following values shall be adopted as coefficient of thermal expansion for reinforced cement Concrete: $12 \times 10^{-6} / ^\circ\text{C}$.

10.2 Structural stainless Steel to be used in Permanent works shall conform to the specification mentioned in SECTION-10- TECHNICAL SPECIFICATION OF STAINLESS STRUCTURAL STEEL

10.3 Stainless Steel Tension rod for Network Arch

Hangers for network arch by SS Rod - Supply & Installation of Tension rod M78 Grade SS460 with Bar Dia. 75mm and consist of accessories: M78 SS Fork Assembly, M78 SS Turnbuckle, M78 SS Lock Cover.

- a) Tension rod M78 Grade SS460 with Bar Dia. 75mm and consist of accessories: M78 SS Fork Assembly, M78 SS Turnbuckle, M78 SS Lock Cover
- b) Full scale 2 million cycles Fatigue Test. Rates to include all laboratory charges, sample preparation and associated cost including witnessing.

- 1. Stainless Steel type of tension rod shall be provided as Hanger for Network Arch Bridge and Hangers must cross each other at least twice.
- 2. The Tension rods system shall design in accordance with EN1993 Euro code 3.
- 3. The anchorages shall be the pin connection type for anchoring of rods.
- 4. The anchorages shall be supplied complete with fork ends forming pinned connections.
- 5. The system shall accommodate bar length adjustment by rotation of the rod at fork and/or at turnbuckle.
- 6. The turnbuckle shall allow for the application of a preload, for self-weight sagging corrections.
- 7. Length adjustment shall be possible at the turnbuckle by ± 50 mm.
- 8. All the material supplied shall be accompanied by the following documents and should be submitted to the Engineer-In-Charge for approval. Unless approval is received, the tension rods should not be manufactured.
 - o Assembly drawings for each tension rod location detailing the length, end fork & bar connection, end fork connection, coupler connection and turnbuckle connection.
 - o Calculation note consisting of –
 - A detailed calculation note based on the Euro code 3 ULS capacity of the threaded bar, to justify that all other components e.g. fork, pin, coupler, turnbuckle, etc., exceed this EC3 design capacity.
 - 3D finite element modeling for end fork for stress and deformation under EC3 load capacity of the bar.
 - o Test certificates as follows –
 - Material test certificates for each component clearly defining the mechanical characteristic as well as the grade of the stainless steel and the chemical composition.
 - Static load test report for the entire tension rod assembly. The test assembly shall include 3 no. bars (SS460 grade SS), 1 No SS coupler, 1 no SS turnbuckle and 2 no. end fork connector with its related pin.

9. The end forks should be secured to bars in such a way to avoid any slippage, human errors, or accident during installation or in future use throughout its life.
10. The stainless steel tension rod system shall include components and/or measures to prevent the contact between the fork and pin with the connecting carbon steel gusset plate, in order to prevent bi-metallic corrosion.
11. The supplier shall provide a method statement for assembly prior the time of delivery.
12. Supplier to submit inspection and test plan for Contractor's approval.
13. Gusset plate for connection of Fork assembly needs to be in strictly in accordance with the tension rod supplier dimension and steel grade recommendation.
14. Certificate of Compliance to be issued with every shipment.
15. The Supplier must be the system manufacturer / in control of the manufacturing process and hold ISO 9001 certificate.
16. The tension rod system proposed shall be a proven solution, with the supplier having executed at least ONE vehicular bridge project and at least TWO pedestrian bridge projects in INDIA (with tension rod system; carbon steel and/or stainless steel material).
17. Installation of these suspender bars must be done under the supervision of the stressing/installer agency, or third party nominated by main contractor. The engineer must be available at site during and prior to installation as per the direction of the Engineer-In-Charge. The system stressing/installer agency must provide a detailed installation procedure to be approved by Engineer-In-Charge with reference to the method statement for assembly provided by the tension rod supplier before commencement of installation activity.
18. The fatigue and ultimate capacity of the tension rod system shall be verified by testing.
19. The tension rod system shall be durable during the working life of the bridge. A maintenance program for the tension rod system shall be prepared by the tension rod supplier which ensures meeting the design lifetime.
20. Due importance shall be given for selecting a well proven corrosion resistant system for the tension rod. A clearly defined corrosion protection concept shall be submitted and verified by testing.
21. The SS tension rod system shall be replaceable either as the whole cable or as single tensile elements.
22. High quality materials must be provided.
23. Installation of the tension rod shall be by qualified companies with experienced personnel, including suitable working instructions and adequate quality control.
24. Tension rod design shall include measures against impact, vandalism, fire and lightning.
25. Continuous monitoring of Tension rod with suitable equipment shall be provided.

Mechanical Properties

System Size	Units	M78
Nominal Bar Diameter	mm	75
Min Yield Strength	N/mm ²	460 MPa
Min Ultimate Tensile Strength	N/mm ²	650 MPa

Min Elongation after fracture	%	25
Min Charpy Impact Value at +20° C	J	100
Young's Modulus	N/mm2	200,000
<ul style="list-style-type: none"> - All male threads to be cold rolled with ISO metric thread according to ISO 965-1 - All accessories shall be designed to a tensile load capacity greater than that of the bar. 		

Note : The Network Arch is compulsory and shall be designed as per the above specifications and drawing attached with this Tender.

10.4 Bearings

SPHERICAL bearings shall be provided.

10.5 Expansion Joints

Finger Type Expansion Joint expansion joints shall be provided on the bridge expansion gaps per MORTH specification for road and bridge. Expansion Joints shall be spaced at not less than 90m c/c except at locations where smaller spacing is permitted by the Engineer. Modular Strip Seal expansion joint shall be provided for Network Arch obligatory span.

10.6 Anti-vision and Noise Barrier

Contractor shall submit drawings along with detailed report covering the locations where noise barriers are to be provided. The report shall also cover the design of the barriers including the height and material for the barriers. The Bi- absorbent noise barrier panel with size of 3 mtr width x 3.5m height to be considered with satisfying European standards EN1793 & EN 1794 and subject to approval of the statutory authorities.

11. PROGRAMME OF SUBMISSION OF DESIGNS & DRAWINGS:

Details	Submission
Award of work	0
General geometrics and GAD and construction methodology	3 Weeks
Inception report and design parameters along with Quality Assurance Manual	4 Weeks
Foundation design	6 Weeks
Temporary work designs	6 Weeks
Substructure design	8 Weeks
Superstructure design	12 Weeks

Solid approaches design	15 Weeks
Miscellaneous items	17 Weeks

The design should be submitted in sufficient details and as lucidly as possible so as to enable quick proof checking. All design calculations shall be submitted along with drawings in 3 sets. Only drawings will be approved and corrections to the designs shall be carried out after approval to all drawings if accepted.

These designs are expected to be submitted as record designs within 15 days of approvals of the drawings. If the record designs are not submitted within this time frame, then a penalty at the rate of Rs. 10,000/- per day per design shall be charged for every day of delay in submission of the record designs. The design would be cleared after compliance of all points are received. Any other component which requires redesigning on account of exigencies of the site like redesigning the foundations for utilities, etc. during the duration of the works shall be approved as expeditiously as possible. Such designs should be submitted within 10 days of taking a decision to redesign the component.

If computer is used for design or analysis, the contractor shall submit with design, the detailed description of method of analysis with explanatory notes and manually done sample calculations for adequate number of typical cases. The Computer Programme as submitted will be further tested by Comparison with solutions of worked examples. Drawings and designs shall be in metric units. Calculations shall be neat and clear and supplemented by full explanatory notes and sketches wherever required. The drawings of initial submissions and final approval shall be stenciled and in A- 1 size only.

If during the scrutiny of detailed design calculations and working drawings, any changes therein which are found necessary in the opinion of BMC /BMC Proof Consultant shall be incorporated without altering the lump sum quotations. It is entirely the responsibility of the contractor to submit properly prepared designs in good time to enable the Employer to approve them in time.

Schedule of reinforcement and rate of reinforcement per Cum. of concrete quantity (and also percentage with respect to gross cross-sectional area of the component) should also be shown on each drawing. Four sets of approved working drawings including one set on reproduction tracing film and 4 sets of approved design calculations shall then be supplied by the contractor which will be formally authenticated by the Employer (2 copies of drawings and one set of design calculations for field officers, one set to be returned to the contractor and one to be retained by the Employer). These drawings shall be submitted in approved plastic folders and calculations in approved plastic files free of cost. After completion of each stage of work, 3 sets of record plans and one set of final design calculations based on the work as actually executed on site, shall be supplied by the Contractor

in bound volumes, to the Employer. Approval to drawings and designs and design calculations by the Employer shall not in any way relieve the Contractor of his responsibility for their correctness and soundness, structural stability, and safety of the structure.

The approved drawings and the design calculations of the bridge shall be the property of the Brihanmumbai Municipal Corporation. The Contractor's designer or consultant shall attend all the review meetings conducted by competent authority from time to time without any extra cost and shall also remain present as and when required during the checking of designs.

12. DISPUTES:

In case of disputes arising between the Employer / Proof Consultant the matter may be referred to the Chief Engineer (Bridges), Brihanmumbai Municipal Corporation. The decision of the Chief Engineer (Bridges) shall be final and binding on the contractor.

Design Data

1.	Total Deck Width Arm 1 Arm 2 Arm 3	15m 7.5m 7.5m
2.	Cross camber for roadway	2.5%
3.	Max. Design Speed	80 kmph (For bridge Portion) And as applicable for curves
4.	Clear Carriageway Arm 1 Arm 2, Arm 3	13m (6.5m + 6.5m) 6.5m
5.	Width of the Crash Barrier	2 x 0.50m
6.	Type of superstructure	Prestressed Segmental/cast-in-situ Box Girder, Structural Stainless Steel composite girder One Span in Network Arch as per the drawing attached with this Tender is Compulsory
7.	Foundation	Pile foundations with RCC piles
Other Specifications		
1.	Exposure condition	Very Severe – Superstructure, Substructure Extreme - Foundation

2.	Loading from Utilities	100 kg/m for each crash barrier
3.	Temperature range and temperature gradient	As per IRC 6
4.	Super elevation	2.5% and 4% on curve
5.	Painting to Sub & Super Structure	Refer Section-II, Design Criteria
6.	Expansion Joint	Finger type and Modular strip seal type
7.	Seismic effects	
	i. Seismic zone	III
	ii. Importance factor	1.2
8.	Reinforcement Steel	Stainless Steel

EMPLOYERS REQUIREMENTS

SUB SECTION –3

DETAILS OF UTILITIES

DETAILS OF UTILITIES

3. DETAILS OF UTILITIES

Details of other utilities passing through the corridor have to be mapped based on the information from the various sources. Any/some of the utilities are likely to cause hindrance to the foundations. These need to be relocated or diverted before taking up the piling/foundation work. These operations need to be done in consultation with the utility provider (owner). Contractor is advised use to his own national/international practices of tracing out or locating these utilities below the ground at no cost to the Employer.

- 1) High Tension Cables HT /LT overhead lines /cables
- 2) Low Tension Cables
- 3) Bharat Petroleum and Hindustan Petroleum Lines
- 4) Telecom and Optical Fiber Cable Lines
- 5) Storm Water Drains
- 6) Street Lighting Cables
- 7) High Tension Cables
- 8) Sewer Lines
- 9) H.E. Lines (Water Pipelines)

Shifting of cables shall have to be done through approved / authorized sub- contractors of utility providers / owners. Contractor shall obtain necessary permits / approvals from the respective Utility Provider / Owner well in advance of starting the shifting work. The shifting works shall be carried out through the authorized sub-contractors of the Utility providers without causing any inconvenience to the utility users at large.

EMPLOYERS REQUIREMENTS

SECTION – 4

TESTS, TESTING & TRAINING REQUIREMENTS

4 TESTS, TESTING & TRAINING REQUIREMENTS

A mock-up of the entire structure (superstructure, substructure involving important features) to prove the desired aesthetics is achieved shall be prepared and maintained at the location selected by the Employer. The same shall be demolished if required at the cost of Contractor.

Tests, Testing and Training Requirements as envisaged under GCC and Circulars in force shall comprise of :

- 1) Regular testing of materials / works as per the provisions given in the respective specifications and or the frequency laid down therein or at the frequency accepted as per International practice shall be carried out.
- 2) After completion test shall broadly cover Testing and Performance of the completed works shall be as per the provisions given in different IS, BIS and MORT&H standards as well related Foreign International standards.

The broad tests to be carried out are listed below:

I Road works

1. Tests

- (a) Road materials
- (b) Ground improvement works

II. Viaduct

2. A) Test of materials

- i) Testing of Cement
- ii) Testing of aggregates
- iii) Testing of concrete
 - a) Tests of fresh concrete
 - b) Tests on hardened concrete
 - c) Flexure test
- iv) Test on High performance Concrete(HPC)
 - a) Tests on cement

- b) Testing of reinforcement-HYSD and
- c) Low relaxation strands

B) Tests on expansion joint material

3. **C) Tests on SPHERICAL bearings &Stainless-Steel Tension Rod, etc as per directions of Engineer.**

4. **D) Testing of Piles**

- i) Initial load test (Static) for vertical load each for different diameter of piles.
- ii) Initial load test (Static) for horizontal loads each for different diameter of piles.
- iii) Routine load test (Dynamic) for integrity test on at least 2% of total service piles.
- iv) Sonic test on piles for special span piers
- v) Pile integrity test for each pile location.

5. E) Completed span of Super structure

6. F) Frequency testing requirements

Testing of Superstructure spans	2 Nos per km
Piles- initial load test	1 Nos for every 200 piles for each Diameter of pile
Routine test	2 % of total service piles for each diameter
Integrity test	for all service piles
Expansion joints	2 Nos per KM
Bearings	As per MORTH specifications
Routine Quality Tests	Section 1000 MORTH specifications

EMPLOYERS REQUIREMENTS
SECTION – 5
SPECIAL REQUIREMENTS OF CONTRACT

EMPLOYERS REQUIREMENTS SECTION – 5

SPECIAL REQUIREMENTS OF CONTRACT

5 SPECIAL REQUIREMENTS OF CONTRACT

5.1 NUMBER OF COPIES OF CONSTRUCTION DOCUMENTS

The Contractor shall supply to the Employer or his representative printed paper copies (hard copies) of each of the Contractor's Documents. Additionally two 'soft' copies in Acrobat PDF format and two copies in editable format should be supplied. The number of copies to be submitted shall be as mentioned in the Designs Criteria below.

5.2 PERMISSIONS AND COORDINATION WITH AUTHORITIES

The Contractor shall have to maintain liaison with the various authorities such as MOEF clearance, MMRDA, MCZMA, any environmental and forest authority, MRDPA, CRZ, concerned Dy. Collector (Encroachment), concerned Municipal authorities, City Survey office, Reliance Energy, Tata power, Traffic Police or any other concerned offices, SEIA, Revenue officials and secure the necessary clearances and permissions as may be required for carrying out the construction activities. Employer or his representative/BMC will provide the necessary assistance as may be required.

IRS Map charges, Statutory Fee, Scrutiny fees for availing various permission / NOCs from above authorities will be borne by BMC but the responsibility of availing all clearances will rest with the bidder.

5.3 SITE POSSESSION SCHEDULE:

The Employer shall provide access to the Site and possession of the Right of Way for the flyover work in stages. The Contractor has to plan the completion of activities as per availability of land in stages. The Contractor shall have to make his own arrangements for any additional or alternative land required by him for casting yard, borrow areas, quarries, site offices, crusher, batching plant, laboratory, labour camp, other camp, etc.

In the event of non-availability of part of land required for particular section of the flyover, the Contractor shall carry out the work as per alternative alignment as approved by the Employer. The reduction in scope of work as per Contract shall not entitle the Contractor for any claim towards such deletion. The payment towards such alteration shall be made as per the rates given in BMC Unified Schedule of Rates, 2018 for the respective item.

5.4 SETTING OUT POINTS:

The details of horizontal and vertical alignment shall be as shown in the Designs Criteria, Design Data and the Drawings

5.5 ENVIRONMENTALCONSTRAINTS

The Contractor shall prepare an Environmental Management Plan and get it approved from the Employer or his representative and ensure that he adheres to the stipulations of various environmental laws and regulations in force.

5.6 PLANNING AND EXECUTION OF THE WORKS

The proposed bridge location is inside creek crossing navigational path and surrounded by mangroves. The contractor shall plan and schedule the construction program accordingly so as to minimum hindrances to current ferry traffic and avoid to damage to mangroves as much as possible. The contractor should take care of all such eventualities while preparing the bid. The contractor shall ensure a minimum road width of 5.50 m on either side / one side as the case may be, of barricaded area for movement of vehicular traffic. The conditions mentioned above or any other such relevant condition not spelt out here shall not cause the reason for extension of contract period.

5.7 ELECTRIC POWERSUPPLY

The Contractor shall make all the necessary arrangement for procurement of electric power required for the work. The Contractor shall submit his requirement of Electric Power Supply for carrying out permanent works, operating plants and equipment, labour camp and field offices etc., as a part of his work plan. The employer will issue the necessary certificates, letters of recommendation etc., to the contractor for obtaining the power supply. However, the employer shall accept no responsibility for any delays in obtaining the power connections. In addition, the contractor shall maintain standby diesel generators of adequate capacity. Non-availability of electric power will not be considered as a reason for delay in progress.

5.8 WATER SUPPLY FOR CONSTRUCTION, LABOUR CAMPS, OFFICESETC.

The Contractor shall make all necessary arrangements for the procurement of water required for construction and labour complete. The employer shall issue the necessary certificates, letters of recommendation etc., for obtaining the necessary permissions. The employer shall assume no responsibility for delay in progress due to delay in obtaining

the permissions. The Contractor may drill bore wells as a source of construction water. The water shall be got tested by the contractor at his own expense and certificates regarding the suitability for construction shall be submitted to the Employer regularly as per his requirements.

5.9 TELEPHONES/ WIRELESS COMMUNICATION FACILITIES

These will be arranged by contractor at his own cost. The employer shall give the necessary certificates and letters of recommendation etc., to the contractor.

5.10 LAND FOR TEMPORARY USE

1. No land will be provided by BMC for casting yard, labour camp and temporary use.
2. Land for labour camps, storage yards temporary site sheds, Casting Yard etc., is to be arranged by the contractor at his own cost.
3. If demanded by the contractor and if land is available with BMC, the land admeasuring about 2 Ha. will be assisted by BMC for Casting yard.
4. This commercial rent rate shall be subject to change as per BMC policy in this regard and MOU shall be signed between contractor and land division of BMC as per BMC's standard policy

5.11 CONTRACTOR'S MATERIALS, LABOUR ETC.

The Contractor shall provide everything necessary (except for items to be provided by the Employer specifically mentioned in the conditions) for the proper execution of the works according to the intent and meaning of the Drawings, Notes, and Specifications taken together, whether the same is or is not particularly shown or described therein; provided the same can be reasonably in forced there from. If the contractor finds any discrepancy therein he shall immediately and in writing refer the same to the Employer. The decision of the Employer shall be final and binding on the contractor. Figured dimensions shall be followed and the drawings shall not be scaled from.

5.12 CEMENT FOR WORKS

The Contractor shall make his own arrangement for cement. The cement shall be as per MORT&H clause 1006 for Structure by approval of Employer. The supply of cement shall be of approved brand by the Employer.

5.13 QUARRIES

The contractor will have to make his own arrangement of acquiring land for quarries. The contractor shall carry out all quarrying operations without endangering the

environment and natural beauty of surrounding. All excess and un-useful excavated materials shall be stacked at dumping places if available, identified by the Employer as directed by the Employer; otherwise the contractor has to make his own arrangement for the same.

5.14 ENABLINGWORKS

The Contractor shall supply, fix and maintain at his own cost during the execution of works, all the necessary centering, and scaffolding, staging, planking, timbering, strutting, shoring, pumping, fencing, hoarding, watching and lighting by night as well as the necessary equipment for protection of public and safety of any adjacent roads and railway lines. The contractor shall remove any or all such centering scaffolding, staging planking and equipment when ordered to do so by the Employer and make good all matters and things disturbed during the execution of works to the satisfaction of the Employer.

Contractor Shall construct bridge with prior approval of competent authority and with required clearances to facilitate permanent construction work of some portion of flyover, Network Arch bridge span and pier construction across Mithi River and within its island. Contractor shall submit detailed methodology for construction of such bridge in creek across Mithi River and/or within island. End-on-piling method or any other suitable methodology shall be adopted. This bridge platform shall be dismantled upon completion of the permanent construction work. Cost for construction of this bridge facilitating permanent construction work is taken under consideration of the project cost.

All necessary sub-soil investigation, topo survey and Hydrographic survey within Mithi River and its island shall be done by the contractor.

5.15 TEMPORARY DIVERSIONS, MAINTENANCE OF SAME AND TRAFFIC MANAGEMENT

In addition to provisions made in the technical specifications, it is stipulated that the contractor shall construct, maintain and carryout the traffic management by providing all safety features like safety barricading etc. as per IRC specification.

5.16 OPPORTUNITIES AND FACILITIES FOR OTHER CONTRACTORS AGENCIES ETC.

The contractor shall, in accordance with the requirements of the Employer afford all reasonable opportunities for carrying out their work to any other contractors employed by the Employer and their workmen and to the workmen of the Employer and of any other duly constituted authorities who may be employed in the execution on or near the site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the works. If, however, the contractor shall on the

written request of the Employer or Employer make available to any such other contractor or to the Employer or any such authority any roads or ways for the maintenance of which the contractor is responsible or permit the use of by any such of the Contractor's scaffolding or any other plant on the site or provide any other service of whatsoever nature, for any such the Employer shall pay to the Contractor in respect of such use of service such sum or sums as shall in the opinion of the Employer be reasonable.

5.17 ENVIRONMENTAL SAFEGUARDS

The Contractor shall take action of following points and note the stipulations as under as regards environmental safeguards as stipulated by the Ministry of Environment and Forests.

- 5.17.1** Appropriate measures shall be undertaken while undertaking digging activities to avoid degradation of water quality.
- 5.17.2** Borrow pits and other scars created during the road construction shall be properly leveled and treated.
- 5.17.3** Adequate provision for infrastructures facilities, i.e. water supply, fuel, sanitation, etc. shall be ensured for labourers during construction period in order to avoid damage to the environment.
- 5.17.4** No excavation from or dumping of waste materials into any water body / wetlands shall be done.
- 5.17.5** Borrow sites for earth, quarry sites for road construction and dump site shall be identified keeping in view:
 - a.** No excavation or dumping on private property is carried out without written consent of the owner.
 - b.** No excavation or dumping shall be allowed or wetlands, forests areas or other ecologically valuable or sensitive locations.
 - c.** The excavation work shall be done in consultation with soil conservation and watershed development agencies working in the area:
 - d.** Construction spoil including bituminous material and other hazardous material must not be allowed to contaminate water course and the dump sites for such materials must be identified well in advances before construction and lined properly so that they do not leach into the ground water.

5.18 REMOVAL / DIVERSION OF UTILITYSERVICE

As far as possible, the Contractor's proposal shall be such that the shifting of utility services is not required. However, if the over ground / underground utility services like electric poles, telephone poles, water supply pipe lines, sewer lines, oil pipe lines, cables, gas ducts etc. owned by various authorities including Public Undertakings and local

authorities encountered during construction shall be diverted by the Contractor and will be reimbursed as per the estimate prepared by the concerned department and approved by Employer. The work shall be carried out under the supervision of concerned department. In case in the opinion of the Employer it is not possible to divert the utilities, the Contractor shall make necessary modifications in the structure at no extra cost of the Employer.

5.19 WORK ORDERBOOK

A work order book shall be maintained on the work and the Contractor or his authorized representative shall acknowledge and sign the orders given therein by the Employer or his representative and shall comply with these promptly and correctly.

5.20 DISCOVERIES

In the event of discovery by the Contractor or his employees, during the progress of work, of any treasure, fossils, materials or other articles of value or interest, the Contractor shall give immediate notice thereof to the Employer or his representative of such treasure or things which shall be the property of the Government of India and shall not be removed by the Contractor under any circumstances.

5.21 TAXES

The rates quoted by the contractor shall be deemed to be inclusive of royalty and taxes inclusive of GST including toll wherever applicable on all materials that the contractor will have to purchase for performance of this contract.

Any further increase in Central or State GST / Royalty or other taxes on completed items of work of this contract as may be levied and paid by the contractor shall be dealt with as per relevant provisions in the GCC.

5.22 CRITERIA FOR CONTRACTOR'S PERSONNEL

5.22.1 Design Team:

The Designer as proposed to be appointed by the bidder shall have relevant experience in Designing of at least one Bridge project having minimum one special structural stainless steel composite span.

The Contractor shall get the Project Designs prepared through an in-house design team or outsource the designs to a specialist design consultant (the Contractor shall be solely responsible for the design of Structures). The contractor's in-house design

team or the specialist design firm should have wide experience on similar projects and the dedicated team for the Project should have following personnel:

Sr. No.	Position	No. of Persons	Minimum Qualification Number of years of Experience
1.	Bridge/Flyover Designs Employer or his representative (Structural Employer).	1	ME/M.Tech. (Structures) 20 Years relevant experience with at least 1 Network Arch bridge execution experience
2.	Highway Design Employer Or his representative Traffic Employer [Transportation]	1	ME/M.Tech. (Transportation) 15 Years relevant experience
3.	Geotechnical Expert	1	ME/M.Tech. (Geotechnical) 15 years of relevant experience.

EMPLOYERS REQUIREMENTS
SECTION – 6

PROJECT SPECIFIC REQUIREMENTS

PROJECT SPECIFIC REQUIREMENTS

The conditions and stipulations given herein below shall take precedence over provisions elsewhere in this document.

1.1 General

- 1.1.1** Special provisions in the detailed specifications or wording of any item shall have precedence over the corresponding contract provisions, if any, in the standard specifications of the MORT&H, PWD etc. In case of any contradictions in the specifications, the interpretation and decisions of the Employer shall be final and binding.
- 1.1.2** Wherever, contractor has to obtain permissions/sanction from various local authorities, BMC will extend necessary assistance by writing letter to concerned authorities.
- 1.1.3** Customs & Excise Duty: No Customs and Excise exemption certificate for procurement of construction equipment, machinery, goods, etc. will be issued by the Employer.
- 1.1.4** Contractor shall be required to observe the restrictions on working hours, if imposed by local authorities and police.
- 1.1.5** If BMC does not remove encroachment / acquire the land of this work then the corresponding work would be treated spilled over to next mile stone and construction programme revised. In case the removal / encroachment / acquisition of land has been impossible for one or other reason up to the contract period the corresponding work shall be withdrawn at the request of the contractor. In such cases no compensation shall be payable on account of idling of machinery, manpower etc. however the contractor if so desire may continue with the affected work for which proportionate extension will be granted. No claims shall be entertained by the dept. on account of phasing of such work either on account of idling of equipment/machinery or men.

1.2 Work Specific

- 1.2.1** Contractors shall obtain sanction to his construction methodology, method statement, material, aesthetics and design in respect of work of Network Arch Bridge from BMC / BMC approved Proof Consultant for Network Arch portion, Road portion, Flyovers, Structures, etc.
- 1.2.2** Any damage caused to either private or public property, services, structures etc. shall be made good by contractor without any extra cost to the employer
- 1.2.3** The work has to be done on the road with busy traffic and hence suitable traffic diversion measures will have to be adopted in consultation with Employer and traffic Police. To ensure traffic safety proper and adequate signboards, barricades, lighting at night shall be displayed during day and night to ensure that no accidents take place.
- 1.2.4** Suitable phasing of construction and temporary traffic arrangement shall be got approved from the Employer. No compensation for any delay in intended date of completion shall be payable to the contractor
- 1.2.5** Contractor shall submit Quality Assurance plan based on ISO 9000 series document to form the basis evolving the quality system, applicable for all quality related activities.
- 1.2.6** The sand shall satisfy gradation requirement as per IS: 383 to be used in the work.
- 1.2.7** No excavated material (including the material to be reused after checking the conformity to required standards for any purpose and with prior permission of the Employer) shall be stacked on road footpaths. The same shall be immediately disposed as directed by Employer.
- 1.2.8** Whenever new drains are constructed the flow in the old drain will have to be suitably diverted to maintain the continuity of flow. The item rate for demolition of drain shall be deemed to contain the cost of such diversions & will not be paid separately.
- 1.2.9** Whenever embankment/widening is done it will be necessary to ensure the compactions of small width towards edge of widening shall be done by mobilizing 3 ton power roller/static roller & percentage compaction as stipulated in the item shall be achieved. This will be necessary in the situation where the vibratory roller of 10 ton cannot approach edges due to site condition.

1.2.10 Wherever kerbs / median kerbs are to be fixed on existing pavement (concrete/bituminous) necessary drilling, cutting and anchoring shall be carried out by the contractor at his own cost. Laying of kerb/median parapet wall etc. shall be done by kerb laying machine only except where permitted otherwise by the Employer.

1.2.11 Ancillary work such as Reinstating Road Surface including paver blocks, kerbs, medians etc. when disturbed during the construction shall be reinstated as per the direction of the Employer.

1.2.12 Scope of maintenance during defect liability period including maintenance of electrical items shall be carried out as per the direction of the Employer.

1.3 Shifting of utilities

1.3.1 Contractor is required to liaison with concerned department for identifying exact location of the utility services. Any damages by the contractor while carrying out work to the utilities shall be repaired at his own cost.

1.3.2 Deposits/Supervision charges levied by Govt. dept. & paid by the contractor for the purpose of shifting of utilities (under Provisional Sums) shall be reimbursable after due assessment, verification and scrutiny except for street light poles, set of signal poles, road signs/sign boards & consumer connection for water connections(Domestic/commercial).

EMPLOYERS REQUIREMENTS

SECTION – 8

MISCELLANEOUS

MISCELLANEOUS

7.0 MISCELLANEOUS:

- 1) **Lane markings:** Provision of necessary lane markings with thermoplastic paint, reflecting lane studs etc., on the Bridge with ramps.
- 2) **Sign Boards / Signals:** Providing and fixing in position sign boards/signals as per approved drawings and specifications.
- 3) Architectural treatment: **Providing architectural treatment / features as per approved drawings and as suggested by the Employer in Charge during the course of execution.**
- 4) **Traffic diversion:** Providing and maintaining necessary traffic diversion, barricading of site during construction such that clear carriage way is to be made available on both sides at any given point of time to have a smooth traffic. Details of barricading shall be as per annexure. The complete area of work shall be cordoned off with necessary barricading & ensuring that there should not be any hindrance to the traffic. Staging & Shuttering scheme shall be designed so that there should not be any hindrance to the traffic.
- 5) **Decorative Lighting for Network Arch Bridge:** Decorative RGB Lighting shall be provided by the contractor for Network Arch bridge. Design and methodology shall be got approved by the contractor prior to commencing the lighting works. The Defect liability period will be 5 years after completion of project and shall include maintenance, repair, replacement of fixtures, lights, etc. at no extra cost to the BMC. The Electricity consumption charges shall be borne by BMC.

7.1 DISPUTES:

In case of disputes arising between the Contractor / Contractor's designer and the Employer / Proof Consultant the matter may be referred to the Chief Employer, BMC. The decision of the Chief Employer shall be final and binding on the contractor.

7.2 Laboratory–

The contractor shall arrange and maintain adequately equipped field laboratory at least of 50 sqm. Area, as required for site control on the Quality of materials and the works. The laboratory shall be located and equipped as directed by the Employer in charge. It shall be provided with amenities like water supply, electrical supply etc. The contractor shall engage a well experienced Lab-in charge (bio-data to be approved by Employer-in-charge) for conducting day to day test as per MORT&H & B.I.S. specifications. All necessary codes shall be kept in lab. These provisions shall be incidental to work & no separate payment will be made by BMC. After completion contractor should demolish laboratory structure and remove all the equipment's as per directions of Employer.

Sr. No.	Description	Unit	Qty
Site laboratory			
A) General Equipment			
1	Oven- electrically operated thermostatically controlled up to 250° C	Number	1
2	Platform balance 100 kg, Avon make or equivalent	Number	1
3	Balance ordinary, 10 Kg with weights	Number	2
4	Balance ordinary, 20 Kg with weights	Number	2
5	Electronic Balance 5Kg	Number	1
6	Water bath	Number	1
7	Thermometer (Dial Type)	Number	2
8	LPG stove	Number	2
9	Hot plate	Number	2
10	Glassware, spatulas, wire glazes....etc.	Set	1
11	IS Sieves Set a) GI Sieve, 450mm Dia. set of 20Sieves b) Brass Sieves, 200mm Dia Set of 10Sieves	Set Set	1 1
12	Water Testing kit for pH value, Sulphur etc.	Kit	1
13	First aid box	Number	1
B) For Soils and aggregate			
14	Rifle box	Number	1
15	Atterberg limit apparatus	Number	1
16	Compaction test equipment (Modified Proctor), 2250 cc mould & steel rammer	Number	1
17	Dry bulk density test app a) Sand replacement method, 100 mm Dia. Cylinder Tray with hole & calibration equipment b) Sand replacement method, 200 mm Dia. Cylinder Tray with hole & calibration equipment	Number Number	2 2
18	Speedy moisture meter,		1
19	Flakiness and elongation gauge		1

20	Standard measures of 30,15 and 3 litre	Set	1
21	CBR test apparatus load frame 5T capacity, electrically operated with 6 moulds, proving ring 1000 Kg, 2500 Kg & 5000 Kg, spacer disk, perforated plate, surcharge weights, soaking tank, gauge etc.		1
C) For Cement and Cement Concrete			
	Vicat apparatus for testing setting time	Number	1
	Slump testing apparatus	Number	4
	Compression testing machine 200T (2000 KN) capacity, hand cum electrically operated with flexural attachment	Number	1
	Needle vibrator 40mm	Number	1
	Air meter	Number	1
	Concrete cube moulds.150 x 150 x 150	Number	24
	Mortar cube moulds	Number	3
	Cylinder moulds 150mm x 300mm	Number	3
	Beam moulds 150mm x 600mm	Number	3
	Permeability testing unit	Set	1

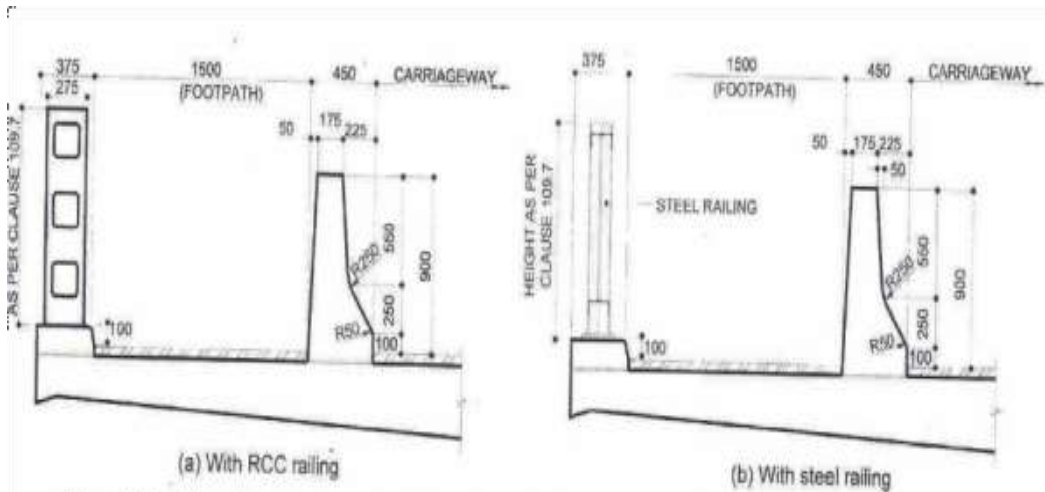


Fig. 1 Details of Concrete Crash Barrier & Railing for showing Bridge with Footpath

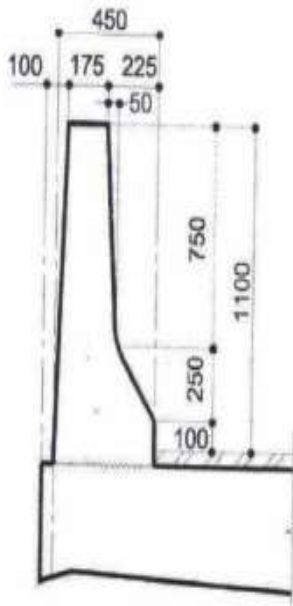


Fig. 2 Details of Crash Barrier for Bridges without Footpath

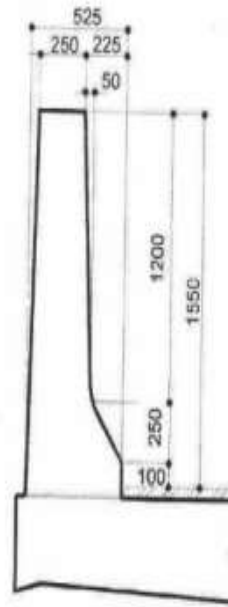


Fig. 3 Details of High Containment Crash Barrier

BARRICADES.

Regarding barricading referred following circular: -

BRIHANMUMBAI MUNICIPAL CORPORATION CIRCULAR

U/No.MGC/F/6342 dated 5.5.2018

Sub.: Revised guidelines regarding barricades being used during the execution of various infrastructure development projects by BMC in Mumbai.

Various infrastructure development projects are being executed by BMC for the betterment of citizens of Mumbai. During the course of execution of the projects, it is necessary to provide strong and secured barricading as a safety measure to avoid any mishaps as well as to avoid nuisance to vehicular and pedestrian traffic. Nowadays, the following types of barricades are being used exclusively in BMC as per the convenience of various departments at different sites.

1. Water/sand fill able PVC Metro barricades.
2. RW 7.45 (G.I. sheets of 22 gauge fixed on 3-inch dia. Wooden bullies buried in existing road sufficiently)
3. RW 7.36 (G.I. sheets of 22 gauge fixed on MS Angle post buried in half the depth in drums of 20 litres capacity in 1:3:6 concrete)
4. Structural steel barricade for major trenches having depth more than 2.00 meters. Thus, from the above, it can be seen that there is no uniformity in provision of barricades as they are of different size and shape. Further it is also observed that the continuity is not maintained in providing the barricading keeping gaps in between thus endangering the safety of vehicular as well as pedestrian traffic. Also the barricades are not being cleaned, thus further adding to shabbiness. Further Mumbai being the financial capital of India, people from all over the world visit the city daily and to maintain good image of city the following decisions are taken.

A) Only two types of barricades having department wise color coding are proposed to be used depending upon the nature of work i.e. Minor and Major.

i) Minor works: Barricading made out of 1.5 mm thick MS plate fixed on M.S. angle post/ frame of 65 mm X 65 mm X 6 mm having height of 1.5 m supported on as shown in Annex-I.

ii) Major works: Structural steel barricade made out of 1.50 mm thick M.S. Plate ISMB 250, ISLC 250X50mm and ISA 50mmX50mmX6 mm having of size 2.5 m X 2 m as shown in Annex-II.

B) The departmentwise colour coding for the barricading shall be as under:-i) H.E. & W.S.P. department – Blue ii) Roads, Traffic, Bridges and Coastal Roads department – Yellow iii) S.P. & S.O department – Green iv) S.W.D., Building Maintenance department & for wards works – Red

C) The basic principle behind installing secured and continuous barricading is to ensure the safety of vehicular as well as pedestrian traffic and residents in the nearby vicinity of the

project. Due to non-installation of appropriate barricades on sites if any mishap occurs leading to injury or loss of life, then the contractor and contractor's Engineer in-charge will be liable for the consequent action.

D) During the course of execution of project, if it is noticed that the contractor has not provided barricading then a penalty of Rs.1000/- per meter per day will be imposed upon the contractor and will be deducted from the due Bill. This penalty shall be a part of penalty as per tender condition.

E) Details of the work shall be prominently displayed on the central panel of the barricades along-with the Social Slogans as given in Annexure III and the Cycle of the same shall be maintained.

F) The contractor shall provide and install the barricading alongwith the slogans printed as per the Annexure III, at his own cost and no payment will be made for this, however the contractor shall quote the bid accordingly by considering the cost of barricading.

The condition shall be included in the tender as given below.

“Barricading shall be provided free of cost as per Circular vide U/No.MGC/F/6342 dated 5.5.2018 and as per Annexure I, II and III of Standard drawings and specifications with slogans and department wise colour codes.” The copy of circular will be attached to the tender as a part of tender document.

This circular will be applicable for the new tenders proposed to be invited from 01.05.2018 and also the corrigendum shall be attached to tenders which are uploaded. However, for the projects wherein the tenders are already invited, the barricading shall be provided strictly as per tender condition. All the details (Annexure I, II & III of Standard drawings and specifications with slogans and department wise colour codes, sketches and department wise colour coding) are uploaded on BMC portal.

This circular shall come in force with immediate effect.

sd/-20.4.2018

(Shri V.P.Chithore)

Dir.(ES&P)

sd/- 20.4.2018

(Shri R. B.Bambale)

D.M.C.(S.E.)

sd/-21.4.2018

(ShriVijaySinghal)

A.M.C.(E.S.)

sd/-21.4.2018

(Dr. Shri Sanjay Mukherjee)

A.M.C.(P.)

Sd/-5.5.2018

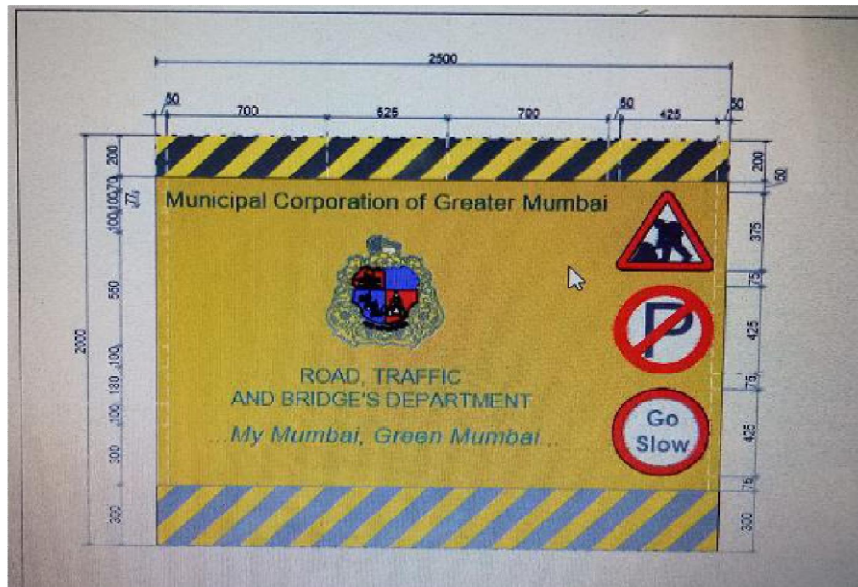
(Shri AjoyMehta)

M.C.

sd/-16.5.2018

(Shri P. R. Kadam)

D.M.C. (S.E.)





SECTION 8
BILL OF QUANTITIES

BRIHANMUMBAI MUNICIPAL CORPORATION

Name of Subject-	EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY
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ABSTRACT SHEET

Sr. No.	Description	Quantity	Unit	Amount
1	Construction Of Elevated Road/Bridge from Fisherman Colony (Senapati Bapat Marg) To W.E. Highway	1	JOB	
2	Applicable GST as per Circular u/no. CA/F/Project/25 dt. 12/07/2022	1	JOB	
		Total Amount		

Note : BMC office Estimate is tentatively prepared as per the USOR 2018 which includes GST as per the prevailing rates at that time.

SECTION 9
GENERAL CONDITIONS OF CONTRACT

General Conditions of Contract

1. Definitions and Interpretations

1.a) Definitions:

- The “**Employer**” shall mean the Municipal Corporation for Greater Mumbai / Municipal Commissioner for Greater Mumbai, for the time being holding the said office and also his successors and shall also include all “Additional Municipal Commissioners, Director (Engineering Services & Projects)” and the Deputy Municipal Commissioner, to whom the powers of Municipal Commissioner, have been deputed under Section 56 and 56B of the Mumbai Municipal Corporation Act.

- **Contract** : The “Contract” shall mean the tender and acceptance thereof and the formal agreement if any, executed between the Contractor, Commissioner and the Corporation together with the documents referred to therein including these conditions and appendices and any special conditions, the specifications, designs, drawings, price schedules, bills of quantities and schedule of rates. All these documents taken together shall be deemed to form one Contract and shall be complementary to one another.

- **Contractor**: The “Contractor” shall mean the individual or firm or company whether incorporated or not, whose tender has been accepted by the employer and the legal successor of the individual or firm or company, but not (except with the consent of the Employer) any assignee of such person.

- **Bidder**: The Bidder shall mean a person or corporate body who has desired to submit Bid to carry out the Works, including routine maintenance till the tender process is concluded.

- **Arbitrator**: “Arbitrator” means the person or persons appointed by agreement between the Employer and the Contractor to make a decision on or to settle any dispute or difference between the Employer and the Contractor referred to him or her by the parties pursuant to General Conditions of Contract amended up to date.

- **Contract Sum** : “Contract Sum” means the sum named in the letter of acceptance including Physical contingencies subject to such addition thereto or deduction there-from as may be made under the provisions hereinafter contained.

Note : The contract sum shall include the following –

- In the case of percentage rate contracts the estimated value of works as mentioned in the tender adjusted by the Contractor’s percentage.
- In the case of item rate contracts, the cost of the work arrived at after finalisation of the quantities shown in schedule of items / quantities by the item rates quoted by the tenderers for various items and summation of the extended cost of each item.

- In case of lumpsum contract, the sum for which tender is accepted.
- Special discount / rebate / trade discount offered by the tenderer if any and accepted by the Corporation.
- Additions or deletions that are accepted after opening of the tenders.
- Contract Cost: “Contract Cost” means the Contract Sum plus Price Variation. This cost shall be included in the letter of acceptance.

A. **Engineer:** The “Engineer” shall mean the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer, appointed for the time being or any other officer or officers of the Municipal Corporation who may be authorized by the commissioner to carry out the functions of the City Engineer / the Hydraulic Engineer / the Chief Engineer / the Special Engineer or any other competent person appointed by the employer and notified in writing to the Contractor to act in replacement of the Engineer from time to time.

B. **Engineer’s Representative:** “Engineer’s Representative” shall mean the Assistant Engineer, Sub. Engineer/Jr. Engineer in direct charge of the works and shall include Sub Eng./ Jr. Eng of Civil section/ Mechanical section/ Electrical section appointed by BMC. from time to time by the Sub Clause 2a.

C. **Excepted Risks:** “Excepted risks” are risks due to riots (otherwise than among Contractors’ employees) and civil commotion (in so far as both these are uninsurable), war (whether declared or not), invasion, act of foreign enemies, hostilities, civil war, rebellion, revolution, insurrection, military or usurped power, any act of government, damage from aircraft, acts of god, such as earthquake, lightning and unprecedented floods and other causes over which the Contractor has no control and accepted as such by the Commissioner or causes solely due to use or occupation by the Municipal Corporation of the works in respect of which a certificate of completion has been issued or a cause solely due to faulty municipal design of work.

D. **Corporation:** The “Corporation” or the “Municipal Corporation” shall mean the Brihanmumbai Municipal Corporation, constituted under the M.M.C. Act 1888 as amended up to date.

E. **Annexure:** The “Annexure” referred to in these conditions shall means the relevant annexure appended to the tender papers issued by the Municipal Corporation.

F. **Site:** The “Site” shall mean the land and other places including water bodies more specifically mentioned in the special conditions of the tender, on, under in or through which the permanent works or temporary works are to be executed and any other lands and places provided by the Municipal Corporation for working space or any other purpose as may be specifically designated in the contract as forming part of the site.

G. **Urgent Works:** “Urgent works” shall mean any urgent measures which in the opinion of the Engineer become necessary during the progress of the work to obviate any risk of accident or failure or which become necessary for security.

H. Works: The “Works” shall mean the Permanent Works and the Temporary Works or either of them as appropriate to be executed in accordance with the contract or part(s) thereof, as the case may be and shall include all extra or additional, altered or substituted works as required for performance of the contract as found necessary as per suggestion of the Engineer.

I. Temporary Works: “Temporary Works” shall mean all Temporary Works of every kind required in or about execution, completion or maintenance of the work also Temporary Works are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.

J. Permanent Works : “Permanent Works” means the permanent works to be executed (Including Plant) and installation of machineries in accordance with the Contract at specified required site and location.

K. Contractor’s Equipment: Contractor’s Equipment means all appliances and things of whatsoever nature required for the execution and completions of the Works and the remedying of any defects therein, but does not include plant material or other things intended to form or forming part of the Permanent Works.

L. Drawings: Drawings means all the drawings, calculations and technical information of a like nature provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation & maintenance manual and other technical information of like nature submitted by the Contractor and approved by the Engineer.

M. Approved: “Approved” shall mean approved in writing including subsequent confirmation of previous verbal approval and “approval” shall mean approval in writing including as aforesaid.

N. Specification: “Specification” means the specification referred to in the tender and any modification thereof or addition or deduction thereto as may from time to time be furnished or approved in writing by the Engineer.

O. Tender: “Tender” means the Contractor’s priced offer to the Employer for the execution and completion of the Works and the remedying of any defects therein in accordance with the provision of the Contract, as accepted by the Letter of Acceptance.

P. Letter of Acceptance: “Letter of Acceptance” means the formal acceptance by the Employer of the tender, for the particular specified work or job.

Q. Commencement Date: “Commencement Date” means the date upon which the Contractor receives the notice to commence, issued by the Engineer pursuant to Clause 8d.

- R. Time for Completion: “Time for Completion” means the time for completing the execution of and passing the Tests on Completion of the Works or any Section or part thereof as stated in the Contract (or as extended under Section8) calculated from the Commencement Date.
- S. Taking over Certificate: “Certificate of Taking-Over/ Take-over Certificate” shall mean the certificate issued by the Employer after completion of Works in all respects.
- T. Defect Liability Period: “Defect Liability Period” means the period of validity of the warranties given by the Contractor commencing from the date of ‘certificate of taking over’ of the Works or a part thereof, during which the Contractor is responsible for defects with respect to the Works (or the relevant part thereof).
- U. Plant: “Plant” means machinery, apparatus, and the like intended to form or forming part of the all types of permanent works.
- V. Section: “Section” means a part of work specially identified in the contract as a section.
- W. Cost: “Cost” means all expenditure properly incurred or to be incurred whether on or off the site including overheads and other charges properly allocable thereto but does not include any allowance for profit.
- X. Day: “Day” means Calendar day
- Y. Month: “Month” means Calendar month of the Gregorian calendar.
- Z. GCC: GCC means General Conditions of Contract.
- AA. Foreign Currency: “Foreign Currency” means currency of a country other than that in which the works are to be located, approved by Govt. of INDIA/Reserve Bank of INDIA.
- BB. Writing: Writing means any hand written, type-written, or printed communication including telex and facsimile transmission ,electronic and digital media.
- CC. Country: Country means the country in which the Site is located
- DD. Variation: Variation means a change to the:
- i. Specification and /or Drawings (if any) which is instructed by the Employer.
 - ii. Scope in the Contract which is instructed by the Employer.
 - iii. Price in the Contract which is instructed by the Employer.
- EE. Force Majeure: Force Majeure means an exceptional event or circumstance: which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the

Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party.

FF. Law: Law means law that is in force in India

GG. Performance Security/ Performance Guarantee: It is the security in the form of a deposit to be provided by the contractor to the Engineer for his proper performance of the contract within the specified period.

HH. Communication: Wherever provision is made for the giving or issue of any notice, instruction, or other communication by any person, unless otherwise specified such communication shall be written in the English language and shall not be unreasonably withheld or delayed.

OO. Tests on Compliance: "Tests on Compliance" means the tests specified in the Contract or otherwise agreed by the Engineer and the Contractor which are to be made by the Contractor before the works or any section or part thereof are taken over by the employer.

PP. Extra items: 'Extra' means additional or substituted items of work activity not included in the 'Bill of Quantities and Rates', however such items are in the prevailing 'Unified Schedule of Rates' for BMC.

QQ. Excess/Savings: Increase or decrease in "Bill of Quantities" of the bidding documents shall be termed as "Excess" or "Savings" correspondingly

RR. Extra item: This shall mean additional or substituted items of work activity not included in the "Bill of Quantities and Rates", however such item of work are in the prevailing "Unified Schedule of Rates" of BMC.

SS. FAIR item: This shall mean additional or substituted items of work activity not included in the "Bill of Quantities and Rates", and even not existing in the "Unified Schedule of Rates" of BMC at the time of tender.

TT. Unforeseen works: Unforeseen works shall mean the works of bursting / leakages of water pipelines, settlement of sewage lines / manholes, settlement of storm water drains in city areas

UU. Subcontractor: Any person named in the contract as Subcontractor for part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer and the legal successors in the title to such person, but not any assignee of such person.

VV. Bill of Quantities: It means the priced and completed bill of quantities forming part of the Tender.

1.b) Headings & Marginal Notes to Conditions:

Headings and marginal notes to these conditions shall not be deemed to form part thereof or be taken into

consideration in the interpretation or construction thereof or of the contract.

1.c) Singular & Plural :

Where the context so require, words importing the singular shall also mean the plural and vice versa.

1.d) Gender :

Words importing in the masculine gender shall also include the feminine gender.

2.Engineer and Engineer's Representative

2.a) Engineers Duty & Authority:

- i. The Engineer shall carry out the Duties specified in the Contract
- ii. The Engineer may exercise the authority specified in or necessarily to be implied from the Contract, provided, however, that if the Engineer is required under the terms of the appointment by the Employer, to obtain the specific approval from the Employer before exercising any such authority, particulars of such requirements shall be set out in Special conditions of Contract. Provided further that any requisite approval shall be deemed to have been given by the Employer for any such authority exercised by the Engineer.
- iii. Except as expressly stated in the Contract, the Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.
- iv. The Engineer may from time to time in writing delegate to the Engineer's representative any of the powers or authorities vested in the Engineer and shall furnish to the Contractor a copy of all such written delegations of powers and authorities. Any written instruction or approvals given by the Engineer's Representative to the contractor with the terms of such delegation (but not otherwise) shall be binding on the Contractor as if given by the Engineer.
- v. The Engineers representative shall be appointed by and be responsible to the Engineer and shall carry out the duties and exercise such authority as may be designated to him by the Engineer under the clause 2.a.(iv).
- vi. The Engineer may from time to time delegate to the Engineers representative. The duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation or revocation shall be in writing and shall not take effect until a copy thereof has been delivered to the Employer and Contractor.

2.b) Duties & Powers of the Engineers Representative:

- i. The duties of the representative of the Engineer are to check, watch and supervise the work and to test and examine any material to be used or workmanship employed in connection with the works. He shall have no authority to relieve the Contractor of any of his duties or obligations under the contract nor to except as expressly provided here under or elsewhere in the contract to order any work involving delay or any extra payment by the Municipal Corporation nor to make any variation of or in the works without written approval, consent or orders/direction of Engineer.
- ii. Communications given by the Engineers Representative to the Contractor in accordance with any delegations shall have the same effect and shall be binding on the contractor as though it had been given by the Engineer, Provided that :
 - a. Failure of the representative of the Engineer to disapprove any work or material shall not prejudice the power of the Engineer thereafter to disapprove such work or material and to order the pulling down, removal or breaking up thereof.

b. If the Contractor questions any communication of the Engineers Representative he may refer to the matter to the Engineer who shall confirm, revise or vary the contents of such communications.

2. c) Engineer's Decision:

The whole of the work shall be under the direction of the Engineer, whose decision shall be final, conclusive and binding on all parties to the contract, on all questions relating to the construction and meaning of plans, working drawings, sections, and specification connected with the work.

2.d) Work to be in accordance with Contract:

Unless it is legally or physically impossible, the Contractor shall execute and complete the Works and remedy any defects therein in strict accordance with the Contract to the satisfaction of the Engineer.

3. Assignment and Sub-Contracting

3.a) Assignment: the Contractor shall not assign transfer or attempt to assign, transfer the Contract or any part thereof, or any benefit or interest therein or there under otherwise than by a charge in favor of the Contractor's bankers of any Money due or to become due under this contract, without the prior written approval of the Commissioner.

3.b) Sub-letting:

- Unless specifically mentioned in the contract subletting will not be allowed. Subletting, where otherwise provided by the contract shall not be more than 25% of the contract price.

- Subletting of contract will be allowed only after appointment of contractor and before starting the execution of the work.

- The permitted subletting of work by the Contractor shall not establish any contractual

relationship between the sub-contractor and the BMC and shall not relieve the Contractor of any responsibility under the Contract.

3.c) Nominated Sub-Contractors:

All specialist, merchants, tradesmen and others executing any work or supplying any goods, materials, plant or services for which provisional, sums are included in the contract, who may have been or be nominated or selected by the employer or the engineer, and all persons to whom by virtue of the provision of the contract the contractor is required to subcontract shall, in the execution of such work or the supply of such goods, materials, plant or services be deemed to be subcontractor to the contractor and are referred to in this contract as "nominated Subcontractors".

The Contractor shall not be required by the Employer or the engineer, or be deemed to be under any obligation, to employ any nominated Subcontractor against whom the Contractor may raise reasonable objection, or who declines to enter into a subcontract with contractor containing provision:

i. That in respect of the work, goods, materials, Plant or services the subject of subcontract, the nominated Subcontractor will undertake towards the Contractor such obligation and liabilities as will enable the contractor to discharge his own obligation and liabilities towards the Employer under the terms of the contract and will save harmless and indemnify the Contractor from and against the same and from all claims, proceeding damages, costs, charges, and expenses whatsoever arising out of or in connection there with or arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities and (ii)

ii. That the nominated subcontractor will save harmless and indemnify the contractor from and against any negligence by the nominated subcontractor, his agents, workmen and servants and from and against any misuse by him or them of any Contractor's Equipment or Temporary Works provided by the Contractor for the purposes of the Contract and from all claims as aforesaid.

- Design requirements to be Expressly stated:

If in connection with any Provisional Sum the services to be provided include any, matter design or specification of any part of the Permanent Works or of any plant to be incorporated therein, such requirement shall be expressly stated in the Contract and shall be included in any nominated Subcontract. The nominated Subcontract shall specify the nominated Subcontractor providing such services will save harmless and indemnify the contractor from and against the same and from all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of or in connection with any failure to perform such obligations or to fulfill such liabilities.

B) Payments to Nominated Sub-Contractors;

For all work executed or goods, materials plant or services supplied by any nominated Subcontractor, The Contractor shall be entitled to:

- a. The actual price paid or due to be paid by the contractor, on the instruction or engineer, and in accordance with the subcontract.
- b. In respect of labor supplied by the Contractor, the sum, if any, entered in the Bill of Quantities or, if instructed by the Engineer pursuant to clause on Use of Provisional Sums as may be determined in accordance with Clause of Valuation of variation.

In respect of all other charges and profit, a sum being a percentage rate of the actual paid or due to be paid as per clause 10 (b) calculated, where provision has been made in the bill of Quantities for a rate to be set against the relevant Provisional Sum, at the rate inserted by the contractor against that item or, where no such provision has been made, at the rate inserted by Contractor in the Appendix to Tender and repeated where provision for such is made special item provide in the Bill of Quantities for such purpose.

C) Certification of payments to nominated sub-contractors:

Before issuing any certificate under Section 12 which includes any payment in respect of work done or goods, material, plant or services supplied by any nominated sub-contractor, the Engineer shall be entitled to demand from the Contractor reasonable proof that all payments, less retentions, Included in previous certificates in respect of the work or good materials, Plant or services of such nominated Sub-Contractor have been paid or discharged by the Contractor.

If the Contractor fails to supply such proof then, unless the Contractor:

- a) Satisfies the Engineer in writing that he has reasonable cause for withholding or refuse to make such payments and
- b) Produces to the Engineer reasonable proof that he has so informed such nominated Subcontractor in writing,

The Employer shall be entitled to pay to such nominated Subcontractor direct, upon certificate of Engineer, all payments, less retentions, provided for in the nominated Subcontract, which the Contractor has failed to make to such nominated Subcontractor and to deduct by way of set-off the amount so paid by the Employer from any sums due or to become due from the Employer to the Contractor.

Provided that, where the Engineer has certified and the Employer has paid direct as aforesaid ,the Engineer shall, in issuing any further certificate in favor of the Contractor, deduct from the amount thereof the amount so paid, direct as aforesaid, but shall not withhold or delay issue of the certificate itself when due to be issued under the terms of contract

3.d) JOINT VENTURE (JV) FIRMS

1. Joint Venture should be allowed only when the number of identifiable different works is more than one and/or the estimated cost of tender is more than Rs.100 Crores. JV shall also be allowed for complex technical work below Rs.100 Crores with the approval of concerned AMC
2. Separate identity/name shall be given to the Joint Venture firm.
3. Number of members in a JV firm shall not be more than three in normal circumstances, if the work involves only one discipline (say Civil or Electrical). If number of members in JV is required to be more than three, then approval of concerned AMC needs to be sought.
4. A member of JV firm shall not be permitted to participate either in individual capacity or as a member of another JV firm in the same tender.
5. The tender form shall be purchased and submitted in the 'name of the JV firm or any constituent member of the JV.
6. Normally EMD shall be submitted only in the name of the JV and not in the name of constituent member. However, EMD in the name of lead partner can be accepted subject to submission of specific request letter from lead partner stating the reasons for not submitting the EMD in the name of JV and giving written confirmation from the JV partners to the effect that the EMD submitted by the lead partner may be deemed as EMD submitted by JV firm.
7. One of the members of the JV firm shall be the lead member of the JV firm who shall have a majority (at least 51%) share of interest in the JV firm. The other members shall have a share of not less than 20% each in case of JV firms with up to three members and not less than 10% each in case of JV firms with more than three members. In case of JV firm with foreign member(s), the lead member has to be an Indian firm with a minimum share of 51%.
8. A copy of Letter of Intent or Memorandum of Understanding (MoU) executed by the JV members shall be submitted by the JV firm along with the tender. The complete details of the members of the JV firm, their share and responsibility in the JV firm etc. particularly with reference to financial technical and other obligation shall be furnished in the agreement.
9. Once the tender is submitted, the agreement shall not be modified/altered/terminated during the validity of the tender. In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited. In case of successful tenderer, the validity of this agreement shall be extended till the currency of the contract expires.
10. Approval for change of constitution of JV firm shall be at the sole discretion of the BMC. The constitution of the JV firm shall not be allowed to be modified after submission of the tender bid by the JV firm except when modification becomes inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. In any case the Lead Member should continue to be the Lead Member of the JV firm. Failure to observe this requirement would render the offer invalid.
11. Similarly, after the contract is awarded, the constitution of JV firm shall not be allowed to be altered during the currency of contract except when modification become inevitable due to succession laws etc. and in any case the minimum eligibility criteria should not get vitiated. Failure to observe this stipulation shall be deemed to be breach of contract with all consequential penal action as per contract condition.
12. On award of contract to a JV firm, a single Performance Guarantee shall be required to be submitted by the JV firm as per tender conditions. All the Guarantees like Performance Guarantee, Bank Guarantee for Mobilization advance, machinery Advance etc. shall be accepted only in the name of the JV firm and no splitting of guarantees amongst the members of the JV firm shall be permitted.

13. On issue of LOA, an agreement among the members of the JV firm (to whom the work has been awarded) has to be executed and got registered before the Registrar of the Companies under Companies Act or before the Registrar / Sub-Registrar under the Registration Act, 1908. This agreement shall be submitted by the JV firm to the BMC before signing the contract agreement for the work. (This agreement format should invariably be part of the tender condition). In case the tenderer fails to observe/comply with this stipulation, the full Earnest Money Deposit (EMD) shall be forfeited and other penal actions due shall be taken against partners of the JV and the JV. This joint venture agreement shall have, inter-alia, following clauses:

13.1 Joint and several liability -The members of the JV firm to which the contract is awarded, shall be jointly and severally liable to the Employer (BMC) for execution of the project in accordance with General and Special conditions of the contract. The JV members shall also be liable jointly and severally for the loss, damages caused to the BMC during the course of execution of the contract or due to non-execution of the contract or part thereof.

13.2 Duration of the Joint Venture Agreement -It shall be valid during the entire period of the contract including the period of extension if any and the maintenance period after the work is completed.

13.3 Governing Laws -The Joint Venture Agreement shall in all respects be governed by and interpreted in accordance with Indian Laws.

13.4 Authorized Member -Joint Venture members shall authorize one of the members on behalf of the Joint Venture firm to deal with the tender, sign the agreement or enter into contract in respect of the said tender, to receive payment, to witness joint measurement of work done, to sign measurement books and similar such action in respect of the said tender/contract. All notices/correspondences with respect to the contract would be sent only to this authorized member of the JV firm.

13.5 No member of the Joint Venture firm shall have the right to assign or transfer the interest right or liability in the contract without the written consent of the other members and that of the employer in respect of the said tender/contract.

14 Documents to be enclosed by the JV firm along with the tender:

14.1 In case one or more of the members of the JV firm is/are partnership firm(s), following documents shall be submitted:

14.1.1 Notary certified copy of the Partnership Deed,

14.1.2 Consent of all the partners to enter into the Joint Venture Agreement on a stamp paper of appropriate value (in original).

14.1.3 Power of Attorney (duly registered as per prevailing law) in favor of one of the partners to sign the MOU and JV Agreement on behalf of the partners and create liability against the firm.

14.2 In case one or more members is/are Proprietary Firm or HUF, the following documents shall be enclosed:

14.2.1 Affidavit on Stamp Paper of appropriate value declaring that his Concern is a Proprietary Concern and he is sole proprietor of the Concern OR he is in position of "KARTA" of Hindu Undivided Family and he has the authority, power and consent given by other partners to act on behalf of HUF.

14.3 In case one or more members is/are limited companies, the following documents shall be submitted:

14.3.1 Notary certified copy of resolutions of the Directors of the Company, permitting the company to enter into a JV agreement, authorizing MD or one of the Directors or Managers of the Company to sign

MOU, JV Agreement, such other documents required to be signed on behalf of the Company and enter into liability against the company and/or do any other act on behalf of the company.

14.3.2 Copy of Memorandum and articles of Association of the Company.

14.3.3 Power of Attorney (duly registered as per prevailing law) by the Company authorizing the person to do/act mentioned in the para (a) above.

14.3.4 All the members of the JV shall certify that they have not been black listed or debarred by BMC from participation in tenders/contract in the past either in their individual capacity or the JV firm or partnership firm in which they were members / partners.

14.3.5 Credentials & Qualifying criteria: Technical and financial eligibility of the JV firm shall be adjudged based on satisfactory fulfilment of the following criteria:

Technical eligibility criteria: In case of Work involving single discipline, the Lead member of the JV firm shall meet at least 35% requirement of technical capacity as stipulated in tender document.

OR

In case of composite works (e.g. works involving more than one distinct component such as Civil Engineering works, M&E works, Electrical works, etc. and in the case of major bridges, substructure and superstructure etc.), at least one member should have satisfactorily completed 35% of the value of any one component of the project work so as to cover all the components of project work or any member having satisfactorily completed 35% of the value of work of each component during last seven financial years.

In such cases, what constitutes a component in a composite work shall be clearly defined as part of the tender condition without any ambiguity.

Financial eligibility criteria: The contractual payments received by the JV firm or the arithmetic sum of contractual payments received by all the members of JV firm in any one of the previous three financial years and shall be at least 30% of the estimated value of the work as mentioned in the tender.

4. Contract Documents

4.a) Languages:

The language of the Contract shall be English and all correspondence, drawings etc. shall conform to the English language.

4.b) Contract Documents:

The documents forming the contract are to be taken as mutually explanatory of one another. Unless otherwise provided in the contract, the priority of the documents forming the contract shall be, as follows:

- 1) Contract Agreement (if completed)
- 2) The letter of Acceptance
- 3) The Bid:
- 4) Addendum to Bid; if any
- 5) Conditions of contract-Part-II: Conditions of Particular Application.
- 6) Conditions of Contract-Part I :General Condition
- 7) The priced bill of Quantities:
- 8) The Specification:
- 9) Detailed Engineering Drawings
- 10) GCC
- 11) All correspondence documents between bidder and BMC.

4.c)Custody of Drawings:

- i. Custody of drawings: The Drawings shall remain in the sole custody of Engineer, but two copies thereof, shall be furnished to the Contractor free of charge. The Contractor shall provide and made at his own expense any further copies required by him and the Engineer for the bonafide cause. At the completion of the Contract, the Contractor shall return to the Engineer all drawings provided under the Contract.
- ii. One copy of drawing to be kept on site: One copy of the drawings, furnished to the Contractors as aforesaid, shall be kept by the Contractor on the site and the same shall at all reasonable times be available for inspection and use by the Engineer and the Engineer's Representative and by any other persons authorized by the Engineer in writing.
- iii. Disruption of Progress: The Contractor shall give written notice to the Engineer whenever planning or progress of the works is likely to be delayed or disrupted unless any further drawings or order, including a direction, instruction or approval, is issued by the Engineer within reasonable time. The notice shall include details of the drawing or order required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.
- iv. Delays and Cost of delay of drawings: If by reason of any failure or inability of the Engineer to issue within a time reasonable in all the circumstances any drawing or order requested by the Contractor in accordance with the sub-clause(iii) of this condition the Contractor suffers delay and / or incurs cost then the Engineer shall take such delay into account in determining any extension of time to which the Contractor is entitled under sub-clause (d) of Clause 8 hereof and the Contractor shall be paid the amount of such cost as shall be reasonable.
- v. Failure to submit Drawings by Contractor: If the failure or the inability of the Engineer to issue any drawings or instructions is caused in whole or in part by the failure of the Contractor to submit specification or drawings or other documents which is required to submit under the contract, the Engineer shall take such failure by the contractor into account when making his determination in accordance with condition 4c(iv)hereof.
- vi. Copyright: The copyright of all drawings and other documents provided by the Contractor under the Contract shall remain vested in the Contractor or his subcontractors as the case may be the Employer shall have a license to use such drawings and other documents in connection with the design, construction, operation and maintenance of the Works. At any time the Employer shall have further license without additional payment to the Contractor to use any such drawings or documents for the purpose of making any improvement of the works or enlargement or duplication of any part thereof, provided that such improvement, enlargement or duplication by itself or in conjunction with any other improvements, enlargements or duplications already made in accordance with the further license does not result in the duplication of the whole of the works.

4.d) Engineer to have power to issue further drawings or instructions:

The Engineer shall have the power and authority from time to time and at all times to make and issue such further drawings and to give such further instructions and directions as may appear to him necessary or proper for the guidance of the contractor and the good and sufficient execution of the works according to terms of the specifications and Contractor shall receive, execute, obey and be bound by the same, according to the true intent and meaning thereof, as fully and effectually as though the same had accompanied or had been mentioned or referred to in the specification, and the Engineer may also alter or vary the levels or position of nature of works contemplated by the specifications, or may order any of the works contemplated thereby to be omitted, with or without the substitution of any other works in lieu

thereof, or may order any work or any portion of work executed or partially executed, to be removed, changed or altered, added if needful, may order that other works shall be substituted instead thereof and difference of expense occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the amount of this Contract, as provided under condition no.10(a) hereinafter.

No work which radically changes the original nature of the Contract shall be ordered by the Engineer and in the event of any deviation being ordered which in the opinion of the Contractor changes the original nature of Contract he shall nevertheless carry it out and disagreement as to the nature of the work and the rate to be paid therefore shall be resolved in accordance with condition no.13d.

The time for completion of the Works, shall be in even of any deviations resulting in additional cost over the contract price being ordered, be extended or reduced reasonably by the Engineer.

The Engineer's decision in this case shall be final.

4.e) Discrepancies in drawings or specifications:

The drawings and specifications are to be considered as mutually explanatory of each other, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and special conditions in preference to general conditions. The preference of documents will be as per condition 4(b). Should any discrepancies, however, appear, or should any misunderstanding arise as to the meaning and import of the said specifications or drawings, or as to the dimensions or the quality of the materials or the due and proper execution of the Works, or as to the measurement or quality and valuation of the Works, or as to the measurement or quality and valuation of the Works execution under this Contract, or as extra thereupon the same shall be explained by the Engineer, and his explanation shall, subject to the final decision of the Commissioner in case a reference be made to him under condition no.13(d) be binding upon the Contractor and Contractor shall execute the Works according to such explanation (subject to aforesaid) and shall also do all such Works and required things as may be necessary for the proper completion of Works as implied by the drawings and specifications, even though such Works and things are not specifically shown and described in the said drawings and specifications.

Provided always that if in the opinion of the Engineer compliance with any such instructions shall involve the Contractor in any expenses which by reason of any such ambiguity or discrepancy, the Contractor did not and had reasons not to anticipate the extra charges if any shall be paid in accordance with conditions 10(a).

The time for completion of the Works, shall be in even of any deviations resulting in additional cost over the contract price being ordered, be extended or reduced reasonably by the Engineer.

The Engineer's decision in this case shall be final.

4.f) Official Secrecy:

The Contractor shall of all the persons employed in any works in connection with the contract that the India Official Secrets Act 1923 (XIX of 1923) applies to them and will continue to apply even after execution of the said works and they will not disclose any information regarding this contract to any third party. The contractor shall also bring into notice that, any information found to be leaked out or disclosed the concern person as well as the Contractor will be liable for penal action; further the Corporation will be at liberty to terminate the contract without notice.

4.g) Subsequent Legislation :

If on the day of submission of bids for the contract, there occur changes to any National or State statute, Ordinance, decree or other law or any regulation or By-laws or any local or other duly constituted authority or the introduction of any such National or State Statute, Ordinance, decree or by which causes additional or reduced cost to the Contractor, other than under Clause 10 in the execution of contract, such additional or reduced cost shall, after due consultation with the Contractor, be determined by the concerned Engineering Department of BMC and shall be added to or deducted from the Contract Price

with prior approval of competent authority and the concerned Engineering Department shall notify the Contractor accordingly with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Clause 10 b. BMC reserve the right to take decision in respect of addition/reduction of cost in contract.

4h)Contract Execution

All required documents for execution of the contract shall be submitted within 30 days from the date of issue of letter of acceptance. If the documents are not submitted within the stipulated time a penalty of Rs 5000/-per day will be applicable to the contractor. All contract documents need to be duly affixed with stamp duty properly signed along with evidence/proof of payment of security/contract deposit/ within 30 days from the date of letter of acceptance received by him.

Obligation of BMC

- i. The concerned department shall submit the contract which is verified by Accounts department, to Municipal Secretary Office for common seal in 45 days from the receipt of those papers in the office
- ii. Municipal Secretary office will complete the process of affixing common seal in next 30 days.
- iii. If the contractor has complied with all the contractual obligations and the contract verified by the accounts department and forwarded to Municipal Secretary office for affixing common seal. It shall be treated as deem executed after 30 days of submission and no payment shall be withheld for want of contractual obligations.

4i) No Claim To Any Payment Or Compensation Or Alteration In Or Restriction Of Work

a) If at any time after the execution of contract documents, the Engineer shall for any reason whatsoever, desires that the whole or any part of the works specified in the Tender should be suspended for any period or that the whole or part of the work should not be carried out, at all, he shall give to the Contractor a Notice in writing of such desire and upon the receipt of such notice, the Contractor shall forthwith suspend or stop the work wholly or in part as required after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury the work already done or endanger the safety thereof, provided that the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the contractor.

The Contractor shall have no claim to any payment or compensation whatsoever by reason of or in pursuance of any notice as aforesaid, on account of any suspension, stoppage or curtailment except to the extent specified hereinafter.

b) Where the total suspension of Work Order as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving 10 days prior notice in writing to the Engineer within 30 days of the expiry of the said period of 90 days, of such intention and requiring the Engineering to record the final measurement of the work already done and to pay final bill. Upon giving such Notice, the Contractor shall be deem to have been discharged from his obligations to complete the remaining unexecuted work under his contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days from the receipt of such Notice in respect of the work already done by the contractor. Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provisions of this clause.

c) Where the Engineer required to Contractor to suspend the work for a period in excess of 30 days at any time or 60 days in the aggregate, the Contractor shall be entitled to apply to the Engineer within 30 days of the resumption of the work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery remained ideal on the site of on the account of his having an to pay the salary of wages and labour engaged by him during the said period of suspension provided always that the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate or such suspension or in respect of any such suspension whatsoever occasion by unsatisfactory work or any other default on his part, the decision of the Engineer in this regard shall be final and conclusive against the contractor.

4j. The limit for unforeseen claims

Under no circumstances whatever the contractor shall be entitled to any compensation from BMC on any account unless the contractor shall have submitted a claim in writing to the Eng-in-change within 1 month of the case of such claim occurring.

5. General Obligations of Contractor

5.a) Inspection of site and sufficiency of tender:

- The Contractor shall inspect and examine the site and its surrounding and shall satisfy himself before submitting his tender as to the nature of the ground and subsoil (so far as is practicable), the form and nature of the site, the quantities and nature of the work and materials necessary for the completion of the works and means of access to the site, the accommodation he may require and in general shall himself obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect his tender. He shall also take into consideration the hydrological and climatic conditions.
- The Employer shall make available to the Contractor data on hydrological and sub-surface conditions as obtained by or on his behalf from investigations relevant to the works but the Contractor shall be responsible for his own interpretation thereof. The contractor shall engage his investigating agency with prior approval of the Engineer from the approved list of such agencies by BMC or Govt at his cost initially before commencing actual work and which shall be reimbursed immediately subject to satisfaction of the Engineer for faithful compliance and submission of required data regarding such investigation within specified time.
- The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of works / items / quantities, or in Bill of Quantities, which rates and prices shall, except as otherwise provided cover all his obligations under the Contract and all matters and things necessary for proper completion and maintenance of the works. No extra charges consequent on any misunderstanding.
- Not Foreseeable Physical Obstructions or Conditions : If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions were, in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Contractor, determine:
 - any extension of time to which the Contractor is entitled under Clause 8 (f) and
 - The amount of any costs which may have been incurred by the Contractor by reason of such obstructions or conditions having been encountered, which shall be added to the Contract Price. and shall notify the

Contractor accordingly. Such determination shall take account of any instruction which the Engineer may issue to the Contractor in connection therewith, and any proper and reasonable measures acceptable to the Engineer which the Contractor may take in the absence of specific instructions from the Engineer. However such costings shall be got approved by the competent authority as governed vide rules prevailing with authority.

5. b) Office for the Engineer (Works costing upto Rs.50 Lakhs)

The Contractor shall at his own cost and to satisfaction of the Engineer provide a small temporary office, at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, telephone with a prerequisite of e-governance and electronic communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance for Municipal Staff.

5. c) Office for the Engineer (Works costing above Rs.50 lakhs)

The Contractor shall at his own cost and to satisfaction of the Engineer provide a temporary office at the work-site which will include tables, chairs and lockers for keeping the records. He shall also make necessary arrangements for drinking water, latrines, with doors, windows, locks, bolts and fastenings sufficient for security for the Engineer, and his subordinates, as close to the works from time to time in progress as can be conveniently arranged, and shall at his own cost furnish the office with such chairs, tables, lockers, locks and fastenings as may be required by the Engineer, and no expense of any kind in connection with the erection or upkeep of the offices or fittings shall be borne by the Corporation, but all such work shall be carried out by the Contractor and the expenses thereof defrayed by him. The Contractor shall also make water connections and fit up stand pipe with a bib tap at each office. The latrines and the water connections shall be subject to all the conditions herein elsewhere laid down for temporary water connection and latrines generally with all requisite equipments for e-governance and electronic and digital communication. These offices are not to be allowed on public roads without the written instruction of the Engineer. These offices should be preferably located within 50 to 500 m of the worksite. In case the office is more than 500m away from the worksite, the contractor is to provide conveyance. Also, for staff working beyond working hours the contractor has to provide conveyance.

Permission for provision and removal of office on completion of work: The tenderer shall obtain permission for provision of site office, cement go-down, store, etc. on payment of necessary cost implication. The cement go-down, Watchman cabins, etc. shall be provided as directed and shall be removed by the Tenderers on completion of the work at their cost. It is binding on the Tenderer to fulfill requirements of Environmental Authorities. The location of such office shall be finalized and got approved from the Engineer before erection/commencement work.

5. d) Contractor's office near works: The Contractor shall have an office near the works at which notice from the Commissioner or the Engineer may be served and shall, between the hours of sunrise and sunset on all working days, have a clerk or some other authorized person always present at such office upon whom such notices may be served and service of any notices left with such clerk or other authorized person or at such office shall be deemed good service upon the Contractor and such offices shall have prerequisite facilities for e-governance.

5.e) Works to be carried out:

The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plant, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the schedule of works / items / quantities, and the Bills of Quantities shall, unless otherwise stated, be held to

include waste on materials, carriage and cartage, carrying in, return or empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognized principles.

5 f) Security Deposit:

The security deposit shall mean and comprising of I) Contract Deposit and II) Retention Money.

5.f.i) Contract Deposit – The successful tender, here after referred to as the contractor shall pay an amount equal to two (2) percent of the contract sum shall be paid within thirty days from the date of issue of letter of acceptance.

5.f.ii) Retention Money – The contractor shall pay the retention money an amount equal to five (5) percent of the contract sum which will be recovered from the contractors every bill i.e. interim / running / final bill. The clause of retention money will not be applicable M. & E. works.

5.f.iii) Additional Security Deposit

The additional security deposit will be applicable when a rebate of more than of 12 % at the rate of with no maximum limit. The ASD is calculated as follows:

Additional security deposit = (X) x office estimated cost,

Where X=percentage rebate quoted above 12%

The ASD shall be paid online in the ASD tab for bidders in e-tendering system before submission of the bid.

5.f.iv) Performance Guarantee

The successful tender, here after referred to as the contractor shall pay in the form of “Performance Guarantee” at different rates for different slabs as stated below:

Offer	PG applicable %
For premium, at par and rebate less than 12%	P.G. = {0.92% x contract sum applicable for rebate of 12%}
For offer below rebate of 12%	PG= 0.92% x contract sum applicable for rebate of 12% +(X) x contract sum where X= percentage rebate quoted more than 12%

Note: Contract sum shall mean amount after application of rebate/premium as quoted by the contractor with contingencies only and excluding price variation.

The PG shall be paid in one the following forms.

- I. Cash (In case guarantee amount is less than Rs.10,000/-)
- II. Demand Draft (In case guarantee amount is less than Rs.1,00,000/-)
- III. Government securities
- IV. Fixed Deposit Receipts (FDR) of a Schedule Bank.
- V. An electronically issued irrevocable bank guarantee bond of any Schedule bank or f in the prescribed form given in Annexure.

Performance Guarantee is applicable over and above the clause of Security Deposit.

Performance Guarantee will have to be paid & shall be valid till the defect liability period or finalization of final bill whichever is later.

This deposit will be allowed in the form of I to V as mentioned above and shall be paid within 15 days after receipt of Letter of Acceptance.

Note: Following exceptions shall be adopted for 'Demolition Tenders':

- Irrespective of the offer (Rebate/ at par/ premium), ASD shall be differed and only PG of 10% of contract sum be taken from the successful bidder on award of contract only.
- BMC departments shall ensure to incorporate specific condition regarding above in bid document and e-tender notice.

5.f.v) Refund of Security Deposit

I. Refund of Contract Deposit

The Contract Deposit shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of 'Defect Liability Certificate' (in case of 1 or 2 or 3 years DLP) subject to no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. No claim shall be made against the Balance Contract Deposit after the issue of Defects Liability Certificate.

II. Refund of Retention Money

One-half (50%) of the Retention Money shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

The balance Retention Money shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of 'Defect Liability Certificate' (in case of 1 or 2 or 3 years DLP) provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. In the event of different Defects Liability Periods have been specified or become applicable to different sections or parts of the Permanent Works, the said moneys will be released within 30 days on expiration of the latest of such Defects Liability Periods.

Payment of the above mentioned 50% is exclusive of the amounts to be withheld as stated in and that amount shall be paid as per condition stated therein.

III. Refund of Additional Security Deposit

The additional security deposit shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

IV. Refund of Performance Guarantee

The Deposit on account of performance guarantee shall be released within 30 days of completion of Defects Liability Certificate subject finalization of final bill whichever is later and no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

- Summary of time of Refund of deposit is tabulated as follows:

a) Time of Refund for works having 5 years DLP

Deposits refunded After Completion	After 3 yrs of DLP	After of DLP completion
ASD + 50% of RM	CD+50% of RM	PG

b) Time of Refund for works having 1 or 2 or 3 years DLP

Deposits refunded after completion	After Completion of DLP
ASD + 50% of RM	CD+50% of RM+PG

5.f.vi.) Cost of Securities: The cost of complying with the requirements of clause 5f(i), 5f(ii) and 5f(iii) and 5f(iv) shall be borne by the Contractor.

5.(f)(vii) Action when whole of security deposit is forfeited:

In any case in which under any Clause of this contract, the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit whether paid in one sum or deducted by installments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Engineer on behalf of the Municipal Commissioner shall have power to adopt any of the following process, as he may deem best suited to the interest of BMC

a) To rescind the contract (for which recession notice in writing to the contractor under the head of Executive Engineer shall be conclusive evidence) and in that case, the security deposit of the contract shall stand forfeited and be absolutely at the disposal of BMC.

b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged establishment employed for getting the unexecuted part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.

c) To order that the work of the contractor be measured up and to take such part thereof as shall be un-executed out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the un-executed work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor.

In case the contract shall be rescinded under Clause (a) above, the contractor shall not be entitled to

recover or be paid any sum for any work therefor actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in Clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractors amount of excess shall be deducted from any money due to the contractor, by BMC under the contract or otherwise, howsoever, or from his security deposit or the sale proceeds thereof provided, however, the contractor shall have no claim against BMC even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clauses (a), (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials or entered in to any engagements or made any advance on account of or with a view to the execution of the work or the performance of the contract.

5.f.(viii) Contract may be rescinded and security deposit forfeited for bribing a public officer or if contractor becomes insolvent If the contractor assigns or sublets his contracts or attempt so to do, or become insolvent or commence any proceeding to get himself adjudicated and insolvent or make any composition with his creditors, or attempt so to do or if bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents through any public officer, or person in the employ of BMC/Govt. in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract the Engineer In-charge may thereupon, by notice in writing rescind the contract and the Security Deposit of the Contractor shall thereupon stand forfeited and be absolutely at the disposal of BMC and the same consequences shall ensure as if the contract had been rescinded under above clause 5.f.(vii) hereof; and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.

5.f.(ix) For The Unsatisfactory Progress Of Any Particular Portion Of The Work:

If the progress of any particular portion of the work is unsatisfactory, the Executive Engineer shall notwithstanding that the general progress of the work is in accordance with the conditions mentioned in the appropriate clause be entitled to take action for forfeiture of security deposit after giving the contractor 10 days notice in writing. The contractor will have no claim for compensation, for any loss sustained by him owing to such action.

5.g) Levels:

All levels referred to in connection with these works are based on the plane known as the Mumbai Town Hall Datum (T.H.D).

5.h) Use of Municipal Land:

- i. The Contractor shall not be permitted to enter on (other than for inspection purposes) or take possession of site until instructed to do so by the Engineer in writing. The portion of the site to be occupied by the Contractor shall be defined and / or marked on the site plan, failing which these shall be indicated by the Engineer and the Contractor shall on no account be allowed to extend his operations beyond these areas. The Contractor will be allowed to use such land, free of charge, for the purpose of sheds, offices thereon for themselves and for the Engineer and his subordinates and shall remove the same from the ground on the completion of the works, or when required to do so, by the Engineer after receiving 7 days' notice. He shall make good any damage which may have been done and restore to good condition anything which may have been disturbed during the period of his occupation. The contractor shall be allowed to use the land for labour employed on the job for emergency situation. He shall not use or allow to be used any such

ground, sheds or offices, or any portion of the site of the works, for any other purpose than the carrying out of works under this Contract. In the event of there being on plot or ground or insufficiency of ground belonging to the Corporation available for the above purpose, the Contractor shall provide other such ground at his own cost.

The Contractor shall in any case pay all taxes which may have to be paid in respect of all ground, sheds or offices used as above, and all the license fees, etc. that may be used as above, and all the license fees, etc. that may be demanded for the storage or otherwise of the various articles as per rules in force. The Contractor shall provide, if necessary or if required on the site all temporary accesses thereto and shall later, adopt and maintain the same as required from time to time and shall take up and clear them away as and when no longer required and make good all damage done to the site.

ii. Save in so far as the Contract may prescribe:

a) The extent of portions of the site of which the Contractor is to be given possession from time to time.

b) The order in which such portions shall be made available to the Contractor.

c) And, subject to any requirement in the contract as to the order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of so much of the site and

d) Such access as, in accordance with the Contract, is to be provided by the Employer as may be required to enable the Contractor to commence and proceed with the execution of the Works in accordance with the program referred to in Clause 8h if any, and otherwise in accordance with such reasonable proposals as the Contractor shall, by notice to the Engineer make. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with such program or proposals, as the case may be.

iii. Failure to give possession: If the Contractor suffers delay and / or incurs costs from failure on the part of the Employer to give possession in accordance with the terms of Sub Clause 5h, the Engineer shall determine :

a) any extension of time to which the Contractor is entitled under Clause 8d and

b) The amount of such costs, which shall be added to the Contract Price, and shall notify the Contractor accordingly.

5.i) Water Supply for Municipal Work.:

Water made available to the Contractor from either nearest municipal main or other municipal source of lakes or wells shall be charged to the contractors as per prevailing water charges. The Contractor will have to make his own arrangements to get at his cost necessary water connection from the Municipal mains, if available. It is, however, agreed that if in the opinion of the Hydraulic Engineer, water is used improperly or wasted, the Hydraulic Engineer may cause the un-metered supply of water to be discontinued and the water will be supplied to the Contractor through a metered connection. He will be charged at the prevailing rates for the quantity of water which in the opinion of the Hydraulic Engineer, has been used in excess of a reasonable quantity required to be used on that work.

The Contractors will be charged for all the cost connected with taking any connections with the mains that may be required for the purpose of the work, and for afterwards cutting off such connections, besides the usual Municipal charges for the use of the meters, if any, fixed by the water department in case of improper use or wastage of water. In the event of the meter getting damaged, or found to be out of order, inaccurate or tampered with, the excess quantity of water chargeable due to misuse will be assessed on the discharging capacity of the water connection.

In case the Contractor finds the water supply to be inadequate for the construction of the work, the balance quantity of water shall be procured by the contractor and the cost of procuring, pumping and conveyance of the balance quantity of water shall be entirely borne by the contractor.

In case municipal water mains are not available nearby, contractors attention is invited to Clause 5 given here before. In such cases, the contractor shall have to make his own arrangements for procuring, pumping and conveyance of water at his cost.

The Contractor may be allowed to use water from the Municipal hydrants subject to such terms and conditions as shall be laid down by the Hydraulic Engineer. The payment for use of water from municipal hydrants shall be entirely borne by the Contractors.

The Engineer may, however, allow use of water from other sources, viz. lakes, wells, etc. for construction purposes only in consultation with the Hydraulic Engineer provided such permission is requested sufficiently in advance. In all these cases the Contractor shall have to make his own arrangements for pumping and conveyance of water. The payment for use of water from such sources shall also be entirely borne by the Contractor.

5.j) Pumping out Water.:

The Contractor will be required to provide and work at his own cost all pumps, engines and machinery requisite to keep the trenches for the sewer, drains or foundations and all other excavations clear of water, whether subsoil water, storm waste or leakage from tanks, wells, drains, sewers, water mains, tide water etc. so that there may be no accumulation of such water and no setting out may be done, no masonry may be laid, no concrete deposited, no joints made and no measurements taken in water. The pumping shall be continued so long after the execution of any portion of the Work as the Engineer may consider necessary for the work to set. For the purpose of keeping the excavations as dry as possible the work would, if necessary be divided into sections or separate portions as per best engineering practices and temporary dams will have to be put up by the Contractor, sumps for the suction pipes to work in, will have to be excavated by the Contractor at such distances apart and to such depths as the as per best engineering practices. When the work progresses other sumps must, from time to time, be excavated by the Contractor, disused sumps being filled up by him with dry rubble carefully hand packed to the satisfaction of the Engineer. The Contractor will not be paid extra for any temporary dams or sumps or their removal or refilling nor will such works be taken into measurement in any way, unless otherwise provided.

The Contractor shall not allow any accumulation of water either from the Discharge of his dewatering pumps or his water connections on site of his work. The Contractor shall make proper provision for leading the pumped discharge to the nearest water entrance, storm water drain, manholes, or water course by means of a wooden or G.I. channel or hose pipe. Under no circumstances the discharge will be allowed to flow, along a paved surface. If an accumulation is unavoidable, it shall be treated with insecticides to the satisfaction of the Engineer. In case of failure to do this on the part of Contractor such accumulation shall be treated by the Municipal Corporation at the risk and cost of the Contractor.

The contractors should note that under no circumstances any payment for pumping out water finding its way into trenches, hill cutting, excavated pits, works site etc. from whatever sources will be permissible unless otherwise specified in the tender.

5.k) Contractors' staff:

The Contractor shall employ in and about the execution of works only such persons as are skilled and are experienced in their several trades and the Engineer shall be at liberty to object to and require the Contractor to remove from the works any person, employed by the Contractor in or about the execution of the works, who in the opinion of the Engineer misconducts himself or is incompetent or negligent in the proper performance of his duties and such person shall not be again employed upon the works without permission of the Engineer.

5.l) Contractors' Supervision:

The Contractor shall himself supervise the execution of works or shall appoint qualified personnel with

prior approval by the Engineer to act in his stead. If, in the opinion of the Engineer the Contractor has himself not sufficient knowledge and experience to be capable of receiving instructions or cannot give his full attention to the works, the Contractor shall at his own expense, employ as his accredited agent an Engineer or a suitably qualified and experienced person approved by the Engineer. The name of the agent so appointed, along with the qualifications, experience and address shall be communicated to the Engineer. The agent shall be a responsible person adequately authorized by the Contractor to take decision on site and to spend money if required for procuring material and labour etc. to carry out emergency works in the interest of the contract Work, if so required by the Engineer. Orders given to Contractor's agent shall be considered to have the same force as if these had been given to the Contractor himself. If the Contractor fails to appoint a suitable agent as directed by the Engineer, the Engineer shall have full powers to suspend the execution of the works until such date as a suitable agent is appointed and the Contractor shall be held responsible for the delay so caused to the works. If approval of the representative is withdrawn by the Engineer, the contractor shall, as soon as practicable, having regard to the requirement of replacing him as hereinafter mentioned. He, after receiving notice of such withdrawal, remove the representative from the Works and shall not thereafter employ him again on Works in any capacity and shall replace him by another representative approved by the Engineer.

5.m)Setting out the works:

The Engineer shall supply dimensioned drawings, level and other information necessary to enable the Contractor to set out the works. The Contractor shall provide all setting out apparatus at his own cost, such as leveling instruments in good working condition and appliances, all pegs, ranging rods, long measuring rods, marked meters, and decimeters and each meter and decimeter numbered, posts and sight-rails, boning rods, moulds, templates, etc. together with any reasonable number of laborers that may be required and set out the work and be responsible for the accuracy of the same in relation to original points, lines and levels of reference given by the Engineer in writing. The Contractor shall amend at his own cost and to the satisfaction of the Engineer any error found at any stage which may arise through inaccurate setting out unless such error is based on incorrect data furnished in writing by the Engineer, in which case the cost of rectification shall be borne by the Municipal Corporation. The Contractor shall protect and preserve all bench marks used in setting out the works till the end of Defects Liability period unless the Engineer directs its early removal. The Contractor should also keep leveling instrument in good working condition throughout the period of construction work on site.

5.n) Precautions for works in thorough-fares:

- a) While the execution of any work is in progress in any street or thoroughfare the Contractor at his own cost shall make adequate provision for the passage of traffic, for securing safe access to all premises approached from such street or thoroughfare, and for any drainage, water supply, or means of lighting or any other utility service which may be interrupted by reason of execution of the work. Whenever it may be necessary to stop the traffic in any street or thoroughfare permission must first be obtained from the Engineer and the Contractor shall then put up such barriers and adopt such other measures or take precautions as may be necessary or as the Engineer may direct for regulation of traffic. The work shall in such cases be executed night and day or for as long a period as practicable if so ordered by the Engineer, and with such speed and vigour as he may require, so that the traffic may be impeded for as short a time as possible. The Contractor shall remove the barriers as soon as the necessity for them has ceased. Care shall be taken by the Contractor to cause the least possible obstruction to traffic during the progress of the work.
- b) The contractor shall use every reasonable means to prevent any of the roads or bridges communicating with or on the routes from the site from being damaged or injured by any traffic of the contractor or any of his subcontractors and, in particular, shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from moving of

materials, Plant, Contractor's equipment or Temporary works from and to the site shall be limited, as far as reasonably possible and so that no unnecessary damage or injury may be occasioned to such roads and bridges. Save in so far as the Contract otherwise provides, the Contractor shall be responsible for and shall pay the cost of strengthening any bridges or altering or improving any road communicating with or on the routes to the site to facilitate the movement of Contractors equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all claims for damage to any such road or bridge caused by such movement; including such claims as may be made directly against the employer, and shall negotiate and pay all claims arising safely out of such damage.

If it is found necessary for the Contractor to move one or more loads of heavy constructional equipment, materials or pre-constructed units or parts of units of work over roads, highways, bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be included in his contract price.

Where the nature of Works is such as to require the use by the Contractor of waterborne transport the forgoing provisions of this Clause shall be construed as though "road included a lock, dock, sea wall or other structure related to waterway and "vehicle" included craft and shall have effect accordingly. Any non-compliance to these precautions will attract penalties as per condition 14 (a).

5.o) Maintenance of underground utility services:

All the underground utility services such as water pipes, gas pipes, drains, sewers, cables, etc. which may be met up in or about any excavation, shall if the Engineer deem it practicable, be properly maintained and protected by the Contractor himself or through other agency by means of shoring, strutting, planking over, padding or otherwise as directed by the Engineer during the progress of the work without claiming any extra charges. Any damage to these underground utility services shall be immediately remedied by the Contractor or by other agency at its own cost, failing which the Engineer may with or without notice adopt such measures as he may deem necessary at the risk and cost of the Contractor.

If on the other hand, the Engineer considers it impracticable for the Contractor to maintain any such underground utility services and that the exigencies of the work necessitate, the breaking down, removal or diversion of the said utility services, the cost of such breaking down, removal or diversion including that of rebuilding, replacing, diverting and reinstating of any such utility services shall be paid to the Contractor if done by him. However, the cost of providing pumps, chutes or other appliances as the Engineer may direct for the raising or temporary passage of the water or sewage and the cost of pumping out or removing as often as the Engineer may direct, any water or sewage which may escape from any such underground utility services, shall be borne by the Contractor.

5.p) Fencing, watching and lighting:

The Contractor shall provide and maintain at his own expense all lights, guards, fencing and watching when and where necessary or as required by the Engineer for the protection of the safety and convenience of those employed on the works or the public. In the event of failure on the part of the Contractor, the Engineer may with or without notice to the Contractor put up a fence or improve a fence already put up or provide and / or improve the lighting or adopt such other measures as he may deem necessary, and all the cost of such procedures as may be adopted by the Engineer shall be borne by the Contractor. In addition the Engineer may impose such fines or penalty as the Engineer may deem reasonable, under Clause 14a.

5.q) Treasure Trove Fossils etc:

All fossils, coins, articles of value or antiquity and structural and other remains things of geological or archaeological interest discovered in or upon the site shall be absolute property of the Municipal Corporation and the Contractor shall duly preserve them and shall take precautions to prevent his workmen or any other person from removing or damaging any such articles or thing and shall immediately upon discovery thereof and before removal acquaint the Engineer with such discovery and shall from time

to time deliver the same to such person or persons as the Engineer may from time to time appoint to receive the same at the expense of the Corporation.

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archeological interest discovered in the Site shall, as between the Employer and the Contractor, be deemed to be absolute property of the Employer. The Contractor, shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer of such discovery and carry out the Engineer's instruction for dealing with the same. If by any reason of such instructions, the Contractor suffer delay and/or incurs costs then the Engineer shall, after due consultation with the Employer, determine:

- a) any extension of time to which the Contractor is entitled under clause 8(d), and
- b) the amount of such costs, which shall be added to the Contract Price, and shall notify the contractor accordingly, with a copy to Employer.
- c) Materials of any kind obtained from excavation of the site shall remain the property of the Municipal Corporation and shall be disposed off as the Engineer may direct.

5.r)Protection of trees:

Trees designated by the Engineer shall be protected from damage during the course of the work and earth level within one meter of each such tree shall not be changed. Where necessary, such trees shall be protected by temporary fencing. All such cost shall be borne by the Contractor.

5.s) Contractor to preserve peace:

The Contractor shall at all times during the progress of the work take all requisite precaution and use his best endeavors for preventing any riotous or unlawful behavior by or amongst the workers and other employed on the works and for the preservation of peace and protection of the inhabitants and security of property in the neighborhood of the works. He shall also pay the charges of such special police (if any) as the Engineer may deem necessary.

5.t)Sanitation:

The Contractor shall, at his own cost, make all necessary provisions for health and safety of his work-people. He shall, when required by the Engineer, provide proper latrines and urinals to the satisfaction of the Engineer in such numbers and in such localities as he may require, and shall

5.y) Contractor's other liabilities & Insurance:

From commencement to completion of the works, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage and to minimize the loss or damage to the greatest extent possible and shall be liable for any damage or loss that may happen to the works or any part thereof and all Municipal Tools and Plants from any cause whatsoever (Save and except Expected Risks) and shall at his own cost repair and make good the same so that at completion, the works and all Municipal Tools and Plants shall be in good order and condition and in conformity in every respect with the requirements of the Contract and instructions of the Engineer.

In the event of any loss or damage to the works or any part thereof or to any Tool and Plant or to any material or article at the site from any of the Expected Risks of the following provisions shall have effect.

- a. The Contractor shall as may be directed in writing by the Engineer, remove from the site any debris and so much of the works as shall have been damaged, taking to the Municipal Stores such Municipal Tools & Plants articles and / or materials as may be directed.
- b. The Contractor shall, as may be directed in writing by the Engineer, proceed with the erection and completion of the works in accordance with the provisions and conditions of the Contract.

c. There will be added to the Contract price the net amount due, ascertained in the same manner as per deviations, or as prescribed for payment, in respect of the re-execution of the works lost or damaged, the replacement of any Tools and Plants and of any materials and articles lost or damaged but not incorporated in the Works on the day when the loss or damage occurred and removal, by the Contractor as provided above of Municipal Tools and Plants, articles and / or materials to the municipal stores and of the debris and damaged works referred to therein.

Before commencing execution of the work, the Contractors shall without in any way limiting his obligations and responsibilities under this condition, insure against any damage loss or injury which may occur to any property (Private, Government and / or Municipal) or to any person (including any employee of the Municipal Corporation) by or arising out of the contract.

“All insurances to be affected by the Contractors and / or his sub-contractors shall be taken out with Directorate of Insurance, Maharashtra State only”. In case, however, a particular aspect is not covered under the policy to be obtained from the Directorate of Insurance, Maharashtra State, the Contractor will be allowed to have such insurance from other insurance company with the prior permission of the Commissioner.

If required by the Engineer, the Contractor shall, without limiting the obligations and responsibilities under this condition insure that work (from commencement to completion) the Municipal Tools and Plants hired by the Contractor and all materials at site at their full value against the risk of loss or damage from whatever cause arising, other than that of the Excepted Risks. The said insurance shall be in the joint names of the Commissioner and the Contractor, and the Contractor shall deposit with the Commissioner the said policy or policies along with the receipts for premium of such insurance from time to time. All moneys payable by the insurers under such policy or policies shall be recovered by the Municipal Corporation and shall be paid to the Contractor in installments by the Commissioner for the purpose of rebuilding or replacement or repair of the works and or goods destroyed or damaged as the case may be.

If the Contractor has a blanket insurance policy for all his works and the policy covers all the items to be insured under this condition, the said policy shall be assigned by the Contractor, in favor of the Municipal Corporation; provided, however, if any amount is payable under the policy by the insurers in respect of Works other than the works under this Contract the same maybe recovered by the Contractor directly from the insurers.

PROVIDED always that the Contractor shall not be entitled to payment under the above provisions in respect of so much loss or damage as have been occasioned by any failure on his part to perform his obligations under the Contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage.

Where a Municipal Building part thereof is rented by the contractor or is allowed to be used by him he shall insure the entire building if the building or any part thereof is used by him for the purpose of storing or using materials of combustible nature as to which the decision of the Engineer shall be final and binding.

The Contractor shall indemnify and keep indemnified the Municipal Corporation against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of the work and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

PROVIDED always that nothing herein contained shall be deemed to render the Contractor liable for or in respect of or to the Municipal Corporation against any compensation or damage caused by the Expected Risks.

The Contractor shall at all times indemnify the Municipal Corporation against all claims, damages or compensation under the provisions of Payment of Wages Act, 1936, Minimum Wages Act 1948, Employers Liability Act, 1938, the Workmen’s Compensation Act, 1923, Industrial Dispute Act 1947, Indian Factories Act 1948 and Maternity Benefit Act 1961 or any modifications thereof and rules made

there under from time to time or as a consequence or any accident or injury to any workman or other persons in or about the works, whether in the employment of the Contractor or not, save and except where such accident or injury have resulted from any act of the Municipal Corporation, their agents or servants and also against all cost, charges and expenses of any suit, action or proceedings arising out of such accident or injury and against all sum or sums which may with the consent of the Contractor be paid to compromise or compound any such claim without limiting his obligations and liabilities as above provided. The Contractor shall insure against all claims damages or compensation payable under the various acts mentioned above or any modifications thereof or any other law relating thereto. Third party policy should be valid till the end of contractual obligation of contractor for reasons attributable to the scope of work of contractor.

The aforesaid insurance policies shall provide that they shall not be canceled till the Commissioner has agreed to their cancellations.

The Contractor shall prove to the Commissioner from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premium for keeping the policies alive till the expiry of the Defects Liability Period after completion of work for a period not exceeding 12 months as per directives of Directorate of Insurance, Maharashtra State.

The Contractor shall ensure that similar insurance policies are taken out by his sub-Contractors (if any) and shall be responsible for any claims or losses to the Municipal Corporation resulting from their failure to obtain adequate insurance protection in connection thereof. The Contractor shall produce or cause to be produced by his Sub-Contractor (if any) as the case may be, the relevant policy or policies and premium receipts as and when required by the Commissioner.

If the Contractor and / or his sub-Contractors (if any) shall fail to effect and keep in force the insurance referred above for any other insurance which he / they may require to effect under the terms of Contract then and in any such case the Commissioner may without being bound to effect and keep in force any such insurance and pay premium or premium as may be necessary for that purpose and from time to time deduct the amount so paid by the Municipal Corporation plus 20 percent of premium or permit amount as service charges from any money due or which may become due to the Contractor or recover the same as debt from the Contractor. All insurances to be effected by the contractor and / or his sub-contractor shall be taken out only with the insurance Company or companies approved by the Municipal Commissioner.

The Contractors shall conform in all respects, including, by the giving of all notices and the paying with all the fees, with the provision of:

a) Any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and

b) The rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works, and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of such provision. Provided always that the employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and shall indemnify the Contractor.

5.z) Changes in constitution: Where the contractor is a partnership firm, the prior approval in writing of the Commissioner shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or Hindu Undivided Family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership form would have the right to carry out the work hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained the contract shall be deemed to have been assigned in contravention of the condition no.13 g hereof and the same action may be taken and the same consequences shall ensure as provided for in the said condition.

5.aa) Facilities to the other Contractors :

The contractor shall, in accordance with the requirements of the Engineer, afford all reasonable facilities to other Contractors engaged contemporaneously on separate Contracts in connection take all steps necessary to compel his work-people to resort to such latrines and urinals, and shall dismiss from his employ and remove from the works any one detected obeying the calls of nature in any place, other than the conveniences allotted for such purposes. The said latrines shall be under the superintendence and orders of the Engineer or his subordinates, and shall be served with Municipal Halalkhore service. The Contractor shall, on no account, allow any huts to be erected on Municipal property unless otherwise permitted by the Engineer in writing, to be inhabited after sunset by anyone except the watchmen required for the Works, and none of his employees, except such watchmen as aforesaid, shall sleep at night on any part of the Works. In case of any offence committed by any of the staff/workers or employees of the Contractor against any of the provisions of this condition the Contractor shall be liable to a penalty not exceeding Rupees Ten thousand per day for every such offense and the same shall be charged to the amount of the Contractor.

If the works are situated outside the limits of Greater Mumbai, rules and regulations of the local authority shall be made applicable to the Contractors and all the cost and any local taxes thereof shall be borne by the Contractor.

5.u Safety Provisions:

The Contractor shall at his own expense arrange for the safety provisions indicated in Annexure 'C' or as required by the Engineer, in respect of all labour directly or indirectly employed for performance of the Works and shall provide all facilities in connection therewith. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid, the Engineer shall be entitled to do so and recover the costs thereof from the Contractor.

5.v) Provision of first aid.:

The Contractor shall at his own cost provide and maintain at the site of works a standard first aid box as directed and approved by the Engineer for the use of his own as well as the Municipal Staff on site.

5.w) Apprentices :

The Contractor shall during the term of this agreement maintain as a part of his organization a system of apprenticeship for training craftsmen, as may be approved by the Engineer. Failure on the part of the Contractor to observe the stipulations of this condition shall be deemed to be a failure to employ a sufficient number of proper and efficient workmen within the meaning of Clause 2b and all the rights and remedies of the Commissioner therein provided including the power to determine the Contract shall be applicable in such case. The Contractor shall duly comply with provisions of the Apprentice Act (1961); failure or neglect to which he shall be subject to all liabilities and penalties provided by the said Act and Rules

5.x) Storage of Explosives:

The Contractor shall obtain the previous permission of the competent authority such as the Chief of Fire Services for the site, manner and method of storing explosives near the site of work. All handling of explosives, including storage, transport shall be carried out under the rules approved by The Petroleum and Explosives Safety Organization (PESO) formerly Department of Explosives, Nagpur.

5.y) Contractor's other liabilities & Insurance:

From commencement to completion of the works, the Contractor shall take full responsibility for the care thereof and for taking precautions to prevent loss or damage and to minimize the loss or damage to the greatest extent possible and shall be liable for any damage or loss that may happen to the works or any part thereof and all Municipal Tools and Plants from any cause whatsoever (Save and except Expected Risks) and shall at his own cost repair and make good the same so that at completion, the works and all Municipal Tools and Plants shall be in good order and condition and in conformity in every respect with

the requirements of the Contract and instructions of the Engineer.

In the event of any loss or damage to the works or any part thereof or to any Tool and Plant or to any material or article at the site from any of the Expected Risks of the following provisions shall have effect.

a. The Contractor shall as may be directed in writing by the Engineer, remove from the site any debris and so much of the works as shall have been damaged, taking to the Municipal Stores such Municipal Tools & Plants articles and / or materials as may be directed.

b. The Contractor shall, as may be directed in writing by the Engineer, proceed with the erection and completion of the works in accordance with the provisions and conditions of the Contract.

c. There will be added to the Contract price the net amount due, ascertained in the same manner as per deviations, or as prescribed for payment, in respect of the re-execution of the works lost or damaged, the replacement of any Tools and Plants and of any materials and articles lost or damaged but not incorporated in the Works on the day when the loss or damage occurred and removal, by the Contractor as provided above of Municipal Tools and Plants, articles and / or materials to the municipal stores and of the debris and damaged works referred to therein.

Before commencing execution of the work, the Contractors shall without in any way limiting his obligations and responsibilities under this condition, insure against any damage loss or injury which may occur to any property (Private, Government and / or Municipal) or to any person (including any employee of the Municipal Corporation) by or arising out of the contract.

“All insurances to be affected by the Contractors and / or his sub-contractors shall be taken out with Directorate of Insurance, Maharashtra State only”. In case, however, a particular aspect is not covered under the policy to be obtained from the Directorate of Insurance, Maharashtra State, the Contractor will be allowed to have such insurance from other insurance company with the prior permission of the Commissioner.

If required by the Engineer, the Contractor shall, without limiting the obligations and responsibilities under this condition insure that work (from commencement to completion) the Municipal Tools and Plants hired by the Contractor and all materials at site at their full value against the risk of loss or damage from whatever cause arising, other than that of the Excepted Risks. The said insurance shall be in the joint names of the Commissioner and the Contractor, and the Contractor shall deposit with the Commissioner the said policy or policies along with the receipts for premium of such insurance from time to time. All moneys payable by the insurers under such policy or policies shall be recovered by the Municipal Corporation and shall be paid to the Contractor in installments by the Commissioner for the purpose of rebuilding or replacement or repair of the works and or goods destroyed or damaged as the case may be.

If the Contractor has a blanket insurance policy for all his works and the policy covers all the items to be insured under this condition, the said policy shall be assigned by the Contractor, in favor of the Municipal Corporation; provided, however, if any amount is payable under the policy by the insurers in respect of Works other than the works under this Contract the same maybe recovered by the Contractor directly from the insurers.

PROVIDED always that the Contractor shall not be entitled to payment under the above provisions in respect of so much loss or damage as have been occasioned by any failure on his part to perform his obligations under the Contract or not taking precautions to prevent loss or damage or minimize the amount of such loss or damage.

Where a Municipal Building part thereof is rented by the contractor or is allowed to be used by him he shall insure the entire building if the building or any part thereof is used by him for the purpose of storing or using materials of combustible nature as to which the decision of the Engineer shall be final and binding.

The Contractor shall indemnify and keep indemnified the Municipal Corporation against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and maintenance of the work and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto.

PROVIDED always that nothing herein contained shall be deemed to render the Contractor liable for or in respect of or to the Municipal Corporation against any compensation or damage caused by the Expected Risks.

The Contractor shall at all times indemnify the Municipal Corporation against all claims, damages or compensation under the provisions of Payment of Wages Act, 1936, Minimum Wages Act 1948, Employers Liability Act, 1938, the Workmen's Compensation Act, 1923,

Industrial Dispute Act 1947, Indian Factories Act 1948 and Maternity Benefit Act 1961 or any modifications thereof and rules made there under from time to time or as a consequence or any accident or injury to any workman or other persons in or about the works, whether in the employment of the Contractor or not, save and except where such accident or injury have resulted from any act of the Municipal Corporation, their agents or servants and also against all cost, charges and expenses of any suit, action or proceedings arising out of such accident or injury and against all sum or sums which may with the consent of the Contractor be paid to compromise or compound any such claim without limiting his obligations and liabilities as above provided. The Contractor shall insure against all claims damages or compensation payable under the various acts mentioned above or any modifications thereof or any other law relating thereto. Third party policy should be valid till the end of contractual obligation of contractor for reasons attributable to the scope of work of contractor.

The aforesaid insurance policies shall provide that they shall not be canceled till the Commissioner has agreed to their cancellations.

The Contractor shall prove to the Commissioner from time to time that he has taken out all the insurance policies referred to above and has paid the necessary premium for keeping the policies alive till the expiry of the Defects Liability Period after completion of work for a period not exceeding 12 months as per directives of Directorate of Insurance, Maharashtra State.

The Contractor shall ensure that similar insurance policies are taken out by his sub-Contractors (if any) and shall be responsible for any claims or losses to the Municipal Corporation resulting from their failure to obtain adequate insurance protection in connection thereof. The Contractor shall produce or cause to be produced by his Sub-Contractor (if any) as the case may be, the relevant policy or policies and premium receipts as and when required by the Commissioner.

If the Contractor and / or his sub-Contractors (if any) shall fail to effect and keep in force the insurance referred above for any other insurance which he / they may require to effect under the terms of Contract then and in any such case the Commissioner may without being bound to effect and keep in force any such insurance and pay premium or premium as may be necessary for that purpose and from time to time deduct the amount so paid by the Municipal Corporation plus 20 percent of premium or permit amount as service charges from any money due or which may become due to the Contractor or recover the same as debt from the Contractor. All insurances to be effected by the contractor and / or his sub-contractor shall be taken out only with the insurance Company or companies approved by the Municipal Commissioner.

The Contractors shall conform in all respects, including, by the giving of all notices and the paying with all the fees, with the provision of:

(a) Any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and

(b) The rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works, and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of such provision. Provided always that the employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and shall indemnify the Contractor.

5.z) Changes in constitution: Where the contractor is a partnership firm, the prior approval in writing of the Commissioner shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or Hindu Undivided Family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership form would have the right to carry out the work hereby undertaken by the Contractor. If prior approval as aforesaid is not obtained the contract shall be deemed to have been assigned in contravention of the condition no.13 g hereof and the same action may be taken and the same consequences shall ensue as provided for in the said condition.

5.aa) Facilities to the other Contractors :

The contractor shall, in accordance with the requirements of the Engineer, afford all reasonable facilities to other Contractors engaged contemporaneously on separate Contracts in connection with the Works and for departmental labour and labour of any other properly authorized authority or statutory body which may be employed at the Site on execution of any work not included in the Contract or of any Contract which the Municipal Corporation may enter into in connection with or ancillary to the Works.

5.ab) Patent, Right and Royalties:

The contractor shall save harmless and indemnify the Corporation from and against all claims and proceedings for or on account of infringement of any Patent rights, design trademark or name of other protected rights in respect of any constructional plant, machine work, or material used for or in connection with the Works or any of them and from and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. Except where otherwise specified, the contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the works or any of them.

5.ac) Production of Vouchers:

The Contractor shall, produce all quotations, invoices vouchers and accounts or receipt etc. to prove that the materials supplied by him are in conformity with the specifications laid down in the Contract and the same are brought to the site and utilized on the said works.

5.ad) Employment of local personnel:

The contractor is encouraged to the extent practicable and reasonable to employ staff and labour with appropriate qualifications from locally or within India available man power.

5.ae) Personnel:

The Contractor shall employ the key personnel named in the schedule of key personnel (annexure E) or other personnel approved by the Engineer to carry out the functions. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities and relevant experience are substantially equal to or better than those of the personnel listed in the schedule.

5. af) Contractor to keep site clear / Clearance of site after completion of works

- i) Upon the issue of any Taking over certificate the Contractor shall clear away and remove from that part of the site to which such Taking-over Certificate relates all contractor's equipment, surplus materials, rubbish and temporary works of every kind, and leave such part of the site and works clean and in a workman like condition to the satisfaction of the Engineer. If the contractor does not clear the site within 15 days all material will be confiscated and no compensation shall be paid and the site will be cleared at risk and cost of the Contractor. A penalty of minimum Rs5000/ per day per site on part thereof shall be levied on the contractor till the requirements of this clause are complied with satisfaction of the Engineer.
- ii) Contractor shall ensure that all vehicles leaving the site shall be cleared adequately to avoid spreading of dirt, dust and mud in the surrounding premises. Also, no material carried in the vehicle shall be allowed to spill material over the sides on the roads, pavement, etc. Any noncompliance will attract penalty as per condition number 14a.

5. ag) Clearance of site after completion of works

- i) Upon the issue of any Taking over certificate the Contractor shall clear away and remove from that part of the site to which such Taking-over Certificate relates all contractor's equipment, surplus materials, rubbish and temporary works of every kind, and leave such part of the site and works clean and in a workman like condition to the satisfaction of the Engineer. If the contractor does not clear the site within 15 days all material will be confiscated and no compensation shall be paid and the site will be cleared at risk and cost of the Contractor.

6.Labour:

6.a) Employment of labour:

- i) The Contractor shall employ the labour in sufficient numbers to maintain the required rate of progress and of quality to ensure workmanship, of the degree specified in the Contract and to the satisfaction of the Engineer. The Contractor shall not employ in connection with the Work any child who has not completed his 15th year of age. He shall also not employ an adolescent who has not completed his 18th year unless he is certified fit for work as an adult as prescribed under clause (b) of sub-section (2) of section 69 of the Factories Act, 1948.

The Contractor shall also see that all the provisions regarding employment of yond persons covered by the Employment of Children Act, 1933 and the Factories Act, 1948 as amended from time to time shall be fully complied with. The Contractor shall also see that the provisions set for under the Minimum Wages Act and contract regulation and abolition Act, 1970 with the Maharashtra Contract Labour (Regulation and Abolition) Rules 1971 as amended from time to time are fully complied with by him and shall maintain necessary registers and records for payment of wages, overtime, etc. made to his workmen as required by the Conciliation Officer (Central), Ministry of Labour, Government of India, or such other authorized person appointed by the Central or State Government.

The Contractor shall make his own arrangement for the engagement of all labour local or otherwise.

The Contractor shall be encouraged to employ, to the extent practicable and reasonable, staff and labour from sources within India.

The Contractor shall indemnify the Municipal Corporation or any agent, servant or employee of Municipal Corporation for any lapses on the part of contractor on account of non-compliance of above referred acts.

- ii) Supply of Water : The Contractor shall having regard to local conditions, provide on the site, to the

satisfaction of the Engineer's representative, an adequate supply of drinking and other water for the use of Contractor's staff and work people.

iii) Alcoholic Liquor or drugs: The Contractor shall not otherwise than in accordance with statutes, ordinances and Government regulation or orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importations, sale, gift, barter or disposal of his sub-contractor, agents or employees.

iv) Arms and Ammunitions: The Contractor shall not give, barter or otherwise dispose off to any person or persons, any arms or ammunitions of any kind or permit or suffer the same as aforesaid.

v) Festivals and Religious Custom. The Contractor shall in all dealings with labour in his employment have due regard to all recognized festivals, days of rest and customs religious or other customs.

vi) Epidemics In the event of any out-break of illness of an epidemic nature the contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities for the purpose of dealing with and overcoming the same.

vii) Disorderly conducts etc: The Contractor shall at all times take all reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preparation of peace and protection of persons and property in the neighborhood of the works against the same.

viii) Observance by Sub-contractors The Contractor shall be responsible for observance by his sub-contractors of the foregoing provisions.

ix) Return of Labour etc: The Contractor shall, if required by the Engineer, deliver this to the Engineer's Representative, or office, a return in detail in such form and at such intervals as Engineer may prescribe showing supervisory staff and the number of the several class of labour from time to time employed by the Contractor on the Site and such information respecting constructional plant as the Engineer's representative may require.

x) Safety Engineer The Contractor shall have on his staff at the Site an officer whose sole task shall be to deal with matters regarding the safety and protection against accidents of all staff, labour and Contractor's Equipment. This officer shall be qualified for this work and shall have the authority to issue instructions and shall take protective measures to prevent accidents.

xi) Burial or Cremation of the Dead The Contractor shall make all necessary arrangements for the transport, to any place as required for burial or cremation, of any of his expatriate employees or members of their families who may die in India. The Contractor shall also be responsible to the extent required by the local regulations, for making any arrangements with regard to burial or cremation of any of his local employed who may die while engaged upon the Works.

xii) Work Permits for Foreign Personnel The Government of India maintains a system of strict regulations concerning the employment and residence of foreign personnel in India.

xiii) Measures Against Insect and Pest Nuisance As soon as practicable after receipt of the Letter of Acceptance, the Contractor shall ascertain the current requirements of the regulations from the authorities concerned and shall ensure that such requirements are complied with in all respects.

xiv) Repatriation of Labour The Contractor shall be responsible for the timely acquisition and subsequent maintenance of the necessary permits for all of his employees who are required to work and/or reside in India at any time during the course of the Contract. The Contractor shall further ensure that all Sub-Contractors employed by him comply with the forgoing requirements in respect of their employees

6.b) Compliance with Labour Regulation:

During compliance of the contract, the Contractor and his sub-contractors shall abide at all times by all

existing labour enactments and rules made there under, regulations, notifications and bye laws of State or Central Government or local authority and any other law (including rules), regulations, bye laws that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given below. The provisions quoted are only indicative. The contractor should refer the latest labour regulations bye-laws etc. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. The Employer is caused to pay or reimburse, such amounts as may be necessary to cause of observe, or for non-observance of the provisions stipulated in the notifications including amendments if any, on the part of the contractor, the Engineer / Employer shall also have right to recover from the contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the contractor and the sub-contractor in no case shall be treated as the employees of the Employer at any point of time.

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- Workman Compensation Act, 1923:

The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

- Payment of Gratuity Act, 1972:

Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed 5 years service or more or on death at the rate of 15 days wages for every completed year of service. The act is applicable to all establishments employing 10 or more employees.

- Employees PF and Miscellaneous Provision Act, 1952:

The Act provides for monthly contributions by the employer plus workers @ 10% or 8.33%. The benefits payable under the Act are –

- Pension or family pension on retirement or death as the case may be.
- Deposit linked insurance on the death in harness of the worker.
- Payment of PF accumulation on retirement / death, etc.

- Maternity Benefit Act, 1951:

Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

- Contract labour (Regulation and Abolition) Act, 1970:

The Act provides for certain welfare measures to be provided by the contractor to contract labour and in case the contractor fails to provide, the same are required to be provided by the Principal Employers by law. The principal employer is required to take Certificate of Registration and the Contractor is required to take a License from the designated Officer. The Act is applicable to the establishment or contractor of principle employer if they employ 20 or more contract labour.

- Minimum Wages Act, 1948:

The Employer is supposed to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the act if the employment is a scheduled employment Construction of buildings, roads, runways are scheduled employments.

- Payment of Wages Act, 1936:

It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

- Equal Remuneration Act, 1979:

The Act provides for payment of equal wages for work of equal nature to Male & Female workers and not for making discrimination against Female employees in the matters of transfers, training and promotions, etc.

- Payment of Bonus Act, 1965:

The Act is applicable to all establishments employing 20 or more workmen. The Act provides for payments of annual bonus subject to a minimum of 8.33% of wages and maximum of 200% of wages to employees drawing Rs.35,000/- p.m. or less. The bonus to be paid to or employees getting Rs.2,500/- p.m. above upto 3,500/- p.m. shall be worked out by taking wages as Rs.2,500/- p.m. only. The act does not apply to certain establishments. The newly set up establishments are exempted or five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of the Act.

- Industrial Disputes Act, 1947:

The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

- Industrial Employment (Standing Orders) Act, 1946:

It is applicable to all establishments employing 1000 or more workmen (employment size reduced by some of the States and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the employer or matters provided in the Act and get the same certified by the designated Authority.

- Trade Unions Act, 1926:

The Act lays down the procedure for registration of trade unions of workmen and employers. The trade unions registered under the Act have been given certain immunities from civil and criminal liabilities.

- Child labour (prohibition and regulation) Act, 1986:

The Act prohibits employment of children below 14 years of age in certain occupation and processes and provides for regulation of employment of children in all other occupations and processes. Employment of child labour is prohibited in Building and Construction Industry.

- Inter-State migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979:

The Act is applicable to an establishment which employees 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The inter-state migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, traveling expenses from home upto the establishment and back, etc.

- The Building & other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996.

All the establishments who carry on any building or other construction work and employ 10 or more workers are covered under this Act. All such establishments are required to pay cess at rate no exceeding 2% of the cost of construction as may be notified by the government. The employer of the establishment is required to provide safety measures at the Building or Construction work and other welfare measures, such as, Canteens, First-Aid facilities, ambulance, housing accommodation for workers near the workplace etc. The employer to whom the Act applies has to obtain a registration certificate from the

Registering Officer appointed by the Government.

- The Factories Act, 1948:

The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

xvii) E.S.I.C. Act, 1948

The tenderer shall have valid registration certificate under E.S.I.C Act 1948, if the tenderer/bidder has less than 10(ten) or more than 20(twenty) Employee/persons on his establishment and work is carried out with the help of energy. This shall be submitted on undertaking on stamp paper of Rs.100/-.

6.c) Regulation Employment Welfare:

The Contractor, which expression shall include sub-contractor or any such person or group of persons representing the contractor who are and, required to handle iron and steel materials shall register themselves as employer with the Mumbai Iron and Steel Labour Board and shall completely fulfill all the obligatory provisions of the Maharashtra Mathadi, Hamal and other Manual Workers (Regulation of Employment Welfare Act, 1969) and the Mumbai Iron and Steel Unprotected Workers (Regulation of Employment and Welfare Scheme, 1970). The consequences of failure of compliance of any of these provisions will entirely be the liability and responsibility of the Contractor.

7. Materials, Plant and Workmanship

7.a) Plant and Equipment:

The Contractor shall arrange at his own expense all tools, plant and equipment required for execution of Works. If required by the Contractor and if available the Municipal Corporation may supply such of the tools, plant and equipment as are available, to the Contractor at the rates and terms to be specified by the Engineer. No tools, plant and equipment once brought to the work site shall be removed without the written permission or order of the Engineer, until he has certified the completion of the work.

If any Tools, Plants and equipment brought on site, are in the opinion of the Engineer inefficient, bad or of inferior quality or are unsuited for the Works then such tools, plant and equipment shall not be used on the Works but shall be removed by the Contractor at his own expense within twenty four hours after the service of a written order or notice from the Engineer to that effect and fresh tools, plant and equipment be substituted in lieu of that ordered to be removed by the Engineer. The Employer will use his best endeavors in assisting the Contractor, where required, in obtaining clearance through the Customs of Contractor's equipment, material and other things required for the Works but shall not be liable to the Contractor for any loss resulting from clearance being delayed or refused.

7.b) Use of Specification B.I.S.:

In case where no particular specification is given for any article to be used under the contract, the relevant specification, where on B.I.S. exists, of the Bureau of Indian Standards.

(BIS 1200) shall apply.

The contractor shall execute the whole and every part of the work the most substantial and workman like manner and both has regards material and every other respect in strict accordance with specifications. The contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer Incharge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office, or on the site or work during office hours. The contractor shall be entitled to receive three sets of contract drawings and working drawings as well as one certified copy of the accepted tender along with the work order free of cost.

7.c) Work to be open to Inspection and Contractor or Responsible agent to be present:

All works under or incourse of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Eng-in-charge and his subordinates and the contractor shall at all times during the usual working hours, at all other times, during the usual working hours and at all other times at which reasonable notice of the intention of the Eng-in-charge and his subordinates to visit the works shall have been given to the contractor, either himself be present to receive orders and instruction or have responsible agent duly accredited in writing present for that purpose. Order given to the contractors' duly authorized agent shall be considered to have the same force and effect as if they had been given to the contractor himself.

The Engineer and any person authorized by him shall at all reasonable times have access to the site and to all workshops and places where materials or plant are being manufactured. Fabricated or prepared for the works and the contractor shall afford every facility for and every assistance in obtaining the right to such access.

The Engineer shall be entitled, during manufacture, fabrication or preparation to inspect and test the material and plan to be supplied under the contract. If materials or plant are being manufactured, fabricated or prepared in workshops or places other than those of contractor, the contractor shall obtain permission for the Engineer to carry out such inspection and testing in those workshop or places. Such inspection or testing shall not release the Contractor from any obligation under the contract.

All works embracing more than one process shall be subject to examination and approval at each stage thereof and the contractor shall give due notice to the Engineer or his authorized representative when each stage is ready. In default of such notice, the Engineer shall be entitled to appraise the quality and extent thereof.

No work shall be covered up or put out of view without the approval of the Engineer or his authorized representative and the contractor shall afford full opportunity for examination and measurement of any work which is about to be covered up or out of view and for examination of foundation before permanent work is placed thereon.

The Contractor shall give due notice to the Engineer or his authorized representative whenever any such work or foundation is ready for examination and the Engineer or his representative shall without unreasonable delay, unless he consider it necessary and informs the contractor, in writing accordingly, attend for the purpose of examining and measuring such work or examining such foundations. In the event of the failure of the contractor to give such notice he shall, if required by the Engineer, uncover such work at the Contractor's expense.

The contractor shall agree with the Engineer on the time and place for the inspection or testing of any materials of plans as provided in the contract. The Engineer shall give the contractor reasonable advance

notice of his intention to carry out the inspection or to attend the tests. If the Engineer, or his duly authorized representative, does not attend on the date agreed, the contractor may, unless otherwise instructed by the Engineer, proceed with the tests, which shall be deemed to have been made in the presence of the Engineer. The contractor shall forthwith forward to the Engineer duly certified copies of the test readings. If the Engineer has not attended the tests, he shall accept the said readings as correct.

If at the time and place agreed the materials or plant are not ready for inspection or testing or if, as a result of the inspection or testing referred to in this Clause, the Engineer determines that the materials or plant are defective or otherwise and not in accordance with the contract, he may reject the materials or plant and shall notify the Contractor thereof immediately. The notice shall state the Engineer's objections with reasons. The contractor shall then make good the defect or ensure that rejected materials or Plant comply with the contract. If the Engineer so requests, the tests of rejected materials or plant shall be made or repeated under the same terms and conditions. All costs incurred by the Employer by the repetition of the tests shall after due consultation with the Employer be determined by the Engineer and shall be recoverable from the contractor by the Employer and maybe deducted from any sums due or to become due to the contractor and the Engineer shall notify the contractor accordingly.

The Engineer shall have authority to issue instructions from time to time for (a) the removal from the site within such time or times as may be specified in the instruction of any materials or plant which is the opinion of the Engineer, are not in accordance with the contract. (b) the substitution of proper and suitable materials or plant and (c) the removal and proper re-execution notwithstanding any previous test thereof or interim payment therefore of any work which in respect of :

i) materials plant or workmanship or ii) design by the contractor or for which he is responsible, is not, in the opinion of the Engineer, in accordance with the contract.

In case of default on the part of the contractor in carrying out such instruction within the time specified therein or, if non, within a reasonable time, the Employer shall be entitled to employ and a other persons to carry out the same and all costs consequent thereon or incidental shall, after due consultation with the Employer, be determined by the Engineer and shall be recoverable from the contractor by the Employer from any monies due or to become due to the contractor and the Engineer shall notify the contractor accordingly.

Departmental officers concerned with the works shall have powers to any time to inspect examine any part of the works and the contractor shall give such facilities as may be required for such inspection and examination.

The Engineer may delegate inspection and testing of materials or plant to an independent inspector. For this purpose such independent inspector shall be considered as an assistant of the Engineer. Notice of such appointment (not being less than 14 days) shall be given by the Engineer to the Contractor.

7.d) Uncovering and making good:

The Contractor shall uncover any part of the works and / or make opening in or through the same as the Engineer may from time to time direct for his verification and shall reinstate and make good such part to the satisfaction of the Engineer, if any such part has been covered up or put out of view after being approved by the Engineer and is subsequently found on uncovering to be executed in accordance with the contract, the expenses of uncovering and / or making openings in or through, reinstating and making good the same shall be borne by the Corporation except in cases where uncovering etc is ordered by the Engineer as a reasonable consequence of previously detected defective work or its symptoms suggesting a failure to comply with the contract. In any other case all such expenses shall be borne by the Contractor.

7.d) i) Notice To Be Given Before Work Is Covered Up

The contractor shall give not less than ten days' notice in writing to the Eng-In-Charge or his subordinate incharge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimension thereof taken before the same is so covered up or placed beyond the reach of measurements and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Eng-In-Charge or his subordinate incharge of the work, and if any work shall be covered up or placed beyond the reach of measurement, without such notice having been given or consent obtained the same shall be uncovered at the contractors expenses, and in default thereof no payment or allowance shall be made for such work or for the materials with which the same was executed

7.e) Materials:

- Material to be provided by the Contractor:

All materials to be provided by the Contractor shall be in conformity with the specifications laid down in the contract and the Contractor shall, furnish proof to the satisfaction of the Engineer that the materials so comply. Contractor shall produce proof viz. challans, bills, vouchers, etc. so as to ensure that the material was brought on site and quantities used as per the norms, specifications, etc.

The Contractor shall, at his own expense and without delay, supply to the Engineer samples of materials proposed to be used in the Works. The Engineer shall within seven days of supply of samples or within such further period as he may require and intimated to the contractor in writing, inform the contractor whether the samples are approved by him or not. If the samples are not approved the contractor shall forthwith arrange to supply to the Engineer for approval fresh samples complying with the specifications laid down in the contract.

The Engineer shall have full powers to require removal of any or all of the materials brought to site by the Contractor which are not in accordance with the contract specifications or which does not conform in character or quality to the samples approved by him. In case of default on the part of the Contractor in removing the rejected materials, the Engineer shall be at liberty to have them removed by other means. The Engineer shall have full powers to procure other proper materials to be substituted for rejected materials and in the event of the Contractor refusing to comply, he may cause the same to be supplied by other means. All costs, which may attend upon such removal and / or substitution shall be borne by the Contractor.

Subject as hereinafter provided in Clause 3(a), all charges on account of Octroi, terminal or sales tax and other duties on material obtained for the works from any source shall be borne by the Contractor.

The Engineer shall be entitled to have tests carried out as specified in the contract for any materials supplied by the Contractor other than those for which as stated above, satisfactory proof has already been produced, at the cost of the contractor and the contractor shall provide at his expense all facilities which the Engineer may require for the purpose.

If no tests are specified in the contract, and such tests are required by the Engineer the contractor shall provide all facilities required for the purpose and charges for these tests shall be borne by the contractor. In case of third party audit, the cost implication has to be borne by the contractor.

The cost of the materials consumed in test shall be borne by the contractor in all cases except when otherwise provided. If the materials used on works are found to be substandard in the test, then the same will be removed by the contractor and replaced by good materials at his cost.

7.f) Stock of Materials required:

The Contractor shall at his own expense provide and furnish himself with sheds and yards in such situations and in such numbers as, in the opinion of the Engineer are requisite for carrying out the Works

under this contract, and the Contractor shall keep at each of the sheds and yards a sufficient quantity of materials in stock so as not to delay the carrying out of works with due expedition and the Engineer and his subordinates shall have free access to the said sheds or yards at any time for the purpose of inspecting the stock of materials so kept in hand any material or article, which the Engineer may object to, shall not be brought upon or used in the work but shall be forthwith removed from the sheds or yards by the contractor at his own cost. The contractor will however be allowed to use for the above purpose the completed portion of the buildings if available.

7.g) Photographs of the works:

No photographs of the work or any part thereof or equipment employed thereon shall be taken or permitted by the contractor to be taken by any of his employees or any employees of his sub-contractor without the prior approval of the Engineer in writing and no such photographs shall be published or otherwise circulated without the approval of the Engineer in writing.

8.Suspension, Commencement and delays

8.a) Suspension of work:

- The contractor shall, on receipt of the order in writing of the Engineer, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer may consider necessary for any of the following reasons:-
- On account of continued non-compliance of the instructions of the Engineer or any other default on the part of the contractor, or
- For proper execution of the works or part thereof for reasons other than the default of the contractor, or
- For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer.

- If the suspension is ordered for reasons (i) and (iii) in sub-para (a) above, the contractor shall be entitled to an extension of time equal to the period of every such suspension plus a reasonable time as decided by the Engineer.

If the suspension is ordered for reasons of (i) in sub-para (a) above, the Engineer shall have powers to suspend the payment under the contract. Such suspension of payment may be continued until default shall have been rectified.

8.b) Rate of progress:

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Section is at any time, in the opinion of the Engineer, shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on locally recognized days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this Clause, involve the employer in additional supervision costs, such costs, shall, after due consultation with the Employer, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and maybe deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractors accordingly.

8.c) Restriction on Working Hours:

i. No work shall be done between sunset and sunrise or on Sunday or Municipal holidays and except with the special sanction of the Engineer in writing previously obtained and the withholding of such sanctions shall be no ground of complaint on the part of the contractor or cause for compensation to him, or excuse for not completing the work within the contract period. The period within which the work has to be carried out and completed has been fixed in terms of this clause with the provision that the total number of hours of work permissible shall not exceed 48 hours in a week and in no case more than 8 hours on any working day, the actual time within which the said hours shall be worked being subject to mutual arrangements with the Contractor at the commencement of the works or from time to time as may be required and provided that all works shall be stopped for rest and meals for one hour at about mid-day exclusive of the permissible hours aforesaid for the works.

Though sanction may be accorded to the Contractor to work on days and at times otherwise normally non-permissible under this Contract, the Contractor shall be required to bear the cost for such supervision as in the opinion of the Engineer may be necessary at these times. Also he has to obtain the necessary permission from police for working at night times and otherwise normally non-permissible times.

It should be distinctly understood that the granting of permission to work extra hours or to work on Sundays and holidays will be entirely at the discretion of the Engineer and cannot be claimed by the Contractor as a matter of right.

i. If on the other hand the Engineer requires that the work shall be proceeded with on days and at times otherwise normally non-permissible under this contract the contractor shall proceed with the work but he will not be required in such cases to bear the cost of the Municipal establishment employed at the time.

The contractor at all times during the continuance of this contract shall in all his dealings with local labour for the time being employed on the works contemplated by this contract have due regard to all local festivals and religious or other customs and all disputes, matters and questions arising between the contractor and any of his agent on the one hand and any local labour on the other hand with respect to any matter or thing in any way connected with this contract shall be decided by the commissioner whose decision shall be final and binding on all parties.

8.d) Commencement Time and Extension for Delay:

The time allowed for execution for the works as specified in the contract documents shall be the essence of the contract. The execution of the works shall commence from the date specified by the Engineer in writing. If the contractor fails or neglects to commence the execution of the Works as aforesaid, the Municipal Corporation shall without prejudice to any other right or remedy will be at liberty to forfeit the security deposit absolutely.

i) Work during Monsoon: In any case where the time prescribed for completion of any work is exclusive of monsoon period. No new trench work should be started after 15th May and existing trenches are required to be reinstated by 31st May every year. The site shall be cleared in all respect including removal of surplus material on or before 10th June of every year. The monsoon period shall be deemed to be from 10th June to 30th September of the calendar year. However, if the contractor is permitted by the Engineer to work during any monsoon period, all such period shall be taken into account for the calculating the contract period on pro-rata basis as under –

$$\begin{array}{l} \text{Effective cost of work done} \qquad \qquad \qquad \text{No. of days of days} \qquad \qquad \qquad = \\ \text{during monsoon} \qquad \qquad \qquad \times \qquad \text{contract period} \qquad \qquad \qquad \text{Total cost of} \\ \text{contract works} \end{array}$$

In the event of the contractor failing to comply with this condition, he shall be liable to pay a compensation as stated in condition no.8e.

ii) Extension of time for Completion: In the event of –

- a. force majeure such as acts of God, acts of public enemy, acts of Government, floods, epidemics, etc., or
- b. abnormally bad weather, or
- c. serious loss of damage by fire, or
- d. civil commotion, local combination of workmen, strike or lockout of any of the traders employed on the work, or
- e. delay on the part of other Contractors or tradesmen engaged by the Employer in executing Works not forming part of the Contract, or
- f. the ordered variations namely the amount or nature of extra or additional work
- g. reasons stated in Adverse Physical Obstructions or Conditions, Delay and Disruption to Progress, or any other cause which, in the absolute discretion of the Engineer is beyond the Contractor's control.

Being such as fairly to entitle the Contractor to an extension of the time for completion of the works, or any section or part thereof, the Engineer shall, determine the amount of such extension and shall notify the Contractor accordingly.

iii) Contractor to provide notification and detailed particulars: Provided that the Engineer is not bound to make any determination unless the contractor has –

- a) Within 28 days after such event has first arisen notified the Engineer.
 - b) within 28 days, or such other reasonable time as may be agreed by the Engineer, after such notification submitted to the Engineer detailed particulars of any extension of time to which he may consider himself entitled in order that such submission may be investigated at the time
- iv) Interim determination of extension: - Provided also that where an event has a continuing effect such that it is not practicable for the contractor to submit detailed particulars within the period of 28 days referred to in sub clause 8(d), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer interim particulars at intervals of not more than 28 days and final particulars within 28 days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer shall, without undue delay, make an interim determination of extension of time and, on receipt of the final particulars, the Engineer shall review all the circumstances and shall determine an overall extension of time in regard to the event. In both the cases the Engineer shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in decrease of any extension of time already determined by the Engineer.

8.e) Compensation for delay:

If the Contractor fails to complete the works and clear the site on or before the Contract or extended date(s) / period(s) of completion, he shall, without prejudice to any other right or remedy of Municipal Corporation on account of such breach, pay as agreed compensation, amount calculated as stipulated below (or such smaller amount as may be fixed by the Engineer) on the contract value of the whole work

or on the contract value of the time or group of items of work for which separate period of completion are given in the contract and of which completion is delayed for every week that the whole of the work of item or group of items of work concerned remains uncompleted, even though the contract as a whole be completed by the contract or the extended date of completion. For this purpose the term 'Contract Value' shall be the value of the work at Contract Rates as ordered including the value of all deviations ordered.

- Completion period for (originally stipulated or as extended) not exceeding 6 months : to the extent of maximum 1 percent per week.
- Completion period for (originally stipulated or as extended) exceeding 6 months and not exceeding 2 years: to the extent of maximum ½ percent per week.
- Completion period for (originally stipulated or as extended) exceeding 2 years : to the extent of maximum ¼ percent per week.

When the delay is not a full week or in multiple of a week but involves a fraction of a week the compensation payable for that fraction shall be proportional to the number of days involved.

Provided always that the total amount of compensation for delay to be paid this condition shall not exceed the undernoted percentage of the Contract Value of the item or group of items of work for which a separate period of completion is given.

Completion period (as originally stipulated or as extended) not exceeding 6 months: 10percent.

- i. Completion period (as originally stipulated or as extended) exceeding 6 months and not exceeding 2 years : 7½ percent.
- ii. Completion period (as originally stipulated or as extended) exceeding 2 years : 5 percent.
- iii. The amount of compensation may be adjusted set off against any sum payable to the contractor under this or any other contract with the Municipal Corporation.

8.f)Action And Compensation Payable In Case Of Bad Work And Not Done As Per Specifications

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Vigilance Department of the BMC or any organization engaged by the BMC for Quality Assurance and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in-charge of the work or to the officer of Vigilance Department, that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to

pay compensation at the same rate as under clause 8.e of the contract (for Compensation for delay) for this default. In such case the Engineer-in Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the Engineer in charge may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

If the penalisation amount exceeds maximum limit with respect to Clause 8.e of Standard General Conditions of Contract, then a show cause notice shall necessarily be issued to the contract as to why the contract should not be terminated. The contractor will be liable for being banned/ deregistered from business dealings with BMC. This shall be governed by relative provision in Registration Rules of BMC and Cl.no.15 of Standard General Conditions of Contract.

8.g) Completion Certificate:

1) As soon as work is completed, the Contractor shall give notice of such completion to the Engineer and within 28 (Twenty-eight) days of receipt of such notice the Engineer shall inspect the Works and shall furnish the Contractor with a certificate of completion indicating (a) the date of completion, (b) the defects to be rectified by the Contractor, and / or (c) items for which payment shall be made at reduced rates.

When separate period of completion have been specified for items or groups of times, the Engineer shall issue separate completion certificates for such items or group of items. No certificate of completion shall be issued, nor the works be considered to be complete till the Contractor shall have removed from the premises on which the Works has been executed, all scaffolding, sheds and surplus materials, except such as required for rectification of defects, rubbish and all huts and sanitary arrangements required for his workers on the site in connection with the execution of Works as shall have been erected by the Contractor or the workmen and cleaned all dirt from all parts of building(s) in, upon or about which the Work has been executed or of which he may have had possession for the purpose of execution thereof and cleaned floors, gutters and drains, eased doors and sashes, oiled and fastenings, labeled the keys clearly and handed them over to the Engineer or his representative and made the whole premises fit for immediate occupation or use to the satisfaction of the Engineer. If the Contractor shall fail to comply with any of the requirements of this condition as aforesaid, on or before the date of completion of works, the Engineer may at the expense of the contractor fulfill such requirements and dispose of all the surplus materials and rubbish etc. as he thinks fit and the contractor shall have no claims in respect of any such material except for any sum actually realized by the sale thereof less the cost of fulfilling their requirements and any other amount that may be due from the contractor. If the expense of fulfilling such requirement is more than the amount realized on such disposal as aforesaid, the contractor shall forthwith on demand pay such excess.

The contractor's notice of completion as aforesaid shall have to be accompanied with one set of tracings of final completion drawings of RTF and six bound sets of copies of as built drawings wherever applicable and as directed by the Engineer, failing which the notice shall be deemed to have not been issued at all.

2) If at any time before completion of the entire work, items or group of items for which separate periods of completion have been specified, have been completed, the Engineer with the consent of the contractor takes possession of any part or parts of the same (any such part or parts

being hereinafter in this condition referred to as 'the relevant part') then notwithstanding anything expressed or implied elsewhere in this contract.

(a) Within 28 days (twenty-eight days) of date of completion of such items or group of items or possession of the relevant part the Engineer shall issue a completion certificate for the relevant part provided the contractor fulfills his obligation for the relevant part as in sub-para (1) above.

(b) The defects liability period in respect of such items and relevant part shall be deemed to have commenced from the certified date of completion of such items or relevant part as the case may be.

(c) For the purpose of ascertaining compensation for delay under condition 8 in respect of any period during which the works are not completed the relevant part shall be deemed to form a separate item or group, with date of completion as given in the contract or as extended under condition 8 and actual date of completion as certified by the Engineer under this condition.

3) If any part of the work shall have been substantially completed and shall have satisfactorily passed any final test that maybe prescribed under the contract, the Engineer may issue a certificate of completion in respect of that part of the works before completion of the whole works and upon the issue of such certificates, the contractors shall be deemed to have undertaken to complete any outstanding works in that part of the works during the period of maintenance.

8.h) Works where PERT chart is required along with Tender:

The contractor shall along with the tender documents submit a network based on principles of PERT / CPM wherever applicable. Milestones and pre-requisites should also be highlighted along with broad estimates for major resources like cement, steel drawings etc. The Contractors must also specify the minimum resources he will exclusively use for this project. This will include all equipment and all category of labour.

8.i) Network Schedule & Monthly Progress Reports:

On award of the contract, the Contractor shall submit the time schedule for the Works in the form of PERT Networks or Bar-chart wherever applicable. The Engineer may approve the Schedule as submitted or suggest modifications as he thinks necessary. The Contractor shall modify the chart accordingly and obtain Engineer's approval.

The schedules shall be prepared in direct relations to the time stated in the contract documents for completion of items or groups of items of work and or the contract as a whole. It shall indicate the dates of commencement and completion of various activities of the work and may be amended as necessary by agreement between the Engineer and the Contractor.

The interim payment (running bill) payable under contract condition 12 (b) shall be paid only after the network is finally approved by the Engineer.

After the issue of the letter of commencement the Contractor shall finalize the network to the satisfaction of the Engineer. This network should be detailed with a fixed project start and finish dates and should contain no activities with duration greater than 28 days. Milestones would be so determined that at least 10 percent of the events are milestones and no two milestones are more than 3 months apart.

The finalized network may be amended from time to time, if felt necessary by the Contractor, with the approval of the Engineer. A fixed sum shall be held in abeyance at the time of the next interim payment for non-attainment of each milestone in the network and shall be released only on completion of the work after deducting the compensation for delay if there is contractor's fault as per provision in condition 8 and penalty covered under Clause 14a. The fixed sum shall be Rs.10,000/- for all contracts over Rs.25 lakhs and upto the value of Rs.100 lakhs.

Rs.20,000/- for all contracts over Rs.1 crore and upto the value of Rs.5 crores.

Rs.35,000/- for all contracts over Rs.5 crores and upto the value of Rs.10 crores.

Rs.50,000/- for all contracts over Rs.10 crores.

If the attainment of the milestones is delayed for reason not attributable to the contractors no moneys will be held in abeyance.

The Contractors will be required to submit the monthly progress reports in the given 'Monthly Report Format' as per Annexure 'D' by the 2nd day of the following month to the Engineer with a copy to the Project Planning and Control Cell. Failure on the part of the Contractor to submit monthly report in time will attract action as per Clause 14a.

8 j) Management Meetings

Either the Engineer or the contractor may require the other to attend Management meeting. The business of a management meeting shall be to review the plans for remaining works.

Engineers shall record the business of management meetings and is to provide copies of his record to those attending the meetings. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meetings or after the management meetings and stated in writing to all who attend the meetings.

8 k) Contractors remain liable to pay compensation :

In any case in which any of the powers conferred upon the Engineer In-charge by the relevant clauses in documents that form a part of contract as exercised or is exercisable in the event of any future case of default by the Contractor, he is declared liable to pay compensation amounting to the whole of his security deposit. The liability of the Contractor for past and future compensation shall remain unaffected.

In the event of the Executive Engineer taking action against these relevant clauses, he may, if he so desires, take possession of all or any tools and plant, materials and stores in or upon the work of site thereof or belonging to the Contractor or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates to be certified by the Executive Engineer, may after giving notice in writing to the Contractor or his staff of the work or other authorized agent require him to remove such tools and plants, materials or stores from the premises within a time to be specified in such notice and in the event of the Contractor failing to comply with any such requisition, the Executive Engineer may remove them at the contractors expense or sell them by auction or private sell on account of the Contractor at his risk in all respects and certificate of the Executive Engineer as to the expense of any such removal and the amount of the proceeds an expense of any such sell be final and conclusive against the Contractor.

8(l) Extension Of Time In Contracts :

Subject to any requirement in the contract as to completion of any portions or portions of the works before completion of the whole, the contractor shall fully and finally complete the whole of the works comprised in the contract (with such modifications as may be directed under conditions of this contract) by the date entered in the contract or extended date in terms of the following clauses:

a) Extension attributable to BMC

(i) Extension Due To Modification: If any modifications have been ordered which in the opinion of the Engineer have materially increased the magnitude of the work, then such extension of the contracted date of completion may be granted as shall appear to the Engineer to be reasonable in the circumstances, provided moreover that the Contractor shall be responsible for requesting such extension

of the date as may be considered necessary as soon as the cause thereof shall arise and in any case should not be less than 30 days before the expiry of the date fixed for completion of the works.

(ii) Extension For Delay Due To BMC: In the event of any failure or delay by the BMC to hand over the Contractor possession of the lands necessary for the execution of the works or to give the necessary notice to commence the works or to provide the necessary drawings or instructions or any other delay caused by the BMC due to any other cause whatsoever, then such failure or delay shall in no way affect or vitiate the contract or alter the character thereof or entitle the contractor to damages or compensation therefore, but in any such case, the BMC may grant such extension(s) of the completion date as may be considered reasonable.

Note: For extension of time period as governed in (i) and (ii) above, any modifications in design/drawings, specifications, quantities shall be needed to be justified with recorded reasons with approval of Ch.Eng. for not anticipating the same while preparing estimates and draft tender.

(b) Extension Of Time For Delay Due To Contractor : The time for the execution of the work or part of the works specified in the contract documents shall be deemed to be the essence of the contract and the works must be completed no later than the date(s) / the programme for completion of work as specified in the contract. If the contractor fails to complete the works within the time as specified in the contract for the reasons other than the reasons specified in above as (a.i) and (a.ii), the BMC may, if satisfied that the works can be completed by the contractor within reasonable short time thereafter, allow the contractor for further extension of time as the Engineer may decide. On such extension the BMC will be titled without prejudice to any other right and remedy available on that behalf, to recover the compensation as governed by Clause 8(e) of GCC.

For the purpose of this Clause, the contract value of the works shall be taken as value of work as per contract agreement including any supplementary work order/contract agreement issued.

Further, competent authority while granting extension to the currency of contract under Clause (b) of as above may also consider levy of penalty, as deemed fit based on the merit of the case. Also, the reasons for granting extension shall be properly documented.

9. Defects Liability

9.a) Defect Liability period:

The Contractor is expected to carry out the construction work in Workmen like manner so as to meet the requirement and specification for the project. It is expected that the Workmanship and materials will be reasonably fit for the purpose for which they are required.

Defects or defective work is where standard and quality of workmanship and materials as specified in the contract is deficient. Defect is defined as a failure of the completed project to satisfy the expressed or implied quality or quantity obligations of the construction contract. Defective construction works are as the works which fail short of complying with the express descriptions or requirements of the contract, especially any drawings or specifications with any implied terms and conditions as to its quality, workmanship, durability, aesthetic, performance or design. Defects in construction projects are attributable to various reasons.

Some of the defects are structural defects resulting in cracks or collapse of faulty defective plumbing, inadequate or faulty drainage system, inadequate or faulty ventilation, cooling or heating systems,

inadequate fire systems etc. The defects could be various on accounts of different reasons for variety of the projects.

The Engineering In charge/Project Officer shall issue the practical completion certificate for the project. During the Defect Liability Period which commences on completion of the work, the Engineering In charge shall inform or the contractor is expected to be informed of any defective works by the Employer's representative of the defects and make good at contractor's cost with an intention of giving opportunity to the contractor of making good the defects appeared during that period. It is the contractor's obligation under the contract to rectify the defects that appear during Defect Liability Period and the contractor shall within a reasonable time after receipt of such instructions comply with the same at his own cost. The Engineering In charge/Project Officer shall issue a certificate to that effect and completion of making good defects shall be deemed for all the purpose of this contract to have taken place on the day named in such defect liability certificate.

If defective work or workmanship or design have been knowingly covered-up or concealed so as to constitute fraud, commencement of the Defect Liability Period may be delayed. The decided period may be delayed until discover actually occurs on at least the defect could have been discovered with reasonable diligence, whichever is earlier.

It is proposed to have DLP as below:

Dept	Type of works	DLP
Roads Bridge	For cement concrete road/ Mastic works	5 years
	Asphalt work	3 years
	Paver Block	3 years
	Structural work	5 years
	General works	5 years
BM/SIC/HIC	General works	3 years
	Structural works	5 years
	Waterproofing works	5 years
Ward Works	All ward level works	2 years
Other Works	Pot holes and pre-monsoon bad patch repair work	1 year
For other departments	HE, WSP, SP, SWD, Garden	3 years

• **The above is illustrative. In case of any type of work not covered in above or any change in DLP, the concerned Ch.Eng. shall stipulate DLP with approval of concerned DMC/AMC.**

• **In case of composite works i.e. having combinations of construction activities of different disciplines, the DLPs shall be approved by AMC.**

Also, in case of defect, the Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at. The Defects Liability Period shall be extended for as long as Defects remain to be corrected. Every time notice of Defect/Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice. The Engineer may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer a compliance report.

It is the Completion Stage when the contractor has completed all of the works and fixed all of the defects that were on the list of issue by Engineer-in-charge. When this happens, the engineer must issue a 'Certificate of Completion'. On the issue of 'Certificate of Completion', the 'Defect Liability Period' starts. The contractor also must issue a 'Certificate statement' as an acknowledgment to the engineer not later than 14 days after the 'Certificate of Completion' has been issued. During the 'Defect Liability Period', the contractor has to obey all written instructions from the engineer to carry out repairs and fix any defects which appear in the

Permanent Works. If the contractor does not, due to his own faults finish the repair works or fix the defects by the end of 'Defect Liability Period', the 'Defect Liability Period' will continue until all works instructed by engineer is done.

Unfulfilled Obligations: Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfillment of any obligation incurred under the provisions of the contract prior to the issue of the defects liability certificate is issued and, for the purposes of determining the nature and extent of any such obligation, the contract shall be deemed to remain in force between the parties to the contract.

9.b) Liability for defects or imperfections and rectifications thereof:

If it shall appear to the Engineer or to his representative at any time during construction or reconstruction or during the defects, liability period, that any work has been executed with unsound, imperfect or unskillful workmanship or that any material or article provided by the Contractor for execution of thereof the work is unsound or of a quality inferior to that contracted for, or otherwise, not in accordance with the contract, or that any defect, imperfections or other faults have appeared in the Work arising out of defective or improper materials or workmanship, the Contractor shall, upon receipt of notice in writing in that behalf from the Engineer forthwith rectify or remove or reconstruct the work so specified in whole or part, as the case may require or, as the case may be and / or remove the materials, or articles so specified and provide other proper and suitable materials or articles at his own expense notwithstanding that the same may have been inadvertently passed, certified and paid for, and in the event of his failing to do so within the period to be specified by the Engineer in his notice aforesaid the Engineer may rectify or remove and re-execute the Work and / or remove and replace with others the materials or articles complained of, as the case may be, by others means at the risk and cost of the Contractor.

In case of repairs and maintenance work, splashes and droppings from whitewashing, painting etc. shall be removed and surfaces cleaned simultaneously with completion of these items of work in individual rooms, quarters or premises etc. where the work in the contract. In case the Contractor fails to comply with requirement of this condition, the Engineer shall have the right to get the work done by the other

means at the risk and cost of the Contractor.

The Engineer shall give three days' notice in writing to the Contractor before taking such action.

The Engineer reserves the right to decide the rates and prices of the works as executed by other means at the risk and cost of the Contractor.

The cost and expenses thereby incurred including supervision charges specified in the Annexure 'A' on the works and also such penalty as the Engineer may impose for such wrongful conduct of the Contractor (which penalty, the Engineer shall be competent to impose and against the imposition of which or the amount thereof by the Engineer an appeal shall lie only to the Commissioner within seven days of the order in that behalf of the Engineer and the decisions of the Commissioner shall be final and binding upon the Contractor) may be deducted from any money due or to become due to the Contractor, under this or any other contract between the Contractor and the Municipal Corporation.

9.c) Liability for damages and risks:

A) The Contractor shall be responsible for all risks to the work and shall make good at his own cost, all loss or damage, whether to the works themselves or to any other Municipal property, or to the lives, persons, or property of others, from whatsoever cause, arising out of, or in connection with the works, either during their progress or during the defects liability period, after completion of work for a period of not exceeding 12 months as per directives of Director of Insurance, Maharashtra State and this although all reasonable and proper precautions may have been taken by the Contractor, and in case the Commissioner or the Corporation shall be called upon to make good any such costs loss or damages, or to pay compensation (including that payable under the provision of Workmen's Compensation Act) to any person or persons sustaining damage as aforesaid by reason of any act or of any negligence or omissions on the part of the contractor, the amount, which the Commissioner may pay in respect thereof and the amount of any costs or charges (including law costs and charges) in connection with legal proceedings which he may incur in reference thereto, shall be charged to the contractor. The Commissioner shall have full power and right at his own discretion to pay or to defend or compromise any claim which may be made against the Corporation for damage or in case of threatened legal proceedings, or in anticipation of legal proceedings being instituted, consequent on the action or default of the contractor, to take such steps as he may consider necessary or desirable to ward off or mitigate the effect of such proceedings charging to the contractor, as aforesaid, any sum or sums of money which he may pay and any expenses, whether for reinstatement or otherwise which he may incur and the propriety of any payment, defense or compromise, or of the incurrence of any such expense shall not be called in question by the contractor.

The contractor shall be held responsible for any obligations, damages and fines etc. arising out of or in connection with the works either during their progress or during the defects liability period after completion of work for a period of not exceeding 12 months as per directives of Director of Insurance, Maharashtra State and shall indemnify the Municipal Corporation or the Commissioner against them and make good any such damages, fines and dues arising out of non-compliance of any regulation under the Minimum Wages Act by the contractor which may devolve on the Corporation or the Commissioner.

The Contractor shall take out a policy as per the provisions of the Workmen's Compensation Act for the purpose of ensuring compensation to the workers engaged by them. B) Extension of Defects Liability:

The provisions of this Clause shall apply to all replacements or renewal of Works carried out by the Contractor to remedy defects and damages as if the replacements and renewals had been taken over on the date they were completed.

The Defects Liability Period for the Works shall be extended by a period equal to the period during

which the Works cannot be used by reason of a defect or damage. If only part of the Works is affected, the Defects Liability Period shall be extended only for that part, however, the retention money/security deposit/performance guarantee will be refunded only after completion of Defect Liability/warranty period of total work. In neither case shall the Defects Liability Period extend beyond 2 years from the date of taking over.

When progress in respect of the Works has been suspended under Clause 5 (u), the Contractor's obligations under this Clause shall not apply to any defects occurring more than 3 years after the Time for Completion established on the date of the Letter of Acceptance.

C) **Inspection Consequent to Renewals/Replacement;** If the replacement or renewals are of such a character as may affect the efficiency of the Works or any portion thereof, the Engineer may, within one month of such replacement or renewals, give to the Contractor notice in writing, requiring that such replacement or renewals be offered for inspection in which case such inspection shall be carried out by the Engineer in receipt of a 21 days notice from the Contractor, in writing.

These Conditions shall apply to, all the replacements and renewals and to all inspections occasioned thereby and carried out by the Contractor pursuant to this Clause.

D) **Access to the Contractor during Defects Liability Period:** Until the expiration of Defects Liability Period of the Works, the Contractor shall have access, at all reasonable working hours, at his own risk and expense, for himself or for his duly authorised representatives whose names shall have previously been communicated, in writing, to the Engineer, to all parts of the Works for the purpose of inspecting the working thereof and to records of the working and performance thereof for the purpose of inspecting the same and taking notes there from subject to the Engineer's approval, which shall not be unreasonably withheld. The Contractor may, at his own risk and expense, make any test, which he considers desirable, in consultation with the Engineer and the Employer.

E) **Liability of Contractor for damages done in or outside work area :**

Compensation for all damages done intentionally or unintentionally by contractor's labour whether in or beyond the limits of BMC property including any damage caused by spreading the fire shall be estimated by the Engineer In-charge or such other officer as he may appoint and the estimate of the Engineer in-charge to the decision of the Dy. Chief Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand failing which the same will be recovered from the Contractor as damages or deducted by the Engineer In-charge from any sums that may be due or become due from BMC to contractor under this Contractor otherwise. Contractor shall bear the expenses of defending any action or other legal proceedings that may be brought to prevent the spread of fire and he shall pay any damages and costs that may be awarded by the Court in consequence.

9 d) Contractor to search.

The Contractor shall, if required by the Engineer in writing, search under the direction of the Engineer for the cause of any defect, imperfection or fault appearing during the progress of the Work or in the period of maintenance. Unless such defect, imperfection or fault shall be one for which the Contractor is liable under the contract, the cost of the Work carried out by the Contractor in searching as aforesaid shall be borne by the Corporation. If such defect, imperfection or fault shall be one for which Contractor is liable as aforesaid, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case repair, rectify and make good such defect, imperfection or fault, at his own expense in accordance with the provisions of condition no.9 b. and 9 c hereof.

10.Variation:

10.A) Rates for Extra/Excess:

i. For Excess / Savings

• Increase or decrease in “Bill of Quantities” of the bidding documents shall be termed as “Excess” or “Savings” correspondingly.

• The contractors shall be entitled to the payment of Additional Quantities required for the completion of activity and works, if the activity increases or decreases within the permissible limit of 20 %.

The maximum savings in individual item upto 20 % shall be permissible.

• Approval Process

Sr no.	Excess	Approving authority
1.	Upto 5 %.	Director (E S & P) / DMC.
2.	Beyond 5 % up to 15 %.	AMC.
3.	Beyond 15 %.	Hon. M.C

• In case, the projection of the “Excess” quantity goes beyond 20 % of the “Bill of Quantities” of the bidding document to complete the work activity and beyond the “Contract Cost”, then all such cases shall be placed before AMC /

Hon. M.C for administrative sanction before execution of “Excess” quantity.

In all such cases the following exercise shall be worked out

(i) Feasibility of foreclosing the work,

(ii) If, foreclosure is not possible the H.O.D shall justify and record the reasons in writing.

• For Underground Works

Underground works shall mean the works of foundation of buildings and other structures, works in sewerage projects, storm water drain, water supply projects and Hydraulic Engineer.

• The contractors shall be entitled to the payment of Additional Quantities required for the completion of activity and works, if the activity increases or decreases within the permissible limit of 25 %.

The maximum savings in individual item up to 20 % shall be permissible.

• Approval Process

Sr no.	Excess	Approving authority
1.	Up to 5 %.	Director (E S & P) / DMC.
2.	Beyond 5 % up to 20 %.	AMC.
3.	Beyond 20 %.	Hon. M.C

• For Unforeseen Works

Unforeseen works shall mean the works of bursting / leakages of water pipelines, settlement of sewage lines / manholes, settlement of storm water drains in city areas. The contractors shall be entitled to the payment of Additional Quantities required for the completion of activity and works, if the activity increases or decreases within the permissible limit of 35 %.

The maximum savings in individual item up to 30 % shall be permissible.

• Approval Process

Sr no.	Excess	Approving authority
1.	Up to 10 %.	Director (E S & P) / DMC.
2.	Beyond 10 % up to 25 %.	AMC.
3.	Beyond 25 %.	Hon. M.C

• In no case, accrued savings beyond 30 % of all individual items of the “Bill of Quantities” of the bidding document shall be allowed to meet the cost of Extra / Excess / Fair items without altering / modifying or damaging the scope of work and without balancing the phase works.

ii. For Extra Items

This shall mean additional or substituted items of work activity not included in the “Bill of Quantities and Rates”, however such item of work are in the prevailing “Unified Schedule of Rates” of BMC.

• The total cost of extra items shall be permissible up to 5% of the “Contract Cost”.

• These extra items shall be paid as per the rates of prevailing “Unified Schedule of Rates” of BMC at the time of tender at rebate quoted by the contractor on contract amount or

at par in case of premium quoted by the contractor on contract amount.

iii. For Fair Items

This shall mean additional or substituted items of work activity not included in the “Bill of Quantities and Rates”, and even not existing in the “Unified Schedule of Rates” of BMC at the time of tender.

- The total cost of fair items including extra items shall be permissible up to 5 % of the “Contract Cost”.

- These fair items shall be got approved by the committee framed. The engineer in charge shall work out these fair items at fair and reasonable market rates on the basis of material, labour and operations of construction equipment required to execute the item and allowing 15 % to cover profits and overhead charges on the same lines of rate analysis prepared for the items that are in “Unified Schedule of Rates” of BMC.

In all cases covered above in respect of A, B and C, the proposals shall be routed through C.A (Finance) / C.A (WSSD).

10.b) Reimbursement refund on variation of price of labour and materials:

The Contractor shall be reimbursed or shall refund to the Corporation as he case may be the variation in the value of the work carried out from time to time, depending on whether the prices of material and labour as a whole rise or fall, and the method adopted for such computations shall be as given below, it being clearly understood that the contractor shall have no claim for being reimbursed on the ground that the price of a particular material or group of materials have risen beyond the limits of the presumptions made in the following paras, however, no price variations shall be made applicable for contracts upto 12 months:

A) Controlled materials: Price variations shall be permitted in respect of these materials the price level of which is controlled by the Government or its agency. The rate ruling on the date of submission of the tender shall be considered as the basic price of such material for adjustment. Any variation in this rate shall be considered for reimbursement to the contractor or refund to be claimed from the contractor as the case may be. The contractor shall, for the purpose of adjustment submit in original the relevant documents from the suppliers.

B) Labour and other materials: For the purpose of this contract and for allowing reimbursement of refund on account of variation of prices of (i) labour, and (ii) materials other than materials mentioned in 10a above, computation will be based on the formula enunciated below which is based on the presumptions that :

i) The general price level of labour, rises or falls in proportion to the rise or fall of consumer price index number 9 (general) for working class in Mumbai.

ii) The general price level of materials rises or falls in proportion to rise or fall of whole-sale price index as published by ‘Economic Adviser to Govt. of India’.

iii) And that the component of labour is to the extent of 30 percent of 88 percent and the component of materials is to the extent of 70 percent of 88 percent of the value of the work carried out. The remaining 12 percent being the presumptive profit of the contractor. a) Formula for Labour component:

$$VL = (0.88 R) \times \frac{30}{100} \times \frac{(I - IO)}{IO}$$

b) Formula for Material component :

$$VM = (0.88 R \times \frac{70}{100} - C) \times \frac{(W - WO)}{WO}$$

Where –

VL = Amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of index referred to above.

I = Consumer Price Index number of working class for Mumbai (declared by the Commissioner of Labour and Director of Employment, Mumbai) applicable to the period under reference (base year ending 2004-05 as 100 i.e. new series of indices).

IO = Consumer price index number for working class for Mumbai (declared by the Commissioner of labour and Director of Employment, Mumbai) prevailing, on the day of 28 days prior to the date of submission of the tender.

VM = The amount of price variation to be reimbursed or claimed as refund on account of general rise or fall of wholesale price index for period under reference.

W = Average wholesale price index as published by Economic Adviser to Govt. of India applicable to the period under reference.

WO = Wholesale price index as stated above prevailing on the day of 28 days prior to the date of submission of the tender.

R = Total value of the work done during the period under reference as recorded in the Measurement Book excluding water charges and sewerage charges but including cost of excess in respect of item upto 50 percent as stated in Sub Clause 10 (a)A and cost of extra items and provisional items of work where the rate is based on Sub Clause 10 (a)B (i)&(ii).

C = Total value of Controlled materials used for the works as recorded in Measurement Book and paid for at original basic rate plus the value of materials used .

i) The quantity of the Controlled material adopted in working out the value of 'C' shall be inclusive of permitted wastages as / if mentioned in specifications.

ii) The basic rate for the supply of controlled material shall be inclusive of all the components of cost of materials excluding transport charges incurred for bringing the material from place of delivery to the site.

Computations based on the above formula will be made for the period of each bill separately and reimbursement will be made to (when the result is plus) and refund will claimed from (when the result is minus) the contractor's next bill. The above formulae will be replaced by the formulae in Annexure-I as and when mentioned in special conditions of contract

The operative period of the contract for application of price variation shall mean the period commencing from the date of commencement of work mentioned in the work order and ending on the date when time allowed for the work order and ending on the date when time allowed for the work specified in the contract for work expires, taking into consideration, the extension of time, if any, for completion of the work granted by Engineer under the relevant clause of the conditions of contract in cases other than those where such extension is necessitated on account of default of the contractor.

The decision of the Engineer as regards the operative period of the contract shall be final and binding on the contractors.

iii) Where there is no supply of controlled items to contractor the component 'C' shall be taken as zero.

C) Adjustment after completion: If the Contractor fails to complete the works within the time for completion prescribed under Clause 8(d), adjustment of prices thereafter until the date of completion of the works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices whichever is more favorable to the employer, provided that if an extension of time is granted pursuant to condition 8 (d), the above provision shall apply only to adjustments made after the expiry of such extension of time.

D) Price variation will be calculated similarly and separately for extra items and / or excess quantities and provisional sums calculated under Sub Clause 10 (b)A (i)&(ii) and Sub Clause 10 (b) B(ii) based on the above formula/formulae in Annexure-I as and when mentioned in Special conditions of contract; IO and WO being the indices applicable to the date on which the rates under Sub Clause 10 (a)A (i)&(ii) and Sub Clause 10 (a) B(iii) are fixed. **No price variation shall be admissible for FAIR items created during execution.** E) Maximum Price Variation shall be as follows:

Time Period of Project	Maximum limit of Price Variation
Up to 12 months	No variation allowed
Above 12 months to 24 months	5%
Above 24 months	10%

***Approval of AMC/MC shall be obtained before invitation of tender in case of any changes in above.**

Price Variation during Extended Period of Contract :

(i) Extension Due To Modification & Extension for delay due to BMC :

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increases or decreases, above/below the indices applicable, to the last month of the original or extended period vide clause 8(1)(a)(i) and (ii) of standard GCC

(ii) Extension Of Time For Delay Due To Contractor :

(a) The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increase, above the indices applicable, to the last month of the original completion period or the extended period vide above clause. 8(1)(b) of standard GCC. However, the price variation shall not be paid in any case for the extended period on account of delay due to contractor.

(b) The price variation shall be limited to the amount payable as per the indices, in case the indices decrease or fall below the indices applicable, to the last month of original / extended period of completion period vide above clause 8(1)(b) of standard GCC, then lower indices shall be adopted.

(iii) Extension of Time For Delay due to reasons not attributable to BMC and Contractor(Reference Cl.8(d) of Standard GCC):

The price variation for the period of extension granted shall be limited to the amount payable as per the Indices in case the indices increases or decreases, above/below the indices applicable, to the last month of the original period. Also, the reasons for granting extension shall be properly documented.

Note: Price variation shall not be admissible for the FAIR items created during execution.

11. Measurements:

11.a) Records and Measurement:

The Engineer shall except as otherwise stated ascertain and determine by measurement the value in accordance with the Contract of work done in accordance therewith.

All items having a financial value shall be entered in measurement book, level book etc. as prescribed by the Municipal Corporation so that a complete record is obtained of all the Works performed under the Contract.

Measurements shall be taken jointly by the Engineer or his authorized representative and by the Contractor or his authorized representative. Before taking measurements of any work the Engineer or the person deputed by him for the purpose shall give a reasonable notice to the Contractor. If the Contractor fails to attend or send an authorized representative for measurement after such a notice or fails to countersign or the objection within a week from the date of measurement, then in any such event measurements taken by the Engineer or by the person deputed by him shall be taken to be correct measurements of the works and shall be binding on the Contractor.

The Contractor shall, without any extra charge, provide assistance with every appliance and other things necessary for measurements.

Measurements shall be signed and dated by both parties each day (of taking measurement) on the site on completion of measurement.

11.b) Method of Measurement:

Except where any general or detailed description of the work in bills of quantities or schedule of works / items / quantities expressly shown to the contrary, bills of quantities shall be deemed to have been prepared and measurements shall be taken in accordance with the procedure set forth in the schedule of rates / specifications notwithstanding any provision in the relevant standard Method of Measurement or any general or local custom. In the case of items which are not covered by the schedule of rates / specifications, measurement shall be taken in accordance with the relevant Standard Method of Measurement issued by Bureau of Indian Standards.(BIS 1200)

12.Payments, Tax and Claims:

12.a) Provisional sum and Advances:

1. 'Provisional sum' means a sum included in the contract and so designated in the Bill of Quantities for the execution of work or supply of goods, materials or services or for contingencies, which sum may be used, in whole or in part, or not at all, at the direction and discretion of the Engineer. The contract price shall include only such amounts in respect of the work, supply or service to which such provisional sum relate as the Engineer shall approve or determine in accordance with this clause.

2. In respect of every provisional sum the Engineer shall have power to order to execute the work, including goods, materials or services to be supplied by the contractor. The contract price shall include the value of such work executed or such goods, materials or services supplied determined in accordance with Sub Clause 10 b.

The contractor shall produce all quotations, invoices, vouchers and accounts or receipts in connection with expenditure in respect of provisional sums.

The Corporation will make advance to the contractor for the works in two installments.

The first installment shall be equal to 5% of the contract price. The payment of the first installment of loan be due after (i) execution of the form of agreement by the parties thereto. (ii) payment of Security Deposit by the Contractor and (iii) Submitting the Bank Guarantee by the Contractor from a Bank specified in the tender for an amount equal to 7% (with includes 2% extra for the interest charges) of the Contract price. The first installment of advance loan shall be paid to the Contractor within 28 days after fulfilling all the above requirements under sub items (i) to (iii).

Payment of second installment of the advance mobilization loan upto 5 (five) percentage of the Contract price will be due within a period of 28 days from completion preliminary site establishment works such as construction of access roads to site, Engineer's office, Contractor's site office, Stores, Workshop sheds, etc. to the satisfaction of the Engineer.

After certification by the Engineer that the preliminary works are completed satisfactorily, the second installment will be released after the Contractor submits the Bank Guarantee from a Bank acceptable to the Corporation for an amount equal to 7% (which includes 2% extra for interest charges) of the Contract price.

Bank Guarantee shall be submitted in the approved prescribed form. The Bank Guarantee/s for the Advance Mobilization Loan should be valid till the full recovery advance is made.

The Contractor shall use the advance payment only towards expenses for materials, preliminary site establishments works, and construction equipment and to meet expenses required specifically to carry out the works.

The above advance shall bear simple interest at 12% per annum. The interest on the amounts paid as advance is chargeable from the date the amount is paid.

RECOVERY OF ADVANCE :

Recovery of advance paid and interest against it aforesaid, shall be made by deductions from the on account of payments referred to in condition no.12 (b) in suitable percentage in relation to the progress as fixed by the Engineer so that all sums with interest shall be fully recovered by the time the work amounting to nearly 80 percent of the contract is completed. If the amount payable under any interim bill is not sufficient to cover all deductions to be made on this account and other sums deductible there , the balance outstanding shall be deducted from subsequent bills as may be necessary.

12.b) Interim Payment :

Interim bills shall be submitted by the Contractor from time to time (but at an interval of not less than one month) for the works executed. The Engineer shall arrange to have the bill s verified by taking or causing to be taken, where necessary, the requisite measurement of work.

Payment on account for amount admissible shall be made on the Engineer certifying the sum to which the Contractor is considered entitled by way of interim payment for all the work executed, after deducting there from the amount already paid, the security deposit / retention money and such other amounts as may be deductible or recoverable in terms of the contract.

On request, the contractor will be paid upto 75 percent of the value of the work carried out as an adhoc payment in the first week of next month after deducting there from recoveries on account of advances,

interest, retention money, income tax etc. The balance payment due will be paid thereafter.

No interim payment will be admitted until such time the Contractor have fully complied with the requirement of the Condition no.8 (h) and 8 (i) concerning submission and approval of Network Schedule for the works, as detailed in Condition 8 (i). A fixed sum shall be held in abeyance at the time of next interim payment for non-attainment of each milestone in the network and shall be released only on attainment of the said milestone.

An interim certificate given relating to work done or material delivered may be modified or corrected by a subsequent interim certificate or by the final certificate. No certificate of the Engineer supporting an interim payment shall of itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract.

12.c) Payment on intermediate certificate to be regarded as advances :

No payment shall be made for any work estimated to cost less than Rupees One Thousand till after the whole of work shall have been completed and the certificate of completion given. But in the case of works estimated to cost more than Rs. One Thousand, the contractor shall on submitting a monthly bill therefor be entitled to receive payment proportionate to the part of the work than approved and passed by the Engineer In-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. All such intermediate payments shall be regarded as payments by way of advance against the final payments only and not as payments for work actual done and completed and shall not preclude the Engineer In-charge from requiring any bad, unsound, imperfect or unskillful work to be removed or taken away and reconstructed or re-erected nor shall any such payment be considered as an admission of the due performance of the contract or any part thereof in any respect or the offering of any claim not shall it conclude, determine or effect in any other way, the powers of the Engineer In-charge as to the final settlement and adjustment of the accounts or otherwise, or in any other way vary or effect the contract. The final bill shall be submitted by the Contractor within one month of the date fixed for the completion of the work otherwise the

Engineer In-charge's certificate of the measurements and of the total amount payable for the work shall be final and binding on all parties.

12.d) No interest for delayed payments due to disputes, etc:

It is agreed that the Municipal Corporation of Greater Bombay or its Engineer or Officer shall not be liable to pay any interest or damage with respect of any moneys or balance which may be in its or its Engineer's or officer's hands owing to any dispute or difference or claim or misunderstanding between the Municipal Corporation of Greater Bombay or its Engineer or Officer on the one hand and the contractor on the other, or with respect to any delay on the part of the Municipal Corporation of Greater Bombay or its Engineer or Officers in making periodical or final payments or in any other respect whatever.

It is distinctly understood and agreed between the parties hereto that payment for work already executed by the Contractor is not a condition precedent under this contract for the execution of the remaining work.

12.e) Receipts to be signed in firm's name by any one of the partners:

Every receipt for money which may become payable or for any security which may become transferable to the Contractor under these present shall, if signed in the partnership name by any one of the partners, be a good and sufficient discharge to the Commissioner and Municipal Corporation in respect of the money or security purporting to be acknowledged thereby, and in the event of death of any of the partners during the pendency of this contract, it is hereby expressly agreed that every receipt by any one of the surviving partners shall, if so signed as aforesaid, be good and sufficient discharge as aforesaid

provided that nothing in this clause contained shall be deemed to prejudice or effect any claim which the Commissioner or the Corporation may hereafter have against the legal representatives of any partners so dying or in respect of any breach of any of the conditions thereof, provided also that nothing in this clause contained shall be deemed prejudicial or affect the respective rights or obligations of the Contractors and of the legal representatives of any deceased Contractors interest.

12.f) Overpayment and underpayment:

Whenever any claim for the payment of a sum to the Municipal Corporation rises out of or under this contract against the Contractor the same may be deducted by the Municipal Corporation from any sum then due or which at any time thereafter may become due to the Contractor under this contract and failing that under any contract with the Municipal Corporation or from any other sum due to the Contractor from the Municipal Corporation (which may be available with the Municipal Corporation) or from his security deposit / retention money, or he shall pay the claim on demand.

The Municipal Corporation reserves the right to carry out post payment audit and technical examination of the final bill including all supporting voucher, abstracts etc. The Municipal Corporation further reserves the right to enforce recovery of any over payment when detected.

If as a result of such audit and technical examination any overpayment is discovered in respect of any work done by the Contractor or alleged to have been done by him under the Contract, it shall be recovered by the Municipal Corporations from the Contractor by any or all of the methods prescribed above or if underpayment is discovered the amount shall be duly paid to the Contractor by the Municipal Corporation.

Provided that the aforesaid right of the Municipal Corporation to adjust overpayment against amount due to the Contractor under any other contract with Municipal Corporation shall not extend beyond the period of five years from the date of payment of the final bill or in case the final bill is a 'Minus' bill, from the date of the amount payable by the Contractor under the 'Minus' bill is communicated to the Contractor. However, to adjust overpayment/recovery from the contractor BMC reserves the rights to recover these payments at any point of time against any other contract with Municipal Corporation and shall not be limited to any prescribed time limits

Any amount due to the Contractor under this contract for underpayment may be adjusted against any amount then due or which may at any time thereafter become due before payment is to the Contractor, from him to Municipal Corporation on any other contract or account whatsoever.

12.g) Payment of final bill:

Final joint measurement along with the representatives of the contractor should be taken recorded and signed by the Contractors. Contractors should submit the final bill within 1 month of physical completion of the work.

If the contractor fails to submit the final bill within 1 month, the BMC staff will prepare the final bill based on the joint measurement within next 3 months.

Engineer's decision shall be final in respect of claims for defect and pending claims against contractors.

No further claims should be made by the Contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payment of those items of the bills in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by the Commissioner shall be made within a reasonable period as may be necessary for the purpose of verification etc.

After payment of the final bill as aforesaid has been made, the contractor may, if he so desires, reconsider his position in respect of a disputed portion of the final bills and if he fails to do so within 84 days, his disputed claim shall be dealt with as provided in the contract.

A percentage of the retention money, over and above the actual retention money as indicated below shall be held back from payments till the finalization of final bill to be submitted as per above and will be paid within 30 days of acceptance of the final bill.

Sr.no.	Amount of Contract Cost	Minimum Payable Amount in final bill
1	Upto Rs.5 Crs.	Rs.10 Lacs or final bill whichever is more
2	Upto Rs.25 Crs.	Rs.1 Crore or final bill amount whichever is more
3	Upto Rs. 50 Crs.	Rs.2 Crores or final bill amount whichever is more
4	Upto Rs.100 Crs.	Rs.4 Crore or final bill amount whichever is more
5	More than Rs.100 Crs..	Rs.7 Crore or final bill amount whichever is more

The contractor have to submit the bill for the work carried out within 15 days from the date of completion of the work to the respective executing department. If the contractor fails to submit their bills to concerned executing department, penalty or action as shown below will be taken for each delayed bill:-

After 15 days from the date of completion/running bill upto certain date, upto next 15 days i.e. upto 30 days	Equal to 5% of bill amount
Next 15 days upto 45 days from the date of completion/running bill upto specified date	Equal to 10% of bill amount
If not submitted witin 45 days from the date of completion/ R.A. bill	Bill will not be admitted for payment.

12.h) Income-Tax:

The Contractor shall pay Indian Income-Tax on all payments made to him under the Contract, other than reimbursements made to him by the Corporation to cover payment by Contractor of minor custom duties, etc. or any other payment which the contractor may make on the Corporation's behalf. Under the provisions of Sec. 194-c of the Indian Income Tax Act, the Corporation is required to deduct Tax with surcharge, if applicable, at source at prevailing rates from the gross amount of each bill submitted. Any expatriate site staff or staff not normally residents of India, employed by the Contractor shall pay personal Income Tax on all money earned and paid in India. The contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

12. i) Currency of Payment:

The Tenderer shall indicate the tender prices in Indian Rupees.

12.j) Taxation Payments of Bills and other claims:

Regarding taxation the prices quoted by the Contractor shall include all customs duties, import duties, excise duties, business taxes, income and other taxes that may be levied in accordance to the laws and regulation in force as of the date 28 days prior to dead line for submission of tenders on the Contractor's Equipment materials and supplies (Permanent, temporary and consumables) to be used on or furnished under the contract and on the services to be performed under the contract. Nothing in the contract shall relieve the contractor from his responsibility to pay any tax that may be levied in the Employer's country on profits made by him in respect of the contract.

The contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

All charges on account of Octroi, terminal or Sales Tax and other duties on material obtained for the works from any source including the tax applicable as per Maharashtra Sales Tax Act on the transfer of property in the goods involved in the execution of works contract (re-enacted) Act, 1991 etc. shall be borne by the Contractor.

Except as otherwise specifically provided in the contract, the contractor shall be liable and responsible for the payment, of all taxes, such as excise duty, custom duty, sales tax, Value Added Tax including the purchase tax, consignment tax, work contract tax, service tax, entry tax or any other similar tax in the state concerned, turnover tax, toll tax, octroi charges, royalty, labour cess, levy and other tax(es) or duty(ies) which may be specified by local/state/ central government from time to time on all material articles which may be used for this work. The rates quoted by him in the tender in bill of quantities shall be inclusive of all taxes, duties, levies etc. Under the provisions of the Maharashtra Sales Tax Act, the Employer is required to deduct "Work Contract Tax" at source at the rates prevailing at the time of payments.

The payment of bills and other claims arising out of the contract will be made by RTGS/NEFT/CBS/ECS/Cheque in the name of Contractors payable to the account and Name of Bank informed by the successful contractors. Successful Tenderers, therefore, have to furnish the information as regards, the Name and complete address of their Bank, its branch and their Bank Account no. etc. They will also have to submit fresh information when there is any change in this regard.

Note : Please refer Circular U/No. CA/F/Project/25 dt. 12/07/2022 and condition therein applicable to this tender.(Copy attached in Circular section)

12.K) Submissions of final completion drawings:

On completion of the work, the contractors shall furnish wherever applicable free of cost 1 set of R.T.F of final completion drawings and 6 bound sets of copies of drawings, showing all the details checked and signed by the Engineer within one month of completion of works. The payment of final bill shall be made to the contractors after receipt of above sets. In case the contractor fails to submit the completion drawings, compensation at the rate of Rs.5000/- per drawing or minimum Rs 50,000 whichever is more shall be recovered from the final bills.

13. Settlement of Disputes:

13.a) Termination of contract for death:

If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if

the Contractor is a partnership concern and one of the legal representative of the individual Contractor or the proprietor of the proprietary concern and in case of partnership, the surviving partners, are capable of carrying out and completing the contract, the Commissioner shall be entitled to cancel the contract as to its uncompleted part without the Corporation being in any way liable to payment of any compensation to the estate of the deceased Contractor and or to the surviving partners of the Contractor's firm on account of the cancellation of the contract. The decision of the Commissioner that the legal representative of the deceased

Contractor or surviving partners of the Contractor's firm cannot carry out and complete the contract shall be final and binding on the parties. In the event of such cancellation the Commissioner shall not hold estate of the deceased Contractor and or surviving partners of the Contractor's firm liable in damages for not completing the contract.

13.b) Urgent Works:

If any Urgent Work (in respect whereof the decision of the Engineer shall be final and binding) becomes necessary and the Contractor is unable or unwilling at once to carry it out, the Engineer may be his own or other work people, carry it out as he may consider necessary. If the urgent work shall be such as the Contractor is liable under the contract to carry out at his expense all expense incurred on it by the Municipal Corporation shall be recoverable from the Contractor and be adjusted or set off against any sum payable to him.

13.c) Foreclosure of contract in full or in Part:

If at any time after acceptance of the tender the Commissioner shall decide to abandon or reduce the scope of the works or any part of the works to be carried out, he shall inform the Contractor in writing to that effect and the Contractor shall have no claim to any payment or compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The Contractor shall be paid at the contract rates full amount of works executed at site, and in addition reasonable amount as certified by the Engineer for the value of such Material (which material thereupon become the property of the Corporation) and also such further allowances as the Engineer may think reasonable and fair in respect of (a) any expenditure incurred by the contractor towards preliminary works etc. and (b) other reasonable and proper engagement the contractor may have entered into for carrying out the work, (c) such compensation as considered equitable under the circumstances.

13.d) Settlement of Disputes:

If any dispute or differences of any kind whatsoever other than those in respect of which, the decision of any person is, by the Contract, expressed to be final and binding) shall arise between the Employer and the Contractor or the Engineer and the Contractor in connection with carrying out of the Works (Whether during the progress of the Works or after their completion and whether before or after the termination, abandonment or breach of the Contract) it, the aggrieved party may refer such dispute within a period of 7 days to the concerned Addl. Municipal Commissioner who shall constitute a committee comprising of three officers i.e. concerned Deputy Municipal Commissioner or Director (ES&P), Chief Engineer other than the Engineer of the Contract and concerned Chief Accountant. The Committee shall give decision in writing within 60 days.

Appeal on the Order of the Committee may be referred to the Municipal Commissioner within 7 days. Thereafter the Municipal Commissioner shall constitute a Committee comprising of three Addl.

Municipal Commissioners including Addl. Municipal Commissioner in charge of Finance Department. The Municipal Commissioner within a period of 90 days after being requested to do so shall give written notice of committee's decision to the Contractor. Save as herein provided such decision in respect of every matter so referred shall be final and binding upon both parties until the completion of the works, and shall forthwith be given effect to by the Contractor who shall proceed with the works with due diligence, whether he requires arbitration as hereinafter provided or not. If the Commissioner has given written notice of the decision to the Contractor and no Claim to arbitration has been communicated within a period of 90 days from receipt of such notice the said decision shall remain final and binding upon the Contractor.

13.e) Arbitration and Jurisdiction:

Note : Please refer Circular u/no. MGC/F/8659 dt. 07/09/2019 and condition therein applicable to this tender. (Copy attached in Circular section)

13.f) Details to be Confidential:

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the contract the same shall be referred to the Employer whose determination shall be final.

13.g) Cancellation of contract in full or in part:

If the Contractor:

- At any time makes default in proceeding with the work with due diligence and continues to do so after notice in writing of fourteen days from the Engineer, or
- Commits default in complying with any of the terms and conditions of contract and does not remedy it within fourteen days after a notice in writing is given to him in that behalf by the Engineer, or
- Fails to complete the Works or items with individual dates of completion, on or before the date(s) of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer, or
- Shall offer or give or agree to give to any person in Municipal Corporation's Service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for the Municipal Corporation, or
- Shall obtain a contract with the Municipal Corporation as a result of ring tendering or other non-bonafide methods of competitive tendering or
- Being an individual or a firm, any partner thereof, shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than voluntary liquidation for the purpose of amalgamation or reconstruction) under any insolvency act for the time effects or force or make any conveyance of assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for his creditors, or

- Being a company, shall pass a resolution or the court shall make an order for the liquidation of his affairs, or a receiver or a manager on behalf of the debenture holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or a Manager, or
- Shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days, or
- Assigns, transfers, sublets (engagement of labour on a piece work basis or labour with materials not to be incorporated in the work, shall not be deemed to be sub-letting) or attempts to assign, transfer or sublet the entire works or any portion thereof without the prior written approval of the Commissioner, the Commissioner may, without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to the Municipal Corporation by written notice cancel the contract as a whole or only such items of work in default from the contract.

The Commissioner shall on such cancellation have powers to -

- take possession of site and any materials, constructional plant, implements stores, etc. thereon and / or
- Carry out the incomplete work by any means at the risk and cost of the Contractor.

On cancellation of the contract in full or in part the Engineer shall determine what amount, if any, is recoverable from the Contractor for completion of works or part of the works or in case the works or part of works is completed, the loss or damage suffered by the Municipal Corporation, in determining the amount, credit shall be given to the Contractor for the value of the work executed by him upto the time of cancellation, the value of the Contractor's material taken over and incorporated in the work, and use of construction equipment belonging to the Contractor.

Any excess expenditure incurred or to be incurred by the Municipal Corporation in completing the works or part of the works or excess loss or damages suffered or may be suffered by the Municipal Corporation as aforesaid after allowing such credit shall be recovered from any money due to the Contractor on any account and if such moneys are not sufficient the Contractor shall be called upon in writing to pay the same within thirty days. If the Contractor fails to pay required sum within the aforesaid period of 28 days, the Engineer shall have right to sell any or all of the Contractor's unused materials, constructional plant, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the Contractor under the contract, and if thereafter there be any balance outstanding from the Contractor, it shall be recovered in accordance with provision of the contract.

Any sums in excess of the amounts due to the Municipal Corporation and unsold materials constructional plant, etc. shall be returned to the Contractor, provided always that if cost or anticipated cost of completion by the Municipal Corporation of the works or part of the works is less than the amount of which the Contractor would have been paid had he completed the works or part of the works, benefit shall not accrue to the Contractor.

Without prejudice to the generally of the foregoing, the amount deposited by the Contractor as security deposit shall be absolutely aforesaid to the Corporation for such failure, or breach or determination of contract.

13 h) Frauds and Corrupt Practices:

The Contractor and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the execution of the works until the settlement of final bill. Notwithstanding anything to the contrary contained herein, the Employer may terminate a Contractor without being liable in any manner whatsoever to the Contractor if it determines that the Contractor has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice or undesirable practice during the works execution.

Without prejudice to the rights of the Employer under Clause 13 (h) hereinabove, if a Contractor is found by the Employer to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice or undesirable practice during the execution of Works, such Contractor shall not be eligible to participate in any tender or RFQ issued by the Employer during a period of 10 (ten) years from the date such Contractor is found by the Employer to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice or undesirable practice, as the case may be.

• **“corrupt practice”** means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Works (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any representative of the Employer who is or has been associated in any manner, directly or indirectly, with the Works or before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Employer, shall be deemed to constitute influencing the actions of a person connected with the Works.

• **“fraudulent practice”** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Works ;

• **“coercive practice”** means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the Works.

14. Notices

14 a) Instructions and notices:

Subject as otherwise provided in this contract all notice to be given on behalf of the Municipal Corporation and all other actions to be taken on its behalf may be given or taken by the Engineer or any officer for the time being entrusted with the functions, duties and powers of the Engineer.

All instructions notices and communications etc. under the contract shall be given in writing and if sent by registered post to the last known place or abode or business of the Contractor shall be deemed to have been served on the date when in the ordinary course of post these would have been served on or delivered to him.

The Contractor or his agent shall be in attendance at the site(s) during all working hours and shall supervise the execution of the works with such additional assistance in each trade as the Engineer may consider necessary. Orders given to the Contractor’s agent shall be considered to have the same force as if they had been given to the Contractor himself.

The Engineer shall communicate or confirm his instruction to the Contractor in respect of the execution of work in a ‘Works site order Book’ maintained in the office of the Engineer and the Contractor or his authorized representative shall confirm receipt of such instructions by signing the relevant entries in this book. If required by the Contractor he shall be furnished a certified true copy of such instruction(s).

If the Contractor fails to comply with the instruction(s) of the Engineer, the Engineer may impose the penalty of Rs.5000/- (Rupees Five Thousand) or equivalent cost for re-doing the faulty work, whichever is more, for each of such defaults. This penalty will not prejudice the right of the Municipal Commissioner or the Engineer to claim compensation.

14.b) Notices to Local Bodies :

The Contractor shall comply with and give all displays required under any Governmental authority, instrument, rule or order made under any Act of Parliament, State Laws or any regulation or Bye-laws of any local authority or public utility concern relating to works. He shall before making any variation from the contract drawings necessitated by such compliance give to the Engineer a notice given reasons for the proposed variations and obtain the Engineer's instructions thereon. The Contractor shall pay and indemnify the Municipal Corporation against any liability in respect of any fees or charges payable under Act of Parliament, State Laws or any Governmental Instrument, Rule or Order and any Regulations or Bye-laws of any local authority or public utility concern in respect of the works.

15 PENAL ACTION

15.1 PENALTIES

In addition to any penal action under general conditions of individual contracts, a contractor/s may be liable under these Rules to one or more of the following penalties:

- a. Warning (7.1.1)
- b. Fine (7.1.1)
- c. Demotion (7.1.2)
- d. Banning / De-registration (7.1.3.)
- e. Suspension of Registration pending inquiry (7.1.4)
- f. Debarring (7.1.5)

15.1.1. WARNING / FINE

A contractor/s will be liable to a warning and / or fine for –

- a. Non-compliance of any provision of these rules,
- b. Failure to comply with any clause or direction under these Rules or failure to comply with any condition of tenders / contracts and
- c. Inadequate progress / performance under a contract.

For the first default of any type mentioned above, a warning letter/notice will be issued. For each subsequent default of the types in (a), (b) & (c) above, the minimum penalty will be imposed to the contractor as per the penalties mentioned in the contract document under general condition of contract or special condition of contract. Higher amount of fine may be levied by the competent authority i.e. defined under Engineer of the Project, for the reasons to be recorded.

15.1.2 DEMOTION

A contractor/s is liable to be demoted to any of the lower classes of registration on one or more of the following grounds -

- a. Specific failure or default in execution of individual works, in respect of physical progress or quality in such works,
- b. Deterioration in financial or technical ability / capacity and
- c. Repeated failure to properly fill in tender document/s, fully and correctly or delay in execution of formal contract documents

Note: Demotion from the lowest class of registration will amount to banning/deregistration of registration for the period specified. In such cases, the registration of the contractor/s will stand restored after the period of demotion/banning/de-registration.

15.1.3 BANNING - DE-REGISTRATION

Banning / Deregistration will be for a specific period or permanent banning / Deregistration.

A contractor/s is liable to be Banned / De-registered on one or more of the following grounds: -

- a) If security considerations including question of loyalty to the BMC so warrant,
- b) If the proprietor of the firm, its employee, partner or representative is convicted by a court of law following of investigation or under normal process of law for offences involving moral turpitude in relation to business dealings viz. Conviction by court of law,
- c) If there is strong justification for believing that the proprietor or employee, or representative of the firm has been guilty of malpractices such as bribery, corruption, fraud substitution of tenders, interpolation, misrepresentation, evasion or habitual default in payment of any tax levied by law,
- d) If the firm continuously refuses to return BMC or State Govt. dues without showing adequate cause, and BMC is satisfied that this is not due to a reasonable dispute which would attract proceedings in arbitration or court of law,
- e) If the firm employs a BMC or State Govt. servant, dismissed/removed on account of corruption, or employs a non-official convicted for an offence involving corruption or abetment of such an offence, in a position where he could corrupt Govt. Servants,
- f) Persistent and intentional violation of important conditions of contract. Not attaining required quality of work and non-execution of works as per terms and conditions of contract. Constant non-achievement of milestone on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out,
- g) An attempt to cheat BMC , an attempt to secure a contract through unfair means or bringing to bear outside influence, an attempt to secure unauthorized copies of Municipal records and documents in relation to any tender / contract or any other official matter, an attempt to tamper with Municipal record and documents, threatening, misbehaving with or physical attack on any Municipal employee/ Officer,
- h) An attempt to instigate or collude with other contractor/s with a view to securing undue advantage,
- i) Any of the grounds mentioned in clause Demotion, if it is deemed serious enough

15.1.4 SUSPENSION OF REGISTRATION PENDING INQUIRY

Whenever any Show Cause Notice is issued to the contractor/s calling for the explanation on the alleged lapses by him, the registration of contractor/s may be banned

/ suspended upto the arrival of final outcome of the said Show cause notice, depending

on the seriousness of the reasons for which show cause notice is issued. Show cause notice shall be issued by the officer not below the rank of Executive Engineer in charge of the concerned work / project of BMC. Director (E. S. & P.) or concerned Deputy Municipal Commissioner is the competent authority to ban / suspend the registration pending inquiry in such cases. Circular of Banning / suspension of registration till further orders shall be circulated to all departments of BMC by Head of the executing department i.e. Chief Engineer of concerned department / Assistant Commissioner of the concerned Ward.

The registration of the contractor/s will be restored depending on the final outcome of the process of the said Show Cause Notice and circular to that effect shall be issued by concerned Head of the Department

15.1.5 DEBARRING

Debarring is the penal action to be initiated against the Contractors who are carrying out works for M.C.G.M. and are not registered with M.C.G.M. All other criteria and procedure of penal action (i.e. observed for suspension, banning, demotion, deregistration) will remain similar as mentioned in penal action clause 7.

15.2 AUTHORITY

15.2.1 On the basis of reports received, concerned Chief Engineer (including City / Hydraulic Engineer) in case of central agencies and Assistant Commissioner in case of Ward Offices of BMC will be competent, either suo-motu or, to issue warning and/or impose fine and order of demotion to contractor/s. The power to issue warning or impose any fine can also be exercised by the Executive Engineer concerned in-charge of construction in accordance with General Contract Condition specified in tender.

15.2.2 On the basis of report/s received from concerned Chief Engineer or Assistant Commissioner, the Director (E.S. & P.) or concerned Deputy Municipal Commissioner will be competent, either suo-motu, or to impose any of the penalties mentioned in clause 7.1 on the contractor/s.

15.2.3 On the basis of report/s, the Municipal Commissioner or any of the Additional Municipal Commissioners will be competent, either suo-motu, or to impose any of the penalties mentioned in clause 7.1 on the contractor/s.

15.3 PROCESS

15.3.1 Before initiating action for demotion / banning / suspension / de-registration, the competent authority not below the rank of Executive Engineer in charge of the concerned work/project of BMC, shall issue a Show Cause Notice to the contractor/s, as to why penal action should not be taken against the said contractor/s. The notice period shall not be less than 15 days and shall be counted from the date of receipt of the notice by the contractor/s and can be extended, for adequate reasons (to be recorded), by the officer who issued the said notice, up to a period of 30 days (including the initial period).

15.3.2 If the contractor/s fails to give satisfactory clarification within the period stipulated in the show cause notice (or, the extended period, if any), the concerned Chief Engineer / Assistant Commissioner shall either take a final decision regarding the demotion with specific time period or permanently or make detailed report with recommendations for suspension / banning / de-registration to the Director (E. S. & P.) or concerned Deputy Municipal Commissioner / Additional Municipal Commissioner / Municipal Commissioner. Before issuing a final order regarding demotion, the Chief Engineer / Assistant Commissioner shall give personal hearing to contractor/s or his/their authorized representative on his request in writing, along with his/their letter of clarification.

15.3.3 The competent authority i.e. Dir. (E. S. & P.) / concerned Deputy Municipal Commissioner / A.M.C. / Municipal Commissioner, shall give personal hearing to contractor/s or his/their authorized representative on his request in writing along with his/their letter of clarification, before taking final decision on banning / de-registration of the contractor/s with specific time period or permanently.

15.3.4 As far as practicable, the competent authority i.e. Chief Engineer / Assistant Commissioner of that concerned department or Dir. (E.S. & P.) / concerned Deputy Municipal Commissioner / A.M.C. / Municipal Commissioner, shall take final decision regarding demotion / banning / de-registration within 15 days of completion of hearing of the contractor/s.

15.3.5 Any order of penalty passed by the competent authority i.e. Chief Engineer / Assistant Commissioner of that concerned department or Dir. (E. S. & P.) / concerned Deputy Municipal Commissioner / A.M.C. / Municipal Commissioner, under these Rules shall state the facts of the case and record the reasons for the order. In case of, suspension / banning and de-registration, the order shall also specify the name(s) of the proprietor / partner(s) / directors / power of attorney holder of the contractor/s firm/ partnership / company as well as the period of demotion / suspension / banning / de-registration in his/their order, and shall intimate the contractor/s accordingly. A circular to that effect shall be issued to all departments of BMC by the executing department who has initiated the action.

15.3.6 The decision regarding demotion / banning / de-registration shall be communicated to contractor/s immediately with directions to submit the original registration certificate to the Monitoring & Registration Cell within 15 days from the date of receipt of the order regarding demotion / banning / de-registration, for taking necessary endorsement on the same. If any contractor/s does not comply with this requirement within the period of 15 days mentioned above, He / they shall be deemed to have been de-registered automatically at the expiry of the above mentioned period, even if the penalty imposed was demotion/banning/suspension for a specific period.

15.4 APPEALATE AUTHORITIES FOR PENAL ACTION

- a. In case of Demotion Director(E.S. & P.) or concerned Deputy Municipal Commissioner is the authority and,
- b. In case of banning/de-registration Additional Municipal Commissioner / Municipal Commissioner are the final authorities

15.5 REVOCATION OF ORDER / RESTORATION OF REGISTRATION

The Suspended / Banned / Demoted / contractor/s shall be restored to the Original Class under which contractor/s was originally registered or as per the sanction of the competent authority subject to following;

- a. An order for suspension/banning/demotion/deregistration passed for a certain specified period shall be deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation, except that an order of suspension/banning/demotion/ deregistration passed on account of doubtful loyalty or security consideration shall continue to remain in force until it is specifically revoked.

OR

- b. An order of suspension/banning/demotion/deregistration for reasons mentioned at aforesaid para may be revoked if, in respect of the same facts, the accused has been wholly exonerated by a court of law.

Circular regarding restoration shall be circulated to all departments of BMC by Head of the executing department i.e. Chief Engineer of concerned department / Assistant Commissioner of the concerned Ward.

15.6 REVIEW

The appellate Authorities may, on representation or appeals from the firms or even otherwise review suspension/banning/demotion/deregistration orders.

15.7 EFFECT OF BANNING / SUSPENSION / DE-REGISTRATION

15.7.1 Once the order of banning / suspension / deregistration is issued, he will not be allowed to participate in any future tender process and if the contractor has already participated in tender process the bid shall be terminated at the instant stage. In case the order of banning/ suspension / deregistration is issued after the proposal is tabled before Standing Committee, the banning / suspension / deregistration order should be communicated to the Standing Committee by making a statement and the DL to MS will be withdrawn.

No contract of any kind whatsoever shall be placed with a banned / suspended / deregistered firm, including its allied firms by all Departments/offices of the BMC after the issue of a banning order. Contracts concluded before the issue of the banning / suspension / deregistration order shall, however, not be affected by the banning / suspension / deregistration order. **Contracts concluded shall mean the date of issuance of 'Letter of Acceptance'.**

Even after banning / suspension / deregistration, the agency will be allowed to complete his other on-going works, unless otherwise rescinded by competent authority on grounds of breach of conditions of contract.

15.7.2 If registered contractor/s (a firm partnership or company) is de-registered/banned/ suspended, then any other registered contractor/s (a firm, partnership or company), with any partner or power of attorney holder who is also a partner or power of attorney holder of such partner or power of attorney holder of the de-registered/banned/ suspended contractor/s, shall also stand automatically de-registered/banned/ suspended,

15.7.3 Demotion / Banning / Suspension / Deregistration order passed in respect of a firm shall be extended to all its allied firms (see definition for details)

15.7.4 Proprietor / Partner/s / Director/s / Power of Attorney Holder/s of banned/suspended / deregistered firm shall not be allowed in Joint Ventures.

15.7.5 Demotion shall be restricted to one class immediately below the existing class of registration. Demotion from the lowest class of registration will amount to suspension of registration for the period specified

15.7.6 The Demotion / Banning / De-registration shall apply permanently or for the period specified in the order of Demotion / Banning / De-registration as per the sanction of competent authority i.e. Chief Engineer of that concerned department/ or Dir. (E.S. & P.) / concerned D.M.C. / A.M.C. / Municipal Commissioner, obtained by the executing department/s initiating the action.

15.7.7 De-registered/banned/suspended contractor/s, registered with BMC in any class shall not be entitled to be issued any tender document/s or quotation/s for any BMC works in any class during the period of De-registration/Banning/suspension. Further for bids in process, the contractor/s will not be considered for award of works /Contract in any class, even if the said de-registered/banned/suspended contractor/s is having registration of any other Govt. / Semi Govt. agency such as PWD/ CPWD /MJP / MHADA/MES/CIDCO etc. in any class. BMC reserves the right to terminate the work in case of such default.

15.7.8 Demoted contractor/s, registered with BMC in any class shall not be entitled to be issued any tender document/s or quotation/s for any BMC works in any upper class during the period of Demotion even if, the said demoted contractor/s is having registration in any upper class from any other Govt. / Semi Govt. agency such as PWD/CPWD/MJP/MHADA / MES/ CIDCO etc. Further for bids in process, the contractor/s will not be considered for award of works / Contract in any upper class in such cases. BMC reserves the right to terminate the work in case of such default.

15.7.8 Debarred Contractor/s (in case of Firms with outside registration) and/or contractors who are penalized by any other Govt. / Semi Govt. agency such as

PWD/CPWD/MJP/MHADA/MES/CIDCO etc. shall not be entitled to be issued any tender document/s or quotation/s for any BMC works in any class during the period of debarring. Further for bids in process, the contractor/s will not be considered for award of Works/Contract in any class, even if the said blacklisted contractor/s is having registration of BMC or any other Govt. / Semi Govt. agency such as PWD/CPWD/MJP/MHADA/MES/CIDCO etc. in any class.

15.8 Payment upon banning / suspension / deregistration of firm

If the Contractual agency is banned / suspended / deregistered for the appropriate reasons because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for value of the work done and materials ordered. Any excess expenditure incurred or to be incurred by the Municipal Corporation in completing the works or part of the works or excess loss or damages suffered or may be suffered by the Municipal Corporation due to sub-standard work shall be recovered from any money due to the Contractor on any account and if such moneys are not sufficient the Contractor shall be called upon in writing to pay the same within thirty days. If the Contractor fails to pay required sum within the aforesaid period of 30 days, the Engineer shall have right to sell any or all of the Contractor's unused materials, constructional plant, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the Contractor under the contract, and if thereafter there be any balance outstanding from the Contractor, it shall be recovered in accordance with provision of the contract.

Any sums in excess of the amounts due to the Municipal Corporation and unsold materials constructional plant, etc. shall be returned to the Contractor, provided always that if cost or anticipated cost of completion by the Municipal Corporation of the works or part of the works is less than the amount of which the Contractor would have been paid had he completed the works or part of the works, benefit shall not accrue to the Contractor.

15.9 REFUND OF FEES

Demoted / banned / suspended or de-registered contractor/s shall not be entitled for refund of Registration / Up-gradation / Renewal fees.

15.10 RENEWAL FOR DEMOTED CONTRACTORS

The renewal of demoted contractor/s shall be processed for original class and the penal action of demotion will continue till the specified period.

In case the validity of the suspended contractor/s falls in suspended period, the validity will be renewed after completion of suspension period, in continuation of validity of his registration without charging the penalty prescribed for renewal.

SECTION B: Safety Health & Environment

CONTRACTOR'S HEALTH, SAFETY & ENVIRONMENT PROGRAMME

1. SAFETY ORGANISATION

1.1. SHE Policy

The Contractor shall have a written health, safety and environment policy issued by the Chief Executive of the Organization, appropriate to the scale and nature of the risks involved in the contract works. A copy of the Policy shall be made available to the Employer at the time of contract in evidence of Contractor's commitment to management of employee's health and safety and compliance to Statutory and regulatory requirements. All Contractors' employees shall be familiar with the Safety Policy and their role and obligations in its implementation. The Policy shall meet the relevant statutory and regulatory requirements and the requirements of the Employer. The Policy shall periodically be reviewed for updating with respect to new and emerging legal and other requirements. SHE policy should focus and present well defined SHE objectives and targets.

1.2 Site specific SHE Plan / Procedures / Forms & Documents

Contractor will have to prepare & get SHE plan approved from the Employer's representative. Contractor will work as per OHSAS guidelines. Contractor can use Forms available with client's representative to show documentary evidence of compliance.

1.3 Safety Representative

a) The Contractor shall appoint a Safety Representative (SR) meeting statutory competence requirements, with a minimum experience of five years of safety management in comparable contracts, approved by the Employer on the basis of his qualification [DIS] and experience & shall have hands-on experience on OHSAS 18000 & Environment Management System (EMS). Safety Head of Client's representative can disqualify the SR if found unsuitable. The SR shall give his whole time to the superintendence of the Health and Safety Programme of the Contractor.

b) The Contractor shall also nominate in writing competent Safety Appointees from different disciplines to assist SR in implementation of health and safety measures in

their routine contract works. The SR shall have sufficient authority to direct Contractor's or his Subcontractor's personnel to meet health and safety requirements and to stop performance of work until such requirements are met.

1.4 Employee consultations, Safety Committee and communication

a) The Contractor shall ensure full involvement of all his employees recognizing their right to consultation on health and safety matters. The Safety Appointees of the various areas, in conjunction with the SR shall be responsible for ensuring employees' involvement through routine safety inspections, hazard and risk assessment in new and changed works and their control. Contractor shall maintain appropriate operating procedures to guide these requirements. Contractor shall plan, maintain and

implement annual training calendar/matrix for periodical SHE Induction & Training programs for all working level personnel.

b) The Contractor shall also appoint a Safety Committee (SC) comprising of Safety Appointees from the various areas under the chairmanship of the Contractor's Project In charge .The committee shall meet at periodic intervals minimum monthly to discuss the status and adequacy of the safety management, and any safety concerns of the employees. The committee shall also formulate and validate the safety procedures incorporating controls to prevent or mitigate hazards and risks before submission for approval by Employer / Engineer. The minutes of SC meeting shall be submitted to the Employer / Engineer. SR shall maintain the records of the meetings. The frequency of the meetings shall be clearly defined in the SHE program and minutes of the meetings shall be submitted to Employer.

c) The Contractor shall communicate with the help of Notice board, Posters, Sign boards to the employees regularly on job hazards applicable to their tasks in hand. Safety Appointees (SA's or any of SR's nominees.) shall hold 'Toolbox talks' for this purpose on a routine basis before undertaking any safety critical and /or non-routine activities. Weekly meetings of the Contractor and his Subcontractor attended by the SR and SA's shall include safety as a key item in the agenda to discuss hazards and risk assessments, Job safety analysis, and control procedures and to review accidents and incidents (Near-miss) for remedial measures to prevent such occurrence. The minutes of the meeting shall be submitted to the Employer / Contractor. SR shall maintain the records.

1.5 Contractor's accident / Environmental incident reports

"Accident" for the purpose of this clause is defined as "Undesired event giving rise to death, ill-health, injury, damage or other loss" and "Incident" is defined as "Event that gave rise to an accident or had the potential to lead to an accident". An accident where no ill health, injury, damage or other loss occurs also referred to as "nearmiss". Incident includes near miss.

The Contractor shall report orally, to Employer and Engineer regardless of their extent, duration and severity, immediately on occurrence of all accidents resulting in:

- a) Personal injury / Dangerous Occurrence,
- b) Property damages,
- c) Fires,
- d) Spills
- e) Overflows of septic tanks and
- f) near-misses

Contractor shall submit the accident/ incident report in writing to Employer / Engineer within 24 hours of its happening in the form as prescribed by the governing statute or in the absence of which, in the form prescribed by the Engineer. Contractor shall detail in the Accident/Incident report, the particulars of the dangerous occurrence leading to the accident, lost time of absence due to accident, root cause analysis and the corrective and preventive actions to prevent such recurrence. In addition, Contractor shall include his estimate of the impact of accident on project schedule. Incidents shall also be reported in the same manner identifying root cause/s to eliminate such potential occurrence or risks

1.6. First -aid personnel and facilities

a) The Contractor shall make available first-aiders, first-aid boxes and or first aid stations as per statutory requirements. The persons holding current certificates of competency of recognized institutions in prescribed numbers as per any governing statute and in the absence of such regulatory requirement a minimum of two firstaiders for each area of work for every hundred workmen. First-aiders' names shall be prominently displayed.

b) The first -aid boxes shall display contents of medical and medicinal articles with quantity maintained, which shall be in accordance with governing statute. Nominated first-aider shall replenish stock promptly.

The first-aid refresher training shall be provided at least once in a year and all employees shall be encouraged to undergo first-aid training. A record shall be kept of all first aid treatments with particulars of treatment and personnel providing the treatment.

1.7 Purchase and Procurement Control

a) The Contractor shall maintain a procedure for control of his purchases to ensure that all safety requirements are appropriately vetted by the safety personnel during all stages of procurement including planning of specifications, inspection for acceptance and commissioning in order that threats to safety are not overlooked and appropriate attention is paid to the training of personnel in the operation of Contractor's new or changed machinery and their operation control procedures, to prevent / control risks.

b) Contractor shall exercise due diligence in appointing his subcontractors and outsourcing contract services, that no new health and safety threats are created. Contractor shall ensure personnel of subcontractors and outsourced contract services are competent in health and safety management to meet the Policy requirements. They shall be made aware of the safety rules, emergency procedures and any information that will have a bearing on the safety, health and related contractual obligations

1.8 Hazard Identification and Risk Assessment

Contractor shall ensure that his key personnel and safety personnel are trained to be competent in hazard identification, risk assessment and risk control processes. Contractor shall on a routine basis identify, evaluate and control all health and safety risks especially in the hazardous work activities to validate the previous risk assessments. Elements such as hazard identification, evaluation of risks with existing control measures in place and estimate of tolerability of the residual risks shall be an ongoing process. Any additional/New control measures shall be designed based on this process on need basis. Contractor shall make sure that specific work related risk assessment is attached to the permit while taking the permit.

2.0 Health and well being of construction workers

The objective is to ensure health and safety of the workers during construction, with effective provisions for the basic facilities of sanitation, drinking water, safety of equipments or machinery etc.

Following are the recommendations to be followed:

1. Comply with the safety procedures, norms and guidelines (as applicable) as outlined in the document Part 7 Constructional practices and safety, 2005, National Building code of India, Bureau of Indian Standards
2. Provide clean drinking water to all workers
3. Provide adequate number of decentralized latrines and urinals to construction workers.
4. Guarding all parts of dangerous machinery.
5. Precautions for working on machinery.
6. Maintaining hoists and lifts, lifting machines, chains, ropes, and other lifting tackles in good condition. Durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
7. Ensuring that walking surfaces or boards at height are of sound construction and are provided with safety rails or belts.
8. Provide protective equipment; helmets etc.
9. Provide adequate measures to prevent fires.
10. Fire extinguishers and buckets of sand to be provided in the fire-prone area and elsewhere where ever found necessary.
11. Provide sufficient and suitable light for working during Nighttime.
12. Dangers, health hazards, and measures to protect workers from materials of construction, transportation, storage etc.
13. Safety policies of the construction firm/division/company.

2.1 Sanitation facilities for construction workers

Sewage generated from the areas occupied by the construction laborers have to be directed into the existing sewage drain of the area. In case of non availability of the sewer system, an onsite decentralized treatment system has to be provided.

3.0 Water use during construction

3.1 Parameters for water quality

Water used shall be clean and reasonably free from injurious quantities of deleterious materials such as oils, acids, alkalis, salts and microbial growth. Generally, potable water shall be used. Where water can be shown to contain any sugar or an excess of acid, alkali or salt, that water should not be used.

3.2 Measures for reducing water demand during construction

To avoid wastage of curing water, following guidelines are to be followed:

1. Curing water should be sprayed on concrete structures; free flow of water should not be allowed for curing..
2. Concrete structures should be covered with thick cloth/gunny bags and then water should be sprayed on them. This would avoid water rebound and will ensure unstained and complete curing.

3. Ponds should be made using cement and sand mortar to avoid water flowing away from the flat surface while curing.
4. Water ponding should be done on all sunken slabs, this would also highlight the importance of having an impervious formwork.

4.0 Construction wastewater management

Wastewater generated from the site during the construction contains suspended materials, spillage and washings from the various areas which can be hazardous and should not be mixed with the sewage water or allowed to percolate into the ground. A separate drainage should be provided for the construction wastewater and collected in a separate basin. The water should be discharged into the sewage drain after pre treatment including filtration and removal of contaminants to the standards prescribed for disposal.

5.0 Noise Control

- i) No horn shall be used in silence zones or during night time in residential areas except during public emergency.
- ii) Sound emitting construction equipment shall not be used or operated during night time in residential areas and silence zone.

Area code	Category of Area/ Zone	Limits of dB(A)Leq	
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Note:-i) Day time shall mean from 6AM to 10 PM ii) Night time shall mean from 10 PM to 6 AM
 iii) Silence Zone is an area comprising not less than 100meters around hospitals, educational institutes, courts, religious places or any other area declared such by competent authority.

ANNEXURE-I

Adjustment Formulae

a) Local Currency Component

i. Price adjustment for increase or decrease in the cost due to **local labour** shall be paid in accordance with the following formula:

$$VL = 88 \times P_L \times RI \times \left(\frac{L^i}{L^0} \right)$$

$$100L_0$$

V _L	increase or decrease in the cost of work during the quarter under consideration due to changes in rates for local labour
=	
L ₀	The Consumer Price Index Numbers (General) for Mumbai (declared by the Labour Bureau, Government of India) as on the date 30 days prior to the deadline for submission of bids
=	
L _i	The average Consumer Price Index Numbers (General) for Mumbai (declared by the Labour Bureau, Government of India) for the quarter under consideration.
=	
P _L	Percentage of local labour component as specified in Special conditions of contract (SCC).
=	

i. Price adjustment for increase or decrease in the cost of **cement** procured by the Contractor from a source within India shall be paid in accordance with the following formula:

$$VC = 88 \frac{PC \cdot RI \cdot (C_i - C_0)}{100 C_0} \quad \text{_____}$$

V _c	Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for cement.
=	
C ₀	The whole sale price index for cement as on the date 30 days prior to the deadline for submission of bids as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.
=	
C _i	The average whole sale price index for cement for the quarter under consideration as by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.
=	
P _c	Percentage of cement as specified in Special conditions of contract (SCC)
=	

i. Price adjustment for increase or decrease in the cost of **reinforcing steel** procured by the Contractor from a source within India shall be paid in accordance with the following formula:

$$VS = 88 \frac{PS \cdot RI \cdot (S_i - S_0)}{100 S_0} \quad \text{_____}$$

V _s	Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for reinforcing steel.
=	
S ₀	The whole sale price index for steel (Iron & Steel) as on the date 30 days prior to the deadline for submission of bids as published by the Office of the Economic Advisor, Ministry of Industry,
=	

Government of India, New Delhi.

Si = The average whole sale price index for steel (Other Iron & Steel) for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

Ps = Percentage of steel as specified in Special conditions of contract (SCC)

i. Price adjustment for increase or decrease in cost of **other local materials** procured by the Contractor shall be paid in accordance with the following formula:

$$\frac{88RI(Mi - M0)}{VM - PM}$$

100M₀

V_M = Increase or decrease in the cost of work during the quarter under consideration due to changes in rates for local materials other than Petroleum Oil & Lubricant.

M₀ = The whole sale price index (all commodities) as on the date 30 days prior to the deadline for submission of bids as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

M_i = The average whole sale price index (all commodities) for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

P_m = Percentage of local material component as specified in Special conditions of contract (SCC).

i. Price adjustment for increase or decrease in cost of **fuel and lubricants** procured by the Contractor from a source within India shall be paid in accordance with the following formula:

$$\frac{VF - 88PF - RI(Fi - F0)}{100F_0}$$

100F₀

V_F = Increase or decrease in the cost of work during the quarter under consideration due to changes in rates for fuels and lubricants.

F₀ = The retail price of High Speed Diesel (HSD) at the existing consumer pumps of Indian Oil Corporation (IOC) at Mumbai as on the date 30 days prior to the deadline for submission of bids.

Fi = The retail price of HSD at the existing consumer pumps of IOC at Mumbai for the 15th day of each calendar month of quarter under consideration.

P_F = Percentage of fuel and lubricants as specified in Special conditions of contract (SCC). (for the application of this clause the price of HSD has to be chosen to represent Fuels and Lubricants group.)

i. Price adjustment for increase or decrease in the cost of **steel plates for pipelines** procured by the Contractor from a source within India shall be paid in accordance with the following formula:

$$VP = 88 \times PP \times RI \times \frac{(Pi - P_0)}{100P_0}$$

V_p = Increase or decrease in the cost of work during the quarter under consideration due to changes in the rates for steel plates.

P₀ = The whole sale price index for Or mild Steel & Tensile Plates as on the date 30 days prior to the deadline for the submission of bids as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

P_i = The average whole sale price index for Or mild Steel & Tensile Plates for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

P_p = Percentage of steel plates component for the Works as specified Special conditions of contract (SCC).

i. Price adjustment for increase or decrease in the cost of **electricity** shall be paid or recovered in accordance with the following formula

$$VE = 88 \times PE \times RI \times \frac{(Ei - E_0)}{100E_0}$$

V_E = Increase or decrease in the cost of work during the quarter under consideration due to changes in rates for electricity.

E₀ = The group-wise index number of industrial production of electricity as on the date 30 days prior to the deadline for submission of bids as officially published in monthly RBI bulletin by Reserve Bank of India

E_i
= The group-wise index number of industrial production of electricity for the quarter under consideration as officially published in monthly RBI bulletin by Reserve Bank of India

P_E = Percentage of electricity component as specified in Special conditions of contract (SCC)

i. Price adjustment for increase or decrease in the cost of **mechanical plant and machinery going into permanent works** shall be paid or recovered in accordance with the following formula :

$$V_T = 88 \times P_T \times R_I \times \left(\frac{T_i}{T_0} \right) \times \frac{100 T_0}{100 T_0}$$

V_T = Increase or decrease in the cost of work during the quarter under consideration due to changes in price for mechanical plant and machinery.

T_0 = The wholesale price index of non electrical machinery & parts as on the date 30 days prior to the deadline for submission of tenders as published by the office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

T_i = The average wholesale price index of non electrical machinery & parts for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Industry, Government of India, New Delhi.

P_T = Percentage of mechanical plant and machinery component as specified in Special conditions of contract (SCC)

For extra items of works required to be executed as per Clause 10(a) and 10 (b) of Conditions of Contract, the escalation will be payable on the basis of formulae mentioned above by adopting Lo, Co, So, Mo, Fo, Po, Eo, and To prevailing on the date of first execution of the extra items.

The percentage of various components such as labour, material, fuel and lubricants to be adopted in the formulae for working out increase or decrease in cost of work, in case of extra items shall be decided while framing the rate for extra items on the basis of actuals.

NOTE : Latest General Contract Conditions from BMC portal shall be applicable.

SECTION 10
SPECIFICATIONS & SELECTION OF MATERIAL

SPECIFICATIONS & SELECTION OF MATERIAL

The tender is prepared on the basis of Unified Schedule of Rates and specifications 2018. The specifications of the items of USOR are available on BMC portal <http://portal.BMC.gov.in> under the Tender tab. Hence the deserving contractor shall either download the same from BMC portal or the same may be collected in the soft copy format at the time of purchasing the tender from this office.

SELECTION OF MATERIAL

1. All materials brought on the site of work and meant to be used in the same, shall be the best of their respective kinds and to the approval of the Engineer. The Engineer or his representative will accept that the materials are really the best of their kinds, when it is proved beyond doubt that no better materials of the particular kind in question are available in the market.
2. The contractor shall obtain the approval of the Engineer of samples of all materials to be used in the works and shall deposit these samples with him before placing an order for the materials with the suppliers. The materials brought on the works shall conform in every respect to their approved samples. Fresh samples shall be deposited with the Engineer when- ever the type or source of any material changes.
3. The contractor shall check each fresh consignment of materials as it is brought to the site of works to see that they conform in all respects to the Specifications of the samples approved by the Engineer, or both.
4. The Engineer will have the option to have any of the materials tested to find out whether they are in accordance with the Specifications and the Contractor will bear all expenses for such testing. All bills, vouchers and test certificates, which in the opinion of the Engineer or his representative are necessary to convince him as to the quality of the materials or their suitability shall be produced for his inspection when required.
5. Any materials that have not been found to conform to the specifications will be rejected forthwith and shall be removed from the site by the contractor at his own cost within 24 hours.
6. The Engineer shall have power to cause the Contractors to purchase and use such materials from any particular source, as may in his opinion be necessary for the proper execution of the work.
7. Notwithstanding the source, the sand shall be washed using sand washing machine before use.

TECHNICAL SPECIFICATION OF STAINLESS STRUCTURAL STEEL

Material description –

Providing, fabricating (Fabrication Charge with all consumables, lifting and handling machineries, electricity charges and destressing of plates including temporary assembly etc), detailing (Preparation of shop/fabrication drawing details for each section from approved good for construction drawing) and fixing at desired location using Stainless Steel Hot Rolled Annealed Pickled Plates 450 N/mm² IRS CR similar to RDSO specifications IRS CR and X2Cr12 suitably modified for the Structural application, ASTM A1010/A1010M - 01E1 and Indian Standard (IS) 6911-2017 (amendment 2) having Chemical properties of C 0.03% Max for make SAIL,JSL or equivalent , Mn 1.5% Max, Si 1% Max, S 0.01% max, P 0.04% Max, Ni 1.5% max, Mo 0.1-0.75 % , Cr 10.5% –12.5% & Mechanical properties 0.2% proof Stress 450 MPA min, Ultimate Tensile Strength 550 MPA min % Elongation 18 Min, Charpy Impact Value (At RT) 27 Joules Min, Hardness 97(RB) Max, of make SAIL, JSL or equivalent, inclusive of all necessary testing & certification etc. complete, transporting to site (including loading/unloading from fabrication plant to site) and erecting structural stainless steel members for all heights & at all levels (charges for crane for erection , fuel & lubricants) including provision of necessary erection bolts, fixing bolts, nuts, washers, cleats, stiffeners, gussets, base plate, Stud, and all necessary fixtures and operations like preheating as per specifications, straightening, bending, cutting, drilling, grinding, machining if specified, welding, grinding and removing the welding burr etc, complete as directed by Engineer In Charge.

1. Grade:

1.1 Stainless Steel -Hot Rolled Annealed Pickled Plates ,Grade IRS-450 CR, similar to RDSO specifications and CK-201-X02Cr22Ni6Mo3n suitably modified for structural application, ASTM A1010/A1010M-01e1 and Indian standard (IS) 6911-2017 (amendment 2)-X02Cr12.

Note : All relevant codes pertaining to the Stainless Steel rebars and Structural Stainless Steel are applicable to this work.

2. Scope:

2.1 This specification covers the technical requirements and quality assurance tests of hot rolled stainless steel sheets and plates for fabrication of components for bridges & associated structural applications.

2.1.1 Conditions of supply:

The material supplied shall be of guaranteed mechanical properties and weldability.

2.2 The material shall be supplied in hot rolled, annealed, shot blasted and pickled Condition and shall be to the specific rationalized sizes required.

3. Manufacture:

3.1. All Structural stainless Steel shall be procured as per specifications Stainless Steel -Hot Rolled Annealed Pickled Plates, Grade IRS-450 Independent tests shall be conducted, wherever required, to ensure that the materials procured conform to the specifications. The Stainless Steel shall be procured only from those firms, which are Established, Reliable, Indigenous and fully Integrated manufacturers/producers with Melting of Stainless Steel like Salem Steel Plant (SAIL)/Jindal Stainless Limited/Jindal Stainless (Hisar) Limited , JSW, Tata Steel, RINL, Jindal Steel ltd., JSPL, Essar steel India Ltd.

4. CHEMICAL COMPOSITION:

4.1. Ladle Analysis

The ladle analysis of Stainless steel when carried out either by the methods specified in relevant parts of ASTM A240 or by any other established instrumental/chemical method shall be as follows. In case of any dispute the procedure given in relevant parts of ASTM A240 shall be the reference method.

4.2 Chemical Composition:

Element	Percentage
Carbon(C)	0.03 max
Manganese (Mn)	1.5 max
Silicon (Si)	1.00 max
Sulphur (S)	0.01 max
Phosphorus (P)	0.04 max
Nickel (Ni)	1.5 max
Molybdenem (Mo)	0.1 – 0.75
Chromium (Cr)	10.5 – 12.5

4.3. Product Analysis

Analysis of product composition from each cast shall be carried out by the material specified in ASTM A240. The chemical composition shall be within the limits of permissible variation specified in ASTM A240.

5. Tensile Test:

5.1 Number of Tensile Test

5.1.1. Tensile test shall be taken from each lot of 10 tones or part thereof. The lot or the part shall be from the same cast and same heat treatment batch.

5.1.2. Where plates or sections of more than one thickness are tolled from the same cast, one additional tensile test shall be made from the material representing each class of product.

5.2 Tensile Test Pieces

5.2.1 One sample each shall be selected lengthwise and crosswise to the direction of rolling from plates and sheets and one sample cut lengthwise from sections for conducting tensile test.

5.3 Mechanical Properties:

5.3.1 When tested according to method specified in IS-1608, the ultimate tensile strength, 0.2% proof stress, hardness and elongation percentage shall be as follows:

Properties	Value
0.2% Proof Stress	450 MPA min
Ultimate Tensile Strength	550 MPA min
% Elongation	18 min
Charpy Impact Value	27 Joules
Hardness (HRB)	32 HRB

5.4 If the fracture of the tensile test piece is outside the gauge length, the test shall be discarded and retest conducted. To facilitate this sufficient number of test pieces shall be prepared in advance.

6. BEND TEST:

6.1. Bend test shall be taken from each lot of 10 tones of sheets/plates/sections or part thereof.

6.2. Bend Test Pieces

6.2.1. One test piece each shall be selected lengthwise and crosswise to the direction of rolling from plates and sheets and one test piece lengthwise from sections.

6.2.2. The rough ends or arris resulting from shearing may be removed by filing or grinding or machining. Test pieces shall receive no other preparation.

6.2.3. Bend test shall be conducted in accordance with ASTM A240 (Method of test).

6.2.4. The bend test specimen shall withstand being bent at ambient temperature in any direction through 180 degree around a former of diameter equivalent to the thickness of the material without cracking on the outside of the bent portion.

7. Location of test sample

7.1. Samples for chemical analysis and test pieces for tensile and bend test shall be drawn from standard location for plates and sections as given in ASTM A240 and for sheets tar any convenient location.

8. Retest

8.1. Should any of the test pieces first selected fail to pass any of the tests specified in his standard, two further samples shall be selected from the same lot for testing in respect of each failure. Should the test piece from both these additional samples pass, the material represented by the test sample shall be deemed to comply with the requirement of that particular test. Should the test piece from either of this additional samples fail the material represented by the test sample shall be deemed to be the not conforming to this standard and shall be rejected.

9. Freedom from defects

9.1. All finished material shall be well and cleanly rolled to the dimensions and weights specified. The finished material shall be free from cracks, surface flaws, laminations, tough jagged and imperfect edges and all other harmful defects. The sheets shall be reasonably flat and the cleanly sheared and truly squared to the specified dimensions. The inspecting officer or the purchaser's representative shall be free to decide the method of detecting these defects.

10. Surface finish

10.1. The plates, sheets and sections shall be well and cleanly rolled. Minor surface defects may be removed by the manufacturer by grinding provided the thickness is not reduced locally by more than 4 percent and the final thickness remains within the tolerance. However,

the manufacturer shall indicate the areas of defect and grinding location to the inspecting officer.

10.2. The surface finish of the sheets/plates/sections shall be No. 1 & condition as per clause 10 of ASTM A480.

11. Weldability

11.1. The plates, sheets and sections shall be suitable for metal arc welding using RDSO approved medium basic coated electrode under class M1 to IRS: M-28 f(Gr E-19.9L of IS: 5206) using DC power source.

11.2. The sheets shall be suitable for metal arc welding and suitable for spot ends seam welding processes also.

Note : All relevant codes pertaining to the Stainless Steel rebars and Structural Stainless Steel welding and testing are applicable to this work.

12. Dimensions and tolerances

Tolerance for thickness will conform to ASTM A480. However for thickness, the tolerances for 4mm- 8 mm thick plates shall be in limits +0.5mm to -0.2mm. Tolerance of width will be as +30mm/ -0 mm for ME and +10 mm/-0 mm for TE. Tolerance of Length will be +50 mm/-0 mm up to 10mm thk & +100mm / -0mm above 10mm thk.

13. Inspection

13.1. The purchaser or his inspecting officer shall have free access to the works of the manufacturer at all reasonable times and he shall be at liberty to inspect the manufacture at any stage and to reject material that does not conform to the terms of this specifications.

13.2. Testing Facilities

13.2.1. The manufacturer will supply the material required for testing free of charge and shall at his own cost furnish and prepare the necessary test pieces and supply labour and appliances for such test as may be carried out on his premises in accordance with the specification. Failing to provide the facilities at his own works for making the prescribed tests the manufacturer shall bear the cost of carrying out the tests in a laboratory/test house selected by the inspecting officer or the purchaser.

13.2.2. Each supply of plates/sheets shall be furnished with a test certificate indicating chemical composition, mechanical properties, bend test result, etc.

14. Marking

14.1. Each product (sheet & plate) shall be stenciled or painted with material specification, code of surface finish, the cast number the manufacturer's name or trade mark and the size of the product,

15. Protection and Packaging

15.1. Plates supplied shall be provided with reasonable packing with metal strapping for handling during transit and storage.

15.2. Due care be taken to avoid mechanical damage and corrosion during transit.

16. Shop Erection

The Stainless steel work shall be temporarily erected in the shop to determine the accuracy of the fit. The extent of erection shall be either complete or as directed by Engineer in charge.

17. General Inspections and Testing of Structures

Materials and workmanship at all times shall be subject to inspection by the Client / Employer.

All inspection as far as possible shall be made at the place of fabrication and the contractor shall co-operate with the Client / Employer Inspector and permit access for inspection to all places where work is being done. The contractor shall supply all necessary gauges and templates necessary for inspection. However, such inspection shall not relieve the contractor of his responsibility to furnish satisfactory work.

Materials of workmanship, not conforming to provisions of the specifications may be rejected at any time when defects are found during the progress of work.

The contractor shall obtain approval from the Engineer – in - charge of all fabricated items prior to commencement of their erection. However, any such approval shall not absolve the contractor from his responsibility of correctness and workmanship of the entire work.

18. Packaging and Transportation

Loading and transportation shall be done in accordance with transport rules prevailing at that

location. Items shall be packed to protect them from damage / distortion. Small parts shall be wired to their main members. Loose item such as bolts, nuts and washers shall be packed in crates / bags.

19. Erections/Launching

19.1 General

Erection of structural Stainless steel work shall be carried out in accordance with the relevant IS code in conformity with the drawings and specifications in an expeditious manner.

The suitability and capacity of all plant, machinery, equipment etc. used for erection shall be to the satisfaction of the Engineer.

19.2 Scope of erection work

The contractor shall provide all construction material and equipment, transport facilities, tools, tackles, consumables, labour, supervision for erection, including carrying out the following:

Receiving, unloading, checking and moving into the storage facility at site, as outlined under General Conditions of contract inclusive of attending to all insurance matters in respect of materials arriving at site.

Transporting from site, storage, handling, rigging, assembling, riveting, bolting, welding, and installation of all fabricated materials in proper location according to drawings or as directed by the Engineer.

Checking centre lines, levels of all foundations blocks including checking line and level, position and plumb of all bolts and pockets. Any defects observed in the foundation shall be brought to the notice of the Engineer. The contractor shall satisfy himself regarding the correctness of the foundations before installing the fabricated structures on the foundation blocks. Aligning, levelling, riveting, bolting, welding, fixing in position of fabricated materials shall be done in accordance with drawings or as directed by the Engineer.

Supply of all required consumables, construction and erection materials, including but not limited to gauges, welding / brazing, rods, electrodes and wires, oxygen, acetylene, fuel, bolts, nuts, rivets, shims and temporary supports etc. as required for the incidental works and for the completion of erection.

Erection/Launching shall also include the following work:

- I. All minor modification such as :

- II. Removal of bends, kinks, twists etc. of parts damaged during transport and handling.
- III. Cutting, chipping, filling, grinding etc. for preparation and finishing of site connections.
- IV. Reaming for use of the next higher size of rivet or bolt for holes which do not register or which are found to be damaged.
- V. Welding of connections in place of riveting or bolting for which holes are either not drilled or wrongly drilled during fabrication.
- VI. The following shall be considered as a legitimate part of erection work:
- VII. Re-fabrication work in respect of parts damaged beyond repair during transport and handling or in respect of those that are incorrectly fabricated.
- VIII. Fabrication of parts omitted during fabrication due to an error, or subsequently found to be essential.
- IX. Plug-welding and re-drilling of holes which do not register and which cannot be reamed for the use of next size of rivet or bolt.
- X. Drilling of holes which are either not drilled at all or are drilled in incorrect positions during fabrication.

19.3 Erection/Launching scheme and Drawings

The approved erection drawings and any approved arrangement drawings, specifications or instructions accompanying them shall be followed while erecting the structural Stainless steelwork. Erection drawings for structural Stainless steel work shall be prepared by the contractor and shall consist of line diagrams showing every member in position with the respective erection mark.

Erection marks shall appear on the structural Stainless steel members as detailed and all Stainless steelwork shall be erected with the marks in the same relative position as shown on the plan or elevation.

Any discrepancy between and specifications shall be brought to the attention of the Engineer in Charge for obtaining his decision.

19.4 Storing and Handling of Material

The fabricated materials shall be carefully unloaded at site, examined for defects, checked, sorted out and stacked properly above the ground level, to be kept clean and properly drained. The handling and storing of the component parts of a structure shall involve the use of method and alliances not likely to produce injury by twisting, bending or otherwise

deforming the metal. No member slightly bent or twisted shall be put in place until the defects are corrected.

All small bends or twists detected in members shall be rectified before such members are put in place. Any serious bends or defects shall be reported at once to the Engineer. The straightening of bent edges of plates, angles and other shapes shall be done by methods not likely to produce fracture or other injury. Following the completion of the straightening of a bend or buckle, the surface of the metal shall be carefully inspected by the contractor for evidence of incipient or any other type of fractures. The contractor shall report to the Engineer about the presence of such evidence and act according to his instructions.

19.5 Setting Out

The contractor shall be responsible for checking the alignment and levels of foundations, correctness of foundation-bolt centres, their projected height above the foundation tops, the length of threading provided and the provision and fitment of nuts for the foundation bolts. These shall be checked well in advance of starting the erection work and the contractor shall be responsible for any consequences for non-compliance thereof. Discrepancies, if any, shall immediately be brought to the notice of the Engineer for his advice.

One set of reference axes and one Bench mark level will be furnished to the contractor. These shall be used by him for the setting out operation.

The contractor shall assume full responsibility for the correct setting out of all Stainless steelwork and erecting it correctly as per the alignment and levels shown on the drawings and for the verticality of members. Notwithstanding any assistance rendered to the contractor by the Engineer, if at any time during the progress of the work any error should appear or arise therein, the contractor shall remove and amend the work to the satisfaction of the Engineer, at his own cost.

19.6 Assembly and Erection

Before the commencement of structural Stainless steel work, the contractor shall submit a schedule of operations, detailing the erection procedures to be followed. The schedule shall include provisions for any temporary bracing that may be considered necessary during the erection.

During the erection of a structure, the Stainless steel work shall be securely bolted or otherwise fastened and if necessary, temporarily braced, so as to make adequate provision for

all erection stresses and conditions, including those due to erection equipment and its operation. Such temporary bracing shall be maintained in position until the erection work is sufficiently advanced and it is ascertained that the bracing provided is no longer required.

Connections for temporary bracing and additional holes, members or cleats used to facilitate handling or erection, shall be provided in a manner which does not weaken the steelwork already erected.

The alignment of each portion of the structure shall be carried out progressively, soon after that portion is erected. Permanent connections shall not be made until proper alignment has been obtained and a sufficiently large portion of the structure has been erected and temporarily connected so as to ensure that the members thus connected shall not be overstressed or displaced during the progressive alignment of the remainder of the structure.

19.7 Tolerances

Erection tolerances shall be provided strictly in accordance with the requirements of IS: 7215/IRC/IRS/RDSO codal provisions.

20. Field Connections

20.1 Field Bolting

This shall be carried out with the same care as shop bolting.

20.2 Field Welding

Field Welding after field assembly shall follow the same requirements as laid down for shop assembly and shop welding.

21. Grouting

Prior to erecting the Stainless steelwork over concrete pedestals, columns or brackets, the top of concrete shall be cleared with wire brushes, chipping and compressed air to remove all laitance and loose material and made thoroughly wet. The structural member shall then be erected aligned and plumbed with the base plates as shoe plates maintained as specified levels using shims / pack plates or wedges.

After the structure is erected, formwork shall be done all around and the joints sealed to be water tight. The Grout under the base plates, including in pockets and sleeves shall be ordinary grout or non-shrink grout as specified in drawings. Non-shrink grout shall be of premix type and shall be prepared as per manufacturer's instruction; Non shrink grout shall

be of quality and type approved by Engineer – in – charge.

The grout shall be poured in by grout a pump continuously from one side till the intervening space is filled completely and the grout is carried to the far side of base plate. The grout shall be spread with flexible steel strips and rammed with rods to ensure the gap is filled completed.

After the grout has sufficiently hardened the shims / pack / wedges which are accessible may be removed and anchor bolts tightened. The alignment of the structure shall be rechecked and the voids left by removal of the shims / pack plates / wedges shall be filled with a similar mix of grout. In case the structure is not properly aligned the grout shall be removed the structure re-aligned and grouting operation repeated.

CONCRETE – REQUIREMENTS FOR DESIGN MIXES

17.5.1.1. Suitability of Proposed Design Mix Proportions

- The Contractor shall submit for the Engineer’s approval, prior to the supply of any design mix, the following information for each grade and type of concrete in the Contract in following manner.

EITHER

In cases where the Contractor proposes to use a continuing concrete source of an approved ready-mixed concrete source, evidence of satisfactory previous performances for target mean strength, workability and water/cement ratio in accordance with Clause 1704.2 of MORT&H Specifications.

OR

Full details of design and trial mixes as per Clause 1704.3 of MORT&H Specifications.

i) Design Mixes from a Continuing Source

When mixes have been proposed from a continuing source for which the necessary test results are available and for a batching installation which has been operated for a sufficient period (not less than 2 months) then the required cube strength results to be adopted shall meet the requirements given in Clause 1706.9

- c) The mean strength calculated from ‘n’ cube results from separate batches of concrete shall exceed the specified characteristic strength by a margin equal to

$$1.64 \times SD (0.86 + 2/n)$$

Where:-

‘SD’ is the standard deviation from ‘n’ results but not less than $3N/mm^2$

‘n’ is the number of results not less than 10 and not greater than 100

When ‘n’ exceeds 100 the margin shall be calculated as $1.64 \times SD$.

d) Previous production data for use in the above criteria shall be 28 day cube test results from separate batches of concrete, sampled at random over an immediately prior period not exceeding one year, using those materials and plant which are proposed for the work.

3.0 Design Mixes from a New Source

For mixes proposed from a source which cannot satisfy the requirements of Clause 1704.2 above, the following procedure shall apply –

A. The Contractor shall supply the Engineer with the design details of the proposed mix, including any proposed admixtures. The design of the mix shall be by a recognized, documented design method.

B. A potential mix design shall first be subjected to preliminary testing on one batch. The mix proportions shall be adjusted to achieve the maximum density from available materials. If this preliminary batch achieves cube strengths which exceed the characteristic strength by an acceptable margin (an assessment based on 7 day strengths may be accepted) at the specified free water cement ratio and produces concrete of the required workability and even consistency, the mix may be prepared for trial mix analysis. If the batch fails the Contractor shall experiment with the mix proportions and submit another design.

C. That batches shall be prepared under strictly mentioned conditions in the presence of the Engineer Materials shall be typical of the prospect supply and special care must be taken in record aggregate moisture contents and to achieve the required free water content. These separate trial batches shall be made using the proposed design mix. The batches shall be determined and six cubes made from each batch, three cubes for testing at 28 days and a further time cubes for testing at 7 days as a quality control guide.

D. These requirements to perform trial mixes may be relaxed by the Engineer upon production of satisfactory evidence of trial mixes previously approved with the same materials used in the same proportions.

• Acceptance

The proposed mix design will be accepted provided:

1. The plastic properties are compatible with the requirements of the Contract having due regard to bleed capacity and minimum workability necessary to allow placing and compaction as specified with the requirement proposed in any situation. If bleeding occurs in a mix, it shall be assessed in accordance with ASTM C232 and where necessary the mix design or sad grading shall be adjusted to prevent recurrence.
2. The specified free water cement ratio (Table 17/4) is not exceeded.
3. The requirements of Clauses 1702.3, 1703.4, 1703.5, 1703.6, 1703.7 and 1703.8 are satisfied, in addition to :

The requirements of clause 1704.2 or

For trial mixes the mean strength of the nine cubes tested at 28 days exceeds the specified characteristic strength by not less than 10 N/mm². The range of individual cube strength shall not be more than 15% of the mean strength.

4. All constituent materials conform to the present specification. Any change in the mix proportions (except changes in cement content of not more than 20 kg/m³), alterations in source grading type or size of material shall be subject to the Engineer's prior approval.

Method Statements

Method statements shall be approved before any concrete is placed and any alteration in the source or quality or proportioning of any of the materials in the mix will necessitate a new method statement which must be submitted to the Engineer for his approval

DECKING SHEET

Deck sheet to be used for concreting over structural Stainless steel girder should have the following specifications:

1. Composed of GI sheet, zinc coating not less than 275 GSM as per IS 277 and of yield strength 500 Mpa of approved make with specified Base Metal Thickness.
2. The profile shall be structural decking profile having ribs & pitch as per the drawing referred with the embossments (shear groove) on top and side of the ribs for better composite action.
3. The decking sheet shall be fabricated to required form as per the slab design and fixed with Galvanised Iron fasteners, self-drilling screws, shear studs as per IS 1367, connectors etc.

REINFORCEMENT STAINLESS STEEL

Supplying, Providing & fixing in position Stainless steel rebars of grade G 410-L Ferritic confirming to IS 16651 : 2017 for RCC works of any dia. Up to 32 mm whenever directed

including handling, fixing, straightening, wastage, cutting, bending, placing in position, binding etc. complete in all respect as directed and procured from MCGM approved supplier.

Structural Health Monitoring System

The objectives for monitoring a bridge are to obtain quantitative data about the structural behavior in order to confirm design assumptions and to provide real-time feed-back during construction.

The contractor shall provide and develop a “Bridge Health Monitoring System (BHMS)” at its own cost in the project for continuous monitoring of major bridge during its life span so that the safety, early warning and durability of the bridge may be ensured. The Bridge Health Monitoring System would be helpful in serving as an alarm system for would be detection of any deteriorate in functioning and taking timely action in preventing any sudden catastrophic failure.

The Bridge Health Monitoring System shall include the establishment of various sensor and other instrument at different part of the bridge structure to observe the behavior of the structure round the clock and a report would be generated at a local control center equipped with computers for taking suitable action as and when required.

The Monitoring Based Maintenance (MBM) system will enable the bridge maintenance engineers to monitor the condition of bridge on real time basis. The sensors may be installed on foundation, substructures, tension rods (suspenders), expansion joints, bearings, decks, etc. to detect the strain, tilt, deflection, vibration amplitudes, stiffness, acceleration, temperature and wind. The inputs shall be processed to represent the condition of the bridge against seismic load, wind load and any other structural deficiency. The wind direction and wind speed may be measured by the anemometer.

The “Bridge Health Monitoring System” shall be developed as per international specifications and to the satisfaction of Engineer In-charge.

Data control device shall be installed in the control room for analyzing recorded data, such as,time history data graphing, statistical and analytical processing through data processor. The weather station shall also be integral part of data control device. The weather station shall be installed at suitable location to measure wind velocity, wind direction, air temperature and barometric pressure.

The reliable & durable system shall be based on sensors like Accelerometer, Local Cell, Anemometer, Temperature sensors LCD, RF Module, GSM Module in 850 to 900MHz, ‘SMART ‘Technology/Structures.

The bearing sensors like Pressure sensors, Wire Displacement sensors shall be installed for ongoing impression of the condition and performance of the bearing & the structures.

- The BHMS shall be designed to continuous record the dynamic movements and stresses in the bridge, along with environmental forces.
- The contractor shall preferably procure pre-integrated sensors in the factory into the key structural components to optimize data.
- Corrosion in the structure is supervised by embedded chloride ion sensors and embedded Corrosion sensors.
- Traffic analysis by laser analyzer for the calculation of lane usage, average lane speed and vehicle classification are installed to log traffic influence on the structure (two for each traffic lane).
- A Video traffic surveillance system is installed for detection of accidents, queues anomalous

behaviors by use of 30 frames per second. The chosen color cameras are capable of night-time usage (two for each lane).

- Software operating system is to be based on Linux software. Manuals for BHMS are to be provided in electronic format (PDF) and also on hard copy. The user manual and all other manuals are to be in English.

- The contractor shall provide the required technical/ non-technical staffs during the construction and Defect liability period.

- The electrical equipment's shall be suitably designed for voltage 415V, AC, 50 Hz for 3 phases units and 230V, AC, 50Hz for single phase unit.

The structure shall be continuously monitored for any distress development and the condition assessment data shall be recorded in IPCS BIM system. The frequency of data recording shall be on weekly basis the condition monitoring shall be for all components and for all aspects as follows:

a. Distress Initiation Indicators

b. Distress Monitoring

c. Instrumentation

a) Distress Initiation Indicator

Distress initiation indicators this shall include the chloride ingress monitoring carbonation monitoring distress monitoring include the measurement of responses of the components on timely basis the following items will be measured one settlement shall be monitored to deflection of the day deflection of the Pier distortion of file K3 rotation distortion of the bearings for corrosion control while cab a pedestal and 1.

These shall include the -

1) Chloride Ingress Monitoring

2) Carbonation Monitoring

b) Distress Monitoring

This shall include the measurement of responses of the components on timely basis. The following items shall be measured.

1. Settlement-

i) Pile settlement shall be monitored

2. Deflection & Displacement

i) Deflection of the deck

ii) Deflection of the pier

iii) Distortion of pile cap

3. Rotation

i) Distortion of bearings

4. Corrosion Potential

- i) Pile
- ii) Pile cap
- iii) Pier
- iv) Pedestal
- v) Deck

c) Instrumentation

Instruments to be used

- a) Strain Gauge
- b) Inclinator
- c) Corrosion Analyser
- d) Level Monitor
- e) Plumb Monitor
- f) Dial Gauge
- g) Any other essential Instruments as per the directions of Engineer Incharge

Generally, following sensors will be installed, actual types will be based on the requirement of the project:

- a) Magneto elastic Force Sensor
- b) Wind/Weather Measurement
- c) Wind Measurement
- d) Structural Temperature, concrete
- e) Structural Temperature, Stainless steel
- f) Temperature and humidity sensor
- g) Seismic Measurement
- h) Corrosion Sensor
- i) Acceleration Measurement
- j) Traffic Monitoring
- k) Traffic Analysis
- l) Temperature Compensated strain, bolt able
- m) Temperature Compensated strain, glue able
- n) Tilt of the deck
- o) Displacement of the deck at the expansion joints

The installation of structural health monitoring system on various parts and locations shall be the responsibility of the bidder. Further the operation-Maintenance and Monitoring of the complete system for the 5 years maintenance period shall be the responsibility of the bidder. It is likely that the quantities may increase as per the requirement during construction which the bidder shall note. No extra payment will be made for any additional quantities. No extra payment shall be made for the installation Commissioning, O&M and monitoring of the Structural health monitoring system. The scheme for structural Health Monitoring system shall be got approved from BMC appointed consultant before installation.

SECTION 11
FRAUD AND CORRUPT PRACTICES

FRAUD AND CORRUPT PRACTICES

- The Applicants and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an Application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process.
- Without prejudice to the rights of the Authority under relevant Clause hereinabove, if an Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bidding Process, such Applicant shall not be eligible to participate in any tender or RFQ issued by the Authority during a period of 2 (two) years from the date such Applicant is found by the Authority to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice, as the case maybe.
- For the purposes of this Clause, the following terms shall have the meaning hereinafter respectively assigned to them:

A. “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bidding Process (for avoidance of doubt, offering of employment to, or employing, or engaging in any manner whatsoever, directly or indirectly, any official of the Authority who is or has been associated in any manner, directly or indirectly, with the Bidding Process or the LOA or has dealt with matters concerning the Concession Agreement or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the Authority, shall be deemed to constitute influencing the actions of a person connected with the Bidding Process);or

save and except as permitted under the relevant sub clause, engaging in any manner whatsoever, whether during the Bidding Process or after the issue of the LOA or after the execution of the Concession Agreement, as the case may be, any person in respect of any matter relating to the Project or the LOA or the Concession Agreement, who at any time has been or is a legal, financial or technical adviser of the Authority in relation to any matter concerning the Project;

B. “fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process;

C. “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any person’s participation or action in the BiddingProcess;

D. “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest;and

E. “Restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

F. If the Employer/Financier determines that the Contractor has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days’ notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of relevant Clause shall apply as if such expulsion had been made.

G. Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with relevant Clause.

For the purposes of this Sub-Clause:

i. “corrupt practice” is the offering, giving, receiving to soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

ii. “Another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes Financier staff and employees of other organizations taking or reviewing procurement decisions.

iii. “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

iv. “Collusive practice” is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

v. “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

vi. “obstructive practice” is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede the Financier investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

vii. Acts intended to materially impede the exercise of the Financer's inspection and audit rights provided.

viii. "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution.

ix. "Parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

x. a "party" refers to a participant in the procurement process or contract execution.

SECTION 12
PRE-BID MEETING

PREBID MEETING

Pre-bid meeting of the interested parties shall be convened at the designated date, time and place. A maximum of three representatives of each Applicant shall be allowed to participate on production of authority letter from the Applicant.

During the course of Pre-bid meeting, the Applicants will be free to seek clarifications and make suggestions for consideration of the Authority. The Authority shall Endeavour to provide clarifications and such further information as it may, in its sole discretion, consider appropriate for facilitating a fair, transparent and competitive Bidding Process.

Note : Prebid meeting date, time and place mentioned in Header data of Tender Notice

SECTION 13
LIST OF APPROVED BANKS

LIST OF APPROVED BANKS

1. The following Banks with their branches in Greater Mumbai and in suburbs and extended suburbs up to Virar and Kalyan have been approved only for the purpose of accepting Banker's guarantee from 1997-98 onwards until further instructions.

2. The Bankers Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Banker's Guarantee is countersigned by the Manager of a branch of the same Bank, within the Mumbai Limit categorically endorsing thereon that said Bankers Guarantee is binding on the endorsing Branch of the bank within Mumbai limits and is liable to be enforced against the said branch of the Bank in case of default by the contractor/supplier furnishing the Bankers Guarantee. IDBI Bank BG not acceptable as per circular CA/FBK/303 dated 17.03.2018.

List of approved Banks:-(Please refer CA-FBK-241 dated 27.11.19)

S.B.I and its subsidiary Banks

- 1 State Bank Of India.
- 2 State Bank Of Bikaner & Jaipur.
- 3 State Bank Of Hyderabad.
- 4 State Bank Of Mysore.
- 5 State Bank Of Patiyala.
- 6 State Bank Of Saurashtra.
- 7 State Bank Of Travankore.

B Nationalized Banks

- 8 Allahabad Bank.
- 9 Andhra Bank.
- 10 Bank Of Baroda.
- 11 Bank Of India.
- 12 Bank Of Maharashtra.
- 13 Central Bank Of India.
- 14 Dena Bank.
- 15 Indian Bank.
- 16 Indian Overseas Bank.
- 17 Oriental Bank Of Commerce.
- 18 Punjab National Bank.
- 19 Punjab & Sindh Bank.
- 20 Syndicate Bank.
- 21 Union Bank Of India.
- 22 United Bank Of India.
- 23 UCO Bank.

- 24 Vijaya Bank.
24 Corporation Bank.

C Scheduled Commercial Banks

- 25 Bank Of Madura Ltd.
26 Bank Of Rajasthan Ltd.
27 Banaras State Bank Ltd.
28 Bharat Overseas Bank Ltd
29 Catholic Syrian Bank Ltd.
30 City Union Bank Ltd.
31 Development Credit Bank.
32 Dhanalakshmi Bank Ltd.
33 Federal Bank Ltd.
34 Indsind Bank Ltd.
35 I.C.I.C.I Banking Corporation Ltd.
36 Global Trust Bank Ltd.
37 Jammu & Kashmir Bank Ltd.
38 Karnataka Bank Ltd.
39 KarurVysya Bank Ltd.
40 Laxmi Vilas Bank Ltd.
41 Nedugundi Bank Ltd.
42 Ratnakar Bank Ltd.
43 Sangli Bank Ltd.
44 South Indian Bank Ltd.
45 S.B.I Corporation &Int Bank Ltd.
46 Tamilnadu Mercantile Bank Ltd.
47 United Western Bank Ltd.
48 Vysya Bank Ltd.

D Schedule Urban Co-op Banks

- 49 Abhyudaya Co-op Bank Ltd.
50 Bassein Catholic Co-op Bank Ltd.
51 Bharat Co-op Bank Ltd.
52 Bombay Mercantile Co-op Bank Ltd.
53 Cosmos Co-op Bank Ltd.
54 Greater Mumbai Co-op Bank Ltd.
55 Janata Sahakari Bank Ltd.
56 Mumbai District Central Co-op Bank Ltd.
57 Maharashtra State Co-op Bank Ltd.

- 58 New India Co-op Bank Ltd.
59 North Canara G.S.B. Co-op Bank Ltd.
60 Rupee Co-op Bank Ltd.
61 Sangli Urban Co-op Bank Ltd.

62 Saraswat Co-op Bank Ltd.
63 ShamraoVithal Co-op Bank Ltd.
64 Mahanagar Co-op Bank Ltd
65 Citizen Bank Ltd.
66 Yes Bank Ltd.
E Foreign Banks
67 ABM AMRO (N.Y.) Bank.
68 American Express Bank Ltd.
69 ANZ Grindlays Bank Ltd.
70 Bank Of America N.T. & S.A.
71 Bank Of Tokyo Ltd.
72 Bankindosuez.
73 Banque Nationale de Paris.
74 Barclays bank.
75 City Bank N.A.
76 Hongkong & Shanghai banking Corporation.
77 Mitsui Taiyokbe Bank Ltd.
78 Standard Chartered Bank.
79 Cho Hung Bank

Note : As per Circular No. CA/FBK/303 dt. 17.03.2018, BG issued by IDBI Bank will not be accepted.

SECTION 14
APPENDIX

FORM OF TENDER

To,
The Municipal Commissioner for Greater Mumbai

Sir,

I/ We have read and examined the following documents relating to the construction of

- i. Notice inviting tender. _____
- ii. Directions to tenderers (General and special)
- iii. General condition of contract for Civil Works of the Brihanmumbai Municipal Corporation as amended up to date.
- iv. Relevant drawings.
- v. Specifications.
- vi. Special directions
- vii. Annexure A and B.
- viii. Bill of Quantities and Rates.

1A. I/We _____

(full name in capital letters, starting with surname), the Proprietor/ Managing Partner/ Managing Director/ Holder of the Business, for the establishment / firm / registered company, named herein below, do hereby offer to

.....

.....

Referred to in the specifications and schedule to the accompanying form of contract of the rates entered in the schedule of rates sent herewith and signed by me/ us” (strike out the portions which are not applicable).

1B. I/We do hereby state and declare that I/We, whose names are given herein below in details with the addresses, have not filled in this tender under any other name or under the name of any other establishment /firm or otherwise, nor are we in any way related or concerned with the establishment /firm or any other person, who have filled in the tender for the aforesaid work.”

2. I/We hereby tender for the execution of the works referred to in the aforesaid documents, upon the terms and conditions, contained or referred to therein and in accordance with the specifications designs, drawings and other relevant details in all respects.

* At the rates entered in the aforesaid Bill of Quantities and Rates.

3. According to your requirements for payment of Earnest Money amounting to Rs. _____ /-(Rs. _____)

I/We have deposited the amount through online payment gateways with the C.E. of the Corporation not to bear interest

4. I/We hereby request you not to enter into a contract with any other person/s for the execution of the works until notice of non/acceptance of this tender has first been communicated to me/us, and in consideration of yours agreeing to refrain from so doing I/we agree not to withdraw the offer constituted by this tender before the date of communication to me/us of such notice of non/acceptance, which date shall be not later than ten days from the date of the decision of the Standing Committee or Education Committee of the Corporation, as maybe required under the Mumbai Municipal Corporation Act, not to accept this tender.(Subject to condition 5below).

5. I/We also agree to keep this tender open for acceptance for a period of 180 days from the date fixed for opening the same and not to make any modifications in its terms and conditions which are not acceptable to the Corporation.

6. I/We agree that the Corporation shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely,if.

a. I/We fail to keep the tender open as aforesaid.

b. I/We fail to execute the formal contract or make the contract deposit when called upon to do so.

c. I/we do not commence the work on or before the date specified by the Engineer in his workorder.

7. I/We hereby further agree to pay all the charges of whatsoever nature in connection with the preparation, stamping and execution of the said contract.

8. I/We further agree that, I/we shall register ourselves as ‘Employer’ with the Bombay Iron and Steel Labour Board’ and fulfill all the obligatory provisions of Maharashtra Mathadi, Hamal and other Manual workers (Regulation of Employment and Welfare) Act 1969 and the Bombay Iron and Steel unprotected workers Scheme 1970.

9. “I/We..... have failed in the accompanying tender with full knowledge of liabilities and, therefore, we will not raise any objection or dispute in

any manner relating to any action, including forfeiture of deposit and blacklisting, for giving any information, which is found to be incorrect and against the instructions and directions given in this tender.

10. "I/We further agree and undertake that in the event it is revealed subsequently after the allotment of work/contract to me/us, that any information given by me/us in this tender is false or incorrect, I/We shall compensate the Brihanmumbai Municipal Corporation for any such losses or inconvenience caused to the Corporation in any manner and will not resist any claim for such compensation on any ground whatsoever. I/we agree and undertake that I/we shall not claim in such case any amount by way of damages or compensation for cancellation of the contract given to me/us or any work assigned to me/us or is with-drawn by the Corporation,"

Address

Yours faithfully,

.....

.....

Digital Signature of the Tenderer or the Firm

1.....

2.....

3.....

4.....

5.....

Full Name and private residential address of all the partners constituting the Firm

A/c No.

.....

1.

Name of Bank

2.

.....

3.

Name of Branch

4.

.....

5.

Vender No.....

AGREEMENT FORM

Tender/Quotation dated..... 20...

Standing Committee/Education Committee Resolution No.
CONTRACT FOR THE WORKS

.....
.....
.....

This agreement made this day of
.....

Two thousand Between
.....
.....

inhabitants of Mumbai, carrying on business at.....
.....
in Bombay under the style and name of Messrs
..... (Hereinafter called “the
contractor of the one part and Shri

.....
the Director(E.S.&P.) (hereinafter called “the commissioner” in which expression are included unless the inclusion is inconsistent with the context, or meaning thereof, his successor or successors for the time being holding the office of Director (E,S.& P)of the second part and the Brihanmumbai Municipal Corporation (hereinafter called “the Corporation”) of the third part, WHEREAS the contractor has tendered for the construction, completion and maintenance of the works described above and his tender has been accepted by the Commissioner (with the approval of the Standing Committee/Education Committee of the Corporation NOW THIS THIS AGREEMENT WITNESSETH asfollows:-

- 1) In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract for works hereinafter referred to:-
- 2) The following documents shall be deemed to form and be read and constructed as a part of this agreement viz.
 - a) The letter of Acceptance
 - b) The Bid:
 - c) Addendum to Bid; if any
 - d) Tender Document
 - e) The Bill of Quantities:
 - f) The Specification:

- g) Detailed Engineering Drawings
- h) Standard General Conditions of Contracts (GCC)
- i) All correspondence documents between bidder and BMC

3) In consideration of the payments to be made by the Commissioner to the contractor as hereinafter mentioned the contractor hereby covenants with the Commissioner to construct, complete and maintain the works in conformity in all respects with the provision of the contract.

4) The Commissioner hereby covenants to pay to the Contractor in consideration of the construction, completion and maintenance of the works the contract sum, at times and in the manner prescribed by the contract.

IN WITNESS WHERE OF the parties hereto have caused their respective common seals to be herein to affixed (or have hereunto set their respective hands and seals) the day and year above written.

Signed, Sealed and delivered by the contractors

In the presence of

Trading under the name and style of

Full Name

Address

Contractors

Signed by the Director (ES&P) in the presence of Ex... City / WS / ES

(Director (ES&P))

The Common seal of the Brihanmumbai
Municipal Corporation was hereunto affixed
on the

..... 20 in the presence of two members of
the Standing Committee.

1.

1.

2.

2.

And in the presence of the Municipal Secretary Municipal Secretary

ANNEXURE " A "

Name of work: EPC TENDER FOR CONSTRUCTION OF BRIDGE FROM FISHERMEN COLONY (SENAPATI BAPAT MARG) TO WESTERN EXPRESS HIGHWAY

- The Engineer for this work : Chief Engineer (Bridges)
Dy.Ch.Eng. (Bridges)
Ex. Eng. (Bridges) City/N
1. Estimated cost of Tender : Rs. 238,01,39,589/-
 2. E.M.D. : Rs. Rs. 2,38,01,400/-
 3. Time Period : **24 months (Excluding monsoon).**
 4. Percentage to be charged as supervision charges for the work got executed through other means- 10percent.

The "Actual cost of the work" shall mean in the case of percentage rate contracts the actual cost of the work executed at the rates as mentioned in the Contract Schedule adjusted by the Contractor's percentage rate and cost of extra and excess, but excluding the cost on account of Water Charges and Sewerage Charges if any, payable by the contractor and also excluding cost on account of price variation claims as provided in price variation clause as amended up to date.

1. In case of item rate contracts the actual cost calculated for the work executed at the rates mentioned in the contract schedule for different items including cost of excess and extra items of the work excluding the cost of water charges and sewerage charges if any, payable by the contractor and excluding cost on account of price variation claims as provided in extra excess conditions as amended up to date.

2. In case of lump sum contract the cost of the work actually carried out as per break up and program of the work and the schedule of payment included in the contract including cost of any excess and/or extra items, of the work, excluding the cost on account of water charges and sewerage charges and also excluding cost on account of price variation claims as provided in extra excess conditions as amended up to date.

Annexure- B

PRE-CONTRACT INTEGRITY PACT

The Bidder commits himself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of his bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits himself to the following: -

1. The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BMC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the Contract.
2. The Bidder further undertakes that he has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BMC or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government.
3. The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
4. The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
5. The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BMC or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
6. The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BMC as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

7. The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
8. The Bidder shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
9. The Bidder and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bidding Process. Notwithstanding anything to the contrary contained herein, the Authority may reject an Application without being liable in any manner whatsoever to the Applicant if it determines that the Applicant has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bidding Process.

For the purposes of this Clause 9, the following terms shall have the meaning herein after respectively assigned to them:

- a. “fraudulent practice” means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bidding Process;
- b. “coercive practice” means impairing or harming or threatening to impair or harm, directly or indirectly, any person or property to influence any persons participation or action in the Bidding Process;
- c. “undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by the Authority with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bidding Process; or (ii) having a Conflict of Interest; and “restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Applicants with the objective of restricting or manipulating a full and fair competition in the Bidding Process.

Signature of Tenderer/Bidder

Annexure- C
(On Rs. 500/- Stamp Paper)

DECLARATION CUM INDEMNITY BOND

I, _____ of _____, do hereby declared and undertake asunder.

1. I declare that I have submitted certificates as required to Executive Engineer (Monitoring) at the time of registration of my firm/company _____ and there is no change in the contents of the certificates that are submitted at the time of registration.
2. I declare that I _____ in capacity as Manager/Director/Partners/Proprietors of _____ has not been charged with any prohibitory and /or penal action such as banning (for specific time or permanent)/de-registration or any other action under the law by any Government and/or Semi Government and/or Government undertaking.
3. I declare that I have perused and examined the tender document including addendum, condition of contract, specifications, drawings, bill of quantity etc. forming part of tender and accordingly, submit my offer to execute the work as per tender documents at the rates quoted by me in capacity as _____ of _____.
4. I further declare that if I am allotted the work and I failed to carry out the allotted work accordance with the terms and conditions and within the time prescribed and specified, BMC is entitled to carry out the work allotted to me by any other means at my risk and cost, at any stage of the contract.
5. I also declare that I will not claim any charge/damages/compensation for non availability of site for the contract work at anytime.
6. I declare that I will positively make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in-charge

Signature of Tenderer/Bidder

BANKERS GURANTEE IN LIEU OF CONTRACT DEPOSIT

THIS INDENTURE made this _____ day of _____ BETWEEN THE _____ BANK incorporated under the English/Indian Companies Acts and carrying on business in Mumbai (hereinafter referred to as 'the bank' which expression shall be deemed to include its successors and assigns) of the first part _____ inhabitants carrying obusiness at _____ in Mumbai under the style and name of Messer's _____ (hereinafter referred to as 'the consultant') of the second part Shri. _____

THE MUNICIPAL COMMISSIONER FOR GREATER MUMBAI (hereinafter referred to as 'the commissioner' which expression shall be deemed, also to include his successor or successors for the time being in the said office of Municipal Commissioner) of the third part and THE BRIHANMUMBAI MUNICIPAL CORPORATION (hereinafter referred to as 'the Corporation') of the fourth part WHEREAS the consultants have submitted to the Commissioner tender for the execution of the work of _____ and the terms of such tender /contract require that the consultants shall deposit with the Commissioner as/contract deposit/ earnest money and /or the security a sum of Rs. _____ (Rupees _____) AND WHEREAS if and when any such tender is accepted by the Commissioner, the contract to be entered into in furtherance thereof by the consultants will provide that such deposit shall remain with and be appropriated by the Commissioner towards the Security -deposit to be taken under the contract and be redeemable by the consultants, if they shall duly and faithfully carry out the terms and provisions of such contract and shall duly satisfy all claims properly chargeable against them there under AND WHEREAS the consultants are constituents of the Bank and in order to facilitate the keeping of the accounts of the consultants, the Bank with the consent and concurrence of the consultants has requested the Commissioner to accept the undertaking of the Bank hereinafter contained, in place of the contractors depositing with the Commissioner the said sum as earnest money and /or security as aforesaid AND WHEREAS accordingly the Commissioner has agreed to accept such undertaking NOW THIS AGRREMENT WITNESSES that in consideration of the premises, the Bank at the request of the consultants (hereby testified) UNDERTAKES WITH the commissioner to pay to the commissioner upon demand in writing , whenever required by him , from time to time , so to do ,a sum not exceeding in the whole Rs. _____ (Rupees _____) under the terms of the said tender and /or the contract .The B.G. is valid upto _____ "Notwithstanding anything what has been stated above, our liability under the above guarantee is restricted to Rs. only and guarantee shall remain in force upto _____ unless the demand or claim under this guarantee is made on us in writing on or before _____ all your right under the above guarantee shall be forfeited and we shall be released from all liabilities under the guarantee thereafter"

IN WITNESS WHEREOF

WITNESS (1) _____

Name and _____

Address _____

WITNESS (2) _____

Name and _____ the duly constituted Attorney Manager

Address _____

The Bank and the said Messer's _____

_____ (Name of the Bank)

WITNESS (1) _____

Name and _____

Address _____

WITNESS (2) _____

Name and _____

For Messer's _____

Address _____

have here into set their respective hands the day and year first above written.

The amount shall be inserted by the Guarantor, representing the Contract Deposit in Indian Rupees.

Annexure- D

Rate Analysis

Item Description

Sr. No.	Description of rate analysis parameters.	Unit	Quantity	Basic Rate	Basic Amount	GST Percentage	GST Amount	Amount Including GST	Remarks
1	Basic Material (Rate should be inclusive of all taxes)								
2	Machinery Hire Charges								
3	Labour Type		(Labour components)						
4	Total of all components								
	Total Basic Amount (A)								
	Material GST								
	Labour GST								
	Total GST Amount (B)								
	d) Amount including GST (C=A+B)								
	e) Contractor's profit & Overhead charges @ 15% on (a+b+c)								
	Rate as per Unit								

Sign & Seal of the Tenderer

Annexure –E

Irrevocable Undertaking

(On Rs.500/- Stamp paper)

Annexure-A

Irrevocable Undertaking

(on Rs.500/-Stamp Paper)

स-37

I Shri/Smt.....aged.....years Indian Inhabitant. Proprietor/Partner/Director of M/s..... resident at do hereby give Irrevocable undertaking as under;

- 1) I say & undertake that as specified in section 171 of CGST Act, 2017, any reduction in rate of tax on supply of goods or services or the benefit of input tax credit shall be mandatorily passed on to MCGM by way of commensurate reduction in prices.
- 2) I further say and undertake that I understand that in case the same is not passed on and is discovered at any later stage, MCGM shall be at liberty to initiate legal action against me for its recovery including, but not limited to, an appeal to the Screening Committee of the GST Council.
- 3) I say that above said irrevocable undertaking is binding upon me/my partners/company/other Directors of the company and also upon my /our legal heirs, assignee, Executor, administrator etc.
- 4) If I fail to compliance with the provisions of the GST Act, I shall be liable for penalty/punishment or both as per the provisions of GST Act.

Whatever has been stated here in above is true & correct to my/our own knowledge & belief.

Solemnly affirmed at

DEPONENT

This day of

BEFORE ME

Interpreted Explained and Identified by me.

PROFORMAS:

PROFORMA-I

The list of similar works as stated in para 'A' of Post qualification during last seven years–

PROFORMA- I					
Sr. No.	Name of the Project	Name of the employer	Stipulated date of completion	Actual date of completion	Actual Cost of work done
1	2	3	4	5	6

NOTE:

Scanned Attested copies of completion/performance certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma. Works shall be grouped financial year-wise.

PROFORMA- II

Yearly turnover of Civil Engineering Construction Works during the last five years

PROFORMA- II					
Sr. No.	Financial year	Annual Turnover of Civil Engineering Works	Updated value to current year	Average of last 5years	Page No.
1					
2					
3					
4					
5					
Total					

NOTE: The above figures shall tally with the audited balance sheets uploaded by the tenderers duly certified by Chartered Accountant.

PROFORMA- III

At least similar work, as stated in para 'A' of Post qualification,

PROFORMA-III							
Name of the Project	Name of The Employer	Cost of the Project	Date of issue of work Order	Stipulated Date of Completion	Actual Date Of Completion	Actual cost of work done	Remarks explaining reasons for delay, if any
1	2	3	4	5	6	7	8

Note: Scanned Attested copies of completion/performance certificates from the Engineer-in-charge for each work should be annexed in support of information furnished in the above proforma.

PERSONNEL:

PROFORMA- IV

Sr. No.	Post.	Name.	Qualification.	Work Experience.	
				No. of years.	Name of Projects.
1	Project Manager				
2	Quality Control Engineer				
3	Site Engineer				
4	Site Supervisor				

NOTE: Scanned Attested copies of qualification certificates and details of work experience shall be submitted /uploaded.

MACHINERY: (for special work only)

PROFORMA-V/A			
Sr. No.	Equipment	Number.	Owned / Leased / Assured access.
1	2	3	4

PROFORMA-V/B			
Sr. No.	Equipment	Number.	Owned
1	2	3	4

Note: The tenderer(s) shall furnish/upload the requisite Scanned Attested documents of ownership/leased of machineries. The undertaking from the suppliers will not be accepted.

PROFORMA- VI/A

Details of Existing Commitments and ongoing works –

PROFORMA-VI/A							
Description of work.	Place.	Contract No. & Date.	Name and Address of Employer	Value of Contract in Rs.	Scheduled date of completion	Value of work remaining to be completed	Anticipated date of completion
1	2	3	4	5	6	7	8

Note: Scanned Attested copies of completion/performance certificates from the Engineer-in-Charge for each work should be annexed in the support of information furnished in the above proforma.

PROFORMA - VI / B

Details of works for which bids are already uploaded –

PROFORMA-VI/B						
Description of work.	Place.	Name & Addresses of employee	Value of Contract in Rs.	Time Period	Date on which decision is expected.	Remarks.
1	2	3	4	5	6	7

Note: Scanned Attested copies of certificates from the Engineer-in-charge for each work shall beannexed.

PROFORMA – VII

Details of Litigation / Arbitration history in which tenderer is involved.

Name of other Party(s)	Employer	Cause of Dispute	Amount Involved	Remarks showing present status
1	2	3	4	5

SECTION 15
SPECIAL CONDITIONS OF CONTRACT

15. SPECIAL CONDITIONS OF CONTRACT

151 BMC shall not be responsible for providing the sites for dumping ground and in the event dumping ground is not able to be made available by BMC, the bidder shall have to arrange own dumping arrangement for which no any cost will be paid by BMC. Nevertheless, BMC reserves its rights to use surplus excavated materials for its own use anywhere in BMC limits.

152 i) All material required for the work can be stacked near the site of work in such manner so as not to cause any inconvenience to the pedestrian and vehicular traffic. If no space is available on site then tenderer shall make his own arrangement for stacking of material etc. No extra payment will be made on this account.

ii) The surplus excavated material from the site shall be removed free of cost to the Municipal dumping ground within 24 hours, as directed. The necessary tipping charges at the dumping ground, as applicable, shall be borne by the contractor.

iii) The royalty charges in respect of excavated material shall be paid by the contractors to the collector as and when asked for.

iv) The contractor should note that during the execution of the work, debris etc. dumped on the public streets/places will have to be removed immediately after completion of the work as per direction of the Engineer, failing which the same will be got removed at their risk and cost

v) The site shall be cleared by removal of surplus material on or before 15th of May every year.

vi) The policy's circulars are issued by BMC from time to time related to various clauses/conditions of bid documents shall remained applicable. The BMC reserves the right of its applicability for the particular work.

153 (a) Removal of Excavated Material

All the excavated material belongs to the Brihanmumbai Municipal Corporation and therefore shall be the property of Brihanmumbai Municipal Corporation. It will be mandatory on the part of contractor to use this material in the execution of works under contract if the quality of material available is as per the specification and rest of quality wise unutilized material shall be removed as directed by Engineer.

All the excavated and surplus material on site shall be disposed by means of transportation or as directed by the Engineer on the cost of contractor. No additional / separate payment will be made to contractor, as per circular under No. MGC/F/7867 dated 12.10.2015.

(b) Royalty Payment on excavated material as per statutory requirement:

The contractor shall pay necessary royalties and submit documentary evidences of such payments to the engineer for his information and records. If and when royalties becomes payable to the government authority on excavated material as per statutory requirements, the payment shall be made by the contractor.

154 If the contractor excavates certain portion of the bridge carriageway and fails to reinstate. The same within the stipulated time limit, as per the programme and or before 31st of May, the reinstatement will be got carried out at contractor's risk and cost through other agency in addition to further penal action.

155 All trenches taken in connection with the work should be sufficiently barricaded, as specified.

156 The noise level shall be maintained within the permissible limit in Silence zone area during the construction activities by the Contractors, as per the notification dated 14.2.2000, issued by the Ministry of Environment & Forests.

157 Bio Toilet and Water Fountain will have to be provided as per the requirement and directions of Engineer In Charge at no extra cost.

158 In all permanent works Stainless Steel rebars and Structural Stainless Steel is to be used compulsorily as per the specifications mentioned in this Tender.

159 All testing of materials to be carried out as per the applicable codes in the presence of BMC Engineers. Arrangement for testing and charges shall be the responsibility of the bidder. The Proof checking consultant will also accompany the BMC staff wherever required as per the directions of the Engineer.

1510 Adequate wardens shall be provided as per the requirement of Traffic Police department.

1511 Permissions:

15.11.1 The contractors will have to obtain permission from the traffic police department well in advance either for closing down the bridge carriageway partially/fully or for diversion of traffic for execution of the work. The work may be required to be executed in phases as per traffic police permission. The contractors should therefore consider this factor while quoting.

15.11.2 The contractor shall have to obtain all the permissions of the concerned authorities outside M.C.G.M. required for carrying out the work. Only recommendatory letters will be issued byBMC.

15.8. The contractors will be given 12 mm. dia. or 20 mm. dia. (as per the conditions of H.E.) water connection for drinking purposes. Extra water required for construction purposes will have to be brought by the contractors at his own cost and no extra claims on this behalf will be

entertained.

15.9 Methodology of the work, **safety manual and quality assurance plan** shall be submitted before commencement of the work with copy at each site office.

15.10 Quantities of all items provided in the B.O.Q. may not be required to be executed depending upon the site conditions. The tenderer shall not be entitled for any compensation on this account. Before starting the work, contractor shall consult with the Site Engineer and shall take actual measurements on the site for procurement of material.

15.11 The contractor shall procure all material required for the work from manufacturers with I.S.I. certificates and according to M.C.G.M. specifications wherever applicable.

15.12 Corporation will appoint a consultant for quality audit, during execution period. The contractor will extend all help in carrying out any survey; test etc. as directed and adverse decision there of including rectification shall be carried out by the contractors at their cost.

15.13 The Engineer not below the rank of Assistant Engineer is entitled to impose a **penalty of Rs.2500/- per day per lapse** for each defective work/lapse, disobedience of orders by the officer not below the rank of site Engineer. Penalty amount will be recovered from contractors running bill. This penalty is over and above Penalty mentioned under G.C.C. enforced.

If it is observed that, the contractor carrying out the work fails to comply with the instructions given by the authorities of the A.C./Ch.E(Br)/ Zonal DMC/Dir.(ES&P)/A.M.C./M.C.'s level during execution of work twice, the work may be terminated and will be carried out at the risk and cost of the contractor and penal action will be taken against them. This decision will not be arbitral at all.

The above mentioned condition will be in addition to the relevant condition in the General Condition of contract regarding cancellation of contract in full or partly final decision of disputes, difference of claims raised by the contractor or relating to any matter out of contract.

ii) Other penalties

In addition to any penal action under the GCC of Individual contracts, a registered contractor will be liable under the registration Rule to one or more of the following penalties as per the procedure laid down in the “Rules Governing registration of Contractor/s for Civil, Mechanical, Electrical and Electronics Engineering works, 2016” of BMC:

- I. Warning
- II. Fine
- III. Demotion
- IV. Banning /De-registration
- V. Suspension of Registration pending inquiry
- VI. Debarring

I. WARNING /FINE

A contractor/s will be liable to a warning and / or fine for -

- i. Non-compliance of any provision of these rules,

ii. Failure to comply with any clause or direction under these Rules or failure to comply with any condition of E-Quotation / E-Tenders / contract and

iii. Inadequate progress during execution of work / performance under a contract.

iv. For the first default of any type mentioned above, a warning letter / notice will be issued by competent authority i.e. defined under Engineer of the project / work. For each subsequent default of the types in (a), (b) & (c) above, the penalty will be imposed to the contractor as per the penalties mentioned in the contract document under general condition of contract or special condition of contract. Higher amount of fine may be levied by the competent authority i.e. defined under Engineer of the Project / work, for the reasons to be recorded.

II. DEMOTION

A Contractor/s is liable to be demoted to one lower class of registration on one or more of the following grounds -

i. Specific failure or default in execution of individual works, in respect of physical progress or quality in such works,

ii Deterioration in financial or technical ability / capacity and

iii. Repeated failure to properly fill in tender document/s, fully and correctly or delay in execution of formal contract documents

Note: Demotion from the lowest class of registration will amount to banning / de-registration of registration for the period specified. In such cases, the registration of the contractor/s will stand restored after the period of demotion / banning / de-registration.

III. BANNING -DE-REGISTRATION

Banning / Deregistration will be for a specific period or permanent banning / Deregistration.

A contractor/s is liable to be Banned / De-registered on one or more of the following grounds: -

i. If security considerations including question of loyalty to the BMC so warrant,

ii. If the proprietor of the firm, its employee, partner or representative is convicted by a court of law following of investigation or under normal process of law for offences involving moral turpitude in relation to business dealings viz. Conviction by court of law,

iii. If there is strong justification for believing that the proprietor or employee, or representative of the firm has been guilty of malpractices such as bribery, corruption, fraud substitution of tenders, interpolation, misrepresentation, evasion or habitual default in payment of any tax levied bylaw,

- iv. If the firm continuously refuses to return BMC or State Govt. dues without showing adequate cause, and BMC is satisfied that this is not due to a reasonable dispute which would attract proceedings in arbitration or court of law,
- v. If the firm employs a BMC or State Govt. servant, dismissed / removed on account of corruption, or employs a non-official convicted for an offence involving corruption or abetment of such an offence, in a position where he could corrupt Govt. Servants,
- vi. Persistent and intentional violation of important conditions of contract. Not attaining required quality of work and non-execution of works as per terms and conditions of contract. Constant non-achievement of milestone on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out,
- vii. An attempt to cheat BMC, an attempt to secure a contract through unfair means or bringing to bear outside influence, an attempt to secure unauthorized copies of Municipal records and documents in relation to any tender / contract or any other official matter, an attempt to tamper with Municipal record and documents, threatening, misbehaving with or physical attack on any Municipal employee/Officer,
- viii An attempt to instigate or collude with other contractor/s with a view to securing undue advantage,
- ix. Any of the grounds mentioned in clause Demotion, if it is deemed serious enough.

IV. SUSPENSION OF REGISTRATION PENDING INQUIRY

- i. Whenever any Show Cause Notice is issued to the contractor calling for the explanation on lapses by him, the registration of contractor/s may be banned / suspended up to the arrival of final outcome of the said Show cause notice, depending on the seriousness of the reasons for which show cause notice is issued.
- ii. Show cause notice shall be issued by the officer not below the rank of Executive Engineer in charge of the concerned work / project of BMC
- iii. Director (E. S. & P.) or concerned Deputy Municipal Commissioner is the competent authority to ban / suspend the registration pending inquiry in such cases.
- iv. Circular of Banning / suspension of registration till further orders shall be circulated to all departments of BMC by Head of the executing department i.e. Chief Engineer of concerned department / Assistant Commissioner of the concerned Ward.
- v. The outcome of registration of the contractor will be decided depending on the final outcome of the process of the said Show Cause Notice and circular to that effect shall be issued by concerned Head of the Department.

V. DEBARRING

Debarring is the penal action to be initiated against the Contractor/s who are carrying out works for M.C.G.M. and are not registered with M.C.G.M. All other criteria and procedure of penal action (i.e. observed for suspension, banning, demotion, (deregistration) will remain similar as mentioned in penal action clause 7.

15.14 Traffic Management:-

15.14.1 The contractor shall have to provide adequate number of wardens as per requirement of Traffic Police Dept. at the contractor's cost.

15.14.2 Traffic signs – Temporary traffic and construction signs are to be provided during construction and maintenance operations for traffic diversion and pedestrian safety as per Traffic Diversion Plan approved by the Engineer.

15.14.3 The contractor shall display the boards stating information of the name of the work, date of starting, date of completion, name of the Dept. and contact telephone no's of Contractor's Engineer

15.15 While constructing/improving footpath, provision for slopping ramp of at least 1.00 m width or as directed, shall be made at every carriage entrance, junctions, bus stops etc., for convenience of physically challenged persons.

15.16 The full time services of the Personnel Team of the contractor are mandatory during the entire period of the project. Daily Attendance register of Contractor's staff shall be maintained and got checked from BMC staff from time to time.

15.17 TESTING OF MATERIAL–

i) Contractors are required to send at least one sample per day up to 50 M.T. and at the rate of one sample for every additional 50 M.T or part thereof per day for Asphalt Macadam/ Seal 170 Coat/Asphalt Concrete and other asphalt mixes to the laboratory for testing. The contractor shall note that, 50% payment of the bitumen work will be withheld till the results are received.

The test of samples of asphalt macadam, asphaltic concrete, mastic asphalt, used in the work shall be carried out at municipal laboratory or approved laboratory as directed by engineer in-charge.

The site laboratory shall be used for testing of sub-base, GSB, base course, WBM, concrete cubes (7 days, 14 days) and other materials as necessary and directed engineer in-charge.

The charges for testing of construction materials and asphalt mixes shall be as per the rates in

force at the time of testing of materials/asphalt mixes and the testing charges shall be borne by the contractor.

a) All requests for testing of samples must be made in writing to in duplicate specifying there in the following information (separate memo should be sent for concrete, Stainless steel, Liner Steel, soil, asphaltic mixes) etc.

b) Name of the Work, Work Code No. if any

c) Type of material and tests desired (i.e. grade of cement, date of consignment)

d) Identification mark on the sample should be mentioned on the forwarding memo (in case of concrete beams and cubes identification marks, grade of concrete, date of casting, specimen No. should be engraved on concrete. If these details are marked by paint, samples will not be accepted. In case of reinforcement bars, details shall be displayed on label pasted on bars and label must be signed by the officer who has taken the samples.)

e) Name and full postal address of the officer to whom the results must be sent.

f) Date of sampling (i.e. date of laying asphalt mix, Sr. No. of load casting concrete or taking cement samples.)

g) Name of the tenderer carrying out the work.

h) Any other information, which is specified by the user department.

ii) Samples must also bear the identification mark and signature of site in charge/ officer taking the samples. In case of samples of asphalt mixes sent in polythene bags a legible duplicate tag should be stapled from outside.

iii) Quantity of sample for testing must be adequate as shown in the schedule.

iv) For issuing additional copies or duplicate copies of test results at Municipal Testing Lab. Rs. 25/- will be charged for each copy. Request for additional /duplicate copy should be made in writing by site in charge or higher officers of the user department.

v) Field Density test shall be taken in Asphalt concrete Carpet for any thickness. The Contractor shall obtain the intimation letter from Engineer-in-charge & furnish the same to A. E. (Soil Mech.) or as directed by the Engineer within 7 days from the date of laying of asphalt concrete for carrying out the field density test. For any neglect or delay on the part of the contractor to intimatethesamewithinsevendaysperiod,theadditionalchargesaspentaltywouldbe

recovered from the Contractor up to Rs. 200/- per test per week at the time of submission of intimation to A. E. (Soil Mech.)'s office.

vi) Samples of bitumen cut back, emulsions shall be forwarded in wide mouthed metal containers with label pasted on the lid.

vii) Samples for tensile testing of reinforcing bars shall be straight for entire length without bends. The ends of the bars shall be hacksaw cut and not chisel cut. One sample of each diameter bar shall be sent for first test and for retest, two bars shall be sent. The length of the bars shall be 50 cm. for all diameters. Test Certificates (Chemical/Physical tests) from manufacturers (MTC) will be submitted along with each Lot of Steel.

viii) Samples that are sent for testing for natural moisture content, shall be forwarded in wax coated packing or sealed airtight bags.

ix) Undisturbed samples sent in sampling tube shall be wax coated on both open ends.

x) The samples thus taken shall send to the Testing Laboratory within 4 days from the date of laying, of Asphalt mix on site. In case of delay, additional testing charges as penalty would be recovered from the Contractor at the following rates.

A)	From the 5th day to 7th day from date of laying of asphalt mix on site	Rs. 10,000/-
B)	From the 8th day to 14th day from date of laying of asphalt mix on site	Rs. 20,000/-

The above charges i.e. (A) & (B) shall be paid by the contractors at time of submitting the samples in Municipal Laboratory.

If the samples of the Asphalt mixes are not sent for testing within 14 days, payment for the corresponding quantity of those samples shall not be made.

Charges would be recovered from the respective bills payable to the contractor by respective department and credited to XV- Traffic Operations, Roads and Bridges, H - Material Testing Laboratory.

xi) In case of failure of asphalt mix sample testing in Municipal Laboratory in various tests the following penalties will be imposed.

a) Rs.500/- for each gradation failure as per result of asphalt macadam, seal coat and asphaltic concrete and Rs.1,000/- for each gradation failure in mastic asphalt.

b) For failure on more than 3 gradations in any asphalt mix. 50% of the cost of the work represented by the failed sample will not be paid to the contractors.

c) Rs.1,000/- each for failure in flow value/Bulk density/Void ratio/marshall stability in

a asphaltic mix beyond permissible limit as mentioned in the test report.

d) In case of excess % of bitumen in the bitumen mix beyond specified limit, a penalty of Rs.60/- per MT of AM/SC/AC having excess bitumen for 50MT or thereafter as applicable for which representative sample was taken will be imposed on C/s.

e) In case of less percentage of bitumen in the bitumen mix, than the specified limit, 50% of the cost of day's work represented by the sample will be recovered as penalty.

f) In case of failure of field density of Asphalt mix, the area represented by the sample has to be removed and redone.

The test of samples of asphalt macadam, asphaltic concrete, mastic asphalt, paver blocks, concrete cubes (28 days) flexural beams used in the work shall be carried out at municipal laboratory or approved laboratory as directed by engineer in-charge.

15.18 The contractor shall maintain the following registers during execution of work:

List of Registers	
Register Code	Name of Register
1.	Inventory Register
2.	Correspondence file
3.	External & internal utility remarks file
4.	File containing drawings
5.	Daily Progress Register
6.	Instruction Register
7.	Level Book
8.	Mix design file
9.	Material Testing Result file
10.	Photograph file
11.	Excavation Register (Asphalt, rock, soil etc.)
12.	Filling/Embankment Register
13.	Removal Challans and Register (if dumped at Municipal Dumping Ground/ if paid separately)
14.	G.S.B Register
15.	W.M.M Register
16.	Sand Metal Filling Register
17.	D.L.C. Register
18.	Register for Stainless Steel tension bar
19.	Register for structural Steel / Stainless Steel
20.	Formwork Shuttering Register

21.	Pour Card Register
22.	M 10 Register.
23.	M 15 Register
24.	M 20 Register
25.	M 40 Register
26.	M 10, M15, M20, M35/M40 Cube registers
27.	R.M.C. Challan file
28.	Cement Variation Register
29.	Joint Cutting Register
30.	Precast item register (Paver blocks, Kerb stone etc.)
31.	Precast item challan register
32.	D.B.M. Register
33.	Bituminous Register
34.	Bituminous challan file
35.	Penalty Register.
36.	Register for inspection during DLP

Any other registers required as per description of items for any activity/material/quantity for which payment is made or as instructed by Engineer in Charge.

Hard copies of the registers signed by the contractors shall be provided as required.

15.19 The successful bidder will make the arrangements of the required equipment on the day of commencement or with respect to the progress of the work in phases, as per the instructions of site in charge. If contractor fails provide equipment's as per instruction of engineer in charge, Penalty of Rs 5000/- day will be imposed and the same will be recovered from contractors ASD or Running Bill.

15.20 Site Office/ Office for the Engineer

i. If Site office with necessary requirements is not provided within 15 days after issue of work order, a penalty of Rs. 10000/- per day per item will be imposed.

ii. If there is further delay more than 30 days, a penalty of Rs. 20000/- per day (i.e. starting from 31st day from issue of work order) will be forfeited from paid ASD, OR will be recovered from 1st R.A.Bill.

iii. If there is further delay more than 45 days, a penalty of Rs. 50000/- per day (i.e. starting from 46th day from issue of work order) will be forfeited from paid ASD, OR

will be recovered from 1st R.A.Bill.

iv. If any of the items at Sr.No.2 to 6 above is not provided, Additional penalty of Rs. 1000/- per day/per item, will be imposed.

NOTE:

aThe bidders have to consider the costs of all items related to site office and site laboratory and quote their % accordingly.

b AS per Circular No. Ch.E./487/Rds, Tr. & Br./SR Dated 18/9/12. On receipt of the work order, the contractor will have to provide for site office as per requirement either on his / her owned place or rented/leased place. The Cost for this may be charged to BMC by incorporating in the offer. No separate payment may be made for providing the Site office and ancillary items.

15.21 FOR ASPHALT ROADWORKS:

I. Loads of asphalt mix brought on Lorries shall be fully covered with tarpaulin, failing which **Rs.2500/- for every lorry** load received on the site uncovered with tarpaulin will be imposed as penalty and the same will be recovered from the contractor's bill.

II. The lorry loads of the asphalt mix shall be checked at random at public weigh Bridge including the Tar Weight for verifying the correct weight of the mix at the rate of one load out of every ten loads.

III. Various asphalt mix challans shall bear printed serial No. weight and departure time from the plant end. The test reports of the test conducted in the asphalt plant laboratory shall invariably accompany with the first load.

IV. The Mix Design for WMM/GSB/Paver Blocks/Concrete/Asphalt mix shall invariably include details of source material including tests carried out at source (Quarry/Cement Manufacturer's/Bitumen supplier's lab).

V. While laying asphalt mix layers on the existing bridge carriageway surface, care shall be taken to see that no manhole or chamber covers of drainage, etc. are buried or kept higher than bridge carriageway surface. They shall be first identified and raised or lowered to be flushed with final asphalt surface.

VI. Prime coat/Tack coat will be allowed during execution of resurfacing work only by mechanicals prayer.

VII. Field Density test shall be taken in Asphalt mix / Asphalt Concrete, W.M.M., D.L.C. and GSB.

VIII. The contractors shall bring the correct size of metal/material required for construction of water bound layers. The contractors will not be allowed to break stones,

preparation of material for water bound layers onsite.

15.22 The contractors should carry out if required, any minor works such as raising/lowering of manhole, attending to bad spots, bad patches etc. as may be decided by the Engineer-in charge anywhere within the concerned ward limit where the work is in progress under contract at the rates included in the Bill of Quantities of the above work with his percentage quoted.

Maintenance Works –

1) During the Contract period (including intervening monsoon) the contractor shall maintain the project roads in motorable and traffic worthy condition at his own cost. The contractor shall attend and repair the damaged portion of the project road and the said work shall be done within 24 hours from intimation as directed by Engineer. The contractor shall not be entitled for any additional cost for such work undertaken.

2) The defect liability period for the improved roads shall be as mentioned in Section 6. The contractor shall be liable to maintain the road during the defect liability period, which shall include any repairs, rectification of any part or portion of the project road immediately without waiting for any notice or intimation and shall include.

a) Maintaining roads signs, road markings, arrow marking etc. throughout the year.

b) Maintaining the kerbs, dividers, with proper painting twice in a year preferably before and after monsoon, jointing etc.

c) All Bridge and Road side furniture shall be inspected, restored/painted to original condition.

d) Surface deteriorations shall be rectified.

e) Paver blocks- the undulations in the paver blocks settlement of paver blocks, broken pieces of paver blocks shall be rectified / replaced as directed.

f) The contractors shall not allow any trenches on the project road, stretch without due permission from concerned authority of BMC.

g) Cleaning and maintaining of laterals and water entrances of storm water drains including replacing missing /broken covers.

h) Preventive Maintenance of Improved Bridge Carriageway Preventive maintenance uses pavement preservation techniques in terms of surface treatments and extends the service life of the pavement and minimizes the need for routine maintenance interventions. The bitumen in asphalt layers of the pavement, especially the wearing course, gets oxidized due to weathering conditions such as sun, wind and water. Due to this the wearing course hardens and becomes brittle causing cracking in the pavement. A seal coat (liquid seal coat) when applied as specified, provides a waterproofing layer on top of the wearing course and slows down the oxidation process. In the present case, initially, the seal coat should be applied during the dry season that follows the first

monsoon rains after the construction of the pavement. Thereafter, the liquid seal coat may be applied 15 days before end of defect liability period as a preventive treatment after carrying out proper structural and functional evaluation of the pavement. For liquid seal coat, Rapid Setting (RS) grade of cationic bitumen emulsion shall be used.

The specifications in relevant clauses of Section 513 of MoRTH (2001) pertaining to Type-A Seal Coat with cationic RS grade emulsified bitumen should be followed. Alternatively micro- surfacing can also be used as a surface treatment for preventive maintenance. In addition, the corrective and emergency repairs such as crack sealing, pothole and patch repair, etc., should be carried out as per Section 3004 of MoRTH (2001) as and when necessary.

The contractor shall not be entitled for any additional cost for above works. All of this cost should be included in fixed percentage quoted by bidder. The contractor shall not be entitled for any additional cost such works undertaken.

i) Sealing of the joints of concrete pavements shall be done once a year, prior to monsoon.

j) Contractor shall maintain the following after expiry of Defect liability period of respective items till completion of DLP of the as directed by Engineer In charge, for which payment will be made with quoted percentage of this tender as per prevailing schedule rates at the time of execution.

ii. Maintaining roads signs, road markings, arrow marking, pedestrian crossings etc.

iii. Maintaining the kerbs, dividers, with proper painting etc.

iv. All road side furniture shall be inspected, restored/painted to original condition

3) Prescribed period for completing the maintenance works shall be as under:

a) Deteriorated surfaces in Asphalt, Paver Blocks that affect the movement of traffic shall be repaired/rectified within 24 hrs. of notice of such defects by the contractor or in his default when brought to his notice by concerned staff of M.C.G.M.

b) All other maintenance work like Road signs, Lane marking, railing etc. if found defective, shall be started within 7 days of notice of such defects by the contractors and completed within a reasonable period of 4 weeks or period as directed by Engineer whichever is earlier.

c) Filling of potholes or patching up should be taken and completed with 24 hrs. of issue of instructions to do so.

4) Penalty of Rs. 2500/- per day for every day of delay beyond period prescribed in the tender shall be levied as regards the Maintenance Works.

5) All scrap of fabrication steel in the bridge work shall be stacked properly in the concern ward office.

- 6) Challan of the scrap materials from ward shall be procured/ shall be maintained.
- 7) During the contract period/ execution of work all kind of utilities such as roads, slab etc. if any get damaged shall maintain smooth flow of nalla, traffic etc. as his own risk and cost.
- 8) An amount of 1% will be deducted from the R.A. bills in respect of Building Construction and other Worker's cess as per directives of State Government and Circular in force as per circular no. CA/FRD/12 of 21.06.2012.
- 9) As per circular No. CA/F/Project/19 of 15.09.2017, Tenderer has to submit undertaking on Rs. 500/- stamp paper.
- 10) Circular for construction and demolition waste management rules:-

A circular regarding implementation of the construction and demolition waste management rules, 2016 has been issued by BMC u/No. Dy.Ch.Eng./SWM/3957/OD dated 28.09.2018. The said circular is to be implemented for the said tender work.

Special Instructions

Bidder should note that if he fails to register with BMC within stipulated time the action as per clause 9.3 of "Rules Governing Registration of contractor/s for Civil/Mechanical/Electrical Engineering works 2016" will attract.

Special Conditions:

This work includes CONSTRUCTION OF ELEVATED ROAD/BRIDGE FROM FISHERMAN COLONY (SENAPATI BAPAT MARG) TO W.E. HIGHWAY

It may specifically be noted by Contractors willing to quote for the work that Tenderer to fulfill all requirements of environmental authorities and safety measures on site. (See Annexure 'B').

The tenderer(s), prior to submitting his tender for the work is encouraged to visit and examine the site of work and its surroundings at his own expenses and obtain and ascertain for himself, on his own responsibility and risk. All information, technical data etc. that may be necessary for preparing his tender and entering into a contract including, inter-alia, the actual conditions regarding the nature and conditions of site, availability of materials, labour probable sites for chowky / stores etc. and the extent of lead and lift required for the execution of the work over the entire duration of the contract, after taking into consideration local conditions, traffic restrictions, obstructions in work if any allow all such extra expenses that are likely to be incurred due to any such conditions, restrictions, obstructions

etc. in the quoted contract price for the work.

As the work under this tender is to be carried out near the running traffic, it will be essential for the contractor to take all safety measures to ensure safety of the same. The intending tenderer should carefully examine the site to understand the restrictions on availability of space and provision of safety measures.

The entire work will be carried out as detailed under title "Scope of Work at the end of this section.

Vehicular traffic in the construction area shall be regulated with the help of Traffic Police Authority. However pedestrian movement in the area should not be affected during entire construction period. Hence, before starting the work barricading, signals, warning signals etc. shall be provided, in order not to affect the pedestrian movement and the utilities.

The sequence of activities to be performed as per prevailing site conditions in each phase will be as under.

1. Demarcation of alignment of proposed bridge and all the utilities underground before excavation work commences, especially at the location of foundations by taking trial pits and mapping utilities as already stated etc.
2. Approval for Concrete Mix Design for various Grades of Concrete prior to start of concreting work.
3. Approval of construction methodology proposed by the contractor for phase wise work. Tenderer to indicate construction methodology for the bridge along with his submission of tender, Traffic regulation if required will be arranged by the contractor in consultation with traffic police. Getting permission from traffic police will be the responsibility of contractor. No claim will be entertained due to non-permission / delayed permission etc.
4. Approval by Engineer in charge for foundation strata.
5. Initial Load Test of piles.
6. Pile length will be determined after carrying out necessary investigations and analysis of information obtained / available at site in consultation with Contractors Consultant (Soil Expert) available at site and Engineer – in-charge.
7. Piling as per predetermined and approved sequence. If the socketing of pile in hard rock of 1 dia. cannot be done with hydraulic rig, then chiseling with ordinary rig and chisel shall be resorted to in order to get desired socketing of the pile in rock. No extra payment for this will be made.

8. Retaining wall to be constructed along with Piling for protection of Western Express Highway and Railway portion in consultation with MMRDA and Western Railway.
9. Staircase to be constructed at location wherever required.
10. RCC pile caps after excavating, soling, PCC etc.
11. Casting of parapet, kerb footpath etc. painting of bridge in phases.
12. Connection of utilities and commissioning of utilities.
13. Contractor will have to arrange his own fabricating and stacking yard etc. Road will not be available for stacking of any material, etc.
14. Existing services will have to be identified by the contractor and arranged to be rerouted as required respective agencies.
15. Safety of the existing structures in vicinity is complete responsibility of the tenderer. Any damages to these structures in vicinity for whatsoever the reason may be responsibility of the tenderer throughout Contract period and repair / rectification will be borne by tenderer. No extra payment will be made for the same. Tenderer should take note of the same while quoting.
16. Contractor will have to maintain all signs, signboards, blinkers, warning, and signals for traffic to the satisfaction of traffic police.
17. Use of ready-mix concrete is compulsory for all concrete items. Concrete manufacture at site will not be allowed. Contractor has to arrange for design of suitable mix.

18. Tenders to indicate construction and assembly and erection methodology for the bridge along with his submission of tender, in case he proposes to use existing bridge for any erection it shall be done only with written permission by the 'Engineer' Scheduling of such erection will be at nighttime. Traffic regulation if required will be arranged by the contractor in consultation with traffic police. Getting permission from traffic police will be the responsibility of contractor. No claim will be entertained due to non-permission / delayed permission etc.

Mapping of Utility services:

For ascertaining the existing utility services met with during excavation, along the project carriageway of Bridges, the contractor shall prepare & precisely map the utilities met with and submit 3 sets maps of said utility services in soft as well as hard copies of all the existing as well as any newly laid utility services from permanent reference points along and across the improved project bridge carriageway by mentioning co-ordinates in three dimensions. Mapping of utilities will not be paid separately.

While bidding, bidders shall consider this aspect and should quote accordingly.

Note:

All the works contained in the scope of work shall be carried out strictly as per the relevant specifications applicable as attached OR referred to in this e- tender document OR as directed by The Engineer.

The above is general description of the scope of work & actual work shall be governed by B.O.Q. and as directed by the Engineer.

The Contractors shall execute the work even on Saturdays, Sundays, Holidays & in nighttime without any break in the continuity of work; the Contractor shall arrange exclusive labour force for this purpose along with all resources. The total working days shall, however, be counted as per the Contract period mentioned in this Tender Document & as per G.C.C. Failure of the Contractor to observe the continuity of work will be viewed seriously & heavy penalty will be imposed for every default.

(III) APPLICABLE TO CONSTRUCTION OF BRIDGE

I. Traffic is plying on the nearby road, which provides access to proposed site. Intending tenderers will have to obtain the approval from traffic police dept., during execution of works

and to take all safety measures such as barricading, blinkers at night at both ends. “Go slow work in Progress” boards at least 100m. at 2 nos. at each end, use of reflective paint etc. this will be incidental to work and will not be paid separately.

- II. Wherever works are to be carried out near the road, it would be necessary to provide strong barricading of approved pattern and design to keep off the pedestrians and vehicular traffic from any construction work or equipment brought for the work. In addition to this barricading diversion sign boards, blinking electric warning colour lights and proper wring lights during night times will have to be provided by the contractors, in consultation with the Engineer – in charge and the traffic authorities. Provision of shoring / strutting necessary for protecting / retaining embankments / filling in the area adjacent to construction area as required by Engineer – in charge is included in contractor’s scope. The cost of providing all these measures, as mentioned above shall be deemed to be included in the price / percentage quoted by the Tenderers and no extra payment on any of these accounts shall be admissible.
- III. There are a few utilities along / over the existing bridge however there could be some unknown utilities also below ground. Tenderers should note that certain utilities are running along the existing bridge, which are required to be shifted. The contractor has to take necessary precautions for safety of the structure and utilities. No extra payment will be made for this.
- IV. The utilities will have to be identified by taking trail pits at suitable interval around the ROW before starting the foundation work. Mapping must be done before taking up any activity. Taking trail pits and mapping utilities is incidental and no extra payment on this account will be made. All damages to the utility known or unknown shall be sole responsibility of the contractor.
- V. Utility services like telephone cables or power cables or water mains, if any, are proposed to be shifted suitably as per provisions of clause no. 33 of G.C.C. as amended up to date. Tenderers are requested to take into cognizance the width of excavation over which utilities will be required to be supported and quote their percentage rate accordingly.
- VI. Contractors have to take all precautions and safety measures of all utilities (underground or on existing bridge) like water mains, cables etc. till its shifting by concerned department. If any mishaps happen with utilities during construction works, all responsibility for the same will be borne by contractor.
- VII. Foundation design may have to be modified as per actual strata met with if it is different than the soil investigation report. However, no claims such as idle labours and machinery and

materials and extra resources on this count shall be entertained. Contractors must plan his work taking into account this factor and complete the work in time.

- VIII. Water required for the work shall be arranged by the contractor at no extra cost. Contractor will have to make his own arrangement for adequate storing of water, so as to avoid use of any other water for construction purpose. Water from the outside sources shall have to be got tested at Municipal Laboratory or any other Government recognized laboratory at Contractors cost before its use.
- IX. The time period prescribed for the completion of the works is **24 months (Excluding monsoon)** includes certain likely delays on account of shifting of utilities etc. In case of any abnormal delay on account of shifting of utilities, the engineer may grant suitable extension in the activity. However, such delays will not vitiate the contract and non-claims for compensation on such account will be entertained.
- X. Layout and detailed drawings attached with the tender documents may undergo changes depending on site conditions soil data, exact location of utilities and sub soil strata met with at the time of execution. This will not vitiate the contract and will not lead to claims for extra rate of compensation.
- XI. Excavation and demolition of various items is required to be carried out with utmost safety. Care should be taken to avoid any damage to the existing properties and utilities. In that eventuality the contractors will have to bear the cost for compensation / reconstruction.
- XII. Mix designs for the required strengths of concert shall be carried out well in advance of concreting. Ready mix concrete must be used for all structural concrete.
- XIII. There are chances of accumulation of slush / mud / foreign material in construction trenches during working. No extra payment will be made for removal of such material.
- XIV. Intending tenderers are free to do the construction activities like superstructures on land away from actual for site. However, mode of payment will be on completion as per BOQ item only.
- XV. The contractor should take a necessary note of tidal variation and flow levels in the creek and make plan the height of coffer dam for diverting flow.
- XVI. No construction joint is permissible in this except as shown in the drawing. The concrete mix shall be designed to provide for the necessary retardation to account for the various pours by addition of admixtures. The tenderer is required to make all necessary arrangements accordingly. No extra payment is admissible on account of use of admixtures.

XVII. Concreting work during night hours will be permitted only when it is necessary. The contractor shall make all the necessary arrangements like flood lights, generator sets etc. at such times.

XVIII. Mechanical means of curing by spraying water is mandatory for all RCC / PSC components. Additionally, the superstructure shall be cured by ponding on top of the slabs.

XIX. The use of approved admixtures / plasticizers is mandatory for maintaining workability of the concrete with the water cement ratio limited to 0.4.

XX. Use of steel shuttering with minimum 3mm. thick M.S. plates backed by angle frames shall be permitted as formwork alternatively Marine Plywood with adequate thickness backed by wooden / SS frames shall also be permitted. The shutting design for all components shall be got approved from the Engineer-in-charge.

XXI. PERT chart with milestone fixed for activities shall be submitted by the successful tenderer before commencing work.

XXII. The staging and shuttering of the RCC members shall be designed for form vibrators.

XXIII. Facility for Fax Connection & PC shall be made on site.

XXIV. All sub-surface water including run off from storm water, other surface drainage, river water etc. running in the Nallas / river shall be required to be diverted from the open excavation of the foundations. Dewatering of water using adequate number of pumps of suitable capacity shall also be considered. The concreting will be permitted only in fully dry condition. Also precautions and provisions for ensuring the same are deemed to be included in the rate and no separate payment shall be made for the same.

XXV. Every Stainless steel bar shall bear the mark of manufacturer embossed on it along with all other requirements as usual.

XXVI. The tenderer should note that –

The maximum price variation payable as per general conditions of contract.As per GR of Maharashtra Government. Basic consumer price index (Io) and basic wholesale price index (Wo) prevailing on the day of 28 days prior to the date submission of the tender is considered. The price variation shall be permitted for the materials. The basic rates adopted in the item of Uniform schedule of rate applicable to this tender are as under-

1. Cement: Rs.6160/MT	4. Mild Steel: Rs.47,200/MT
2. HYSD Steel(Fe415): Rs.49,560/MT	5. T.M.T.(Fe500): Rs.52,510/MT
3. Structural Steel: Rs.50,740/MT	6. Bitumen: i) 10/20 - Rs.40.00 per Kg ii) 30/40 - Rs.39.00 per Kg iii) 60/70 - Rs.36.38 per Kg
7. Structural Stainless Steel: Rs. 2,10,040/MT	8. Structural Stainless rebars : Rs.1,59,300/MT

However, price variation shall not be admissible beyond theoretical date of completion of contract period, as also for the fair items created during execution.

The price variation formula in clause 74(b) of general condition of contract as below:

a) Formula for Labor component:

$$\frac{VL = (0.88 R) \times 30}{100} \times \frac{(I - IO)}{IO}$$

b) Formula for Material component:

$$\frac{VM = (0.88 R \times 70 - C)}{100} \times \frac{(W - WO)}{WO}$$

XXVII. Mastication work during night hours will be permitted only when it is necessary. The contractors shall make all the necessary arrangements like flood lights, generator sets etc. at such times.

The bidders have to sign on pages, Proforma I, II, III, IV, V, VI, VI-A & VI-B, summary sheet & undertaking.

It is mandatory for the contractors to provide necessary and required office equipment accessories, stationary, furniture etc. for the work under reference.

List of Registers.

The contractor shall prepare & maintain soft copies of the following registers as applicable during execution of work: -

1. Inventory Register
2. Correspondence file
3. External & internal utility remarks file
4. File containing drawings

5. Daily Progress Register
6. Instruction Register
7. Level Book
8. Mix design file
9. Material Testing Result file
10. Photograph file
11. Excavation Register (Asphalt, rock, soil etc)
12. Filling/Embankment Register
13. Removal Challans & Register (if dumped at Municipal ground /if paid separately)
14. G.S.B. Register
15. W.M.M. Register
16. Steel Register
- 17 M15, M20, M-35, M-40, M50 Cube registers etc.
18. M15, M20, M-35, M-40 registers etc
19. R.M.C. Challan file for grade M15, M20, M-35, M-40 etc
20. Cement Variation Register if applicable
21. MS Liner Register
22. Cement Register
23. Joint Cutting Register
24. Precast item register (Paver blocks, Kerb stone etc)
25. Precast item challan register
26. D.B.M. Register
27. Asphalt concrete /Seal coat Register
28. Asphalt challan file
29. Penalty Register.
30. Register for inspection during defect liability period.
31. Contractor's site staff attendance register
32. Utility trench register.
33. Register for Stainless Steel tension bars
34. Register for structural steel / Stainless Steel

Note: - Any other register as directed by Engineer- In-Charge. Any other registers required as per description of items for any activity/material/quantity for which payment is made or as instructed by engineer in -charge. Hard copies of the registers shall be prepared and signed by the contractors and shall be provided as and when required. Mastication work during night hours will be permitted only when it is necessary. The contractors shall make all the necessary arrangements like flood lights, generator sets etc. at such times.

a) It is mandatory for the contractors to provide necessary and required office equipment accessories, stationary, furniture etc. for the work under reference and will help the site engineers for maintaining day to day record as given below.

SECTION 16
CIRCULAR

बृहन्मुंबई महानगरपालिका

परिपत्रक

प्र.ले./वित्त/प्रकल्प/शहर/२८ दि. १०.११.२०१७

विषय: महानगरपालिकेद्वारे हाती घेण्यात येणारी विविध प्रकल्प कामे तसेच खरेदी करण्यात येणा-या वस्तु व सेवा इत्यादीबाबतच्या निविदांमध्ये वस्तु व सेवा कराच्या अनुषंगाने घ्यावयाचे विशेष परिशिष्ट-१ (Special Annexure-I) बाबत.

- संदर्भ: १) प्र.ले./वित्त/प्रकल्प/शहर/३३ दि.०४.०३.२०१७
२) प्र.ले./वित्त/प्रकल्प/शहर/१२०अ दि.०८.०५.२०१७
३) प्र.ले./वित्त/प्रकल्प/शहर/८ दि.१४.०७.२०१७

संदर्भित परिपत्रकांन्वये वस्तु व सेवाकराच्या अनुषंगाने, निविदांमध्ये निविदाकाराने त्याच्या देकारामध्ये समाविष्ट असलेल्या सर्व करांची माहिती Special Annexure-I मध्ये दर्शविण्याबाबत वेळोवेळी यथोचित सूचना देण्यात आल्या आहेत.

संदर्भित परिपत्रकानुसार, निविदेतील अनुषंगिक अटी व शर्तीनुसार निविदाकाराने निविदा सादर करावयाच्या अंतिम दिनांकास लागू असलेल्या सर्व करांसहित दर उद्धृत करणे आवश्यक आहे. तसेच सादर Special Annexure-I मध्येही निविदाकाराने दर उद्धृत करताना विचारात घेतलेले कर, कराची टक्केवारी व रक्कम, दिलेल्या रकान्यात दर्शविणे आवश्यक आहे. तथापि, काही खातेप्रमुखांकडून काही प्रकरणी कंत्राटदाराच्या नियुक्तीसाठी लघुत्तम निविदाकाराची शिफारस करणारे प्रस्ताव व मसुदापत्र लेखाविभागास पडताळणीसाठी सादर केले असता, निविदाकाराने लिफाफा 'क' मध्ये उद्धृत केलेला दर व त्या अनुषंगाने आलेली रक्कम आणि Special Annexure-I मध्ये उद्धृत केलेली रक्कम, कराची टक्केवारी अथवा कराची रक्कम इत्यादींमध्ये तफावत/विसंगती असल्याचे निदर्शनास येत आहे. त्यामुळे अशा प्रकरणी कंत्राटदार म्हणून नियुक्तीसाठी निविदाकाराची शिफारस करताना खालील निर्देशांचे पालन करावे.

१. प्रथम लघुत्तम निविदाकार (L1) ठरविण्यासाठी निविदेचे मूल्यमापन (Tender Evaluation) करताना निविदाकारांनी सॅप कार्यप्रणालित लिफाफा 'क' मध्ये उद्धृत केलेला दर तसेच रक्कम व त्या अनुषंगाने आलेला निविदा तुलनात्मक तक्ता (Bid Comparison Statement Generated by SAP) हा अंतिम समजण्यात यावा.

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Tax:


“G.S.T. and other state levies/cess which are not subsumed under GST will be applicable. The tenderer shall quote inclusive of all taxes. It is clearly understood that MCGM will not bear any additional liability towards payment of any Taxes & Duties.

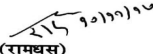
Wherever the services to be provided by the Tenderers, falls under Reverse Charge Mechanism, the Price quoted shall be exclusive of GST, but inclusive of Taxes/ Duties/ Cess other than GST, if any.


Rates accepted by MCGM shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/ any other levies / tolls etc. except that payment / recovery for overall market situation shall be made as per Price Variation.”


यापुढील मागविण्यात येणाऱ्या निविदा/अतारंकित निविदा/ दरपत्रक यांमध्ये कराबाबत उपरोक्त अटीचा समावेश करावा.

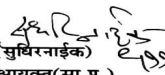
सर्व खातेप्रमुख , रूग्णालयांचे अधिष्ठाता, सहायक आयुक्त, उपप्रमुख लेखापाल, तसेच सर्व लेखाधिकारी यांनी उपरोक्त सुचनांचे काटेकोर पालन करावे.



(रा.क.आ.क.ड.)
प्रमुख लेखापाल(पा.पु.म.नि.)


(रामधस)
उप आयुक्त(म.ख.खा.)


(डॉ. संजय मुखर्जी)
अतिरिक्त आयुक्त(प्रकल्प)


(हेमलता येखे)
प्रमुख लेखापाल (वित्त)


(सुबिरनाईक)
उप आयुक्त(सा.प्र.)


(अजोय महता) 10/11/12
महानगरपालिका आयुक्त

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२. निविदा दाखल करावयाच्या अंतिम दिनांकास (Last date of Tender Submission) लागू असलेले कर, सदर निविदेस त्यावेळी लागू होते असे विचारत घेऊन आणि प्रथम लघुत्तम निविदाकाराने (L1 as per 'C' packet, i.e. Bid Comparison Statement Generated by SAP) निविदेसोबत Special Annexure-I अपलोड केलेले असेल तरच व आवश्यक असल्यास, प्रथम लघुत्तम निविदाकाराकडून सुधारीत Special Annexure-I घेण्यात यावे. तथापि, ज्या प्रकरणी प्रथम लघुत्तम निविदाकाराने निविदेसोबत अपलोड केलेल्या Special Annexure-I मध्ये नमूद केलेली कराची टक्केवारी, निविदा सादर करावयाच्या शेवटच्या दिनांकास लागू असलेल्या जीएसटी दरापेक्षा जास्त असल्यास, प्रथम लघुत्तम निविदाकाराकडून स्पष्टीकरण घ्यावे.
३. प्रथम लघुत्तम निविदाकाराशिवाय (L1 as per 'C' packet, i.e. Bid Comparison Statement Generated by SAP) अन्य निविदाकारांशी वाटाघाटी (Negotiations) करू नयेत.
४. जीएसटी अंमलबजावणीनंतर सर्व प्रकारच्या वस्तु व सेवा खरेदी मधील कर स्वतंत्रपणे दर्शविणे अनिवार्य आहे. याकरीता कार्यालयीन कामकाजात सुलभता येण्यासाठी निविदांमध्ये Special Annexure-I बाबतची अट समाविष्ट करण्यात आली असून त्याअनुषंगाने निविदाकारांकडून Special Annexure-I घेण्यात येते. कोणत्याही परिस्थितीमध्ये निविदेचे मूल्यमापनासाठी, प्रथम लघुत्तम निविदाकार ठरविण्यासाठी (Tender Evaluation i.e. deciding L1) Special Annexure-I प्रमाण मानता येणार नाही.
५. महापालिकेने वस्तु व सेवाकराच्या अनुषंगाने निविदाकारांनी उद्भूत केलेल्या दरामधील कररचना/कर रक्कम Special Annexure-I मध्ये दिलेल्या विहित नमून्यात जाहिर करण्याबाबत संदर्भित परिपत्रकांन्वये निर्देश देण्यात आले होते. आता वस्तु व सेवाकराचे दर, रचना इत्यादी बाबी जाहिर झालेल्या असून Special Annexure-I ची प्रासंगिकता संपुष्टात आली आहे. यास्तव, यापुढील मागविण्यात येणाऱ्या निविदा/अतारांकित निविदा/दरपत्रक यांमध्ये Special Annexure-I घेणे आवश्यक नाही. यास्तव संदर्भित क्र.३ स्थित परिपत्रकामध्ये कराबाबत दिलेल्या अटीमध्ये खालील प्रमाणे बदल करण्यात येत आहे.

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बृहन्मुंबई महानगरपालिका

परिपत्रक

क्र.प्र.ले./वित्त/प्रकल्प/२९ दिनांक: १५.०९.२०१७

विषय: जीएसटी अंमलबजावणीनंतर महानगरपालिकेतील कंत्राटात होणा-या बदलाबाबत.

- संदर्भ: १) शासन परिपत्रक क्र.जीएसटी-१०१७/प्र.क्र.८१/कराधान-१ दिनांक १९, ऑगस्ट, २०१७.
 २) प्र.ले./वित्त/प्रकल्प/शहर/१६ दिनांक ३१.०८.२०१७
 ३) प्र.ले./वित्त/प्रकल्प/शहर/१७ दिनांक ०६.०९.२०१७
 ४) शासन परिपत्रक क्र.जीएसटी-१०१७/प्र.क्र.१५५/कराधान-१ दिनांक १९, सप्टेंबर, २०१७

जीएसटीच्या अंमलबजावणीमुळे शासकीय कंत्राटांवर कराच्या बदललेल्या कररचनेमुळे परिणाम होणार असल्याने शासनाने उपरोक्त संदर्भित क्र.१ च्या परिपत्रकान्वये मार्गदर्शक सूचना दिल्या होत्या. त्या अनुषंगाने सदर सूचनांची महापालिकेतील कंत्राटांत अंमलबजावणी करण्याच्या दृष्टीने संदर्भित क्र.२ व ३ अन्वये परिपत्रके प्रसूत करण्यात आली आहेत.

शासकीय कंत्राटांबाबत शासनाने संदर्भित क्र.४ च्या परिपत्रकान्वये सुधारीत सुचना प्रसारित केल्या आहेत. त्याअनुषंगाने महापालिकेतील कंत्राटांबाबत करावयाच्या कार्यवाहीबाबत खालीलप्रमाणे सुधारीत सुचना देण्यात येत आहेत.

क्र.	निविदा तपशिल	करावयाची कार्यवाही
१.	निव्वळ वस्तु पुरवठा किंवा निव्वळ सेवा पुरवठा (Pure Supply of Goods or Pure Services)	
अ	ज्या निविदा १ जुलै, २०१७ वा तदनंतर सादर झालेल्या आहेत. (Bids Received on or after 01.07.2017)	अ) निविदा रद्द न करता प्रचलित पद्धतीप्रमाणे निर्णय घ्यावे. मात्र, अशा निविदांच्या बाबतीत, i) कंत्राटदाराकडून रू.५००/- च्या स्टॅम्प पेपरवर सोबत जोडलेल्या Annexure-A च्या नमुन्यामध्ये प्रतिज्ञापत्र घेण्यात यावे.
ब	ज्या निविदा १ जुलै, २०१७ पूर्वी सादर झालेल्या आहेत. (Bids Received before 01.07.2017)	ब) अशा निविदा रद्द करण्यात येऊ नयेत. मात्र, अशा निविदांच्या बाबतीत, i) कंत्राटदाराकडून रू.५००/- च्या स्टॅम्प पेपरवर सोबत जोडलेल्या Annexure-A च्या नमुन्यामध्ये प्रतिज्ञापत्र घेण्यात यावे. ii) सदर कंत्राटामध्ये समाविष्ट असलेल्या जून्या कर व ड्यूटीजचा भार, तसेच जीएसटी अंतर्गत लागू असलेल्या कराचा भार यांचा सनदी लेखापालाने परिगणन करून प्रमाणित केलेला तुलनात्मक तक्ता कंत्राटदाराने सादर करणे आवश्यक आहे. जर पूर्वीच्या कराच्या भारापेक्षा जीएसटीचा भार कमी झाला असेल तर सदर फायदा Anti Profiteering Measure अंतर्गत महापालिकेस वर्ग करणे बंधनकारक आहे.

ब	ज्या निविदा १ जुलै, २०१७ पूर्वी सादर झालेल्या आहेत.	<p>अ) ज्या निविदांमध्ये निविदाकारांनी Special Annexure-I मध्ये जून्या कर व ड्युटीच्या अनुषंगाने आवश्यक ती माहिती सविस्तरपणे दिलेली आहे, तसेच त्याबाबत संबंधित खात्याला कोणत्याही प्रकारची संदिग्धता नसेल तर अशा निविदा रद्द न करता त्यांची लेखा विभागाकडून पडताळणी करावी तसेच, खालील ३-अ(ते इ) प्रमाणेदेखील कार्यवाही करून प्रचलित पद्धतीने निविदेची पुढील कार्यवाही पूर्ण करावी.</p> <p>ब) इतर निविदांच्या बाबतीत ज्यांचे कायदेशि दि.२२.०८.२०१७ पूर्वी देण्यात आलेले नाहीत अशा निविदा रद्द करून कोणत्याही अटी व शर्तीमध्ये बदल न करता, जीएसटीच्या अनुषंगाने संदर्भ क्र.३ अन्वये प्रसूत केलेली अट समाविष्ट करून, अल्प मुदतीची सुचना देऊन पुन्हा त्वरित मागविण्यात याव्यात. तथापि, जर अशा प्रकारे मागवावयाच्या पुनर्निविदांमधील कोणत्याही अटी व शर्तीमध्ये बदल करावयाचे असल्यास प्रचलित पद्धतीने परिपत्रक क्र.सीए/एफआरडी/एक/५ दि.१०.०५.२०१६ नुसार सक्षम प्राधिकार्याची प्रशासकिय मान्यता घेण्यात यावी.</p>
३	प्रगतीपथावरील कंत्राटे: (Ongoing Contracts)	<p>अ) १ जुलै २०१७ पूर्वी सादर होऊन कायदेशि दिलेली कंत्राटे.</p> <p>अ) कंत्राटदाराकडून रू.५००/- च्या स्टॅंप पेपरवर सोबत जोडलेल्या Annexure-A च्या नमुन्यामध्ये प्रतिज्ञापत्र घेण्यात यावे.</p> <p>ब) कंत्राटदाराने सादर कंत्राटामध्ये समाविष्ट असलेल्या जून्या कर व ड्युटीजचा भार तसेच जीएसटी अंतर्गत लागू असलेल्या कराचा भार यांचा तुलनात्मक तक्ता तयार करून कराच्या रकमेत झालेल्या बदलाबाबत सनदी लेखापालाचे प्रमाणपत्र सादर करणे आवश्यक आहे. जर पूर्वीच्या कराच्या भारापेक्षा जीएसटीचा भार कमी झाला असेल तर सादर फायदा Anti Profiteering Measure अंतर्गत महापालिकेस वर्ग करणे बंधनकारक आहे.</p> <p>क) जर कंत्राटदार Anti Profiteering Measure अंतर्गत होणारा फायदा महापालिकेस वर्ग करण्यास तयार नसेल तर अशी कंत्राटे सक्षम प्राधिकार्यांच्या मंजूरीने Foreclose करून नव्याने निविदा मागविण्यात याव्यात.</p> <p>ड) तथापि, कंत्राटामध्ये समाविष्ट असलेल्या जून्या कर व ड्युटीपेक्षा जीएसटीचा भार जास्त येत असेल तर, संबंधित कंत्राटातील अटी व शर्तीनुसार सक्षम प्राधिकार्यांनी निर्णय घ्यावा.</p>

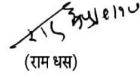
		इ	कंत्राटदाराने सादर केलेले प्रतिज्ञापत्र तसेच सनदी लेखापालाचे प्रमाणपत्र, जीएसटी कर निर्धारण प्राधिकरणकडे (GST Assessing Authority) सत्यता पडताळणीसाठी पाठविण्यात यावे. तसेच सदर प्राधिकरणास, कंत्राटदाराने CGST Act, 2017 मधील कलम १७१ चे उल्लंघन केलेले असल्यास त्यानुसार मनपास अवगत करण्याबाबतची विनंती करण्यात यावी.
ब	१ जुलै २०१७ नंतर सादर होऊन २२ ऑगस्ट २०१७ पुर्वी कार्यादेश दिलेली कंत्राटे.	वरिल क्र.२(कार्यकंत्राटे)-अ अथवा ३(प्रगतीपथावरील कंत्राटे)-अ, यापैकी जे लागू होईल त्याप्रमाणे कार्यवाही करावी.	

यापुढे सर्व निविदांमध्ये सोबत जोडलेल्या Annexure-A प्रमाणे निविदाकाराकडून प्रतिज्ञापत्र घेण्यात यावे.

सर्व खातेप्रमुख /सहाय्यक आयुक्त /अधिष्ठाता / वैद्यकीय अधीक्षक यांनी उपरोक्त सूचनांची काटेकोर अंमलबजावणी करावी.


(स.क. अश्राफ)

प्रमुख लेखापाल(पा.पु.म. नि:)


(राम धस)

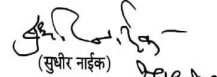
उपायुक्त (म.ख.खा.)


(डॉ. संजय मुखर्जी)

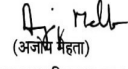
अतिरिक्त आयुक्त (प्रकल्प)


(प्रदिप पडवेळ)

प्रमुख लेखापाल(वित्त) प्र.


(सुधीर नाईक)

उपायुक्त (सामान्य प्रशासन)


(अजय म्हाता)

मा. महानगरपालिका आयुक्त

Annexure-A

Irrevocable Undertaking

(on Rs.500/-Stamp Paper)

I Shri/Smt.....aged,.....years Indian Inhabitant. Proprietor/Partner/Director of M/s..... resident at do hereby give Irrevocable undertaking as under;

- 1) I say & undertake that as specified in section 171 of CGST Act, 2017, any reduction in rate of tax on supply of goods or services or the benefit of input tax credit shall be mandatorily passed on to MCGM by way of commensurate reduction in prices.
- 2) I further say and undertake that I understand that in case the same is not passed on and is discovered at any later stage, MCGM shall be at liberty to initiate legal action against me for its recovery including, but not limited to, an appeal to the Screening Committee of the GST Counsel.
- 3) I say that above said irrevocable undertaking is binding upon me/my partners/company/other Directors of the company and also upon my /our legal heirs, assignee, Executor, administrator etc.
- 4) If I fail to compliance with the provisions of the GST Act, I shall be liable for penalty/punishment or both as per the provisions of GST Act.

Whatever has been stated here in above is true & correct to my/our own knowledge & belief.

Solemnly affirmed at

DEPONENT

This day of

BEFORE ME

Interpreted Explained and Identified by me.

MUNICIPAL CORPORATION OF GREATER MUMBAI

No. : MGC/F/6565 dtd. 25-9-2018

CIRCULAR

Sub : Setting up the parameters of litigation history of the bidders.

As approved by Hon'ble M.C., the clause of litigation history be included as part of SBD as below :-

- 1) The bidder shall disclose the litigation history in Packet 'B' under the head "Details of Litigation History".

If there is no Litigation History, the bidder shall specifically mention that there is no Litigation History against him as per the clause of Litigation History. In case there is Litigation History -

Litigation History must cover – Any action of blacklisting, debarring, banning, suspension, deregistration and cheating with MCGM, State Govt., Central Govt. or any authority under State or Central Govt./Govt. organisation initiated against the company, firm, directors, partners or authorized signatory shall be disclosed for last 5 years from the date of submission of bid. Also, bidder must disclose the litigation history for last 5 years from the date of submission of bid about any action like show cause issued, blacklisting, debarring, banning, suspension, deregistration and cheating with MCGM and MCGM is party in the litigation against the company, firm, directors, partners or authorized signatory for carrying out any work for MCGM by any authority of MCGM and the orders passed by the competent authority or by any Court where MCGM is a party. While taking decision on litigation history, the concerned Chief Engineer or D.M.C. or Director, as may be the case, should consider the details submitted by bidder and take decision based on the gravity of the litigation and the adverse effect of the act of company, firm, directors, partners or authorized signatory on the MCGM works which can spoil the quality, output, delivery of any goods or any work execution and within the timeframe.

- 2) The litigation history shall be treated as curable defect and hence, the portion/clause of SBD, (C) Bid Capacity at Pg. 15 & in the chapter of 'Instructions to Applicants' at Pg. 31 of the SBD will be now corrected by deleting the word litigation history and shall be read as below.

C) Bid Capacity :

The bid capacity of the prospective bidders will be calculated as under: Assessed Available Bid Capacity = (A* N* 2 - B)

Where,

A = Maximum value of Civil Engineering works executed in any one year (year means Financial year) during the last five years (updated to the price level of the Financial year in which bids are received at a rate of 10% per year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the Project/Works, excluding monsoon period, for which these bids are being invited. (E.g. 7 months = 7/12 year). For every intervening monsoon, 0.33 shall be added to N.

B = Value of existing commitments (only allotted works) on the last date of submission of bids as per bidding document and on-going works to be completed during the period of completion of the Project/Works for which these bids are being invited.

Note: The statement showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be attached along with certificates duly signed by the Engineer-in Charge, not below the rank of an Executive Engineer or equivalent.

Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:

- made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirements; and/or
- Record for poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc."

All the concerned are directed to implement the above directions with immediate effect.

9/c

Director (E. S. & P.)

City Engineer/Ch.Eng.(Roads & Traffic) / Ch.Eng. (Bridges) / H. E. / Ch.Eng. (WSP) /Ch.Eng.(S.P.) /Ch.Eng(S.O.)/ Ch.Eng.(MSDP) / Ch.Eng. (BM) / Ch.Eng.(Vig) / Ch.Eng. (M&E) / Ch.Eng.(D.P.)/Ch.Eng.(SWD) / Ch.Eng. (Coastal Road) / Ch.Eng.(SWM) / Ch.Eng.(CTIRC)/Dv. Ch.Eng.(HIC) / Dv.Ch.Eng.(SIC), Supt. of Gardens/

Asstt. Comm. Ward / Asstt. Comm.(Markets) / Asstt. Comm. (Estate) / Asstt. Comm.(Planning) / Asstt. Comm.(R.E.) City/W.S./E.S.

No. DIR/ES & P/915/MC dtd. 27-9-2018

C.C. to : DMC(MCO)/ DMC (Imp.) / DMC(GA)/ DMC(Vig)/ DMC(SE) / DMC(E)/ DMC(CPD)/ DMC(SWM)/DMC (Education)/DMC (RE)/ DMC(PH)/ DMC(Z-I) / DMC(Z-II) / DMC(Z-III) / DMC(Z-IV) / DMC(Z-V)/ DMC(Z-VI) / DMC(Z-VII) / C.A. (F) / C.A. (WSSD) / C.A. (C.P.D.) / Law Officer

Forwarded for information please.

9/c

Director (E.S.& P.)

No. No. DIR/ES & P/915/MC dtd. 27-9-2018

C.C. to:

Submitted please.

9/c

Director (E.S.& P.)

A.M.C.(City) / A.M.C.(E.S.) / A.M.C(W.S) / A.M.C(P)

Sir/Madam,

BRIHANMUMBAI MAHANAGARPALIKA

CIRCULAR
2020-21

No.CA(F)/Project/ 32 of 26.10.2020

Sub : Bid Security or EMD

Ref : No.MDD/7878 of 27.09.2016

The MCGM's tender conditions have been amended and Standard Bid Document has been circulated vide No.MDD/7878 of 27.09.2016.

The condition of refund of Bid Security or EMD incorporated in SBD, is as follows :-

- (i) The Bid Security of the successful bidder will be discharged when the bidder has signed the agreement and furnished the required Security Deposits.
- (ii) The Bid Security/EMD of L-3 and bidders shall be refunded immediately after opening of financial bid but **the EMD/ASD submitted by the L-2 bidder will be returned after obtaining Standing Committee Resolution.**

In recent past, due to COVID-19 pandemic, various benefits and relief are given to contractor for ease of doing business and to maintain their cash flow. Further, the Statutory Committee meetings are not held in this pandemic situation. Hence, the condition of refund of Bid Security/EMD and ASD is reviewed and revised condition for all invited tenders wherein Statutory Committee's sanction has not been accorded and forthcoming e-tenders –

- (a) The Bid Security/EMD of the successful bidder will be discharged when the bidder has signed the agreement and furnished the required Security Deposits.
- (b) The Bid Security/EMD and ASD of L-2 and other higher bidders (L-3, L-4, etc.) shall be refunded immediately after opening of financial bid.

(c) In case, the successful bidder becomes non-responsive or successful bidder withdraws the bid or is unwilling to extend the bid validity period, in such circumstances, if L-2 bidder is agreeable to extend the bid validity period and ready to deposit the requisite amount of bid security/EMD and ASD to the department within the stipulated time period i.e. 15 days, the department will process further as per normal procedure.

The above revised directives shall come into effect immediately on issuance of this circular.

All Chief Engineers/Head of Departments/Deans shall note the above directives and follow them scrupulously.

Sd/-13.10.2020
C.A.(W.S.S.D.)

Sd/-13.10.2020
C.A.(Finance)l.c

Sd/-13.10.2020
D.M.C.(Infra)

Sd/-13.10.2020
D.M.C.(E)

Sd/-13.10.2020
Dir.(ES&P)

Sd/-16.10.2020
A.M.C.(P)

Sd/-23.10.2020
Municipal Commissioner

Municipal Corporation of Greater Mumbai

No. Dy.Ch.Eng./SWM/3957/Op. dt. /09/2018

CIRCULAR

28-9-2018

Subject: Implementation of the Construction and Demolition Waste Management Rules, 2016

Reference: i) Hon'ble Supreme Court's order in the Special Leave Petition (civil) No. D 23708/2017, dated 15/03/2018
ii) Hon'ble M.C. Sir's Approval u/no. MGC/F/7076 dtd. 30.08.2018

The Construction and Demolition Waste Management Rules, 2016 is applicable to 'every waste resulting from construction, re-modeling, repair and demolition of any civil structure of individual or organisation or authority who generates construction and demolition waste such as building materials, debris, rubble'.

Hon'ble Supreme Court vide order dated 15/03/2018, has directed to dispose of construction and demolition waste material by following due procedure in accordance with the provisions of the Construction and Demolition Waste Management Rules, 2016".

In order to put curb on the un-authorisedly dumped waste, it is essential to control it by asking ward Maintenance department or any MCGM department to issue work-permission only after assessing the total estimated quantity of C&D waste likely to be generated out of the repairs / construction / trenching work or any such civil works, and asking them to make payment in advance or in stages of waste generation for the 'Debris on Call' system or transport C&D waste to designated unloading site.

Following standard operating procedure is proposed to be adopted:

- 1) MCGM department like A. E. (Maintenance), A. E. (B&F), H.E., S.O., S.P., M.S.D.P., W.S.P., S.W.D., S.W.M., C.E., B.C., B.M., Roads, Bridges, etc. carrying out civil work / repairs works etc. shall put condition in the tender / quotation / work order to dispose of C&D waste generated either by (i) 'Debris on Call' scheme if generation of C&D waste is less than 300MT for entire project or (ii) contractor shall transport to designated unloading site approved by MCGM S.W.M. department by following due procedure if C&D waste is more than 300MT for entire project.
- 2) The estimated quantity of the C&D waste generated shall be certified by A.E. (Maintenance) Ward or the concerned department.
- 3) If quantity of C&D waste is less than 300MT, A. E. (S.W.M.) Ward will issue Challan for making payment as per 'Debris on call' scheme on approval from Zonal Ex. Eng. (S.W.M.).
- 4) If quantity of C&D waste is more than 300MT, the contractor / agency will submit C&D waste management plan complete with requisite documents to Zonal Ex. Eng. (S.W.M.). On approval, the contractor / citizen / agency carrying out the civil works will be allowed to transport the C&D waste material to the designated unloading site.
- 5) The contractor / citizen / agency carrying out the civil works shall maintain & submit the appropriate record like date, quantity of C&D waste transported, vehicle No., Challan of Receipt of C&D waste from unloading site etc.
- 6) The whole system of issuing NOC for C&D waste transportation and payment will be made ONLINE and for this M/S. Sofitech will be asked to develop appropriate software on the basis of existing norms being done for auto-DCR portal.
- 7) The proposals will be processed manually till the complete system fully operational online.
- 8) All the contractors / agencies using designated unloading site must maintain proper record of the C&D waste generated and transported along with date and vehicles through which C&D is transported & the copies of Challans from unloading site for having unloaded the C&D waste and submit the same to A.E. (S.W.M.) ward through concerned department.


Sd/-07/08/2018
Ch. Eng. (S.W.M.)

Sd/-07/08/2018
D.M.C. (S.W.M.)

Sd/-10/08/2018
A.M.C.(E.S.)

Sd/-29/08/2018
Municipal Commissioner

Forwarded for information and compliance please


Dy. Ch. Eng. (SWM) Op.

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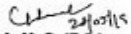
MUNICIPAL CORPORATION OF GREATER MUMBAI

No. AMC / ES / 2700 dt. 27.05.2019

C I R C U L A R

Chief Engineer (Roads), Chief Engineer (S.W.D.), Chief Engineer (Bridges), Chief Engineer (S.W.M.) and Supdt. of Garden are hereby directed that henceforth no extension should be given to any works beyond stipulated time period, as mentioned in tender.

However, at the same time while forwarding any D.L. to M.S. for any work to be carried out, an undertaking should be obtained from the concerned contractor that the work will be completed within stipulated time period mentioned in tender and in case of not completing the work within that time period, penalty will be recovered for such lapses, as per tender condition.


A. M. C. (E.S.)

MUNICIPAL CORPORATION OF GREATER MUMBAI

Central Purchase Department

CIRCULAR

No. D.M.C./CPD/3217 Date: 02.03.2019

Sub : To incorporate new clause of Internal "GRIEVANCE REDRESSAL MECHANISM" in the standard Bid document.

Ref: i) CA/FRD/I/05 dt. 10.05.2016
ii) MGC/F/8155 dtd: 30.01.2019.

- Vide above reference, Hon'ble M.C. has granted to discontinue the existing Procurement Redressal Committee & to incorporate new clause of Internal "GRIEVANCE REDRESSAL MECHANISM" as mentioned below in the bid document.

INTERNAL GRIEVANCE REDRESSAL MECHANISM

M.C.G.M. has formed a Internal Grievance Redressal Mechanism for redressal of bidder's grievances. Any Bidder or prospective Bidder aggrieved by any decision, action or omission of the procuring entity being contrary to the provisions of the tender or any rules or guidelines issued therein, in Packet 'A', 'B' & 'C' can make an application for review of decision of responsiveness in Packet 'A', 'B' & 'C' within a period of 7 days or any such other period, as may be specified in the bid document.

While making such an application to procuring entity for review, aggrieved bidders or prospective bidders shall clearly specify the ground or grounds in respect of which he feels aggrieved.

Provided that after declaration of a bidder as a successful in Packet 'A' (General Requirements), an application for review may be filed only by a bidder who has participated in procurement proceedings and after declaration of successful bidder in Packet 'B' (Technical Bid), an application for review may be filed only by successful bidders of Packet 'A'. Provided further that, an application for review of the financial bid can be submitted, by the bidder whose technical bid is found to be acceptable / responsive.

Upon receipt of such application for review, M.C.G.M. may decide whether the bid process is required to be suspended pending disposal of such review. The M.C.G.M. after examining the application and the documents available to him, give such reliefs, as

may be considered appropriate and communicate its decision to the Applicant and if required to other bidders or prospective bidders, as the case may be.

M.C.G.M. shall deal and dispose off such application as expeditiously as possible and in any case within 10 days from the date of receipt of such application or such other period as may be specified in pre-qualification document, bidder registration document or bid documents, as the case may be.

Where M.C.G.M. fails to dispose off the application within the specified period or if the bidder or prospective bidder feels aggrieved by the decision of the procuring entity, such bidder or prospective bidder may file an application for redressal before the 'Internal Procurement Redressal Committee' within 7 days of the expiry of the allowed time or of the date of receipt of the decision, as the case may be. Every such application for internal redressal before Redressal Committee shall be accompanied by fee of Rs.25,000/- and fee shall be paid in the form of D.D. in favour of M.C.G.M.

1st Appeal by the bidder against the decision of C.E./HoD/Dean can be made to concerned D.M.C / Director who should decide appeal in 7 days.

If not satisfied, 2nd Appeal by the bidder can be made to concerned A.M.C for decision.

Grievance Redressal Committee (GRC) is headed by concerned D.M.C / Director of particular department for the first appeal / grievances by the bidder against the decision for responsiveness / non-responsiveness in Packet 'A', Packet 'B' or Packet 'C', and if not satisfied, concerned A.M.C. will take decision as per second appeal made by the bidder.

This Grievance Redressal Committee (GRC) will be operated through DMC(CPD) office where appeals of aggrieved bidder will be received with fee of Rs. 25,000/- from aggrieved bidder. The necessary correspondence in respect of said applications to the aggrieved bidder & concerned department, issuing notices, arranging of Grievance Redressal Committee (GRC) with D.M.C and further proceeding will be carried out through registrar appointed by MCGM.

No application shall be maintainable before the redressal Committee in regard of any decision of the M.C.G.M. relating to following issues:

Determination of need of procurement

The decision of whether or not to enter into negotiations.

Cancellation of a procurement process for certain reasons.

On receipt of recommendation of the Committee, it will be communicated his decision thereon to the Applicant within 10 days or such further time not exceeding 20 days, as may be considered necessary from the date of receipt of the recommendation and in case of non-acceptance of any recommendation, the reason of such non-acceptance shall also be mentioned in such communication.

बृहन्मुंबई महानगरपालिका

परिपत्रक

२०२०-२१

क्र.प्रले(वित्त)/४२ दिनांक .०६.१.२०२१

विषय:- बृहन्मुंबई महानगरपालिकेत कंत्राटदारामार्फत पार पाडावयाच्या कामाच्या मसुदा निविदेमध्ये अतिरिक्त सुरक्षा अनामत रक्कमेबाबतची सुधारित अट समाविष्ट करण्याबाबत.

संदर्भ:- एमडीडी/७८७८ दिनांक २७.०९.२०१६.

बृहन्मुंबई महानगरपालिकेत कंत्राटदारामार्फत पार पाडण्यात येणाऱ्या कामाकरिताच्या मसुदा-निविदेत समाविष्ट करावयाच्या अतिरिक्त सुरक्षा अनामत रक्कमेबाबतच्या अटीबाबतचे निर्देश संदर्भित परिपत्रकान्वये निर्गमित करण्यात आले आहेत. त्यामध्ये खालीलप्रमाणे सुधारणा करण्यात येत आहे.

विद्यमान पध्दत:-

ई-निविदा सूचनेस प्रतिसाद करून ज्या ज्या कंत्राटदारांनी वजा -१२% पेक्षा कमी दराने टक्केवारी उद्धृत केली आहे, अश्या सर्व कंत्राटदारांना वजा १२% पेक्षा जास्त नमूद केलेल्या प्रत्येक टक्क्याला १% याप्रमाणे कोणतीही मर्यादा न ठेवता ऑनलाईन निविदा सादर करताना अतिरिक्त सुरक्षा अनामत रक्कम ऑनलाईन स्विकारली जाते.

सुधारित पध्दत:-

१. कंत्राटदाराने वजा -१२% पेक्षा कमी दराने टक्केवारी उद्धृत केली असल्यास वजा १२% पेक्षा जास्त असलेल्या प्रत्येक टक्क्याला १% याप्रमाणे ऑनलाईन निविदा सादर करताना अतिरिक्त सुरक्षा अनामत रक्कमेचा ऑनलाईन भरणा करणे आवश्यक नसेल.

२. कंत्राट रकमेनुसार सक्षम प्राधिकाऱ्यांची मंजूरी प्राप्त झाल्यानंतर प्रथम लघुत्तम असलेल्या निविदाकाराने कार्यस्विकृती पत्रात नमूद केल्यानुसार कार्यालयीन कामकाजाच्या १५ दिवसात विद्यमान पध्दतीनुसार अतिरिक्त सुरक्षा अनामत रक्कम डिमांड ड्राफ्ट स्वरूपात महानगरपालिकेचा नागरी सुविधा केंद्रात जमा करणे व त्या पावतीची प्रत खातेप्रमुखाकडे सादर करणे आवश्यक असेल.

३. जर प्रथम लघुत्तम निविदाकाराने कार्यस्विकृती पत्रात नमूद केल्यानुसार कार्यालयीन कामकाजाच्या १५ दिवसांमध्ये अतिरिक्त सुरक्षा अनामत रक्कम जमा केली नाही तर सदर कंपनीने भरणा केलेली संपूर्ण इसारा अनामत रक्कम (EMD) जप्त केली जाईल तसेच कंपनीला दोन वर्षांसाठी डीबार (Debar) करण्यात येईल, त्याचप्रमाणे त्या कंपनीचे संचालक/

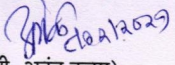
LoA)

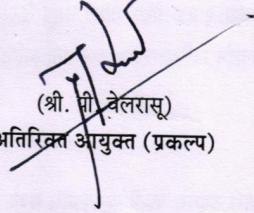
(After fixing)

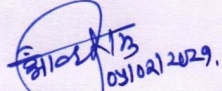
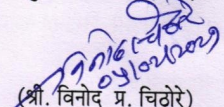
पार्टनर इतर कंपनीमध्ये संचालक/ पार्टनर म्हणून कार्यरत असतील तर ती कंपनी सुद्धा दोन वर्षाकरिता डीबार (Debar) करण्याची कार्यवाही करण्यात येईल.

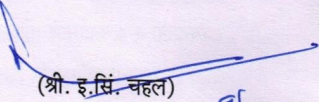
यापुढील कामाकरिताच्या मसुदानिविदेत परिपत्रकात नमूद केल्याप्रमाणे अतिरिक्त सुरक्षा अनामत रक्कमेबाबतची अट अंतर्भूत करण्यात यावी.


उपरोक्त सूचनांचे काटेकोरपणे अंमलबजावणी करण्याबाबत सर्व खाते प्रमुख/ सहाय्यक आयुक्त/ रुग्णालय अधिष्ठाता/ वैद्यकीय अधिक्षक/ उप प्रमुख लेखापाल/ लेखा अधिकारी यांनी दक्षता घ्यावी.


(श्री. अनंत कदम)
उपायुक्त - (पायाभूत सुविधा)


(श्री. पी. वेलरासू)
अतिरिक्त आयुक्त (प्रकल्प)


(रा. क. आब्हाड)
प्रमुख लेखापाल (वित्त) प्र.

(श्री. विनोद प्र. चिठोरे)
संचालक (अ.से.व.प्र)


(श्री. इ.सिं. चहल)
महानगरपालिका आयुक्त १/२२-


१/१०/२०२१

MUNICIPAL CORPORATION OF GREATER MUMBAI

No. : MGC/F/8659 Dtd. 07.09.2019.

Sub : Arbitration clause in the Standard General Conditions of Contract for Construction Works, 2016.

In one of the cases of W.S.P. regarding arbitration. dispute, a note was submitted by DyLaw Officer (High Court, Suit & PIL) and subsequently the report is submitted by Jt. M.C. (Vig.) vide No. Jt.M.C./Vig./69/MC dtd. 21-8-2019 proposing a process to deal with the arbitration matters as per the Law & Judiciary, Govt. of Maharashtra, policy for institutional arbitration vide it's G.R. dtd. 13-10-2016 and the report submitted by Jt. M.C. (Vig.) is approved by Hon'ble M.C. on 17-8-2019.

There is a provision of arbitration clause in the Standard General Condition of Contract for Construction Works, point no. 13 (e) reads as follows :-

13.e) Arbitration and Jurisdiction:

If the Commissioner shall fail to give notice of the decision as aforesaid within a period of 90 days after being requested as aforesaid, or if the Contractor be dissatisfied with any such decision, then and in any such case the Contractor may within 90 days after receiving notice of such decision or within 90 days after the expirations of the first named period of 90 days (as the case may be) require that the matter or matters in dispute be referred to arbitration as hereinafter provided. All disputes or differences in respect of which the decision (if any) of the Commissioner has not become final and binding as aforesaid shall be finally settled by arbitration as follows:

Arbitration shall be effected by a single arbitrator agreed upon the parties. The arbitration shall be conducted in accordance with the provisions of the Arbitration Act, 1996 or any statutory modifications thereof, and shall be held at such place and time within the limits of Brihan Mumbai as the arbitrator may determine. The decision of the arbitrator shall be final and binding upon the parties hereto and the expense of the arbitration shall be paid as may be determined by the arbitrator. Performance under the Contract shall, if reasonably be possible, continued during the arbitration proceedings and payment due to the Contractor by the Employer shall not be withheld unless they are the subject matter of arbitration proceedings. The said arbitrator shall have full power to open up, review and revise any decision, opinion, direction, certification or valuation of the Commissioner and neither party shall be limited in the proceedings before such arbitrator to the evidence or arguments put before the Commissioner for the purpose of obtaining his said decision.

No decision given by the Commissioner in accordance with the foregoing provisions shall disqualify him from being called as a witness and giving evidence before the arbitrator on any matters whatsoever relevant to the disputes or difference referred to the arbitrator as aforesaid.

All awards shall be in writing and for claims equivalent to 5,00,000 or more such awards shall state reasons for amounts awarded. The expenditure of arbitration shall be paid as may be determined by arbitrator.

In case of any claim, dispute or difference arising in respect of a contract, the cause of action thereof shall be deemed to have arisen in Mumbai and all legal proceedings in respect of any claim, dispute or difference shall be instituted in a competent court in the City of Mumbai only.

As per Hon'ble M.C's approval dtd. 17-8-2019, the existing clause is now replaced as follows :

13.e Arbitration and Jurisdiction

If the Commissioner fails to give notice of the decision as aforesaid within a period of 90 days after being requested as aforesaid or if the Contractor is dissatisfied with any such decision, then the Contractor may within 90 days after receiving notice of such decision or within 90 days after the expiration of the first named period of 90 days (as the case may be) require that the matter or matters in dispute be referred to arbitration as hereinafter provided.

i) In case of a contract where the contract price and/ or contract value is less than Rs. 5,00,00,000/- (Rupees Five Crore Only), any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to a mutually agreed arbitral tribunal in accordance with the Arbitration and Conciliation Act, 1996 (amended upto date). The arbitral tribunal shall consist of a sole arbitrator, as mutually agreed upon by the parties and the said dispute shall be finally resolved by the said arbitral tribunal. The decision of the arbitral tribunal shall be in writing (with reasons) and which will be final and binding upon the parties hereto and the expenses of the arbitration shall be paid as may be determined by the arbitral tribunal. The seat of the arbitration shall be Mumbai. The venue of arbitration shall be within the limits of Brihan Mumbai. The language of the Arbitration shall be English.

If the parties fails to appoint mutually agreed arbitral tribunal, within the period of 30 days from the date of application seeking arbitration in the dispute,

the arbitral tribunal shall be appointed by the recognised arbitral institution i.e. Mumbai Centre for International Arbitration (approved by Government of Maharashtra under G.R. no. ARB/Case No. 1,2017/D-19 dtd. 28.02.2017) as per the Arbitration Rules of the Mumbai Centre for International Arbitration then in force ("MCIA Rules").

(ii) In case of contract where the contract price and/ or contract value is Rs.5,00,00,000/- (Rupees Five Crore Only) or more, any dispute arising out of or in connection with such a contract, including any question regarding its existence, validity or termination, shall be directly referred to and finally resolved by the recognized arbitral institution i.e. Mumbai Centre for International Arbitration (approved by Government of Maharashtra under G.R. no. ARB/Case No. 1,2017/D-19 dtd. 28.02.2017) as per the Arbitration Rules of the Mumbai Centre for International Arbitration then in force ("MCIA Rules"). The arbitral tribunal shall consist of a sole arbitrator. The seat of the arbitration shall be Mumbai. The language of the Arbitration shall be English.

In either case, the law governing this arbitration agreement and the contract shall be Indian Law.

All the HoDs are hereby directed to note the revised clause in G.C.C. as mentioned above and ensure that the same is included in the tenders invited from 15-1-2019 onwards. If the tenders are already invited before 15-1-2019 and the Packet 'A' is not opened, then the corrigendum shall be issued so as to see that all the new tenders accepted/invited after 15-9-2019 shall include this revised condition and will become a part of the contract for all such works.

Sd/-22.08.2019
Dir. (E.S. & P.)

Sd/-29.08.2019
A.M.C. (P)

Sd/-06.09.2019
M.C.

No. : DIR/ES&P/919/MC dtd. 16.09.2019.

Copy to :

Asstt. Comm. A307 Ward / City Engineer/Ch.Eng.(Roads & Traffic) / Ch.Eng. (Bridges) / H. E. / Ch.Eng. (WSP) /Ch.Eng.(S.P.) / Ch.Eng.(MSDP) / Ch.Eng. (BM) / Ch.Eng.(Vig) / Ch.Eng. (M&E) / Ch.Eng.(D.P.)/Ch.Eng.(SWD) / Ch.Eng.(SWM) / Ch.Eng.(CTIRC)/Ch.Eng. (Coastal Roads) / Dy. Ch.Eng.(HIC) / Dy.Ch.Eng.(SIC), Supdt. of Gardens / CA (F) / CA (WSSD)/ CA (CPD)

Forwarded for information and necessary action please.

9/9
Director (E. S. & P.)

MUNICIPAL CORPORATION OF GREATER MUMBAI

Health Infrastructure Cell

No-CH.E./BM/15600/HIC date: 09.01.2019

CIRCULAR

Sub: Clarifications/corrections on the parameter (i.e. financial eligibility criteria in case of Joint Venture (J.V.) in the "Tender Reforms" circulated u/n MDD/7878 dated 27.09.2016.

Ref: AMC/WS/9153/ I dated 05.09.2018.

The detailed report on the above subject matter was submitted to C.E./Dir (ES&P)/AMC(WS)/ and as per AMC (WS)'s approval u/no- AMC/WS/9153/I dt 05.09.2018, the following amendments / corrections is proposed to be made in the respective part of SBD document for the works undertaken by MCGM department.

Sr.No.	Location in SBD	As per SBD	Proposed amendments
1	Section - 9 General condition of contract (pg. no. 102 of SBD) clause no. 83 - Joint venture, last paragraph regarding Financial Eligibility Criteria	"The contractual payments received by the JV firm or the arithmetic sum of contractual payments received by all the members of JV firm in any one of the previous three financial years shall be at least 100% of the estimated value of the work as mentioned in the tender."	"The average annual contractual payments received by the JV firm or the arithmetic sum of average annual contractual payments received by all the members of JV firm, in proportion to their share in JV, in last three financial years shall be at least 30 % of the estimated value of the work as mentioned in the tender."

The above circular is forwarded to all HOD's on official e-mail Id's and will be uploaded on MCGM portal also.

HOD's are requested that all Engineer's and Account officers be informed about the same.

The above amendments are applicable for the works to be undertaken by MCGM department & necessary corrections shall be done in all tenders to be uploaded from this date onwards.

Sd/-
City Engineer

Copy to-

No- CHE./BM/15600/HIC date: 09-01-2019

Hon'ble M.C.

A.M.C.(P) / A.M.C.(WS) / A.M.C.(ES) / A.M.C.(City)

Director(ME&MH) / Dean(KEM) / Dean(SION) / Dean(NAIR)/ Dean Nair Dental/ Dir.(I.T)

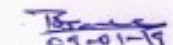
Director(ES&P) / DMC(SE) / DMC(E) / DMC(Vigilance) / DMC(MCO) / DMC(SWM) / DMC(GA) / DMC(CPD) / DMC(PHD)/ DMC (School) / DMC(RE)/ DMC(Environment)/ DMC(fire Brigade)/ DMC(Z-I) / DMC(Z-ID) / DMC(Z-III) / DMC(Z-IV) / DMC(Z-V) / DMC(Z-VI) / DMC(Z-VII)

C.A.(Finance) / C.A.(WSSD)

Asst. Commissioner(market)/ Asst.Commissioner (Planning) / Asst. commissioner(R.E) / Asst. Commissioner(Estate) / Asst. Commissioner ward

City Engineer/ Ch.Eng.(Roads & Traffic) / Ch.Eng.(Bridges) / H.E. / Ch.Eng.(WSP) / Ch.Eng.(SP) / Ch.Eng.(MSDP) / Ch.Eng.(BM) / Ch.Eng.(Vig) / Ch.Eng.(M&E) / Ch.Eng.(DP) / Ch.Eng.(SWD) / Ch.Eng.(SWM) / Ch.Eng.(CTIRC) / Ch.E.(disaster Management/ Ch.E.(S.O.)/Dy.Ch.Eng.(HIC) / Dy.Ch.Eng.(SIC)

Submitted please.


Dy.Ch.E.(HIC)

बृहन्मुंबई महानगरपालिका

परिपत्रक

प्र.ले./वित्त/प्रकल्प/ 25 दि. 12/09/2022

विषय: महानगरपालिकेद्वारे हाती घेण्यात येणारी विविध प्रकार्य कामे तसेच प्राप्त करण्यात येणा-या वस्तु व सेवा इत्यादीबाबतच्या ई-निविदा/निविदा/दरपत्रक यामध्ये वस्तु व सेवा कराच्या अनुषंगाने अंतर्भूत करावयाच्या अटीबाबत.

संदर्भ: १) प्र.ले./वित्त/प्रकल्प/शहर/३३ दि.०४.०३.२०१७

२) प्र.ले./वित्त/प्रकल्प/शहर/१२०अ दि.०८.०५.२०१७

३) प्र.ले./वित्त/प्रकल्प/शहर/८ दि.१४.०७.२०१७

४) प्र.ले./वित्त/प्रकल्प/शहर/२८ दि.१०.११.२०१७

५) Press Release: 47th Meeting of the GST Council, Chandigarh
28th and 29th June, 2022.

बृहन्मुंबई महानगरपालिकेद्वारे हाती घेण्यात येणाऱ्या विविध प्रकार्य कामे तसेच प्राप्त करण्यात येणा-या वस्तु व सेवा इत्यादीबाबतच्या ई-निविदा/निविदा/दरपत्रक यामध्ये वस्तु व सेवा कराच्या अनुषंगाने अंतर्भूत करावयाच्या अटीबाबत संदर्भित परिपत्रकान्वये सूचना प्रसूत केल्या आहेत.

वस्तु व सेवाकरांच्या दरात फेरबदल करण्याबाबत शासन विचाराधीन असल्याने महानगरपालिकेतील विविध कामांच्या निविदांबाबत संभाव्य निविदाकर महापालिकेस निवेदन खबर करत आहेत. अतएव, महानगरपालिकेद्वारे हाती घेण्यात येणारी विविध प्रकार्य कामे तसेच प्राप्त करण्यात येणा-या वस्तु व सेवा इत्यादीबाबतच्या ई-निविदा/निविदा/दरपत्रक यामध्ये संदर्भित क्र.५ अन्वये दिलेल्या वस्तु व सेवा कराच्या अनुषंगाने अंतर्भूत करावयाच्या अटीमध्ये खालीलप्रमाणे बदल करण्यात येत आहे.


विद्यमान अट	सुधारित अट
<p>"GST and other state levies/cess which are not subsumed under GST will be applicable. The tenderer shall quote inclusive of all taxes. It is clearly understood that BMC will not bear any additional liability towards payment of any Taxes & Duties.</p> <p>Wherever the services to be provided by the Tenderers, falls under Reverse Charge Mechanism, the Price quoted shall be exclusive of GST, but inclusive of Taxes/Duties/Cess other than GST, if any.</p> <p>Rates accepted by BMC shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/any other levies/tolls etc. except that payment/recovery for overall market situation shall be made as per Price variation.</p>	<p>"GST and other state levies/cess which are not subsumed under GST will be applicable. The tenderer shall quote inclusive of all taxes <u>applicable at the time of bid submission</u>. It is clearly understood that BMC will not bear any additional liability towards payment of any Taxes & Duties.</p> <p>Wherever the services to be provided by the Tenderers, falls under Reverse Charge Mechanism, the Price quoted shall be exclusive of GST, but inclusive of Taxes/Duties/Cess other than GST, if any.</p> <p>Rates accepted by BMC shall hold good till completion of work and no additional individual claim shall be admissible on account of fluctuations in market rates; increase in taxes/any other levies / tolls etc. except that payment/recovery for overall market situation shall be made as per Price variation and if there is any subsequent change (after submission of bid) in rate of GST applicable on the work/services to be executed as per tender, i.e. any increase will be reimbursed by BMC whereas any reduction in the rate of GST shall be passed on to BMC as per the provisions of the GST Act.</p>


उपरोक्त सुधारीत अट ही ज्या कामांच्या ई-निविदा/निविदा/दरपत्रक दस्तऐवज यामध्ये समाविष्ट केलेली असेल फक्त त्याच कामांकरिता लागू असेल.


अतएव, प्राप्त होणारे देकार प्रचलित वस्तु व सेवा करांच्या दरानुसार प्राप्त होणार असल्याने, सध्या ज्या ई-निविदा/निविदा/दरपत्रक मागविलेल्या आहेत अशा निविदांमध्ये


नियत दिनांकापूर्वी शुद्धीपत्रकाद्वारे उपरोक्त सुधारीत अट समाविष्ट करण्याबाबत तसेच यापुढे मागनिष्पात येणाऱ्या ई-निविदा/निविदा/दरपत्रक यांमध्ये उपरोक्त सुधारीत अट समाविष्ट करण्याची संबंधित खातेप्रमुख यांनी दक्षता घ्यावी, तसेच वस्तु व सेवा कराच्या दरातील बदल हा शासन निर्णयामधील दिनांकापामुन प्रभाव्य राहिल.

सर्व खातेप्रमुख, रूग्णालयांचे अधिष्ठाता, सहायक आयुक्त, यांनी उपरोक्त सुचनांचे काटेकोरपणे अनुपालन करावे.


(पांडुरंग गोसावी)
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(पो. जे. नागसु.) २२५
अतिरिक्त आयुक्त (प्रकल्प)

SECTION – 18

Drawings

Attached on BMC Portal