

**JABALPUR SMART CITY LIMITED (JSCL)  
JABALPUR, MADHYA PRADESH**

**TENDER DOCUMENT**

**ITEM RATE TENDER**

**Office of the** : - **JABALPUR SMART CITY LIMITED**

**NIT Number and Date** : - **JSCL/2017/640/ADM/46 Dated: 07/10/2017**

Agreement Number and Date :- \_\_\_\_\_

Name of Work : ***Providing, erecting, fixing & Maintaining Retro reflective Signage & Smart Real Time Automatic Variable signage on various roads under JMC limits.***

Name of the Contractor : \_\_\_\_\_

Probable Amount of Contract

(Rs. In Figure) : **8.60 Crores**

(Rs. In Words) : **Eight Crore & Sixty lacs**

Contract Amount

(Rs. In Figure) :

(Rs. In Words) :

Stipulated Period of Completion: - **18 Months (including Rainy season)**

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प्रदेश टुडे

जबलपुर, रविवार, 08 अक्टूबर, 2017



**Jabalpur Smart City Limited**

CIN-U 75100MP2016SGC035536

Ref No. JSCL/2017/640/ADM/46

Date: 07.10.2017

**Notice Inviting Tender**

JSCL invites online Item Rate Bid for work of "Retro Reflective Signages & smart real time at different places in Jabalpur" and Detail can be viewed on [www.jscljabalpur.org](http://www.jscljabalpur.org) & [www.mpeproc.gov.in](http://www.mpeproc.gov.in)  
Contact:- 7611136800

Executive Director Jabalpur Smart City Limited Jabalpur

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जबलपुर, रविवार 8 अक्टूबर 2017

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**JABALPUR SMART CITY LIMITED**

CIN-U75100MP2016SGC035536

JABALPUR  
SMART CITY LIMITED

N.I.T.No.: JSCL/2017/640/ADM/46

Dated 07.10.17

**NOTICE INVITING TENDER**

JSCL invites online Item Rate Bid for work of "RetroReflective Signages & smart real time at different places in Jabalpur", and Detail can be viewed on [www.jscljabalpur.org](http://www.jscljabalpur.org) & [www.mpeproc.gov.in](http://www.mpeproc.gov.in).  
Contact : 7611136800

Executive Director  
Jabalpur Smart City Limited, Jabalpur

**Notice Inviting e-Tenders**  
**Jabalpur Smart City Limited, Jabalpur**

N.I.T. NO JSCL/2017/640/ADM/46

Dated: 07/10/2017

Jabalpur Smart City Limited invites **Online Item rate bids** for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S.No./Pkg /Code	Work	District(s)	Probable Amount (Rs. In lacs)	Completion Period (months)
1.	<b>Providing, erecting, fixing &amp; Maintaining Retro reflective Signage &amp; Smart Real Time Automatic Variable signage on various roads under JMC limits.</b>	<b>Jabalpur</b>	<b>860.00 Lacs</b>	<b>18 month</b>

1. Interested bidders can view the NIT on website <http://www.mpeproc.gov.in> [www.jscljabalpur.org](http://www.jscljabalpur.org).
2. The Bid Document can be purchased only online from website <http://www.mpeproc.gov.in> from **17:30 Hours 07/10/2017** to **23:59 Hours 08/11/2017**
3. Amendments to NIT, if any, would be published on website only, and not in Newspaper.

Executive Director  
Jabalpur Smart City Limited

## Notice Inviting Tender

Jabalpur Smart City Limited, Jabalpur

Office of the **Jabalpur Smart City Limited, Jabalpur**

N.I.T. NO JSCL/2017/640/ADM/46

Dated: 07/10/2017

Jabalpur Smart City Limited invites **Online Item rate bids** for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No	Name of Work	District	Probable Amount of Contract (Rs. In lacs)	Earnest Money Deposit (EMD) (in Rupees)	Cost of Bid Document (in Rupees)	Category of Contractor	Period of completion (in Months)
	<b>Providing, erecting, fixing &amp; Maintaining Retro reflective Signage &amp; Smart Real Time Automatic Variable signage on various roads of Jabalpur</b>	<b>Jabalpur</b>	<b>860.00 Lacs</b>	<b>860000/-</b>	<b>20000/-</b>	<b>As per appropriate class</b>	<b>18 months</b>

1. All details relating to the Bid Document(s) can be viewed and downloaded free of cost on the website.
2. Bid Document can be purchased after making online payment of portal fees through Credit/Debit/Cash Card/ internet banking.
3. At the time of submission of the bid the eligible bidder shall be required to :
  - I. Pay the cost of bid document.
  - II. Deposit the Earnest Money
  - III. Submit a check list and
  - IV. Submit an affidavit.Details can be seen in the Bid Data Sheet.

#### 4. Eligibility for bidders :

At the time of submission of the bid the bidder should have valid registration with the Government of Madhya Pradesh, PWD in appropriate class; however, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.

- (a) The bidder would be required to have valid registration at the time of signing of the Contract.
  - (b) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.
5. **Pre-qualification** – Prequalification conditions, wherever applicable, are given in the Bid Data Sheet.
  6. **Special Eligibility**- Special Eligibility Conditions, if any, are given in the Bid data sheet.
  7. The Bid Document can be purchased only online from website <http://www.mpeproc.gov.in> from **17:30 Hours 07/10/2017** to **23:59 Hours 08/11/2017**. Other key dates may be seen in bid data sheet.
  8. Amendments to NIT, if any, would be published on website only, and not in newspaper.

Executive Director  
Jabalpur Smart City Limited

# TECHNICAL BID (PART I)

## SECTION 1- INSTRUCTIONS TO BIDDERS

### Scope of Bid:

1.1 JSCL invites bid for: **“Providing, erecting, fixing & Maintaining Retro reflective Signage & Smart Real Time Automatic Variable signage on various roads under JMC limits”** hereinafter referred to as “the Works” as defined in these bidding documents.

### 1.2 Background

JSCL proposes to install Way finding, Cautionary/Mandatory signboards covering all major roads in Jabalpur City in order to divert/regularize the traffic with respect to the Jabalpur Smart City Work. Different types of Sign boards have been proposed in order to achieve the objective. Tentative locations are identified & the details including the exact locations of the proposed signboards have to be worked out by the tenderer in association with JSCL.

Apart from supply and installation, a maintenance contract for the first five years is also to be executed by the tenderer with JSCL. The cost of maintenance as described in the following section will have to come in the quoted rate itself. This tender is for the manufacturing, installing and maintaining of retro-reflective signboards in Jabalpur City.

### 1.3 Major Activities

Major activities associated with this work are summarized below.

- 1.3.1 Preparation of the final list of locations for each type of boards, information on name of Destinations, distance, arrows, symbols to be provided on each board in association with JSCL.
- 1.3.2 Preparation of retro-reflective sign boards in accordance with the specifications and designs in approved drawings and tender schedule available with JSCL as per the details finalized.
- 1.3.3 Transportation and installation of the signboards at appropriate locations in Jabalpur City.
- 1.3.4 Maintenance of the boards for the first five years from the date of installation. The following items of works are included in the maintenance.
- i. Water washing and cleaning the board, if necessary by light detergent, in every one year.
  - ii. Painting of the signs, if necessary, in every two years.
  - iii. Repairing / replacing the sheets / boards damaged in natural causes, free of cost.
  - iv. If the damage is of serious nature and not caused naturally, the actual cost of replacement (should not be more than the item price as per the present tender) can be claimed with the support of photo identification and Certificate from the Engineer in charge

- v. Even though it is the responsibility of the tenderer to see that all the boards are in perfect condition, a local contact number is to be provided for informing the noticed damages in case of emergency.

## 2 Time of Completion

- 2.1 The successful bidder will be expected to complete the Works within eighteen months from the start date noted in the conditions of contract.
- 2.2 Throughout these bidding documents, the terms 'bid' and 'tender' and their derivatives (bidder/tenderer, bid / tender bidding / tendering etc.) are synonymous and 'day' means calendar day.

## 3 Eligible Bidders:

- 3.1 This Invitation for Bids is open to all bidders who meet the qualification criteria as mentioned in Instruction to Bidders.
- 3.2 Bids from joint ventures are not acceptable.

## 4 Qualification Criteria

### 4.1 Qualification of Bidder:

#### 4.1.1 To qualify for the award of Contract.

Each bidder shall be a registered contractor of the PWD of Madhya Pradesh State/ CPWD/Any Other State PWD/NHAI etc.

#### 4.1.2 Each bidder in its name should have in the **last three financial years.** ((2016-17, 2015-16, 2014-15)

- i. Achieved a minimum annual financial turnover of 300 lakhs and an average turnover of 400 lakhs. (A CA certified statement showing year wise turnover supported by audited financial statements should be provided).
- ii. The prospective applicant should be in the Civil Engineering business for a minimum period of 3 years and should have satisfactorily completed in the last 3 years ((2016-17, 2015-16, 2014-15) at least one similar works using retro-reflective road signage works using Type XI standards of ASTM D 4956 – 09 & as per IRC 67-2012 specifications to Govt. agency or should be satisfactorily executing currently at least one work of similar nature and magnitude of the proposed work and completed billing of at least 90% of the value of the work as a prime contractor or as a nominated sub-contractor (here the sub contract involved execution of all main items).(Copies of the work orders or certificates duly attested by Gazetted office not below the rank of Executive Engineer)
- iii. Should not have failed in the last three (3) years to perform on any contract or been expelled from or abandoned any PWD, Government of Madhya Pradesh work, any other State Government, Central Government or have any of their works rescinded for any reason. **(A declaration on stamp paper to this effect shall be furnished).**
- iv. The bidders participating in the bidding will be required to deposit, at the time of bidding, a bid security/EMD. On final selection, the selected bidder will be required to furnish performance security as per Clause.
- v. JSCL reserves the right to reject any or all proposals received.

#### 4.2 All bidders shall include the following information and documents with their bids



- a) Copies of original documents defining the constitution or legal status, place of registration and principal place of business.
- b) Experience (minimum three numbers) in signage works of a similar nature of value not less than 50% of the estimated value of this work for the last three years .(**Copies of the work orders or certificates duly attested by Gazetted office not below the rank** of Executive Engineer)

**4.3** Even though the bidders meet the above qualifying criteria they are subject to be disqualified if they have;

- a) Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirements and/or
- b) Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc. and/or

## **5 One bid per Bidder**

**5.1** Each bidder shall submit only one bid for proposal. A bidder who submits or participates in more than one Bid (other than as a subcontractor) will cause all the proposals with the Bidder's participation to be disqualified.

## **6 Cost of Bidding**

**6.1** The bidder shall bear all costs associated with the preparation and submission of his Bid and the Employer will in no case be responsible and liable for those costs.

## **7 Site Visit**

The Bidder, at the Bidder's own responsibility and risk is encouraged to visit to examine the Site of Works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for execution of the Works. The costs of visiting the Site shall be borne by the bidder.

## **B.BID DOCUMENTS**

### **8 Content Of Bid Documents:**

The Bid Document comprises of the following documents:

1. NIT with all amendments.
2. Instructions to Bidders, Bid Data Sheet with all Annexure
3. Conditions of Contract :
4. Part I General Conditions of contract and the Contract Data with all Annexure, and
5. Part II Special Condition of Contract.
6. Specifications
7. Drawings
8. Priced bill of quantities
9. Technical and Financial bid
10. Letter of Acceptance
11. Agreement, and
12. Any other document(s), as specified

The bidder is expected to examine carefully all instructions, conditions of contract, the **Contract data**, forms, terms and specifications, bill of quantities, forms and drawings in the bid document, Bidder shall be solely responsible for his failure to do so.

### **9 Pre-Bid Meeting (Where Applicable)**

Wherever the Bid Data Sheet provides for pre-bid meeting:

- 9.1** Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid-meeting would be communicated on the website only, and intimation to bidders would not be given separately.
- 9.2** Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.
- 9.3** Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.
- 9.4** Pursuant to the pre-bid meeting, if the employer deems it necessary to amend the bid Documents, it shall be done by issuing amendment to the online NIT.

### **10 Amendment Of Bid Documents:**

- 10.1** Before the deadline for submission of bids, the Employer may amend or modify the bid document by publication of the same on the website.
- 10.2** All amendments shall form part of the Bid Document.
- 10.3** The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

## **C. PREPARATION OF BID**

## **11 Preparation Of Bid**

**11.1** The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-tenders after signing of the same by the Digital Signature of their authorized representative.

## **12 Documents Comprising The Bid:**

The bid submitted online by the bidder shall be in the following parts:

**Part1-** This shall be known as online Envelop A and would apply for all bids. Online envelop A shall contain the following as per details given in the bid data sheet:

- a) Registration number or proof of application for registration and organizational details in the format given in the bid data sheet.
- b) Payment of the cost of Bid Document.
- c) Earnest Money : and
- d) An Affidavit Duly Notarized.

**Part 2 –** This shall be known as Online Envelope B and required to be submitted only in work where pre-qualification conditions and / or special eligibility conditions are stipulated in the Bid Data Sheet. Online Envelope B shall contain a self-certified sheet duly supported by documents to demonstrate fulfillment of pre-qualification conditions.

**Part 3-** This shall be known as online Envelope C and would apply to all bids. Envelop C shall contain financial offer in the prescribed format enclosed with the Bid Data Sheet.

## **13 Language:**

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation of the bid, such translation shall govern.

## **14 Technical Proposal:**

**14.1** Only, in case of bids with pre-qualification conditions defined in the Bid Data Sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.

**14.2** All the documents/ information enclosed with the Technical Proposal should be self-attested and certified by the bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document/information is found false/fake/untrue before acceptance of bid. If it is found after acceptance of the bid, the bid sanctioning authority may at his discretion forfeit his performance security / guarantee, security deposit, enlistment deposit and take any other suitable action.

## **15 FINANCIAL BID:**

- 15.1 The bidder shall have to quote rates in format referred in Bid Data Sheet, item wise, if the bid is in absolute amount, overall percentage would be arrived at in relation to the probable amount of contract given in NIT. The overall percentage rate would apply for all items of work.
- 15.2 Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found, lower of the two shall be taken as valid and correct.
- 15.3 The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same.
- 15.4 The material along with the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

## 16 PERIOD OF VALIDITY OF BIDS:

The bids shall remain valid for a period specified in the Bid Data Sheet after the date of "close for bidding" as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

## 17 EARNEST MONEY DEPOSIT (EMD)

- 17.1 The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), in the amount specified in the Bid Data Sheet.
- 17.2 The EMD shall be in the form of Fixed Deposit Receipt of a scheduled Nationalised/commercial bank, issued in favors of the name given in the Bid Data Sheet. The Fixed Deposit Receipt shall be valid for six months or more after the last date of receipt of bids. However form(s) of EMD may be allowed by the employer by mentioning it in the Bid Data Sheet.
- 17.3 Bid not accompanied by EMD shall be liable for rejection as non-responsive.
- 17.4 EMD of bidders whose bids are not accepted will be returned within ten working days of the decision on the bid.
- 17.5 EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement after furnishing the required Performance security.
- 17.6 Failure to sign the contract by the selected bidder, within the specified period, for whatsoever reason, shall result in forfeiture of the earnest money.

## D. SUBMISSION OF BID

### 18 Submission

The bidder is required to submit online bid duly signed digitally, and envelop "A" in physical form also at the place prescribed in the Bid Data Sheet.

## E. OPENING AND EVALUATION OF BID

### 19 PROCEDURE:

- 19.1 **Envelope "A"** shall be opened first online at the time and date notified and its contents shall be checked. In cases where **Envelope "A"** does not contain all requisite documents, such bid shall be treated as non-responsive, and envelop B and / or C of such bid shall not be opened.
- 19.2 Wherever **Envelope 'B' (Technical Bid)** is required to be submitted, the same shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the **Envelope 'B' Envelope 'C' (financial bid)** of bidders who are not qualified **in Technical Bid (Envelop 'B')** shall not be opened.
- 19.3 **Envelope 'C' (Financial Bid)** shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the **Envelope 'C'**

- 19.4** After opening **Envelope 'C'** all responsive bids shall be compared to determine the lowest evaluated bid.
- 19.5** The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.
- 19.6** The employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

## **20 CONFIDENTIALITY:**

- 20.1** Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.
- 20.2** Any Attempt by a bidder to influence the employer in the evaluation of the bids or contract award decisions may result in the rejection of his bid.

## **F. AWARD OF CONTRACT**

### **21 AWARD OF CONTRACT:**

- 21.1** The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' (LOA) that his bid has been accepted.

### **22 PERFORMANCE SECURITY**

- 22.1** Prior to signing of the contract the bidder to whom LOA has been issued shall have to furnish performance security of the amount in the form and for the duration, etc. as specified in the Bid Data Sheet.
- 22.2** Additional performance security, if applicable, is mentioned in the Bid data sheet and shall be in the form and for the duration, etc. similar to Performance Security.

### **23 SIGNING OF CONTRACT AGREEMENT:**

- 23.1** The successful bidder shall have to furnish Performance Security and Additional Performance Security, if any, and sign the contract agreement within 15 days of issue of LOA
- 23.2** The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the employer to the contractor for commencement of work.
- 23.3** In the event of failure of the successful bidder to submit Performance Security and Additional Performance Security, if any or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking any other action against the bidder.

### **24 CORRUPT PRACTICES:**

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy the employer may

- i. reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract ; and
- ii. debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has,

directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing , a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

- a. **'Corrupt Practice'** means the offering, giving, receiving or soliciting directly or indirectly, anything of value to influence improperly the actions of another party ;
- b. **'Fraudulent Practice'** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a fanatical or other benefit or to avoid an obligation:
- c. **'Coercive Practice'** means impairing of 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,
- d. **'Collusive practice'** means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

**(END OF ITB)**

<b>BID DATA SHEET</b>		
<b>GENERAL</b>		
<b>SR.NO.</b>	<b>PARTICULARS</b>	<b>DATA</b>
1	Office inviting tender	<i>JABALPUR SMART CITY LIMITED</i>
2	NIT No.	<i>JSCL/2017/640/ADM/46</i>
3	Date of NIT	<i>7<sup>th</sup> October 2017</i>
4	Bid document download available from date & time	<i>7<sup>th</sup> October 2017</i>
5	Website link	<i>www.mpeproc.gov.in</i>
<b>SECTION 1 – NIT</b>		
<b>CLAUSE REFERENCE</b>	<b>PARTICULARS</b>	<b>DATA</b>
2	Portal fees	<i>As notified in e-tendering website</i>
3	Cost of bid document	<i>Rs.20,000.00</i>
	Cost of bid document payable at	<i>As notified in e-tendering website</i>
	Cost of bid document in favor of	<i>As notified in e-tendering website</i>
4	Affidavit format	<i>As per ANNEXURE B</i>
5	Pre-Qualifications required	<i>Yes</i> -
	If yes, details	<i>As per ANNEXURE C</i>
6	Special Eligibility	<i>According to Bid Data sheet</i> <i>Yes</i>
	If Yes, details	<i>As per ANNEXURE D</i>
7	Key dates	<i>As per ANNEXURE A</i>
<b>SECTION 2 – IT B</b>		
<b>CLAUSE REFERENCE</b>	<b>PARTICULARS</b>	<b>DATA</b>
1	Name of 'work'	<i>Providing, erecting, fixing &amp; Maintaining Retro reflective Signage &amp; Smart Real Time Automatic Variable signage on various roads of Jabalpur</i>
2	Specifications	<i>As per ANNEXURE –E</i>
3	Procedure for participation in e-tendering	<i>As per ANNEXURE -F</i>

4	Whether joint venture is allowed		<b>No</b>
	If yes, requirement for joint venture	<b>As per ANNEXURE – G</b>	
5	Pre bid meeting to be held		<b>Yes</b>
	If Yes, Date, Time & Place	<b>Date : 25-10-2017</b> <b>Time form: 15.00 hrs</b> <b>Place: JSCL Office Manas Bhawan</b> <b>Jabalpur M.P</b>	

**BID DATA SHEET**

<b>CLAUSE REFERENCE</b>	<b>PARTICULARS</b>	<b>DATA</b>
12	Envelopment A containing:  Registration number or proof of application for registration and organizational details as per Annexure H  Cost of Bid Document  EMD  An affidavit duly notarized as per Annexure – B  Should reach in physical form	<b>At the Office of the Jabalpur Smart city Limited, Manas Bhawan</b>     <b>Rs. 20000.00</b>  <b>Rs. 860000.00</b>  <b>Before</b>
14	Envelope-B Technical Proposal	<b>ANNEXURE – I and ANNEXURE –I (Format I-1 to I-5)</b>
15	Envelope-C Financial Bid	<b>Annexure – J (SHOULD BE SUBMITTED ONLINE)</b>
16	Period of Validity of Bid	<b>120 Days</b>
17	Earnest Money Deposit	<b>Rs. 860000.00</b>
	Forms of Earnest Money deposit	<b>FDR/e-FDR</b>  <b>Demand draft of scheduled commercial bank</b>  <b>Interest bearing securities</b>



		<b>of post office.</b>
	EMD valid for a period of	<b>365 Days</b>
	FDR must be drawn in favor of	<b>Executive Director, JSCL</b>
21	Letter of Acceptance (LoA)	<b>ANNEXURE K</b>
22	Amount of Performance Security	<b>5% of contract amount</b>
	Additional Performance Security, if any	<b>As per rule</b>
	Performance security in the format	<b>ANNEXURE L</b>
	Performance security in favor of	<b>Executive Director, JSCL</b>
	Performance security valid up to	<b>Valid upto defect liability period plus six months</b>

## Annexure A

### KEY DATES

S. No	WORKS DEPARTMENT STAGE	BIDDERS STAGE	START		EXPIRY		ENVELOPE S
			Date	Time	Date	Time	
1		Purchase of Tender – Online	<b>07/10/17</b>		<b>08/11/17</b>		
2		Bid Submission – Online	<b>07/10/17</b>		<b>10/11/17</b>		
3	Mandatory submission Open (Envelope-A)	-	<b>13/10/17</b>				Envelope A
4	Technical Proposal open (PQ Envelope-B)		<b>13/10/17</b>				Envelope B
5	Financial Bid open (Envelope-C)		<b>20/10/17</b>				Envelope C

***Original term deposit receipt of earnest money deposit, demand draft for the cost of bid document and affidavit shall be submitted by the bidder so as to reach the office as prescribed in bid data sheet, at least one calendar day before specified start time and date in key dates for opening of technical proposal as per key dates in Bid Data Sheet.***

## Annexure – B

**|| AFFIDAVIT ||**  
**(To be contained in Envelope A)**  
**(On Non Judicial stamp of Rs. 100)**

I/We \_\_\_\_\_ who is / are \_\_\_\_\_ (status in the firm / company) and competent for submission of the affidavit on behalf of M/S \_\_\_\_\_ (contractor) do solemnly affirm an oath and state that :

I/We am / are fully satisfied for the correctness of the certificates/ records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. \_\_\_\_\_ for \_\_\_\_\_ (name of work) dated \_\_\_\_\_ issued by the \_\_\_\_\_ (name of the Department).

I/We am/ are fully responsible for the correctness of following self- certified information / documents and certificates.

That the self – certified information given in the bid document is fully true and authentic.

That :

Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.

Information regarding financial qualification and annual turnover is correct.

Information regarding various technical qualifications is correct.

No. close relative of the undersigned and our firm/company is working in the department.

Or

Following close relatives are working in the department:

Name \_\_\_\_\_ - Post \_\_\_\_\_ present Posting \_\_\_\_\_

Signature with seal of the Deponent (bidder)

I/We, \_\_\_\_\_ above deponent do hereby certify that the facts mentioned in above paras 1 to 4 are correct to the best of my knowledge and belief.

Verified today \_\_\_\_\_ (dated) at \_\_\_\_\_ (place).

**Signature with seal of the Deponent (bidder)**

*Note: Affidavit duly notarized in original shall reach at least one calendar day before opening of the bid.*

## Annexure—C

### PRE- QUALIFICATIONS CRITERIA

The bidder should have:

#### A. Financial

i. Experience of having successfully executed: -

- a) **Three similar works**, each costing not less than the **amount equal to 20%** of the probable amount of contract during the **last 3 financial years**; or
  - b) **Two similar works**, each costing not less than the **amount equal to 30%** of the probable amount of contract during the **last 3 financial years**; or
  - c) **One similar work** of aggregate cost not less than the amount equal to **50% of the probable amount** of contract in any one financial year during **the last 3 financial years**;
- ii. **Average Annual Construction Turnover** on the construction works **shall not be less than 50%** of the probable amount of contract during **the last 3 financial years**.
  - iii. Executed similar items of work in any one financial year during the last 3 financial years, which should not be less than the minimum, physical requirement, if any, fixed for the work.
  - iv. **Bid Capacity** — Bidder shall be allotted work up to his available Bid Capacity, which shall be worked out as given in **Format 1-2 of Annexure I**. **Bid Capacity shall be equal or higher than the bid amount**.

**B. Physical**

Physical qualifications for the work shall be as below

S.No.	Particulars	Quantity	Period
	Physical qualification required	Yes	
1	Execution of Road & Road Side Sign Boards	Min. 2 projects of 3 crores and Above	In Last 3 Financial Years

**(The Employer shall specify all physical qualifications required).**

**Note: Above criteria is indicative, subject to suitable stipulations by the Departments and specific Bid.**

**SPECIAL ELIGIBILITY CRITERIA**

***NOT APPLICABLE***

## SPECIFICATIONS

### TECHNICAL SPECIFICATIONS

1. The Technical Specifications contained herein shall be read in conjunction with the other tender documents.

#### 1.1 General Specifications

The colour, configuration, size and location of all traffic signs for highways and for other roads (other than Expressways) shall be in accordance with the Code of Practice for Road Signs, IRC: 67:2012 or as shown on the drawings. In the absence of any details or for any missing details, the signs shall be provided in accordance with international standards and/or as directed by the Owner.

The work, in general, shall be executed conforming to IRC 67:2012, as per the description of the item and as per MoRTH's specifications for Roads & Bridges, 2013 (Fifth Revision).

#### 1.2 Specification of materials for Signs

Detailed specification is attached. Materials and fabrication of road signs shall conform to the following requirements:

**Concrete:** Concrete shall be of M20 grade.

**Reinforcing steel:** Reinforcing steel shall conform to the requirements of IS 1786 unless otherwise specified in contract drawings.

**Bolts, nuts and washers:** High strength bolts shall conform to IS 1367 whereas precision bolts, nuts etc, shall conform to IS 1364.

**Plates and supports:** Plates and support sections for the signposts shall conform to IS 226 and IS 2062 or any other stated IS specification.

**Substrate:** Substrate shall be Aluminium conforming to following sub-sections: Aluminium sheets used for sign boards shall be of smooth, hard and corrosion resistant aluminium alloy conforming to IS 736- Material designation 24345 or 1900. Thickness of aluminium shall be 2mm.

**Retro reflective sheeting:** The retro reflective sheeting used on the signs shall consist of the **white or blue** colored sheeting having a smooth outer surface, which has the property of retro reflection over its entire surface. It shall be weather-resistant and show color fastness. It shall be new and unused and shall show no evidence of cracking, scaling, pitting, blistering, edge lifting or curling and shall have negligible shrinkage or expansion. A certificate of having the sheeting tested for co-efficient of retro-reflection, day/night time colour luminous, shrinkage, flexibility, liner removal, adhesion, impact resistance, specular gloss and fungus resistance, 3 years outdoor weathering (as per table 14 of ASTM D 4956-09) and its having passed these tests shall be obtained from an International/ Laboratory, by the manufacturer of the sheeting.

Retro-reflective sheeting is typically manufactured as a cube corner. The reflective sheeting shall be Class C retro-reflective sheeting made of Grade XI micro prismatic retro-reflective material. The retro-reflective surface, after cleaning with soap and water and in dry condition shall have the minimum coefficient of retro-reflection (determined in accordance with ASTM D 4956-09) as indicated in the **Table**. When totally wet, the sheeting shall show not less than 90 per cent of the values, of retro reflection indicated in the Table. At the end of 10 years, the sheeting shall retain at least 80 per cent of its original retro-reflectance.

**Acceptable Minimum Coefficient of Retro-reflection for Type XI Prismatic Grade Sheetting<sup>A</sup> (Candelas per Lux per Square Metre) (Table – 1)**

Observation Angle	Entrance Angle	White	Yellow	Orange	Green	Red	Blue	Brown	Flourescent Yellow-Green	Flourescent Yellow	Flourescent Orange
0.1 <sup>oB</sup>	-4°	830	620	290	83	125	37	25	660	500	250
0.1 <sup>oB</sup>	+30°	325	245	115	33	50	15	10	260	200	100
0.2°	-4°	580	435	200	58	87	26	17	460	350	175
0.2°	+30°	220	165	77	22	33	10	7	180	130	66
0.5°	-4°	420	315	150	42	63	19	13	340	250	125
0.5°	+30°	150	110	53	15	23	7	5	120	90	45
1.0°	-4°	120	90	42	12	18	5	4	96	72	36
1.0°	+30°	45	34	16	5	7	2	1	36	27	14

**\*\* Minimum Co-efficient of Retro-reflection (RA) (cd.lx-1.m-2).**

**Adhesives:** The sheeting shall have a pressure-sensitive adhesive of the aggressive-tack type requiring no heat, solvent or other preparation for adhesion to a smooth clean surface, in a manner recommended by the sheeting manufacturer. The adhesive shall be protected by an easily removable liner (removable by peeling without soaking in water or other solvent) and shall be suitable for the type of material of the base plate used for the sign. The adhesive shall form a durable bond to smooth, corrosion and weather resistant surface of the base plate such that it shall not be possible to remove the sheeting from the sign base in one piece by use of sharp instrument. The sheeting shall be applied in accordance with the manufacturer's specifications.

**Fabrication:** Surface to be reflectorised shall be effectively prepared to receive the retroreflective sheeting. The aluminium sheeting shall be de-greased either by acid or hot alkaline etching and all scale/dust removed to obtain a smooth plain surface before the application of retro-reflective sheeting. If the surface is rough, approved surface primer may be used. After cleaning, metal shall not be handled, except by suitable device or clean canvas gloves, between all cleaning and preparation operation and application of reflective sheeting/primer. There shall be no opportunity for metal to come in contact with grease, oil or other contaminants prior to the application or retro-reflective sheeting. Complete sheets of the material shall be used on the signs except where it is unavoidable. At splices, sheeting with pressure-sensitive adhesives shall be overlapped no less than 5mm. Where screen printing with transparent colored is

proposed, only butt joint shall be used. The material shall cover the sign surface evenly and shall be free from twists, cracks and folds. Cut-outs to produce legends and borders shall be bonded with the sheeting in the manner specified by the manufacturer.

**Messages/ borders:** The messages (legends, letters, numerals, etc.) and borders shall either be screen-printed or of cut out from durable transparent overlay or cut-out from the same type of reflective sheeting for the cautionary and mandatory sign boards. Screen printing shall be processed and finished with materials and in a manner specified by the sheeting manufacturer. For the informatory and other sign boards, the messages (legends, letters, numerals etc.) and borders shall be cut-out from durable transparent overlay film or cut-out from the same reflective sheeting only. Cut-outs shall be from durable transparent overlay materials as specified by the sheeting manufacturer and shall be bonded with the sheeting in the manner specified by the manufacturer. Whenever transparent overlay film is used for making any type of sign, the colored portion of sign shall have coefficient of reflectivity not less than the reflectivity of type and colour of sheeting normally used, as given in **Table**. Cut-out messages and borders, wherever used, shall be either made out of retro-reflective sheeting or made out of durable transparent overlay except those in black which shall be of non-reflective sheeting or opaque in case of durable transparent overlay. Creating colored areas by means of screen-printing with ink shall not be permitted.

**Warranty and durability:** The Contractor shall obtain from the manufacturer of retroreflective sheeting, a 7 year warranty certificate in original for field performance including the screen printed areas and cut-out sheeting and cut-out durable transparent overlay film and submit the same to the Owner. The contract shall indicate the minimum retro-reflectivity of the signs at the end of the warranty period.

### **Specifications for posts and mountings for Signs**

The traffic signs shall be mounted on support posts, which may be of GI pipes conforming to IS 1239, Rectangular Hollow Section conforming to IS 4923 or Square Hollow Section conforming to IS 3589. In case of signs supported on two or more posts, if necessary, bracing may also be provided. Sign posts, their foundations and sign mountings shall be so constructed as to hold these in a proper and permanent position against the normal storm wind loads or displacement by vandalism. Normally, signs with an area up to 0.9 square meter shall be mounted on a single post, and for greater area, two or more supports shall be provided. Sign supports may be of mild steel, reinforced concrete (M20) or galvanized iron (GI Post) sections. End(s) shall be firmly fixed to the ground by means of properly designed foundation. The work of foundation shall conform to relevant specifications as specified.

All components of signs and supports, other than the reflective portion of GI posts shall be thoroughly descaled, cleaned, primed and painted with two coats of epoxy paint. Any part of Mild Steel (MS) post below ground shall be painted with three coats of red lead paint.

The signs shall be fixed to the posts by welding in the case of steel posts and by bolts and washers of suitable size in the case of reinforced concrete or GI posts. After the nuts have been tightened, the tails of the bolts shall be furred over with a hammer to prevent removal.

### **Specification for colour for signs**



**Color** : The color of the material shall be located within the area defined by the chromaticity coordinates in Table 8.1 and comply with the luminance factor given in Table 8.2 of IRC:67:2012 when measured as per ASTM D: 4956-09.

<b>Specification Limits (Daytime)<sup>A</sup></b>								
<b>Colour</b>	<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>	
	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>	<b>x</b>	<b>y</b>
<b>White</b>	0.303	0.300	0.368	0.366	0.340	0.393	0.274	0.329
<b>Yellow</b>	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472
<b>Green<sup>B</sup></b>	0.026	0.399	0.166	0.364	0.286	0.446	0.207	0.771
<b>Red</b>	0.648	0.351	0.735	0.265	0.629	0.281	0.565	0.346
<b>Blue<sup>B</sup></b>	0.140	0.035	0.244	0.210	0.190	0.255	0.065	0.216

The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 standard colorimetric system measured with standard illumination Source D65 - these colors are equivalent to those listed in ASTM D 4956 using Source C. The color shall be durable and uniform in acceptable hue when viewed in daylight or under normal headlights at night.

**Test Criteria:**

As per clause 6.7 of IRC 67-2012, the retro reflective sheeting shall be tested for coefficient for retro reflection, daytime colour and luminance, shrinkage, flexibility, liner removal, adhesion, impact resistance secular gloss and fungus resistance, 3 years outdoor weathering and its having passed these tests shall be obtained from International/Government Laboratory/Institute by the manufacturer of the sheeting. A certified copy of the test report having the test done for the above mentioned parameters shall be submitted along with the bid. The report shall be attested by the retro reflective sheeting manufacturer, the performance reading after three years, must be at least 80% of the minimum values mentioned in ASTM D 4956-09 Type-XI sheeting performance table. Also a test report from an independent test laboratory from India for the sheeting having tested for Retro Reflection & Colorometry shall be submitted by the tenderer.

**Warranty and Durability:**

As per clause 6.9 of IRC 67-2012, both the screen printed area, cut-out sheeting and cut-out durable transparent overlay film shall be covered under the 10 year warranty issued by the sheeting manufacturer. As per clause 6.7.4.3, at the end of 10 years the sheeting shall retail at least 80 percent of its original retro reflection. Hence the bidder shall also submit Pre-Qualification Warranty for Ten Years field performance attested by the sheeting manufacturer for technical qualification in the tender.

**Specification of size of letters**

Letter size should be chosen with due regard to the speed, classification and location of the road, so that the sign is of adequate size of legibility but without being too large or obtrusive.

Size of letters shall conform to the requirements of IRC 67:2012 unless otherwise specified in contract drawings. The size of the letter, in terms of x-height, to be chosen as per the design speed is given in **Table 11.1 of IRC 67/2012**.

**Periodical Testing:**

Authority shall be testing the coefficient of retro reflection of the installed sign boards in a periodical basis of 3 years. Sign board shall perform above/meet minimum coefficient of retro reflection at all angles as per Table 6.9 of IRC 67-2012 failing which contractor shall be liable to replace all the sign boards installed by them as mentioned in the tender BOQ. Also the performance security shall be withheld for 10 years. Charges for the periodical testing shall be borne by the contractor.

**TECHNICAL SPECIFICATIONS FOR ACM/ACP SHEETING AS PER IRC 67-2012**

ACM (aluminum composite material )/ ACP (aluminum composite panel) used as a substrate for sign board shall be 4 mm thick with aluminum skin thick ness of 0.4 to 0.5 mm on both sides. All properties of ACP/ACM shall be comply to clause 6.5.2 of IRC 67-2012. Test parameters shall be as per table 6.1 of IRC 67-2012 and test shall be conducted at government approved laboratory.

**TECHNICAL SPECIFICATIONS FOR SMART REAL TIME MULTICOLORED AUTOMATIC VARIABLE MESSAGE SIGNAGE:**

SR.No.	Description	Technical Specification
1	Size of Smart Variable Message LED Display	3.84 Mtrs Length x 1.92 Mtrs Height
2	Pixel Pitch	10mm
3	Colour Type	Full Colour
4	Brightness Adjustment	Automatic & Manual
5	Control Method	Synchronised with system
6	Working Temperature	Shall be 0 to +55 Degrees Centigrade
7	Picture Display	Customized as per size of display board
8	Viewing Distance	100 mtrs Minimum
9	Humidity (RH)	The operating ambient humidity shall cope up with requirement of Bangalore City
10	LED Type	DIP
11	Life Span of LED	Minimum 1,00,000 Hrs
12	Defect Ratio	<0.1%
13	Working voltage	AC 230 V + 10%; 50 HZ
14	Control System	DVI display card + Full color controller card
15	Ingress protection rating	IP 54 - For Cabinet & IP 65 - For LED Display Module
16	Operating system	Windows embedded operating system
17	Flicker	No visible flicker to naked eye
18	Multiple communication	RJ45 Ethernet, RS232, RS 485 and any other suitable, NTCIP protocol shall be used.

	interface/port/protocol	
19	Local storage in VMS	The local storage shall be provided as per the requirement of the customer and not less than 10 GB
20	Communication	Wired/GPRS based wireless technology with 3G upgradable to 4G capability
21	Functional features	The VMS boards shall have the facility to generate Real Time information of Traffic Data i.e. Traffic Live Congestion, Journey Time, Traffic rerouting, Live Weather, automatically using a thin client windows embedded system. The VMS solution should provide Android based application for Disaster Management/Emergency Messages

### Client Player Software (At the Display)

Sl. No.	Details
1	The Software should run on Microsoft Windows Platform: Windows 7 Embedded.
2	The Software powers up the Media Player at pre-determined times on all functioning days of the Station.
3	The Software powers off the unit during the closing hours of the Station.
4	No Personnel should be required to either switch on, switch off, power off, log in or log out procedures. All the above functions should function automatically as scheduled.
5	Multiple Screen Layouts with Multiple Independent Zones.
6	Play Standard Multimedia Files: Flash, Videos, Images, etc.
7	Separate Weather Banners
8	Scrolling Banners
9	Time-Sensitive Content – Expired old content to be purged.
10	Unattended, Continuous Playback
11	Remote Shutdown, Reboot Mode.
12	Connect on “as-and-when-needed” basis
13	Can use Dial-Up or Broadband Connectivity
14	No Proprietary Hardware required
15	Off the Shelf Operating Systems

16	Scalable Network
17	No need of dedicated bandwidth
18	Play Scheduled Playlist in day parts
19	Ability to schedule permitted download and upload time so as to use connectivity during non-peak hours.
20	Proof of Play and Log Retrieval
21	Support Major Indian Language Fonts
22	Minimum 4 GB RAM and 16 GB Flash, 1.66 GHZ
23	24x7 Operations

### **Network Control Software (At the USER)**

Sl. No.	Details
1	Web Based Solution (Hosted Manager Application) anywhere access on the Clients Network
2	Desirable Integration with Windows Server 2008 / 2012 based Active Directory System.
3	Screen Layout Designer Module with Drag and Drop interface and supporting more than 2 Media Zones, 3 Scrolling Zones, Date and time zone along with Weather Module. Supports any screen resolution in both the screen Formats (Portrait and Landscape).
4	Alert Manager: Option to assign player or Group of players to an email id to receive the Player logs between set intervals.
5	Players can be placed in multiple Groups and schedules can be sent to a Group or a selection of Players in a Group or to the Whole Network.
6	Can add any number of media players in the Network.
7	Default - Screen can be divided into 7 zones. 3 Media zones supporting all Media formats (Videos, Images, Flash, Web URLs), 3 Ticker, Date Zone & Clock Zone.
8	Media zone can play Videos, Flash, Images, Web pages, Office Files & PDF documents.
9	Customer can choose smooth seamless transitions between images.
10	Media zones can be synchronized.

11	Media can be organized in Tree View Folders.
12	All the zones in the Screen Layout can be scheduled independently.
13	Tickers supports UNI code (Multi Lingual Support). Should customize font name, font size, font type, Foreground color and Background color (Gradient & Solid).
14	Tickers scroll in any direction (Right to Left, Left to Right, Top to Bottom and Bottom to Top)
15	Tickers support feature where news can be downloaded from a RSS News Feed at a given interval.
16	Option to set Different text Scroll data for different days of the week
17	Feature of Enabling and disabling players on the network.
18	Feature for deleting / purging the files on the Content server.
19	Feature to view History, Active and Future Schedules for all the zones.
20	Feature to overwrite Future Schedules and files on the Remote players.
21	Ability to view the Current Files and the playlist of the Remote Players.
22	Ability to Overlay Image and text on the Main Video Zone ( Transparency Feature)
23	Feature to set the different shutdown time and reboot time for all days of a week for the Remote Players.
24	Logs for viewing the Status of the players (Start Up time, Shutdown Time and Server Connect Time).
25	Feature for creating project files for External Pen drive Updates for the players where there is no Internet connectivity.
26	Dashboard view of the Network connectivity Status between the Media Players and the Central Server, Players current IP Address & Free Space available on Players.
27	Drag and Drop feature to create a playlist, modify the position of the files in the playlist.
28	Each file in the Media Playlist to have Start and End time and option for looping.
29	Option to set the files in the playlist to play for a set number of Occurrence in a day
30	Option to set the files in the playlist to play in a set day of the Week or entire week
31	Option to mute Audio for each Media file in the playlist.
32	Option to play selected Media files in Full Screen Mode during payback

33	Option to set the start play time and end play time for Media file to playback only selected portion of the Media file.
34	Option to force download selected Media files in the playlist.
35	Option to set Screen shot with time stamp during Media Playback on Media player and upload back the screenshot to be viewed from the Manager.
36	Information about the Contents upload time form the Manager Application and Media files download time form the player.
37	Reports of Media Exposure between Date ranges. Should be able to export this data to Microsoft Excel & PDF.
38	User access & management - Multi Level user access, Administrator will have all the rights and he can create users and assign rights, User access can be provided for a Player, Group of Players or each module like Playlist creation, Layout Management, Reports etc.
39	Software Updates and Patches are to be remotely managed from the manager to the Media Players.
40	The Schedules, Playlists, Logs and other information for the players are uploaded to a Content Server in an encrypted format.
41	Internet connectivity (Green and Red) Indicator at the Player to identify network connectivity.
42	Self-Healing Watch Dog Module on the player to ensure sure that all the zones in the current Layout are up and running.
43	Media Expo uploaded to the server once every day.
44	Automatic Project update Flash Module on the player to update the content and the schedules from the project file in case of manual update.
45	Players should be programmed to download content from the XML feed automatically.
46	Encryption of Data to increase secure downloads on the player – Minimum 128-bit encryption is to be supported.
47	Intelligent Download Module on the player helping in content and schedules to be downloaded meant for the particular player.
48	Player programmed to play unattended 24 x 7
49	If there is no internet/ data connectivity on the player then the player plays the last updated content.
50	Reports Customizable based on the Clients requirement with no additional Charges.
51	Log Viewer Module in the Manager application to give instant reports for Active Playlists on each player, Content upload and download time, player start up

	and shutdown times.
52	Option to push Blue casting Messages to the players at the locations.
53	Option to send Emergency messages to the players. Messages should override the current content on the Screen and Display FULL Screen. Also option to set the Start and End time for Emergency Messages and the frequency interval so that the player will alternate between the Emergency Messages and current content.
54	Scheduled Player downloads for better Bandwidth Management and also support Broken downloads and Intelligent downloads where only modified content downloads.
55	Support for preventing play back of content that is not authenticated in the Manager Application.
56	Support Multiple File types in a Loop (Multiple file formats in a Playlist).
57	Option to have a schedule Exclusive Media Playback - Media files in the playlist can be marked as Exclusive and provided a Start Duration and End Duration in a Day so that during this interval all other Media files in the Playlist are skipped and only the files marked as exclusive will play.
58	Twitter Feed Integration in Scrollers
59	Option to play selected Media files in Day Time Parting by providing the Start time and End Time
60	Additional option for Displaying all the screen shots of all the players in the Network as Thumbnails in a Single Web Page
61	An Image Designer Application to Create and design Images which can be installed as a standalone applications (The Images designed with combination of Images and Text can be directly uploaded to the content Server which can be used in the playlists)
62	Preset Weather Zones for Portrait and Landscape (can be customized based on client requirement) will display the current weather and forecast for next 2 days for selected cities. Players to have internet connectivity

**Functional Specifications:**

1. VMS solution shall be able to display real-time as well as static data.
2. VMS solution shall be a fully customizable solution for each display/ location to show live traffic-related information, live congestion related information specific to that location/ corridor.
3. VMS solution shall be able to provide automatic real time information like weather updates, alternate route options useful to the road user.

4. VMS Solution shall have the capability to be integrated with disaster management & emergency response data sources to provide instant alerts to road users & public.
5. SMART VMS solution shall allow integration with Speed Radars/lasers for speed monitoring and Driver feedback applications to reduce accident on roads.
6. SMART VMS solution shall allow distribution of emergency messages to specific individual / group or all VMS boards via secured Mobile/ Tablet application.
7. SMART VMS solution shall be capable of reading live data from road side sensors. Example: - Parking, Air Quality etc.
8. If there is no data connectivity due to network issues on the thin client then the VMS shall display the last uploaded content / programmed content, thus ensuring uninterrupted performance.
9. In the event of central server failure, each of the SMART VMS boards should be individually capable of continuous & uninterrupted display of real time traffic & other information as per last configuration thereby ensuring continuous operation.
10. There shall be an option to view latest content screen shot of every display on the centrally hosted VMS Manager Application
11. Android App shall be provided for entering Emergency messages and distributing to the VMS Displays from the App with clear time lines (Start time & Date, End time and Date). Authentication key shall be provided to the authorized users only.
12. Automated email alerts at set intervals shall be provided in case the VMS thin clients are not connecting to the central manager application.
13. The system shall maintain the history of messages archived for future reference and analysis.
14. All boards shall be connected and controlled centrally via one software application and server.
15. It shall be capable to integrate with other Intelligent Transport Solutions as and when required on availability of protocols.
16. The intended information to be displayed shall have the feature to schedule and display data at any date and time.
17. VMS solution shall be installed at Traffic Police Head Quarters Control Room and shall also be capable of providing viewing facilities as directed by the Engineer.
18. VMS shall be capable to maintain logs on the server for a period of 12 months.
19. VMS solution shall display pictograms and text message in English, Hindi and other regional languages.
20. VMS Solution shall have the capability to define groups for displays, so that specific messages can be displayed to targeted boards.



21. VMS solution shall work in an automated fashion. No manual intervention shall be required for displaying the contextual, real-time information.
22. VMS solution shall be a cloud-based solution.
23. Comply with FCC, CE

### **Specification of work**

- The boards should be erected at various roads in Jabalpur City
- The minimum distance from the kerb of the road to nearest edge should be 60 cm.
- All structural steel work should be painted with one coat of epoxy primer except surfaces, which will be in contact with concrete. All rust scales, dirt, supplier's delivery marks, oil, greases etc. should be removed. Special care should be taken for cleaning corners. Two coat of epoxy paint should be applied at right angles to each other. Each coat shall be allowed to dry up perfectly before the succeeding coat is laid over it.
- The concrete for foundation shall be laid gently (not thrown) in a layer not exceeding 15 cm and compacted by pinning with rods and tamping with wooden tampers until a dense concrete is obtained. Unless otherwise stated, quality of materials and specifications for the work shall conform to the latest ISI specification and codes of practice.

### **Maintenance of Signs**

- Excessively discoloured or faded signs (e.g. white backgrounds which have become grey or brown, or red borders faded to pink) and signs, where the legend or graphic is peeling off cannot be fully effective and need to be replaced. The signs along with the posts shall be maintained in proper position, and kept clean and legible at all times. Signs should be cleaned at intervals appropriate to the site conditions. Signs at locations where they are subject to heavy soiling from passing traffic, or algae growth (a common problem with signs beneath tree canopies) will need more frequent cleaning.
- A reference number along with the month and year of installation should be placed on the back of a sign in a contrasting colour or by stamping in characters not exceeding 50 mm in height. It is distracting and unsightly to place reference numbers on the sign face or on the front of a backing board.
- All signs shall be inspected at least twice a year both in day and night times and at least once a year in the rain. All signs should be replaced at the end of the warranty period provided for the retro-reflective sheeting used on the sign. Damaged signs shall be replaced immediately.
- The authorities responsible for road signs should maintain a schedule of painting of the posts and signs periodically. It is recommended that painting of the signs (where applicable) maybe undertaken after every two years. In case of overhead signs, adequate provision is to be made to have access to the signs for the purpose of maintenance activities. This must be ensured at the time of installation. Special care shall be taken to see that weeds, shrubbery, mud, etc. are not allowed to obscure any sign.

**PROCEDURE FOR PARTICIPATION IN E-TENDERING**

**1. REGISTRATION OF BIDDERS ON E-TENDERING SYSTEM:**

All the PWD registered bidders are already registered on the new e-procurement portal <https://www.mpeproc.gov.in>. The user id will be the contractor ID provided to them from MP Online. The password for the new portal has been sent to the bidders registered email ID. for more details may contact M/s. \_Tata Consultancy Services Corporate Block, 5th floor, DB City BHOPAL-462011 email id: [eproc\\_helpdesk@mpsdc.gov.in](mailto:eproc_helpdesk@mpsdc.gov.in). Helpdesk phone numbers are available on website.

**2. DIGITAL CERTIFICATE:**

The bids submitted online should be signed electronically with a Class III Digital Certificate to establish the identity of the bidder submitting the bid online. The bidders may obtain Class III Digital Certificate issued by an approved Certifying Authority authorized by the Controller of Certifying Authorities, Government of India. A Class III Digital Certificate is issued upon receipt of mandatory identity proofs along with an application. Only upon the receipt of the required documents, a Digital Certificate can be issued. For details please visit [cca.gov.in](http://cca.gov.in).

**NOTE:**

- I. It may take upto 7 working days for issuance of Class III Digital Certificate; hence the bidders are advised to obtain the Certificate at the earliest. Those bidders who already have valid Class III Digital Certificate need not obtain another Digital Certificate for the same. The bidders may obtain more information and the Application Form required to be submitted for the issuance of Digital Certificate from **[cca.gov.in](http://cca.gov.in)**
- II. Bids can be submitted till bid submission end date. Bidder will require digital signature while bid submission.

The digital certificate issued to the Authorized User of a Partnership firm / Private Limited Company / Public Limited Company and used for online bidding will be considered as equivalent to a no-objection certificate / power of attorney to that user.

In case of Partnership firm, majority of the partners have to authorize a specific individual through Authority Letter signed by majority of the partners of the firm

In case of Private Limited Company, Public Limited Company, the Managing Director has to authorize a specific individual through Authority Letter. Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization for online bids as per information Technology Act 2000. This Authorized User will be required to obtain a Digital Certificate. The Digital Signature executed through the use of Digital

Certificate of this Authorized User will be binding on the firm. It shall be the responsibility of Management / Partners of the concerned firm to inform the Certifying Authority, if the Authorized User changes, and apply for a fresh Digital Certificate for the new Authorized User.

**3. SET UP OF BIDDER'S COMPUTER SYSTEM:**

In order for a bidder to operate on the e-tendering System, the Computer System of the bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. The details are available at <https://www.mpeproc.gov.in>

**4. KEY DATES:**

The bidders are strictly advised to follow the time schedule (Key Dates) of the bid on their side for tasks and responsibilities to participate in the bid, as all the stages of each bid are locked before the start time and date and after the end time and date for the relevant stage of the bid as set by the Department.

**5. PREPARATION AND SUBMISSION OF BIDS**

The bidders have to prepare their bids online, encrypt their bid Data in the Bid forms and submit Bid of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

**6. PURCHASE OF BID DOCUMENT**

For purchasing of the bid document bidders have to pay Service Charge online ONLY which is Rs. [as per Bid Date Sheet]. Cost of bid document is separately mentioned in the Detailed NIT. The Bid Document shall be available for purchase to concerned eligible bidders immediately after online release of the bids and upto scheduled time and date as set in the key dates. The payment for the cost of bid document shall be made. online through Debit/Credit card Net banking or NeFT Challan through the payment gateway provided on the portal.

**7. WITHDRAWAL, SUBSTITUTION AND MODIFICATION OF BIDS**

Bidder can withdraw and modify the bid till Bid submission end date

## Annexure-H

### ORGANIZATIONAL DETAILS (To be contained in Envelope- A)

S.No.	Particulars	Details
1	Registration number issued by Centralized Registration System of Govt. of M.P. or Proof of application for registration.	'(If applicable, scanned copy of proof of application for registration to be uploaded)
2	Valid Registration of bidder in appropriate class through Centralized Registration of Govt. of MP	Registration No. ____ Date____ (Scanned copy of Registration to be uploaded)
3	Name of Organization/ Individual/ Proprietary Firm/Partnership Firm	
4	Entity of Organization Individual/ Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/Limited Company (Registered under the Companies Act—1956)/ Corporation / Joint Venture	
5	Address of Communication	
6	Telephone Number with STD Code	
7	Fax Number with STD Code	
8	Mobile Number	
9	E-mail Address for all communications	
	Details of Authorized Representative	
10	Name	
11	Designation	
12	Postal Address	
13	Telephone Number with STD Code	
14	Fax Number with STD Code	
15	Mobile Number	
16	E-mail Address	

*Note: In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association along with registration certificate of the company shall have to be enclosed.*

Signature of Bidder with Seal

Date: \_\_\_\_\_

## Annexure — I

**Envelope — B, Technical Proposal**  
**Technical Proposal shall comprise the following documents:**

<b>S. No.</b>	<b>Particulars</b>	<b>Details to be submitted</b>
1	Experience — Financial & Physical	Annexure - I (Format: I-1)
2	Annual Turnover	Annexure - I (Format: I-2)

## Annexure - I (Format: I-1)

### FINANCIAL & PHYSICAL EXPERIENCE DETAILS

#### A. Financial Requirement:

The bidder should have completed either of the below:

- a) **three similar works** each costing not less than the amount **equal to 20% of the probable amount** of contract during the **last 3 financial years; or**
- b) **two similar works** each costing not less than the amount **equal to 30% of probable amount** of contract during the **last 3 financial years; or**
- c) **one similar work** of aggregate cost not less than the amount **equal to 50% of the probable amount** of contract in any one financial year during **the last 3 financial years;**

#### To be filled in by the contractor:

- i. Details of successfully completed similar works shall be furnished in the following format
- ii. Certificate duly signed by the employer shall also be enclosed for each completed similar work

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Employer's Name and Address

#### Existing commitments— (Value of 'C' for Bid Capacity formula)

Agreement Number & Year	Name of Work	Date of Work Order	Date of Completion	Amount of Contract	Amount of balance work	Employer's Name and Address

#### B. Physical Requirement:

Execution of similar items of work in any one financial year during the last 3 financial years should not be less than the minimum physical. Requirement fixed for the work.

S.No.	Particulars	Actual Quantity Executed (To be filled in by the contractor)		
		Year - 1	Year - 2	Year - 3
	Physical qualification required	Yes		
1	Execution of Road & Road Side Sign Boards			

Note:

1. Certificate duly signed by the employer shall be enclosed for the actual quantity executed in any one year during the last 3 financial years,
2. Similar works: The similarity shall be based on the physical size, complexity, methods technology or other characteristics of main items of work viz, earth work, cement concrete, Reinforced cement concrete, brick masonry, stone masonry etc.

## Annexure-I(Format: I-2)

### ANNUAL TURN OVER

**Requirement:**

Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 3 financial years;

**To be filled in by the contractor:**

Financial Year	Payments received for contracts in progress or completed
1. 2016-2017	
2. 2015-2016	
3. 2014-2015	

**Note:**

- i Annual turnover from construction should be certified by the Chartered Accountant.*
- ii Audited Balance sheet including all related notes, and income statements for the above financial years to be enclosed.*

**Bid Capacity**

Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:

$$\text{Bid Capacity} = (1.5A \times B) - C$$

Where

A. = Maximum value of civil engineering works executed in any one year during the last five year (10% weightage per year shall be given to bring the value of work executed at present price level)

B = Proposed contract period in years.

C = Amount of work in hand at present.

**FINANCIAL BID  
(To Be Contained in Envelope-C )**

NAME OF WORK \_\_\_\_\_

I/We hereby bid for the execution of the above work within the time specified at the rate (in figures) \_\_\_\_\_(in words) \_\_\_\_\_ at par based on the Bill of Quantities and item wise rates quoted therein in all respects and in accordance with the specifications, designs, drawings and instructions in writing in all respects in accordance with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns, nature and the extent of ground, working conditions including stacking, of materials, installation of tools and plant conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed- hereto so far as applicable, or in default thereof to forfeit and pay to Jabalpur Smart City Limited or his successors in office the sums of money mentioned in the said conditions.

**Note:**

- i. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, Conditions of Contract, Technical Specification and Drawings.
- ii. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of Contract.
- iii. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract include all constructional plant, labour, supervision, materials, erection, maintenance, insurance , profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
- iv. The rates and prices shall be quoted entirely in Indian Currency.
- v. A rate or price shall be entered against each item in the Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
- vi. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities , and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
- vii. General directions and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.

**Special Note:**

- b. *Item for which no rate or price has been entered in will not be paid for by the*
- c. *Employer when executed and shall be deemed covered by the other rates and prices in the bill of quantities*
- d. *Unit rates and prices shall be quoted by the bidder in Indian Rupees.*



- e. *Where there is a discrepancy between the rate in figures and words, the rates in words will govern*
- f. *Where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by quantity, the unit rate quoted shall prevail.*
- g. *All duties, taxes, and other levies payable by the bidder shall be included in the percentage quoted by the bidder.*

Signature of Bidder  
Name of Bidder

The above bid is hereby accepted by me on behalf of the Municipal Corporation Jabalpur dated the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

Signature of Officer  
by whom accepted

**LETTER OF ACCEPTANCE (LOA)**

No. \_\_\_\_\_

Dated: \_\_\_\_\_

To,

M/s. \_\_\_\_\_

(Name and address of the contractor)

Subject: \_\_\_\_\_

(Name of the work as appearing in the bid for the. work)

Dear Sirs,

This is to notify you that your Bid dated.....for execution of the .....  
(name of the contract and identification number, as given in the Instructions to Bidders) for the  
Contract \_\_\_\_\_ Price \_\_\_\_\_ of \_\_\_\_\_ Rupees.....  
.(.....)(Amount in words and figures), as  
corrected and modified in accordance with the Instructions to Bidders\* is hereby accepted by  
our agency.

You are requested to submit within 15 (Fifteen) days from the date of issue of this letter:

- a. The performance security/ performance guarantee of Rs. \_\_\_\_\_ (in-figures)  
(Rupees \_\_\_\_\_ in words only). The performance security shall be in the shape of term  
deposit receipt / bank guarantee of any nationalized / schedule commercial bank valid up to  
three months after the expiry of defects liability period.
- b. Sign the contract agreement.

Please note that the time allowed for carrying-out the work as entered in the bid is \_\_\_\_\_  
months including/ excluding rainy season, shall be reckoned from the date of signing the-  
contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and  
no separate letter for commencement of work is required. Therefore, after signing of the  
agreement, you are directed to contact the Engineer-in-charge for taking the possession of site  
and necessary instructions to start the work.

Yours faithfully,

Authorized Signature

Name and title of Signatory

Name of Agency

Delete 'Corrected and' or 'and modified' if only one of these action applies. Delete as  
corrected and modified in accordance with the Instructions to Bidders, if corrections or  
modifications have not been affected.

(Seal)

**PERFORMANCE SECURITY**

To

\_\_\_\_\_ [name of Employer]  
\_\_\_\_\_ [address of Employer]

WHEREAS \_\_\_\_\_ [name and address of Contractor] (Hereinafter called 'the Contractor') has undertaken, in pursuance of letter of Acceptance No-\_\_\_\_\_ dated to execute \_\_\_\_\_ [name of Contract and brief description of Works] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, Up to a total of \_\_\_\_\_ [amount of guarantee]\* \_\_\_\_\_ (in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and Without cavil or argument, an sum or sums within the limits of \_\_\_\_\_ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the term of the Contract of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 3 (three) months from the date of expiry of the Defect Liability Period.

Signature, Name and Seal of the guarantor \_\_\_\_\_

Name of Bank \_\_\_\_\_

Address \_\_\_\_\_

Phone No, Fax No., E-mail Address, of Signing Authority \_\_\_\_\_

Date \_\_\_\_\_

\*An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.

## SECTION III- CONDITIONS OF CONTRACT

### A. GENERAL CONDITIONS OF CONTRACT

#### 1. Definitions.

1.1 Terms which are defined in the Contract Data are not also defined in the Conditions of Contract but keep their defined meaning. Capital initials are used to identify defined terms.

**Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.

**The Completion Date** is the date of completion of the works as certified by the Engineer in accordance with Clause 2 in Instruction to Bidder.

**The Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Works till the completion of the defect liability period.

**The Contractor** is a person or corporate body who's Bid to carryout the Works has been accepted by the Employer.

**The Contractor's Bid** is the completed Bidding document submitted by the Contractor to the Employer and includes Technical and Financial bids.

**The Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

**Days** are calendar days; Months are calendar months.

**A Defect** is any part of the Works not completed in accordance with the Contract.

**The Defects Liability period** is the period named in the Contract Data and calculated from the completion date.

The **Employer** is **JSCL** who will employ the contractor to carry out the works

**Equipment's** are the Contractor's machinery and vehicles brought temporarily to the site to construct the works.

**The Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

**The Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works.

The work must be completed in all respects within the time of completion with the following rate of progress

1/3 rd. time of completion 25%

2/3 rd. time of completion 70%

At the time of completion 100%

The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

**Materials** are all supplies, including consumables, used by the contractor for incorporation in the Works.

**Plant** is any integral part of the Works which is to have a mechanical, electrical, electronic or chemical or biological function.

**The Site** is the area defined as such in NIT

**Specification** means the specification of the Works included in the Contract and any modification or addition made or approved by **JSCL**.

**The Start Date** shall be the **date of issue of notice to proceed with the Letter of Acceptance issued by JSCL**. It is the date when the Contractor should commence execution of the works.

**A Subcontractor** is a person or corporate body who has a Contract with the Contractors to carry out a part of the work in the Contract, which includes work on the Site.

**Temporary Works** are works designed, constructed, installed, and removed by the Contractor, which are needed for construction or installation of the Works.

**A Variation** is an instruction given by JSCL, which varies the Works;

## **2. Interpretation**

2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of Contract.

2.2 The documents forming the Contract shall be interpreted in the following order of priority

- 1) Agreement
- 2) Letter of Acceptance
- 3) Contractor's Bid (Technical and Financial Bid)
- 4) Conditions of Contract,
- 5) Specifications
- 6) Drawings
- 7) Bill of quantities
- 8) Programme for execution and
- 9) Any other document forming part of the Contract.

## **3. Languages and Law**

3.1 The language of the Contract shall be English or Hindi and the law governing the Contract shall be the laws of India.

#### **4. Communications**

4.1 Communications between parties which are referred to in the conditions are effectively only when in writing. A notice shall be effective only when it is delivered (in terms of Indian Contract Act)

#### **5. Sub-Contracting**

DELETED

#### **6. Contractor to Construct the Works.**

6.1 The Contractor shall construct and install the Works in accordance with the Specification and Drawings.

#### **7. The Works to be completed by the Intended Completion Date**

7.1 The Contractor may commence execution of the Works on the Start Date and shall carryout the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

#### **8. Programme**

8.1 Within a period of 14 days from the issue of Letter of Acceptance the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works along with monthly cash flow forecast.

8.2 An update of the programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

8.3 The Contractor shall submit to the Engineer, for approval, an updated Programme at within thirty .days of the last programme. If the Contractor does not submit an updated programme within this period, the Engineer may withhold the amount of Rs( 2% of contract price from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

8.4 The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer again at any time. A revised programme is to show the effect of Variations.

#### **9. Extension of the Intended Completion Date.**

The contractor is bound to complete the work within the stipulated period as per the agreement.

The extension of time of completion that can be granted at a time shall not exceed 25% of the original time or 6 months whichever is less. The maximum extension that can be granted for a work shall be limited to half the original time of completion

The contractor shall not execute any work as per the agreement after the expiry of the time of completion unless the agreement authority duly sanctions extensions of time. If any work is carried out by the contractor in contravention to this, the same shall be treated as unauthorized and no payment will be made for such work. The department will also have the right to claims from the contractor, cost of dismantling and removing such unauthorized work

For extension of time fine will be imposed at the following rates.

Period	Rate of fine
First Extension	1% of the Contract Amount subject to a minimum of Rs.1000/- and the maximum of Rs.50,000/-.
Beyond First Extension	2% of Contract Amount subject to a minimum of Rs.2000/- and maximum of Rs.1,00,000/-.

9.1 The Engineer shall extend the Intended completion Date if a variation is issued which makes it impossible to active the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the contractor to incur additional cost.

9.2 The Engineer shall decide whether and by how much to extend the Intended Completion Date after the Contractor asking the Engineer for a decision upon the effect of a variation and submitting full supporting information. If the contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

## **10. Delays ordered by the Engineer.**

10.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works.

## **11. Identifying Defects.**

11.1 The Engineer shall check the Contractor's work and notify the Contractor of any defects that are found. Such checking shall not release the Contractor of his responsibilities.

## **12. Correction of Defects**

12.1 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability period. The Defects Liability period shall be extended for as long as defects remain to be corrected.

## **13. Uncorrected Defects**

13.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the defect corrected and the contractor will pay this amount or such amount deducted from the payment due to the contractor.

## **14. Bill of Quantities**

14.1 Contractor shall take measurements of works done and prepare bill for the work as stipulated in the relevant portions of MP PWD Manual.

14.2 The Bill of Quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.

14.3 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item.

## **15. Changes in the Quantities**

15.1 If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 per cent provided the change exceeds 1% of initial Contract Price, JSCL shall adjust the rate to allow for the change, duly considering.

(a) Justification for rate adjustment as furnished by the contractor,

(b) Economies resulting from increase in quantities by way of reduced plant equipment, and overhead costs.

15.2 If requested by JSCL, the Contractor shall provide JSCL with a detailed cost breakdown of any rate in the Bill of Quantities.

15.3. Additional security on increased scope of work needs to be submitted by the contractor at the time of execution of supplementary agreement with the competent authority

## **16. Variations**

16.1 All Variation shall be included in updated programmes produced by the Contractor

## **17. Payments for Variations**

DELETED

## **18. Payment Certificates and Payment**

The payment for the work on production of the bill in duplicate on the quoted rate as approved by JSCL will be made within 21 days of submission of bills and duly certified by the competent authority of JSCL; all payments will be made to the designated bank account of the contractor through electronic mode.

## **19. Tax**

19.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales, service and all other taxes that the Contractor will have to pay for the performance of this contract. JSCL will perform such duties in regard to the deduction of such taxes at source as per applicable law.

19.2 The contractor shall be responsible for the payment of all taxes and other duties as per the rules in force from time to time and JSCL will not entertain any claim on account of enhancement of tax and rates".

## **20. Currencies**



20.1 All payments shall be made in Indian rupees only.

## **21. Retention**

21.1 10% of the value of bill will be deducted from the bill as security deposit and the amount so deducted will be released on satisfactory completion of works .

## **22. Securities**

22.1 The performance Security shall be provided to JSCL no later than the date specified in the Letter of Acceptance and shall be issued and denominated in Indian Rupees. The performance Security shall be valid until a date 28 days from the date of expiry of Defects Liability Period.

## **23. Cost of Repairs**

**23.1** Loss or damage to the Works or materials to be incorporated in the Works between the Start Date and the end of the Defects correction Periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions or negligence.

## **24. Completion**

24.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the Works and the Engineer will do so upon deciding that the work is completed. .Final bill will be paid only after completion is certified by the competent authority. The date of completion of a work is the date of last measurements taken by the concerned Engineer/ Contractor on completion of work.

## **25. Final Account**

25.1. The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The JSCL Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to Contractor and issue a payment certificate, within 56 days of receiving the contractor's revised account.

## **26. Termination**

### **26.1 Defaults by Contractor**

As per general conditions of contract, the competent authority has the power to cancel the contract and arrange the work otherwise in the event of default by the contractor. The competent authority in exercising the power vested with him shall follow the procedure outlined in the general conditions of the contract. The damages and penalties provided there in and applicable to the particular contract shall also be realized in accordance with the general conditions of contract.

26.2 If the contractor fails to maintain the required progress as per conditions of contract or to complete the work and clear the site on or before the contract or extended date

of completion, he shall without prejudice to any other right or remedy available under the law to the employer on account of such breach, pay to the employer as liquidated damages an amount calculated @ 0.1% (Zero point one percent) of the contract price of the work for every week of delay subject to a maximum of 10% of the contract price.

26.3 The amount of compensation may be adjusted or set off against any sum payable to the contractor under this or any other contract with the government. In case, the contractor does not achieve a particular milestone mentioned in the conditions of contract or the re-scheduled milestone(s), the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time.

26.4 Withholding of this amount on failure to achieve the completion of work or of milestones shall be automatic without any notice to the contractor.

## **27. Termination of Contract**

27.1 JSCL can terminate the contract and rearrange the work at the risk and cost of contractor in the following cases.

**a)** If the contractor does not turn up for starting the work within the specified period to take charge of the site after executing the agreement.

**b)** If the contractor does not show the proportionate progress during the original/extended period of time of completion.

**c)** The Engineer issues notice to the contractor against the delay in progress of the works and if the works do not show sufficient progress even after 28 days from issuing of notice.

**d)** If the contractor abandons the work after executing a portion without genuine reason and does not resume or complete it even after specific direction from the JSCL

**e)** The Contractor stops work for 28 days when no stoppage of work is shown on the current programme and the stoppage has not been authorized by the Engineer.

**f)** The Employer or contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation.

**g)** Fails to make application for extension of time of completion in time

**h)** If the contractor in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this paragraph: "corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of JSCL and includes, collusive practice amongst Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the JSCL of the benefits of free and open competition."

27.2 When either party to the Contract gives notice of a breach of contract to the Engineer for a cause other than those listed under Sub Clause 27.1 above the Engineer shall decide whether the breach is fundamental or not.

27.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

27.4 If the Contract is terminated the Contractor shall stop work immediately, make the site safe and secure and leave the site as soon as reasonably possible.

## **28. Termination of Contract in Case of Death, Insanity or Insolvency**

If the contractor is an individual or a proprietary concern and the individual or a proprietary concern and the individual or the proprietor dies, becomes insane or insolvent, the competent authority has to satisfy himself whether the legal heirs or legal representatives of the contractor are capable of carrying out and continuing the work, and if they are willing, he may entrust the balance portion of the work to such legal heir or representative on a fresh agreement on the same terms and conditions as in the original agreement. In other cases the competent authority shall cancel the contract in respect of the incomplete portion of the work and rearrange the work otherwise without any penalty or damage to either party on account of such cancellation and rearrangement. All liabilities due to government arising under the contract up to the date of death of contractor shall be realized from the estate of the contractor.

## **29. Realisation of loss on account of termination**

29.1 An amount equal to 30% of the cost of the remaining works at agreed rates of the terminated contract shall be recovered from the defaulted contractor towards the risk and cost. The contractor shall be directed to remit the risk and cost amount within three months. The total loss sustainable due to the original contractor is assessed after completion of the work. If the defaulted contractor fails to remit the amount within this period the realisation of loss by the defaulted contractor can be realised from the following.

1. EMD / Security
2. Bill amount / retention if any due to the contract.
3. Any dues from JSCL to the contractor.
4. Bank Guarantee / Performance Guarantee or by filling civil suit against the contractor.

## **30. Revoking of termination**

DELETED

## **31. Property**

**31.1.** All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Employer, if the Contract is terminated because of contractor's default.

## **32. Releases from Performance**

32.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works

duly carried out before receiving it and for any work carried out afterwards to which commitment was made.

### **Other Conditions of Contract**

#### **33. Currencies**

All payments will be made in Indian Rupees.

#### **34. Labour**

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

#### **35. Compliance with Labor Regulations**

During continuance of the Contract, the Contractor and his Sub Contractors shall abide at all times by all existing labor enactments and rules made there under, regulations, notifications and bye laws of the, State or Central Government or local authority and any other labor law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labor 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 in the Contract Data. 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 their under, regulations or notifications including amendments, If the Employer is caused to pay or reimburse, such amounts as may .be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/ byelaws/ Acts/Rules / regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct from any money due to the Contractor including his amount of performance security. The Employer/Engineer 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.

#### **36. Audit and Technical Examination**

Government shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers abstract etc to be made after payment of the final bill and if as a result of such audit and technical examination any sun is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not to; have been executed, the Contractor shall be liable to refund the amount of overpayment and it shall be lawful for Government to recover the same from him in the manner prescribed in clause 24 above and if it is found that the Contractor was paid less than what was due to him, under the contract in respect of any

work executed by him under it, the amount of such under payment shall be duly paid by Government to the Contractor.

### **37. Death or Permanent Invalidity of Contractor**

If the Contractor is an individual or a proprietary concern, partnership concern, dies during the currency of the contract or becomes permanently incapacitated, where the surviving partners are only minors, the contract shall be closed without levying any damages/compensation as provided for in clause 28.2 of the contract agreement. However, if the competent authority is satisfied about the competence of the survivors, then the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions under which the contract was awarded.

### **38. Jurisdiction**

This contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

## **B. SPECIAL CONDITIONS OF CONTRACT**

### **Warranty and Durability Certificate – Informatory /Cautionary/Mandatory boards**

1. The contractor shall obtain from the sheeting manufacturer of Retro Reflective Sheeting **a Pre-Qualification Warranty Certificate in original for seven years satisfactory filed performance** including stipulated retro reflectance of the retro reflective sheeting to be used and submit the same. This includes for satisfactory infield performance of the finished sign inclusive of the screen printed or cut out letters/legends, transparent films and their bonding to the retro reflective sheeting and

shall be jointly signed by the sheeting manufacturer and the contractor and submit the same at the time of tender submission. Agents/ authorized representatives, companies representing principals by way of power of attorney etc shall not qualify to the status of that of the manufacturer and is not acceptable.

2. The Pre-Qualification warranty shall also cover the replacement obligation by the sheeting manufacturer as well as contractor for replacement/repairing/restoration of the retro reflective efficiency and shall be jointly signed by the Sheeting Manufacturer and the Contractor.

**3.** Product Conformance Certificate in original from the manufacturer of retro reflective sheeting stating that the material offered for this tender, conforms to the standards/specifications of retro reflective sheeting as given in this tender and is part of the original warranty shall be submitted

4. A Certificate having tested the sheeting for these properties in an unprotected outdoor exposure facing the sun for three years and its having passed these tests shall be obtained from a reputed test laboratory by the manufacturer of the sheeting. The certificate should be accompanied with a copy of test results for every lot of supply of sheeting conforming the specification requirement.

- (i) Coefficient of Retro Reflection
- (ii) Day time colour & luminous
- (iii) Accelerated out door weathering requirement and colour fastness
- (iv) Shrinkage
- (v) Flexibility
- (vi) Resolvability of liner
- (vii) Adhesion
- (viii) Impact resistance
- (ix) Specular gloss

5. The sheeting manufacturer shall also provide test data showing that has met the requirements for 36 months of accelerated outdoor weathering. The test data shall be gathered in accordance with ASTM D 4956-09 and by an independent agency. The data submitted shall cover both the retro reflective sheeting and process inks and/or overlay films manufactured by the sheeting manufacturer in standard traffic colours.

6. Indian Custom Duties, if any, levied upon the work, equipment's etc. are to be borne by the Bidders and this will not be separately paid for. The Contractor shall bear all taxes, both corporate and personnel, including but not limited to taxes on income levied on the contractor or on their affiliated companies on account of payments received by them from JSCL for the works done under contract.

7. If the contractor is an individual or a proprietary concern and the individual or the proprietor dies or if the contractor is a partnership concern and one of the partners dies then unless the JSCL is satisfied that the legal representatives of the individual contractor or of the proprietor of the proprietary concern and in the case of partnership, the surviving partner(s) are capable of executing the contract as to its uncompleted part, without JSCL in any way liable to pay any compensation to the estate of the deceased contractor and/ or to the surviving partner(s) of the contractor's firm on account of the cancellation of the contract. The decision of JSCL that the legal representative of the deceased contractor or surviving partners of the contractors firm cannot carry out and complete the contract, shall be final and binding on the parties. In the event of such cancellation, the JSCL shall not hold the estate of the deceased contractor and / or to partners of the contractor's firm liable in damage for not completing the contract.

8. It shall also be responsibility of the contractor to observe provisions of any other law (like the ESI Act, EPF Act, Payment Wages Act, Contract Labor Abolition and Regulation Act etc) to the extent they are applicable to him in respect of workmen engaged or employed by him in or for the execution of the work as per this contract.

9. The courts at Jabalpur alone shall have jurisdiction in respect of any matter arising out or in connection with this contract.

## CONTRACT DATA SHEET

<b>1</b>	The <b>Employer</b> is <b>Jabalpur Smart City Limited</b> Address: <b>JSCL Office Manas Bhawan beside Wright Town Stadium Jabalpur M.P)</b>
<b>2</b>	The <b>Engineer</b> is – <b>Authorized Engineer of JSCL</b>
<b>3</b>	The Defects Liability Period is: <b>5 years</b> from the date of completion
<b>4</b>	The Start Date shall be the date of issue of the Notice to proceed with the work.
<b>5</b>	The Intended Completion Date for the whole of the Work (Manufacture, Supply and Erection at site) is <b>18 months</b> after start of work with the following milestones:
<b>6</b>	The site is located <b>within Jabalpur Corporation limits in the State of Madhya Pradesh</b>
<b>7</b>	The works consist of <b>“Providing, erecting, fixing &amp; Maintaining Retro reflective Signage &amp; Smart Real Time Automatic Variable signage on various roads under JMC limits” as per the requirement of JSCL Limited.</b>
<b>8</b>	The law which applies to the Contract is the law of <b>Union of India</b>
<b>9</b>	The language of the contract documents is English.
<b>10</b>	The site Possession Dates shall be the date of <b>issue Letter of Acceptance.</b>
<b>11</b>	The period for submission of the programme for approval of Engineer shall be 15 days from the issue of Letter of Acceptance.
<b>12</b>	The period between programme updates shall be 30 days.
<b>13</b>	The amount to be withheld for late submission of an updated Programme shall be 2% of Contract Price .
<b>14</b>	The currency of the Contract is Indian Rupees.
<b>15</b>	The Securities shall be for the following minimum amounts equivalent as a percentage of the Contract Price: Performance Security for 10 per cent of contract price. Validity of PBG will be up to the expiry of Defect Liability Period.

**Physical Completion Certificate**

Name of Work:

.....  
.....  
.....

Agreement No \_\_\_\_\_ Date \_\_\_\_\_

Amount of Contract Rs \_\_\_\_\_

Name of Agency \_\_\_\_\_

Used MB No. ....

Last measurement recorded

a. Page No. & MB No. \_\_\_\_\_

b. Date \_\_\_\_\_

Certified that the above mentioned work was physically completed on .....(date) and taken over on .....(date) and that I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer

.....

.....



**Final Completion Certificate**

Name of Work:

.....  
.....  
.....

Agreement no ..... Date .....

Name of Agency: .....

Used MB No. ....

Last measurement recorded

a: Page No. & MB No. \_\_\_\_\_

b. Date \_\_\_\_\_

Certified that the above mentioned work was physically completed on .....(date) and taken over on .....(date).

Agreement amount Rs .....

Final Amount paid to contractor Rs.....

Incumbency of officers for the work

I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer

.....  
.....

**AGREEMENT FORM**

**AGREEMENT**

This agreement, made on the \_\_\_\_\_ day of \_\_\_\_\_ between: \_\_\_\_\_ (name and address of Employer) (hereinafter called "the Employer) and \_\_\_\_\_ (name and address of contractor) hereinafter called "the Contractor' of the other part.

Whereas the Employer is desirous that the Contractor execute \_\_\_\_\_(name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs.....

**NOW THIS AGREEMENT WITNESSED as follows:**

1. In this Agreement, words and expression shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other Sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
  - i. Letter of Acceptance
  - ii. Contractor's Bid
  - iii. Condition of Contract: General and Special -
  - iv. Contract Data
  - v. - Bid Data

- vi. Drawings
- vii. Bill of Quantities and
- viii. Any other documents listed in the Contract Data as forming part of the Contract.

In witnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written.

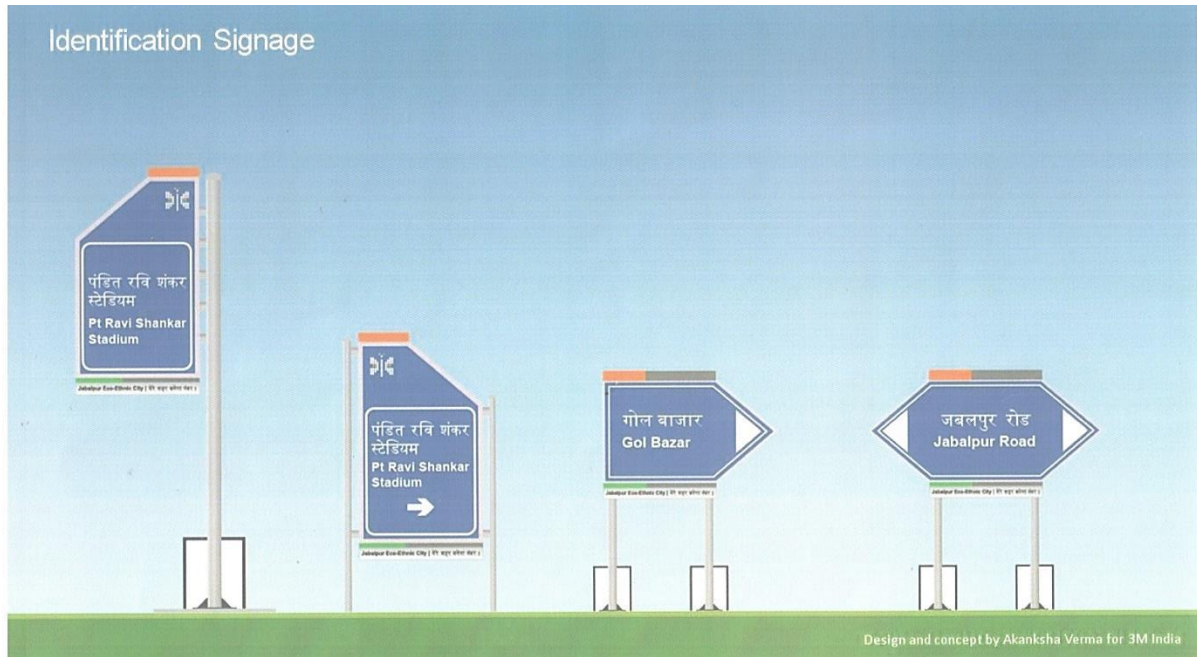
The Common Seal of \_\_\_\_\_ was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said \_\_\_\_\_ in the presence of:

Binding Signature of Employer \_\_\_\_\_

Binding Signature of Contractor \_\_\_\_\_

DRAWINGS



# Directional Signage



Design and concept by Akanksha Verma for 3M India

**Bill of Quantities**  
**BOQ SIGANAGES IN JABALPUR**

Sl. No .	Item Description	Unit	Qty	Unit Rate	Rate in Words	Total
1	<p>Providing installing and fixing with necessary clamps etc. retro-reflective Double Sided Road Name Signboards comprising of customised modular PU Epoxy coated MS hollow section frame work, 4mm thick aluminum composite panel (ACP) mill finished or PDVF coated or as specified as base board, micro prismatic retro-reflective sheet and electro cut coloured overlay film. The horizontal and vertical members including inclined outer members of the MS frame module shall be made of pair of MS hollow section 80x40x4mm as per approved drawing. The aluminum composite panel (ACP) shall have a thickness of 4mm with 0.5mm thick skin of aluminium on both sides. The ACP shall be routed, folded and fixed on the MS frame with VHB tape, 24mm wide and 2.3m thick provided through out the length and breadth of the frame including riveting at the right angle face of the frame with pop riveting or with self tapping SS screws 5mm dia spaced not more than 300mm center to center ensuring that no riveting is seen on either face of the frame. On the front and back face of the ACP, micro prismatic retro-reflective sheet conforming to Type-XI of IRC:67:2012 shall be pressure fixed as background sheet (In white colour) which will be over laid with electro cut transparent film of approved make and colour to create a desired road name information message. The rate shall include all materials, labour, equipments, fabrication, transportation, erection, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Each	95.0 0			

2	<p>Providing installing and fixing with necessary clamps etc. retro-reflective Double Sided Place identification Signboards comprising of customised modular PU Epoxy coated MS hollow section frame work, 4mm thick aluminum composite panel (ACP) mill finished or PDVF coated or as specified as base board, micro prismatic retro-reflective sheet and electro cut coloured overlay film. The horizontal and vertical members including inclined outer members of the MS frame module shall be made of MS hollow section 50x50x3.60mm as per approved drawing. The aluminum composite panel (ACP) shall have a thickness of 4mm with 0.5mm thick skin of aluminium on both sides. The ACP shall be routed, folded and fixed on the MS frame with VHB tape, 24mm wide and 2.3m thick provided through out the length and breadth of the frame including riveting at the right angle face of the frame with pop riveting or with self tapping SS screws 5mm dia spaced not more than 300mm center to center ensuring that no riveting is seen on either face of the frame. On the front and back face of the ACP, micro prismatic retro-reflective sheet conforming to Type-XI of IRC:67:2012 shall be pressure fixed as backGround sheet (In white colour) which will be over laid with electro cut transparent film of approved make and colour to create a desired place identification information message. The rate shall include all materials, labour, equipments, fabrication, transportation, erection, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Each	75.0 0			
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3	<p>Providing installing and fixing with necessary clamps etc. retro-reflective Double Sided 3 Plate Direction Signboards comprising of customised modular PU Epoxy coated MS hollow section frame work, 4mm thick aluminum composite panel (ACP) mill finished or PDVF coated or as specified as base board, micro prismatic retro-reflective sheet and electro cut coloured overlay film. The horizontal and vertical members including inclined outer members of the MS frame module shall be made of pair of MS hollow section 50 X 50 X 3.6mm as per approved drawing. The aluminum composite panel (ACP) shall have a thickness of 4mm with 0.5mm thick skin of aluminium on both sides. The ACP shall be routed, folded and fixed on the MS frame with VHB tape, 24mm wide and 2.3m thick provided through out the length and breadth of the frame including riveting at the right angle face of the frame with pop riveting or with self tapping SS screws 5mm dia spaced not more than 300mm center to center ensuring that no riveting is seen on either face of the frame. On the front and back face of the ACP, micro prismatic retro-reflective sheet conforming to Type-XI of IRC:67:2012 shall be pressure fixed as background sheet (In white colour) which will be over laid with electro cut transparent film of approved make and colour to create a desired road name information message. The rate shall include all materials, labour, equipments, fabrication, transportation, erection, installation and incidentals all complete as per direction of the Engineer-in-Charge.</p>	Each	250. 00			
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4	<p>Providing installing and fixing with necessary clamps etc. retro-reflective Double Sided Mandatory Cautionary &amp; Facility Signboards comprising of customised modular PU Epoxy coated MS hollow section frame work, aluminum composite panel (ACP) mill finished or PVDF coated or as specified as base board, micro prismatic retro-reflective sheet and electro cut coloured overlay film. The horizontal and vertical members of the MS frame module shall be made of MS hollow section of size 50x50x3.6mm as per approved drawing. The aluminum composite panel (ACP) shall have a thickness of 4mm with 0.5mm thick skin of aluminum on both sides. The ACP shall be routed, folded and fixed on the MS frame with VHB tape, 24mm wide and 2.3 mm thick provided throughout the length and breadth of the frame including riveting at the right angle face of the frame with pop riveting or with self tapping SS screws 5mm dia spaced not more than 300mm center to center on one side of frame ensuring that no riveting is seen on either face of the frame. On the front face of the ACP, micro prismatic retro-reflective sheet conforming to Type-XI of IRC:67:2102 specification shall be pressure fixed as background sheet (In white colour) which will be over laid with electro - cut transparent film of approved make and colour to create a desired road side and information message. The rear side of the MS frame shall be covered with balancing ACP sheet of the same description as mentioned above and shall be fixed in similar manner as described above. The rate shall include all materials, labour, equipments, fabrication, transportation, erection, installation and incidentals all complete as per direction of the Engineer-in-Charge</p>	Each	300. 00			
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5	<p>Supply and Fixing of Retro Reflective Double Sided Over Head Cantilver Signage made out of Type-XI Micro Prismatic Type sheeting conforming to IRC:67:2012 &amp; ASTM D 4956 – 09, covered with Electro Cuttable translucent film as per the drawing and display matter given by the engineer in charge, fixed over 4 mm thick aluminum composite panels and riveted using 6mm aluminium rivets to back support frame of MS angle 35 x 35 x 3 mm all round supported on a tubular gantry structure of 350 NB pipe with 8 mm wall thickness as per the drawings attached. The MS tubular pole shall be painted with one coat of steel primer &amp; two coats of synthetic enamel paint . The Gantry sign posts shall be firmly fixed to the ground by means of properly designed foundation (as per the drawing ) with M20 grade cement concrete. Installation work shall be as per relevant clauses of MORT&amp;H specifications section 800 &amp; IRC :67: 2012 complete in all respect. The rates shall include cost of design fabrication, supply, transportation, local shifting, erection of signage structure using crane. All T&amp;P machine, material &amp; labor required for proper completion of work as per the direction of Engineer in charge.</p>	Each	20.0 0			
6	<p>Supply and Fixing of Retro Reflective Double Sided Over Head Gantry Signage made out of Type-XI Micro Prismatic Type sheeting conforming to IRC:67:2012 &amp; ASTM D 4956 – 09, covered with Electro Cuttable translucent film as per the drawing and display matter given by the engineer in charge, fixed over 4 mm thick aluminum composite panels and riveted using 6mm aluminium rivets to back support frame of MS angle 45 x 45 x 5 mm all round supported on a tubular gantry structure of 350 NB pipe with 8 mm wall thickness as per the drawings attached. The MS tubular pole shall be painted with one coat of steel primer &amp; two coats of synthetic enamel paint . The Gantry sign posts shall be firmly fixed to the ground by means of properly designed foundation (as per the drawing ) with M20 grade cement concrete. Installation work shall be as per relevant clauses of MORT&amp;H specifications section</p>	Each	14.0 0			

	800 & IRC :67: 2012 complete in all respect. The rates shall include cost of design fabrication, supply, transportation, local shifting, erection of signage structure using crane. All T&P machine, material & labor required for proper completion of work as per the direction of Engineer in charge.				
7	Supply and Fixing of Single Sided Smart Automatic Variable Message Sign of 3.84 m x 1.92 m Full colour (RGB) as per technical specifications with 10mm Pitch erected on all round supported on a tubular gantry structure of 350 NB pipe with 10 mm wall thickness as per the drawings attached. The MS tubular pole shall be painted with one coat of steel primer & two coats of synthetic enamel paint . The Gantry sign posts shall be firmly fixed to the ground by means of properly designed foundation (as per the drawing ) with M20 grade cement concrete. Installation work shall be as per relevant clauses of MORT&H specifications section 800 & IRC :67: 2012 complete in all respect. The rates shall include cost of design fabrication, supply, transportation, local shifting, erection of signage structure using crane. All T&P machine, material & labor required for proper completion of work as per the direction of Engineer in charge.	Each	10.00		
	<b>TOTAL COST</b>				