

GOVERNMENT OF GUJARAT ROADS AND BUILDINGS DEPARTMENT



CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA.

INVITEE

**Executive Engineer,
R & B (Panchayat)
Division Palanpur**

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SECTION - 1

INFORMATION TO CONSULTANTS

- 1.1 The Client named in the “Data Sheet” will select a firm in accordance with the method of selection indicated in “Datasheet”.
- 1.2 The consultants are invited to submit a **Technical Proposal** and a **Financial Proposal**. As specified in the Data Sheet (the Proposal) for consulting service required for the Assignment name in the Data Sheet. The Proposal will be the basis for contract negotiations and ultimately for a signed contract with the selected firm.
- 1.3 The Assignment shall be implemented in accordance with the phasing or otherwise as indicated in the Data Sheet. When the Assignment includes several phases, the performance of the consultant under each phase must be to the Client’s satisfaction before work begins on the next phase.
- 1.4 The Consultants must familiarize themselves with local conditions and take them into account in preparing their proposal. To obtain first-hand information on the Assignment and on the local conditions, consultants are encouraged to pay a visit to the Client before submitting a Proposal.
- 1.5 The Client will provide the inputs specified in the Data Sheet, assist the firm in obtaining licenses and permits needed to carry out the services, and make available relevant project data and reports.
- 1.6 Please note that (i) the costs of preparing the proposal and of negotiating the contract, including a visit to the Client, are not reimbursable as a direct cost of the Assignment; and (ii) the Client is not bound to accept any of the Proposal submitted.
- 1.7 Government policy requires that consultants provide professional objective, and impartial advice and at all times hold the Client’s interest’s paramount, without any consideration for future work, and strictly avoid conflicts with other assignments or their own corporate interests. Consultants shall not be hired for any assignment that would be in conflict with their prior or current obligations to other Clients, or that may place them in a position of not being able to carry out the assignment in the best interest of the Client.
- 1.8 Application from Joint venture (JV) and any type of association are not acceptable

2. CLARIFICATION AND AMENDMENT OF LETTER OF INVITATION

- 2.1 Consultants may request a clarification of any of the technical and price bid documents up to the number of days indicated in the Data Sheet before the Proposal submission date. Any request for clarification must be sent in writing by paper mail, cable, telex, facsimile or electronic mail to the Client’s address indicated in the Data Sheet. The Client will respond by cable, telex, facsimile, or electronic mail to such requests and will send copies of the response (including an explanation of the query but without identifying the sources of inquiry) to all invited consultants who intend to submit Proposals.
- 2.2 At any time before the submission of Proposal, the Client may for any reason, whether at its own initiative or in response to a clarification requested by an invited firm, modify the technical and

price bid documents by amendment. Any amendment shall be issued in writing through haddenda, Addenda shall be sent by mail, cable, telex, facsimile, or electronic mail to all invited consultants and will be binding on them. The Client may at its discretion extend the deadline for the submission of Proposal.

3. PREPARATION OF PROPOSAL

- 3.1 Consultants are requested to submit a Proposal (Para 1.2) written in the language(s) specified in the Data Sheet.

Technical Proposal

- 3.2 In preparing the Technical Proposal, Consultants are expected to examine the documents comprising this technical and price bid documents in detail. Material deficiencies in providing the information requested may result in rejection of a proposal.
- 3.3 While preparing the Technical Proposal, Consultants must give particular attention to the following
- (i) For assignments on a staff-time (person months) basis, the estimated number of key professional person-months is given in the Data Sheet. The proposal shall, however be based on the number of key professional staff-months estimated by the firm.
 - (ii) It is desirable that the majorities of the key professional staff proposed be permanent employees of the firm or have an extended and stable working relation (preferably more than 12 months) with it.
 - (iii) Proposed key professional staff must have a minimum experience indicated in the Data Sheet, preferably working under conditions similar to those prevailing in the country of the Assignment.
 - (iv) Alternative key professional staff shall not be proposed, and only one curriculum vitae (CV) shall be submitted for each position.
 - (v) Reports to be issued by the consultants as part of this assignment must be in the language(s) specified in the Data Sheet. It is desirable that the firm's personnel have a working knowledge of the client's national language.
 - (vi) The CVs have been recently signed and dated in blue ink by the respective Personnel and countersigned by the Applicant. Photocopy or unsigned / countersigned CVs shall be rejected and can not be considered for the evaluation;
 - (vii) The CVs shall contain an undertaking from the respective Key Personnel about his/her availability for the duration specified in the RFP;
 - (viii) Professional Personnel proposed have good working knowledge of English language;
 - (ix) Key Personnel would be available for the period indicated in the TOR.

- (x) No Key Personnel should have attained the age of 65 (Sixty five) years at the time of submitting the proposal and
- (xi) If an individual Key Personnel makes a false averment regarding his qualification, experience or other particulars, or his commitment regarding availability for the Project is not fulfilled at any stage after signing of the Agreement, he shall be liable to be debarred for any future assignment of the R & B Department for a period of 5 (five) years. The award of this Consultancy to the Applicant may also be liable to cancellation in such an event.

3.4 The Technical Proposal should provide the following information using the attached Standard Forms (Section 3):

- (i) A brief description of the firm's organization and an outline of recent experience on assignment (Section 3B) of a similar nature. The experience of individual consultant in Government or Semi Government Organization will be considered for eligibility for technical qualification for each assignment, the outline should indicate, inter alias, the profile and names of the staff provided, duration of the assignment, contract amount, and firm's involvement.
- (ii) Any comments suggestions on the Terms and Reference and on the data, a list of services, and facilities to be provided by the client (Section 3C).
- (iii) A description of the methodology and work plan for performing the assignment (Section 3D).
- (iv) The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member, and their timing (Section 3E).
- (v) **CVs recently signed by the proposed key professional staff and the authorized representative submitting the proposal (Section 3F) along with undertaking. Key information should include number of years working Experience for the firm/entity/Govt./ Semi Govt. organization, and degree of responsibility held in various assignments/project during the last ten (10) years.**
- (vi) Estimates of the total staff effort (professional and support staff; staff time) to be provided to carry out the Assignment, supported by bar chart diagrams showing the time proposed for each key professional staff team member. (Section 3E and 3G&3H).
- (vii) A detailed description of the proposed methodology, staffing, and monitoring of training, if the Data Sheet specifies training as a major component of the assignment.
- (viii) Any additional information requested in the Data sheet (3I& separate sheet)

3.5 The Technical Proposal shall not include any financial information.

4. Financial Proposal

- 4.1 In preparing the financial proposal, consultants are expected to take into account the requirements and conditions of the technical and price bid documents. The Financial Proposal should follow standard Forms given in priced bid. It lists all costs associated with the Assignment, including (a) remuneration for staff (local in the field and at headquarters), and (b) other facilities such as subsistence (per diem, housing), transportation (international and local, for mobilization and demobilization), services and equipment (vehicles, office equipment, furniture, and supplies), office rent, insurance, printing of documents, surveys; and training, if it is a major component of the assignment. If appropriate, these costs should be broken down by activity and if appropriate into local expenditures.
- 4.2 The financial proposal should clearly identify, as a separate amount, the local taxes (including social security), duties, fees, levies, and other charges imposed under the applicable law, on the consultants, the sub-consultants, and their personnel (other than nationals or permanent residents of the government's country); unless the Data Sheet specifies otherwise.
- 4.3 Consultant may express the price of their services in the currency of Indian Rupees.
- 4.4 Commissions and gratuities, if any, paid or to be paid by consultants and related to the Assignment will be listed in the Financial Proposal submission form.
- 4.5 The Data sheet indicates how long the proposals must remain valid after the submission date.
- 4.6 During this period, the consultant is expected to keep available the key professional staff proposed for the assignment. The Client will make its best effort to complete negotiations within this period. If the Client wishes to extend the validity period of the proposals, the consultants who do not agree have the right not to extend the validity of their proposal

5. SUBMISSION, RECEIPT AND OPENING OF PROPOSALS

- 5.1 The original proposal (Technical Proposal and if required financial Proposal; see para 1.2) shall be prepared & submitted to **Executive Engineer, R&B Division, Palanpur by online only.**
- 5.2 The Completed technical and financial Proposal must be reached at the submission address on or before the time and date stated in the Data sheet. Any Proposal received after the closing time for submission of proposal shall not be accepted through internet, for which client is not responsible.
- 5.3 After the deadline for submission of proposals the technical Proposal shall be opened immediately by the evaluation committee.
- 5.4 The Financial proposal shall remain unopened and until all submitted proposals are opened publicly & evaluated.

6. PROPOSAL EVALUATION

General

- 6.1 From the time the bids are opened and till the contract is awarded, if any consultant wishes to contact the client on any matter related to its proposal, it should do so in writing at the address indicated in the Data Sheet. Any effort by the firm to influence the Client in the client's proposal evolution, proposal comparison or contract award decisions may result in the rejection of the consultant's proposal.
- 6.2 Evaluator's Technical Proposals shall have no access to the financial Proposal until the technical evolution.

EVALUATION OF TECHNICAL PROPOSAL

- 6.3 The evaluation committee appointed by the client as whole, and each of its members individually. Evaluates the proposals on the basis of their responsiveness to the terms of reference, applying the evaluation criteria, sub criteria (typically not more than three per criteria) and point system specified in the Data Sheet. Each responsive proposal will be given a technical score (St) A proposal shall be rejected at this stage if it does not respond to important aspects of the terms of reference or if it fails to achieve the minimum technical score indicated in the Data Sheet.

Evaluation of Financial Proposal

- 6.4 In the second stage, the financial evaluation will be carried out as per this Clause 5.4. Bids of those bidders who qualifies in the technical score shall be opened.
- For financial evaluation, the total cost indicated in the Financial Proposal, excluding Additional Costs, will be considered. Additional Costs shall include items specified as such in Form-4A.
 - The Authority will determine whether the Financial Proposals are complete, unqualified and unconditional. The cost indicated in the Financial Proposal shall be deemed as final and reflecting the total cost of services. Omissions, if any, in costing any item shall not entitle the firm to be compensated and the liability to fulfil its obligations as per the TOR within the total quoted price shall be that of the Consultant. The lowest Financial Proposal (F_M) will be considered as a lowest bidder.

7. NEGOTIATIONS

- 7.1 Negotiations will be held at the address indicated in the Data Sheet. The aim is to reach agreement on all points and sign a contract.

- 7.2 Negotiation will include a discussion of the technical proposal, the proposal methodology (work plan), staffing and any suggestions made by the firm to improve the Terms of Reference. The Client and firm will then work out final Terms of Reference, staffing, and bar charts indicating activities, staff period in the field and in the home office, staff-months, logistics and reporting. The agreed work plan and final Terms of Reference will then be incorporated in the “Description of Services” and form part of the contract, special attention will be paid to getting the most of the firm can offer within the available budget and to clearly defining the inputs required from the client to ensure satisfactory implementations of the Assignment.
- 7.3 The financial negotiations will include a clarification (if any) of the firm’s tax liability in the Client’s country and the manner in which it will be reflected in the contract; and will reflect the agreed technical modifications in the cost of the services. Unless there are exceptional reasons, the financial negotiations will involve neither the remuneration rates for staff (no breakdown of fees) nor other proposed unit rates.
- 7.4 Having selected the firm on the basis of among other things, an evaluation of proposed key professional staff the client expects to negotiate a contract on the basis of the experts named in the Proposal. Before contract negotiations, the Client will require assurances that the experts will be actually available. The client will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or that such changes are critical to meet the objectives of the assignment. If this is not the case and if it is established that key staff was offered in the proposal without confirming their availability, the firm may be disqualified.
- 7.5 The negotiations will conclude with a review of the draft from the contract. To complete negotiations the Client and the firm will initial the agreed contract. If negotiations fail. The client will invite the firm whose proposal received the second highest score to negotiate a contract.

8. Substitution of Key Personnel

- 8.1 The Authority will not normally consider any request of the Selected Applicant for substitution of Key Personnel as the ranking of the Applicant is based on the evaluation of Key Personnel and any change therein may upset the ranking. Substitution will, however, be permitted if the Key Personnel is not available for reasons of any incapacity or due to health, subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority.
- 8.2 The Authority expects all the Key Personnel to be available during implementation of the Agreement. The Authority will not consider substitution of Key Personnel except for reasons of any incapacity or due to health. Such substitution shall ordinarily be limited to one Key Personnel subject to equally or better qualified and experienced personnel being provided to the satisfaction of the Authority. As a condition to such substitution, a sum equal to 20% (twenty per cent) of the remuneration specified for the original Key Personnel shall be deducted from the payments due to the Consultant. In the case of a second substitution hereunder, such deduction shall be 50% (fifty

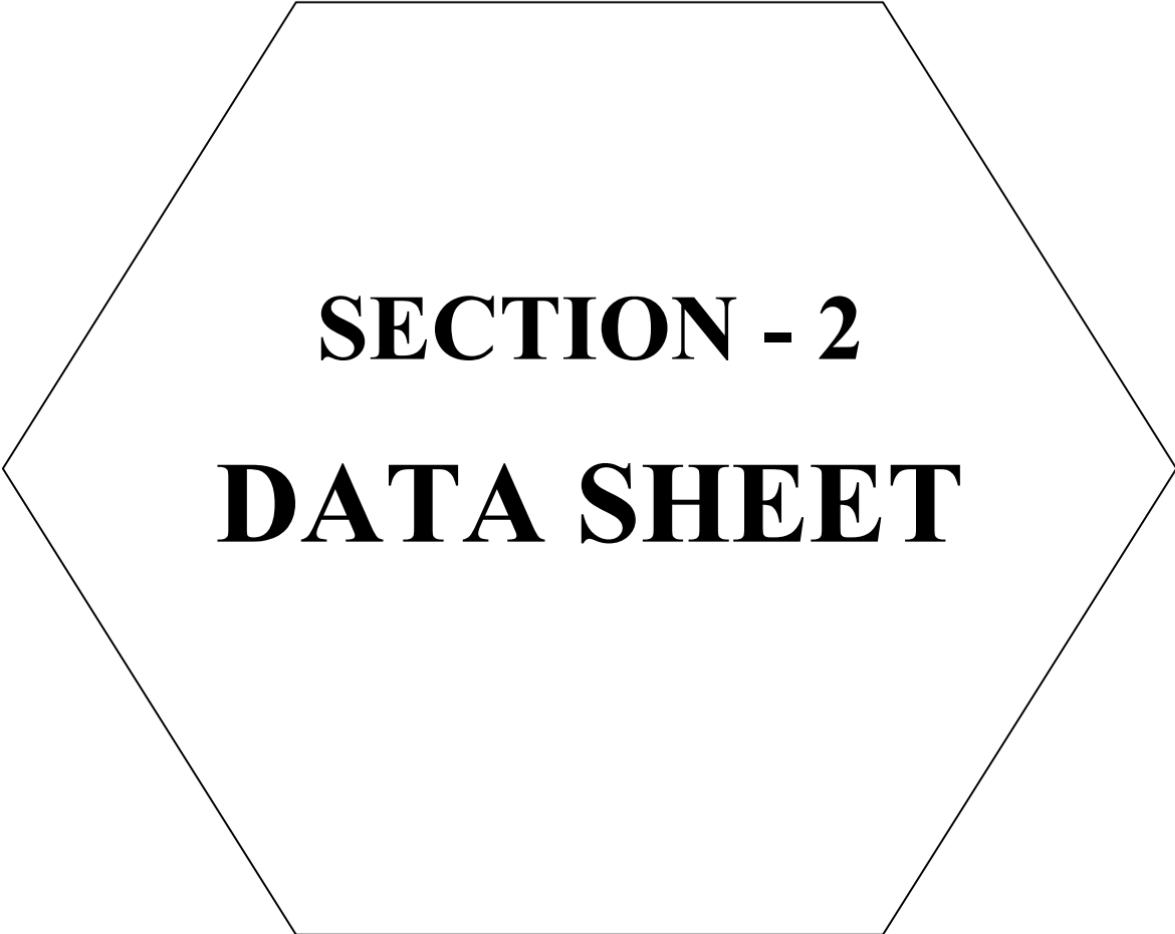
per cent) of the remuneration specified for the original Key Personnel. Any further substitution may lead to disqualification of the Applicant or termination of the Agreement.

9. AWARD OF CONTRACT

- 9.1 The contract will be awarded following negotiations. After negotiations are completed, the client will promptly notify other consultants on the shortlist that they were unsuccessful and the financial proposals of the consultants who did not pass the technical evaluation (para 5.3) will not be opened.
- 9.2 The firm is expected to commence the Assignment on the date and at the location specified in the DataSheet.

10. CONFIDENTIALITY

- 10.1 Information relating to evaluation of proposal and recommendations concerning awards shall not be disclosed to consultants who submitted the proposals or to other persons not officially concerned with the process, until the winning firm has been notified that it has been awarded the contract.



SECTION - 2
DATA SHEET

SECTION - 2
DATA SHEET
Information of consultants

Clause

Reference

- 1.1 The name of the Client is :- Roads & Building Department, Govt. of Gujarat, India
Quality and Cost – Based Selection (QCBS) System
- 1.2 A Technical and Price Bid Proposal are requested : Yes
The name, objectives and description of the Assignment are: **CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC NORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA**
- Proposals should be submitted in the following language(s) : English
- (i) Short listed firm/entity may associate with other short listed firm: No
- (ii) The estimated number of key professional person months required for the assignments is -
18 Months (ref. para 3 TOR)
- (iv) The minimum required experience of proposed key professional staff is as per para 3.02 of TOR
- (v) The estimated man months for support staff: As required (ref para 3.01 of TOR)
The consultants should submit the proposal as per the broad indicative requirements of the staff indicated herein.
- (vi) Reports: (ref para 7.0 of TOR) which are parts of the assignment must be written in the following language: English.
- (vii) Training is an important feature of this assignment: No
- (viii) Additional information in the Technical Proposal includes : As per the TOR
- 2.0 **Taxes** – Consultants are requested to consult tax consultants for details & it will be solely consultant's responsibility.
- 3.0 The consultants to state local costs in Indian rupees.
- 4.0 Proposal must remain valid **120 days**
- 5.0 Consultants must submit their proposal online up to **Date / /2026 up to 18=00hrs.:**

Tenders will be open at on the prescribed date in the office of **The Executive Engineer, R&B Panchayat Division, Palanpur**

The consultants submission must bear the following additional information: Detailed address of firm, Ph. No, on the net should also include Facsimile :

Proposal for CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA

6.0 Proposal must be submitted not later than the following date and time : as stated in technical Bid / letter of invitation.

7.0 Specific experience of the consultants related to the Assignment, The experience of individual consultant in Government or Semi Government Organization will be considered for eligibility for technical qualification

Points	100
(i) Experience of Firm	15
• Experience in similar nature and size of projects (only completed projects shall be considered necessary supporting document need to be enclosed)	08
(Only Bridge will be Considered)	
➤ Experience in similar nature and size of projects > 4	08
➤ Experience in similar nature and size of projects > 2	04
➤ Experience in similar nature and size of projects ≤ 2	00
• Experience in similar region	02
• Annual turnover for last five year	05
➤ Annual turnover of the Firm >200.00 Lacs	05
➤ Annual turnover of the Firm between 100.00 Lacs to 200.00 Lacs	03
➤ Annual turnover of the Firm ≤ 100.00 Lacs	00
(ii) Adequacy of the proposed work plan and methodology in Responding to the TOR	10
• Project Appreciation	02
• Quality of Methodology	04
• Work program & Organization of staff	04
(iii) Qualifications and competence of the key professional staff for the Assignment	75
• Bridge Engineer cum Team Leader	20
• Sr. Bridge Structural Engineer	15
• Material cum Geotechnical Engineer	10
• Quality Engineer for Highway and Bridge Work(Laboratory)	10
• Road / Traffic Safety expert	10
• Site Supervisor for Bridge Construction Work	10
Total Points:	100

- Work Successfully Completed Certificates shall be acceptable only if signed by

Executive Engineer and equivalent or above position for the projects shown in experience.

- The experience of Private contractors/concessionaire shall not be considered.
- Valid and Relevant ISO 9001:2015 Certificate need to be attached
- Valid Bank Solvency Certificate of 20% of Estimated amount issued in the current calendar year 2026.

- Consultant should not have been blacklisted by any Government/Non-Government / Private Agencies / Organizations/Institutions and Funding Agencies in the last 10 years. (A copy of the affidavit on Rs. 100 stamps must be furnished with Technical Proposal) The number of points to be given for qualifications and competence of the key professional staff for the Assignment are:

Bridge Engineer cum Team Leader

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Degree in Civil Engineering or equivalent [AICTE Approved]		20
ii)	Post Graduation in Structural Engineering, Degree/Diploma/Certificate in Construction Management		5
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	<15 years	0	
	15-18 years	11	
	>18-21 years	13	
	> 21 years	15	
(b)	Experience in major Bridge Project –Experience in major Bridge Design/Construction / Development Project		25
	< 5 years	0	
	5-8 years	19	
	>8-10 years	22	
	>10 years	25	
c)	Experience in Similar Capacity		30
(i)	As Team Leader/Project Manager or similar capacity of at least two major bridge of a length 350 mtr. (Excluding approaches) in Construction Supervision / IC.		20
	< 2 projects	0	
	2 projects	15	
	3- 5 projects	18	
	> 5 projects	20	
(ii)	As Team Leader/Project Manager or similar capacity of at least two major bridge of a length 350 mtr. (Excluding approaches) in DPR/ Feasibility Study.		10
	< 2 projects	0	
	2 projects	8	
	3- 5 projects	9	
	> 5 projects	10	
III	Employment with Firm		5
	> 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

Senior Bridge Structural Engineer

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Degree in Civil Engineering or equivalent [AICTE Approved]		20
ii)	Post Graduation in Structural Engineering/ Bridge		5
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	<10 years	0	
	10-12years	11	
	>12-15 years	13	
	>15 years	15	
b)	Experience in Bridge Projects		25
(i)	Experience in project preparation and design of bridge		20
	<8 years	0	
	8-10 years	15	
	>10-12 years	17	
	>12years	20	
(ii)	Experience of 2/4 lane configuration bridges		5
	<2 Projects	0	
	2-4 Projects	4	
	> 4 projects	5	
c)	Experience as Senior Bridge Engineer or Similar Capacity in Highway Design Consultancy Projects (2/4/6 lane) involving design of Major Bridges (minimum 2 nos. of length more than 200m)		30
	<2 numbers	0	
	2-4 numbers	24	
	5-6 numbers	27	
	> 6 numbers	30	
III	Employment with Firm		5
	Less than 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

MATERIAL ENGINEER Cum GEOTECHNICAL ENGINEER

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Degree in Civil Engineering /M. Sc. in Geology[AICTE Approved]		20
ii)	Post graduation in Foundation Engineering / Soil Mechanics / Geo Tech Engineering or Phd in Geology[AICTE Approved]		5
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	<10 years	0	
	10-12 years	11	
	>12-15 years	13	
	>15 years	15	
b)	Experience in Highway Projects–In Similar Projects (2/4/6 lane) in design and or Construction/ Construction Supervision		25
	<7 years	0	
	7-10 years	19	
	>10 -12 years	22	
	>12years	25	
c)	Experience as Material cum Geo-technical Engineer in Similar capacity on Highway Projects (2/4/6 lane) (Minimum aggregate length 80 km)		30
	<80 km	0	
	80 km-150 km	24	
	>150 km – 250 km	27	
	>250 km	30	
III	Employment with Firm		5
	Less than 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

Quality Engineer for Highway and Bridge Work(Laboratory)

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Graduation or equivalent in Civil Engineering / Certificate course from 'Institution of Quantity Surveying '[AICTE Approved]		25
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	<10 years	0	
	10-12 years	11	
	>12-15 years	13	
	>15 years	15	
b)	Experience in Bridge Projects as Quality Engineer		25
	<8 years	0	
	8 -10 years	19	
	>10-12 years	22	
	>12 years	25	
c)	Experience in Bridge Project (No. of Project)		30
	<2 No.	0	
	2-3 No.	24	
	4-5 No.	27	
	>5No.	30	
III	Employment with Firm		5
	Less than 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

Road/Traffic Safety Expert

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Degree in Civil Engineering [AICTE Approved]		20
ii)	Post graduation in Traffic Engineering /Transportation Engineering /Transportation Planning [AICTE Approved]		5
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	<6 years	0	
	6-10years	11	
	>10-15 years	13	
	>15years	15	
b)	Experience in Highway Projects – Experience on Similar Projects (2/4/6 lane)		25
	<5years	0	
	5-6years	19	
	>6-10 years	22	
	>10years	25	
c)	Experience as Traffic and Safety Expert / Traffic Engineer or in Similar Capacity in Highway Projects (2/4/6 lane) (Minimum aggregate length 80 km)		30
	<80 km	0	
	80 km-150 km	24	
	>150 km -250 km	27	
	>250 km	30	
III	Employment with Firm		5
	Less than 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

Site supervisor for Bridge Construction Work

S. No.	Description		Max. Marks
I	General Qualification		25
i)	Graduation or equivalent in Civil Engineering		20
ii)	Post Graduation in Civil Engineering/Highway Engineering/ Structural Engineering		
II	Relevant Experience & Adequacy for the Project		70
a)	Total Professional Experience		15
	>10 years	0	
	10-15 years	11	
	>15-20 years	13	
	>20 years	15	
b)	Experience in Similar Projects in project preparation/ Construction / Construction Supervision		25
	<3years	0	
	3 -5 years	19	
	>5-7 years	22	
	> 7 years	25	
c)	Experience as Bridge Supervisor in Similar Capacity for project of any type of Bridge		30
	<3years	0	
	3 -5 years	24	
	>5-7 years	27	
	>7 years	30	
III	Employment with Firm		5
	Less than 1 Year	0	
	1 year	3	
	Add 0.5 marks for each subsequent year subject to maximum of 2 marks		
	Total		100

Assumptions to be made regarding Similar Capacity for various positions

1. Bridge Engineer cum Team Leader
 - i) On behalf of Consultant / Contractor: Team Leader/Senior Bridge Engineer/Bridge Engineer/Bridge Design Engineer.
 - ii) In Government Organizations: Executive Engineer with 5 Yr. of Experience as Executive Engineer and above
2. Senior Bridge Structural Engineer
 - i) On behalf of Consultant / Contractor: Senior Bridge Engineer/Bridge Engineer /Bridge Design Engineer
 - ii) In Government Organizations: Executive Engineer (or equivalent) and above
3. Material Engineer cum Geo Technical Engineer
 - i) On behalf of Consultant / Contractor: Material Engineer/Material Expert/Geo Technical Engineer
 - ii) In Government Organizations: Executive Engineer (or equivalent) and above
4. Quality Engineer for Highway and Bridge Work (Laboratory)
 - i) On behalf of Consultant / Contractor: Quality Engineer
 - ii) In Government Organizations: Executive Engineer (or equivalent) and above
5. Road/Traffic Safety Expert
 - i) On behalf of Consultant / Contractor: Traffic Engineer/Transportation Engineer/Road Safety Expert
 - ii) In Government Organizations: Retired Executive Engineer (or equivalent) and above or Retired Deputy Executive Engineer with 7 Yr. of Experience as Deputy Executive Engineer
6. Site supervisor for Bridge Construction Work
 - i) On behalf of Consultant / Contractor: Site supervisor
 - ii) In Government Organizations: Assistant Engineer (or equivalent) and above

The minimum technical score required to pass is: 75 Points

The number of points to be given for qualifications and competence of the key professional staff for the Assignment Break up details in Para 7

- (ii) The key professional staffs should be working with the firm at least since last 12 months.
- (iii) Bids of those bidders who qualifies in the technical score shall be opened and the lowest financial bidders shall be considered for the award of work.

7.2 The Assignment is expected to commence in the month of **March-2026** at Gujarat, India.

SECTION – 3

TECHNICAL PROPOSAL

SECTION 3 :

TECHNICAL PROPOSAL – STANDARD FORMS

- 3A Technical Proposal Submission form
- 3B Firm's Reference
- 3C Comments and suggestions on the Terms of Reference and on data services, and facilities to be provided by the Client
- 3D Description of the methodology and work plan for performing the assignment
- 3E Team composition and task assignments
- 3F Format of curriculum Vitae of proposed key professional staff
- 3G Time schedule for professional personnel
- 3H Activity (work)schedule

3A TECHNICAL PROPOSAL SUBMISSION FORM

[LOCATION DATE]

FROM: (NAME OF FIRM)

TO : [NAME AND ADDRESS OF CLIENT]

Ladies / Gentlemen:

Subject: CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA.

Technical Proposal

We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal dated (Date) and our attained proposal. The Proposal which, we are hereby submitting, includes a Technical Proposal and a Financial Proposal. If selected to implement the services during the validity period of (period), we undertake to negotiate the contract on the basis of the proposed staff. Our proposal is binding upon us and subject to the modifications resulting from contract negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain.

Your sincerely,

Authorized Signature
Name and Title of Signatory
Name of firm
Address

3 B. FIRM'S REFERENCES

Relevant Services Carried Out in the Last Five Years
That Best Illustrate Qualifications

Using the format below provide information on each reference assignment for which your firm either individual as a corporate entity or as one of the major with association was legally contracted by the Client stated below ...

Assignment Name		Country
Location within country		Key professional staff provided by your Firm/entity.
Name of Client :		No. of Staff : No. of man-months :
Address :		No. of support staff : No. of man-months :
Start Date (Month/Year):	Completion date : (Month/Year) :	Approx, Value of services (in Rupees in Lacs):
Name of Associated consultants if any :		No. of Months of key professional staff, provided by Associated Consultants :
Name & qualification of senior staff (Project Director/ Coordinator, Team Leader) involved and functions performed :		
Narrative description of Project :		
Description of Actual Services Provided by your Staff :		

Firm's Name & authorizedsignature:_____

Note : Support document in reference to above data shall be provided.

Summary Sheet for form - 3B

Sr. No.	Criteria	Nos. of Projects in last five year
1	Experience in similar nature and size of projects (Total)	
2	Experience in similar region (out of above)	

3C. COMMENTS AND SUGGESTIONS OF CONSULTANTS ON THE TERMS OF REFERENCE AND ON DATA, SERVICES, AND FACILITIES TO BE PROVIDED BY THECLIENT.

On the Terms of Reference :

- 1.
- 2.
- 3.
- 4.
- 5.

On the data, services, and facilities to be provided by the Client

- 1.
- 2.
- 3.
- 4.
- 5.

Consulting Firm's Name

3D. DESCRIPTION OF THE METHODOLOGY AND WORK PLAN FOR PERFORMING THEASSIGNMENT

3E. TEAM COMPOSITION AND TASK ASSIGNMENTS

1. Technical / KeyStaff

Sr. No.	Name	Position	Task
1.			
2.			
3.			
4.			
5.			
6.			

2. SupportStaff

Sr. No.	Name	Position	Task
1.			
2.			
3.			
4.			
5.			
6.			

3F. FORMAT OF CURRICULUM VITAE (CV) FOR PROPOSED KEY PROFESSIONAL STAFF

FORMAT OF CURRICULUM VITAE FOR PROPOSED PROFESSIONAL STAFF

Proposed Position:

Name of Firm:

Name of Staff:

Profession:

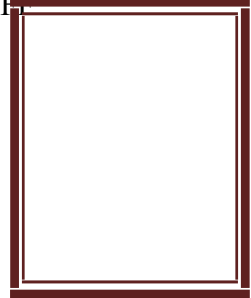
Date of Birth:

Years with Firm/Entity:

Nationality:

Membership of Professional Societies:

Detailed Task Assigned:



S No.	Name of Employee	Post Held	Project Name	Period		Assignm ent in the Project	Client of the Project	Remark
				From	To			

Education:

[Summarize college/university and other specialized education of staff member, giving their names, dates attended, and degrees obtained. Use about one quarter of a page.]

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to task on assignment. Describe degree of responsibility held by staff member on relevant previous assignments and give dates and locations. Use about half a page.]

Employment Record:

[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, name of employing organizations, titles of positions held, and locations of assignments. For experience also give types of activities performed and client references, where appropriate. Use

about three-quarters of a page]

Languages :

[For English language indicate proficiency : excellent, good, fair, or poor; in speaking, reading, and writing]

Summary of Qualification & Experience vis-à-vis the requirements as per TOR

Requirements as per TOR (Enclosure –B)	Possessed by the staff Member	Break-up of experience	
		Brief Description of Project	Man-months provided

Certification by the Candidate

I, the undersigned, (Name and Address) undertake that this CV correctly describes myself, my qualifications and my experience and Employer would be at liberty to debar me if any information given in the CV, in particular the Summary of Qualification & Experience vis-à-vis requirements as per TOR is found incorrect. I further undertake that I have neither been debarred by R&B Department, Gujarat or any other central/stage government organization nor left any assignment with the consultants engaged by Employer/contracting firm (firm to be supervised now) for any continuing work of Employer without completing my assignment. I will be available for the entire duration of the current project (named....). If I leave this assignment in the middle of the work, Employer would be at liberty to debar me from taking any assignment in any of the Employer works for an appropriate period of time to be Decided by the Employer. I have no objection if my services are extended by the Employer for this work in future.

I further undertake that my CV is being proposed for this project by --(the applicant firm) and I have not given consent to any other consultant(s) to propose my CV for any position for this project.

I further undertake that if due to my inability to work on this project due to unavoidable circumstances, due to which consultant's firm is forced to seek

replacement. In such unavoidable circumstances, I shall not undertake any employment in Employer projects during the period of assignment of this project and Employer shall consider my CV invalid till such time.

I undertake that I have no objection in uploading/hosting of my credentials by Employer in public domain.

For Key Personnel having intermittent inputs, add the following: I further certify that I am associated with the following assignments as on date (as on 7 days prior to due date for submission of proposal) including those for which LOA has been received by the firm and the inputs in these assignments shall not affect the work of the current assignment.

Name of Assignment	Client	Date of LOA	Likely start (Month/year)	Likely end (Month/end)	Total input of the person (man-months)

Note : CVs of Key Personnel having intermittent inputs will be considered only if the assignments on hand a son 7 days before due date of proposal including those for which LOA has been received from the client or for which Consultant has been declared as H1 do not exceed 3 (three) for Senior Contract Specialist, and Sr. Quantity Surveyor.

.....
(Signature of Key Personnel)

Date
(Day/Month/Year)

3G. TIME SCHEDULE FOR PROFESSIONAL PERSONNEL

Sr. No.	Name	Position	Reports Due/ Activities	Months (in the form of a Bar chart)												Number of Months
				1	2	3	4	5	16	17	18	
1.																Sub total (1)
2.																Sub total (2)
3.																Sub total (3)
4.																Sub total (4)

Full-time: _____
Reports Due: _____
Activities Duration: _____

Part-time: _____

Signature: _____

(Authorized Representative)

Full name : _____

Title : _____

Address: _____

3H. ACTIVITY (WORK) SCHEDULE

A. Field Investigation and Study Items:

Sr. No.	Item of Activity (Work)	Month wise Program (in form of Bar chart) [1st , 2nd etc. are months from the start of assignment]											
		1st	2nd	3rd	4th	5th	16th	17th	18th

B. Completion and Submission of Reports

Reports :	Programme : (Date)
1. Inception Report	
2. Monthly Progress Report	
3. Quarterly Report	
4. Final Completion Report and certificates	

SECTION – 4

FINANCIAL

PROPOSAL(PRICEBID)

SECTION 4.

STANDARD FORM

(PRICEBID)

FINANCIAL PROPOSAL – STANDARD FORMS

4A FinancialProposal.

4B Summary of Costs – Appendix B of Price Bid & Appendix B1

4 – A FINANCIAL PROPOSAL SUBMISSION FORM

[Location, date]

FROM : (Name of Firm)

TO : (Name and Address of Client)

Ladies / Gentlemen :

Subject : CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA. Financial Proposal

We, the undersigned, offer to provide the consulting services for the above in accordance with your Request for Proposal date [Date], and our attached Financial Proposal for the sum of [Amount in words and figures]. This amount is inclusive of all taxes which we have estimated at prevailing rates.

If selected to implement the services during the validity period of the proposal i.e. [period], our Proposal shall be binding upon us subject to the modifications resulting from contract negotiations.

We undertake that, in completing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1988".

We understand you are not bound to accept any Proposal you receive.

Yours Sincerely,

Authorized Signature

Name and Title of Signatory

Name of the Firm

Address

4B :- Total Cost

No.	Details	Amounts (Rs.)
1	Remuneration (4B-1)	
2	All Taxes (including service tax, GST, etc.)	
	Grand Total	

Note : Grand total will be considered for evaluation

4 B-1 Remuneration

Remuneration Summary		
No.	Description	Amount (Rs.)
I	Remuneration for Local Staff	-
II	Support Staff	-
III	Transportation	-
IV	Duty Travel to Site	-
V	Office Rent	-
VI	Office Supplies, Utilities and Communication	-
VII	Office Furniture and Equipment	-
VIII	Reports and Document Printing	-
IX	Road Safety Audit	-
	Total Amount	-

Expenses

ESTIMATED COST FOR APPOINTMENT OF CONSULTANT ENGINEER

I. Remuneration for Local Staff (including per diem allowance)

No.	Position	Man Month in Construction period	Rate / Month (INR)	Amount (Rs)	Remark
-----	----------	----------------------------------	--------------------	-------------	--------

I. Key Personnel

1	Bridge Engineer cum Team Leader	0.60			
2	Sr. Bridge Structural Engineer	0.60			
3	Material cum Geotechnical Engineer	0.60			
4	Quality Engineer for Highway and Bridge Work(Laboratory)	18.00			
5	Road/Traffic Safety expert	0.60			
6	Site supervisor for Bridge Construction Work	18.00			
	Total				

II. Support Staff

No.	Position	Man Month in Construction period	Rate / Month (INR)	Amount (INR)	Remark
1	Computer operator cum steno	18.00			
2	Office boy	18.00			
	TOTAL				

III. Transportation

No.	Description	Qty. (No. of vehicle-month)	Nos. of Month	Rate/ Vehicle - Month	Amount (INR)
		During Construction Period			
1	Innova or equivalent (Not more the 2 years old) For R & B Department	1.00	18.00		
	TOTAL				

IV. Duty Travel to Site (Fixed Costs)

No.	Trip	No	Rate / Trip (INR)	Amount (INR)
1	Trip to Employer's Head Office	5.00		
2	Trip to Employer's regional office	10.00		
	TOTAL			

V. Office Rent (Fixed Costs) The rent cost includes maintenance, cleaning, repairs, etc.

No.	Description	Nos. of Month	Rate / Month (INR)	Amount (INR)
1	Minimum 200 sqm area of office shall be rented. The rent cost includes electricity and water charges, maintenance, Cleaning, repairs, etc. complete.	18.00		
	TOTAL			

VI. Office Supplies, Utilities and Communication (Fixed Costs)

No.	Item	Nos. of Month	Rate / Month (INR)	Amount (INR)
1	Office Supplies	18.00		
2	Drafting Supplies	18.00		
3	Computer Running Costs	18.00		
4	Domestic and International Communication	18.00		
	TOTAL			

VII. Office Furniture and Equipment (Rental) [Fixed monthly cost]

No.	Description	Nos. of Month	Rate / Month (INR)	Amount (INR)
1	The cost shall include rental charges towards all such furniture and equipment as required for proper functioning of office. Office furniture shall include executive tables, chairs, visitor chairs, steel almirahs, computer furniture, conference table etc. Office equipment shall include as a minimum of telephone (2 external & 10 internal lines), photocopier (15ppm, 12000 copies per month with A3&A4 input) fax machine, PCs(5 No., Intel Core 2 Duo E8300, 19" colour TFT, Cache-6MB, RAM-2 GB, HDD-250 GB, DVD Writer, Key board, optical scroll mouse, MSWindows Vista Business, pre-loaded anti-virus etc.), laser printers (2 no., 14 ppm, 266 MHZ, 5000 pages per month, 600x600 dpi or better etc., Engineering Plan printer (1 no.), binding machine (1 no.), plotter A0 size, overhead projector, AC (4 no., 1.5 Ton), Water Coolers (as required)etc.	18.00		

TOTAL

VIII. Reports and Document Printing

No.	Item	Nos. of Reports	Total Nos of copies	Rate per Copy	Amount (INR)
1	Monthly Report (Design and Construction)	18.00	5.00		
2	Half yearly Reports	3.00	5.00		
3	Various others reports as provided in the Concession Agreement Such as Completion Report	Lump Sum			
	TOTAL				

X. Road Safety Audit

No.	Item		No. of Visit and KM	Rate	Amount (INR)
1	Carrying out safety audit through a qualified and experienced Road safety Audit as per IRC / MORTH guidelines are submission of report with cost effective measures and its estimate	Safety Audit per KM / Two visit	2 X 1.00		

Performa C - 1

DECLARATION / UNDERTAKING

1. I / We agree that the decision of the **R & B Department, Sachivalaya, Gandhinagar** here by **referred as Client** in selection of Applicants / Contractor, phasing of works and in any other Project related matter, will be final and binding to me /us.
2. All the information and data furnished herewith are correct to my / our best of knowledge.
3. I / We agree that we have no objection if inquiries are made about our works, its related areas and any other inquiry regarding all details, projects and works listed by us in the Pre-Qualification document.
4. I / We also understand that furnishing of wrong information or hiding of any information shall be a cause for disqualification.

Date:

Signature with Seal of the Company

SECTION - 5

TERMS OF REFERENCE

**TERMS OF REFERENCE
FOR**

**CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND
CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF
CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD
TA.DEESA DIST-BANASKANTHA.**

ROADS AND BUILDINGS DEPARTMENT

GOVERNMENT OF GUJARAT

**CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND
CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF
CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD
TA.DEESA DIST-BANASKANTHA.**

CONTRACT BETWEEN

ROADS & BUILDINGS DEPARTMENT

(CLIENT)

AND

(THE CONSULTANT)

DATE:

PLACE:

TERMS OF REFERENCE

TERMS OF REFERENCE FOR

CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA.

1.0 INTRODUCTION AND BACKGROUND

- 1.01 The Government of Gujarat (GOG) has embarked upon a major projects for Improvement of various important roads under the various schemes as named & listed in Annexure –I. The State Government from its Plan & Non-Plan Outlay Funding these Projects. The projects will be implemented during financial year 2022-23 &2023-24.
- 1.02 Road and Building Department (R & BD), Govt. of Gujarat, intends to hire consultants for TA/QA Consultancy / Carrying out safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate. The prioritization of works has been carried out by R & B Deptt. Roads and Building Department, Government of Gujarat will be the supervising and Implementing agency for the Projects. The works will be executed through the contractors appointed by Govt. of Gujarat through open competition tendering system. It is intended that the roads be upgraded to standard of Ministry of surface Transport (MOST) specifications, respective IRC guidelines and R&BD standard specifications and guideline as high speed corridor. The break up of roads length is as per Annexure-1 attached
- 1.03 The improvement of selected roads shall mainly comprises of Construction of Bridge, road furniture etc. with cautionary, warning, mandatory signage's.
- 1.04 The improvement of selected roads shall mainly comprises of Construction of Bridge,.In order to achieve high standard in quality of road constructions works, R&BD is intended to hire consultancy services for providing quality Assurance and Technical Audit of works being carried out under the schemes as specified. Primarily responsibility of day to day supervision of works will be that of R & BD engineers and consultant's role shall be of Quality Assurance and Technical Audit and Carrying out safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate.

2.0 OBJECTIVE

- 2.01 The main objective of these consulting services is to conduct technical audits and / Carrying out safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate of the execution of the identified Bridge of 1.000 Km. Banaskantha Districts as specified in Annexure- I. of whereby the consultant will render professional services to improve the quality of construction of Bridge.

- 2.02 To ensure achieving high standards in quality of construction works.
- 2.03 To ensure that all the works carried out under the scheme fully comply with the technical specifications drawings established codes/standards and sound engineering practices.
- 2.04 To assure R&B and GOG for the quality of works being executed comply the quality norms and standards laid down in contracts pecifications.
- 2.05 To provide technical audit and advisory services for the works.
- 2.06 To Carry out safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate

3.0 **SCOPE OF SERVICES**

3.01 **Estimated level of services:**

R & B has assessed the expertise required for carrying out the assignment as follows

Sr. No.	Specialist / Position & Numbers (Key Positions whose CV will be evaluated)	Person months for package (Estimated) at site
1	Bridge Engineer cum Team Leader	1 visit per Month or extended time limit of work whichever is later.
2	Senior Bridge Structural Engineer	2 visit per Month or extended time limit of work whichever is later.
3	Material cum Geotechnical Engineer	2 visit per Month or extended time limit of work whichever is later.
4	Quality Engineer for Highway and Bridge Work (Laboratory)	Full Time (18 Months) at Site or extended time limit of work whichever is later.
5	Road / Traffic Safety Engineer	2 visit per Month or extended time limit of work whichever is later.
6	Site supervisor for Bridge Construction Work	Full Time (18 Months) at Site or extended time limit of work whichever is later.

3.02 **TEAM COMPOSITION AND STAFF QUALIFICATIONS**

- Eligibility and Criteria for Bridge Engineer cum Team Leader as per Data Sheet Clause 7
- Eligibility and Criteria for Senior Bridge Structural Engineer as per Data Sheet Clause 7
- Eligibility and Criteria for Material cum Geotechnical Engineer as per Data Sheet Clause 7
- Eligibility and Criteria for Quality Engineer for Highway and Bridge Work(Laboratory)as per Data Sheet Clause 7
- Eligibility and Criteria for Road / Traffic Safety Engineer as per Data Sheet Clause 7
- Eligibility and Criteria for Site supervisor for Bridge Construction Workas per Data Sheet Clause 7

3.03 The consultants shall familiarize him self, with the help of sample surveys, visits and inspections in the field and by examination initially of one set of documents such as detailed estimates, contract documents, including specifications, interim certificates, quality control test results and other relevant documents as per 3.05. All line and levels shall be checked & to be done in consultants presents. All FRL and TBM shall be submitted timely for necessary approval of authority.

3.04 The consultant will examine that the description, procedure and quality of works accurately

reflects conditions in the field; work progress monitoring and per schedule-C of original work and field supervision procedures have been followed correctly; site journals, reports of site meetings, and other documents are maintained in accordance with the Procedures acceptable to R & B.

- 3.05 Assist and guide the R & BD staff in interpretation of the technical specification, etc. as and when required. Also consultant has to assured the work quality as per tender specification and qty. as per work BOQ.
- 3.06 Review contractor's detailed work programmes, suitability of contractor's key personals, constructions methods and test results of construction materials and workmanship and suggest necessary action and rectifications if required on these activities.
- 3.07 Assist R & BD in implementation of quality control measures to ensure quality of work, and also in approval of field testing laboratories in respect of facilities, adequacy, arrangements, equipments and staff as per contract document.
- 3.08 Review the construction methods proposed by the contractor for carrying out the works to ensure that these are satisfactory with particular reference to the technical requirements, the Project Implementation Schedule and environmental aspects, as well as safety of the works, property, personnel and the general publics.
- 3.09 Review the tests Results/ certificates of all construction materials and the sources for assessing their suitability in works. All field experiments testing shall be done in witness of consultant. The consultant shall undertake random sample checks independently for quality control using contractors / GERI / Polytechnic / Engineering Colleges / approved private laboratory and recommended solutions for improving road / Bridge quality to meet the specifications. Consultant shall also collect independently core samples as per MORTH guidelines of finished road / Bridge and test them using Contractor's core cutting equipment (for bituminous work).
- 3.10 Develop standard form and procedures to ensure a proper quality Control System to be implemented for materials and workmanship.
- 3.11 Assist the R & BD on technical supervision of the works to ensure the quality and in conformity with the standards and specifications prescribed in the contract and review the frequency of quality control test.
- 3.12 Assist R & BD during inspection about the contractor's equipment/machinery employed for road construction works so as to determine their suitability for work at site. Assistance shall also be provided during periodic inspection for machines / laboratory equipment. Also review the suitability of source of materials and their quality on the basis of inspection, laboratory equipment certifications, test results, manufacturers certificate etc.
- 3.13 If the consultant considers any items of work substandard or unacceptable, he will inform the contractor as well as R & BD of any rectification required in writing, providing full justification thereof with all necessary supporting data.
- 3.14 Inspect the works on substantial completion before take over all indicate to the contractor / R & BD any rectification required and any outstanding work to be carried by the contractor during the Defects Liability Period.

- 3.15 Assist the R & BD in monitoring progress of the works at regular intervals through modern aids such as computer aided project management techniques. Also review and assist R&BD staff in effective implementation of Quality control / Assurance system.
- 3.16 Prepare monthly reports and final audit report (in six copies) fully describing the progress of the works and the assistance given by the consultant during the month under review, indicating also the problem areas and actions required to overcome them by the relevant authority. Monthly progress report shall consist the progress of work done in detail, planning of the work for the next month, quality observed during MPR month with photographs, profiles for line level and camber, highlight the problem areas and actions taken by consultant against the problem areas, physical, financial and timely progress in percentage.
- 3.17 Recommendations regarding the methods and procedures for the evaluation and the system for monitoring of the conditions of the road after the project completion.
- 3.18 Consultant shall recommend to R & BD to grant the permission to start the work on the basis of quality check of materials on plant site, Plant and machinery, laboratory facility, weigh bridge and any other requirements related to tender.
- 3.19 More over for complete work OR completed items (each layer of work) check for width of road, shoulders / hard side shoulders and earth work, camber, super elevation, grade, ascertaining CBR / density of each layer shall be performed as per MORTH Guidelines. Also inspect the work on completion / substantial completion before taking over in order to identify the balance work and rectification of defects to be carried out by contractor. After completion of each and every layer, the report shall be submitted to concern officer for verification and after the grant of permission, the next layer shall only be started at site.
- 3.20 Also other item like concrete work, foot path, side drains, gutter, structure works etc. shall be checked in accordance with standard specification and design and as per tender provisions.
- 3.21 Each quality aspects shall be reported road wise and item wise as summary report periodically to R & BD. Also consultant shall furnish the summary of QC test results conducted in each activity of work and furnish a QC certificate (regarding Quality of material and workmanship and performance) along with contractors each invoice (RA BILLS)
- 3.22 Final report shall have concluding remarks (Road wise – Item wise) about overall quality of road also consultant shall recommend the methods and procedures for evaluation and system for monitoring the condition of road.
- 3.23 The consultant shall conduct technical audit of work. In addition to regular audit activities of works the auditor shall also examine the following:
- 3.24 The description, procedure, and quality to works executed accurately reflect the requirements as per prevailing site condition. (B) R & BD site staff has followed correctly or not the system for monitoring of work progress and supervision of works. (C) System followed for maintenance and documentation of site instruction book, reports, minute of meetings and other documents are being followed correctly and in accordance with the procedures acceptable to R

& BD or not.

- 3.25 If the extension of three months required the consultant is bound to render the services at his quoted rate with the same pattern of personal staff.
- 3.26 Consultant Responsibility for Road Works / Approach works/ Bridge Work / Culvert Work
- 3.27 To verify the line out of road in accordance with approved drawing and site situation and to suggest modifications wherever necessary as per technical requirement.
- 3.28 The consultant shall check and approve the design and procedure of staging and form work for bridge work and also check reinforcement, form work and concrete to be casted first time in each
- 3.29 component of the bridge work and guide the R&B.D. Staff for good workmanship and quality and record to be maintained.
- 3.30 The consultants shall verify the actual foundation level along with strata and approve the same as well as also verify and approve the tilt and shift in well sinking / pile foundation and suggests modifications or remedies when it is beyond permissible limits. The consultant shall verify the records of well sinking / pile to be maintained.
- 3.31 The consultants shall witness first time pre stressing / post stressing of girders / slab in pre-stressed superstructure and also check and verify the results of pre-stressing.
- 3.32 The testing of all material & C.C. cubes etc. shall be tested as per norms & as shown for road works.
- 3.33 To check measurements and keep measurement records as per direction of R&B.
- 3.34 To assist R&B to order the removal improper / substandard work.
- 3.35 To assist R&B in co-ordination work with different agencies and hold meetings for proper and timely implementation of the works.
- 3.36 To carry out periodic review of contractor's resources vis-a-vis work programme.
- 3.37 To check road inventory km wise road length incorporating all basic data and details of road;
- 3.38 To carryout existing road condition survey and listing all defects on bituminous surfacing, berms, drainage system, structure / CD Works, road furniture.
- 3.39 To carryout a Safety Audit of the project reach through a qualified & experienced Road Safety Auditor as per manual on Road Safety Audit, SP-88. Review and maintain the work zone as per SP-55 and tender specifications for traffic during construction work. After construction is completed, review and verify road safety criteria at site, certify the same and submit road safety audit report for day and night time survey.
- 3.40 To carryout a Safety Audit of the project reach through a qualified & experienced Road Safety Auditor as per manual on Road Safety Audit, IRC-2009. Mainly Following points to be considered in road safety audit. (A-1) Geometry Improvement
Black Spots
Horizontal Curve Improvement Vertical Curve Improvement Junction Design Improvement
Stopping / Passing / Intersection / Decision sight distance etc.

- 3.41 Any other assignments given by the 'Employer'. The scope shall however remain restricted to such services as necessary for fulfilling the stipulated obligations of the Engineer.

4.0 OFFICE ACCOMODATION

The office of consultant's team leader shall be maintained at Site, having approximate area of 50 to 60 Smt. The consultant shall make available suitable office accommodation for team leaders & associated staff including office furniture, office equipment, and other relevant requirements as per necessity of a T.L. and associated staff. It shall be maintained & managed by consultant at his own cost. The consultant shall bear the cost of electricity telephone bill and water consumer etc. at office accommodation including all taxes.

It is expected that the consultant will set up field office for construction engineer, A.R.E. & Lab Technician as indicated below. Office accommodation space at District Place as per client discretion including, laptop, computer with necessary networking system and furniture shall be procured by consultant at his own cost. The Team leader is accepted to attend review meeting at Mehsana, Gandhinagar and Palanpur once in a Month or as required.

Sr. No.	POSITION/ PERSON	NOS.OF PERSON	PROPOSED LOCATION OF OFFICES
1.	2.	3.	4.
1	Bridge Engineer cum Team Leader	1	At Site
2	Senior Bridge Structural Engineer	1	At Site
3	Material cum Geotechnical Engineer	1	At Site
4	Quality Engineer for Highway and Bridge Work(Laboratory)	1	At Site
5	Road / Traffic Safety Engineer	1	At Site
6	Site supervisor for Bridge Construction Work	1	At Site

5.0 LABORATORIES

- 5.01 Laboratories of CONTRACTOR / GERI / Polytechnic / Engineering Collages SVNIT / MSU recognized Pvt. Labs shall be used. Also according to contract conditions the contractor shall provided a fully equipped field testing laboratory. The consultant will have full access to witness / supervise the tests in contractor's laboratories during contract implementation. The testing results shall be signed by consultant, contractor and departmental engineer.
- 5.02 Contractor shall make available free of cost core cutting machine in working order along with operator and fuel at each site of work core sample is contempt..

6.0 TIME FRAME

6.01 Consultancy services are required for a period of 18 months (Including 1 month suffix and one month prefix for documentation and completion and final testing of work report) and will start on issuing work order.

7.0 REPORTING REQUIREMENTS

7.01 Reports required to be submitted in six copies (on CD/USB/Email and typed – hard copy) to R & B include the following.

- Monthly reports on the activities progress and major issues and the observations by the Field Engineer. (as per 3.17)
- Quarterly report covering summary of progress and quality checks with remedial measures and penalty measures.
- Final audit report containing detailed report of quality and other relevant information.
- quality–certificate covering overall view of quality and all items with contractor's each R.A. bill and Final bill.
- Safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate
- Design drawing of vertical & horizontal profile correction, curve improvement, Junction Improvement, Including FRL.

The Proposed schedules for submission of various reports are as follows.

No.	Report	Time of Submission
1	Quality Assurance Manual for the entire project covering type and nature of QC tests to be conducted, acceptance criteria, frequency of tests, Standard observation sheets and documentation.	Within 15 days from commencement of services.
2	Safety audit through a qualified and experienced Road Safety Auditor as per IRC / MORTH guidelines and submission of report with cost effective measures and its estimate.	Within 15 days from commencement of services.
3	Monthly Reports on the activities in progress and major issues and the observations of the consultant's engineers.	For every month by 20 th date in following month.
4	Quarterly reports covering summary of progress and quality checks results of audit notes including remedial measures if suggested and non conformance reports and their disposal.	By the end of every quarter of assignment within 20 days after the expiry of quarter
5	Final completion report including status of audit notes, NCR and its disposal and status of Quality control Tests conducted along with required frequency and results of QC tests.	Within one month after completion of consultancy assignment
6	Certificate regarding Quality of work executed for each activity of work	Within one month after completion of work and with all bill.
7	Recommendations regarding methods and procedures for evaluation and the system for monitoring the condition after completion.	Within one month after completion of consultancy assignment
8	Design drawings	Before starting of execution of particular activity.

Note : Reports shall be submitted individually.

8.0 DATA AND ASSISTANCE TO BE PROVIDED BY THE CLIENT

8.01 The following will be provided by R & BD:

- Copies of estimated and contract agreements, work orders and tenders between R&B and contractors.
- Access to all other necessary data and facilitation of consultations required for the performance of the consultant's duties.

9.0 CONSULTANT'S RESPONSIBILITY

In addition to what is specified under the scope of services the consultant shall be responsible for—

- 9.01 The consultant will be responsible for providing all other necessary facilities and logistical support for him/her self and supporting staff, including office and residential accommodation, transportation, office equipment, communications, utilities, office supplies, and other support requirements. The consultant shall also purchase/hire different types of vehicles as preened.
- 9.02 For the entire work consultant shall have to purchase 3 nos. of computer (Dual Core type, 500 GB HDD, 256 Ram, with DVD Writer and DVD ROM, Pen Drive etc.) along with laser printers of known brand (10-12 ppm, B/w, A-4).
- 9.03 Consultant shall also purchase necessary office furniture at the office of regional team leader, and team leaders and at office Places for staff.
- 9.04 Consultant shall have to inform & submit register of activities carried out on site in pursuance of scope of work.

10.0 CONTRACTUAL ARRANGEMENT

10.01 The consultant's contract will be with R & B D and will be Consultancy services contracts.

11.0 PAYMENT SCHEDULE

- 11.01 The consultancy fee shall be paid for in Indian Rupees only.
- 11.02 The running bills shall be claimed monthly.
- 11.03 Consultant will have to submit the certificate from concern DEE's showing satisfactory work is carried out by consultant as per T.O.R with every bill and presence of consultant shall be got registered from the departmental engineer.
- 11.04 Consultant will have to submit the certificate of attendance / presence of their staff from concerned Dy. Executive Engineer with every running bill, otherwise payment will not be done. Specifically the separate daily attendance of every staff members have to be submitted with the running bill and payment will be made as per actual presence of the staff. The attendance register of staff should be counter signed by concerned Deputy Executive Engineer or Executive Engineer of R&B Department

PERFORMANCE SECURITY

The amount of Security Deposit shall be 10% of estimated consultancy amount. Consultant shall be required to submit 5% of Security at the time of agreement in the form of NSC pledged in favour of Executive Engineer, R & B Division, Palanpur or FDR of Nationalized Commercial Bank in favour of Executive Engineer, R & B Division, Palanpur. Remaining 5% will be recovered from R.A. Bills. The

validity of NSC/FDR shall cover entire duration of consultancy period plus 3months. The NSC/FDR will be return after satisfactory completion of the agreement duly recommended by concern Exe. Engineer.

TERMS OF REFERENCE FOR ROAD SAFETY AUDIT

A. PROJECT BACKGROUND

- 1.1 Road & Building Department, Government of Gujarat recognize the urgent need and importance of improving road safety on their road network particularly in construction zones of their projects. Traffic Accident fatalities are on the constant increase with improved road network operating conditions offering higher speeds of operation day after day. The work zones pose serious problems by way of changed paths of travel offering much less comfort and convenience to regular traffic. It needs no explanation that if the work zone traffic is managed properly on sound principles supported by appropriate traffic engineering measures, adequately controlling and guiding the traffic through work zones, the incidence and severity of the accidents can be brought down to acceptable levels.
- 1.2 In this direction Roads & Buildings Department, GoG intends to avail the services of competent and experienced consultants for carrying out safety audit of the project highways under construction and advice on the preparation of traffic management plans in specific to each of the work zones.
- 1.3 Safety Consultant will be required to conduct the safety audits of the ongoing construction projects as per the internationally accepted and approved RSA procedures. For facilitating the selection each consultant as part of the formal proposal of their offer will submit brief work plan, indicating their understanding of the assignment and proposed approach to fulfil the tasks of RSA of Work Zones. Once selected, the Successful consultant will be required to submit an inception report describing detailed methodology, check lists and procedure within two weeks after signing the agreement. It is needless to say check list and procedures proposed by the consultant will meet the requirements of RSA as per Manual on Road Safety Audit – Indian Roads Congress (IRC- SP: 88-2010) and Guidelines on Traffic Management in Work Zones (IRC-SP55:2014) and such other best international practices which can be considered superior and better than what is practiced in India.

1. OBJECTIVES

- 1.1 Minimize the number and severity of accidents at work sites of the project Highways / roads of R&BD in Gujarat.
- 1.2 Safety of the Road users, workers and non-users (pedestrians) should be ensured at the project Highway work sites.

- 1.3 Evolve Traffic Management Plans for different kinds of work sites. The work sites may be classified as (i) Mobile work sites (ii)Short duration work sites,(iii)Medium duration work sites and(Iv)long duration work sites. Conduct RSA of the Traffic Management Plans employed at active work sites in the field and suggest improvements from time to time.
- 1.4 Prepare guide lines to assist the R&BD Engineers in preparing traffic management plans at work sites of different types and impart training to the Engineers of R&BD, Gujarat in preparing traffic Management Plans in Work Zones.

2. SCOPES OF THE SERVICES

- 2.1 The Safety Consultants shall carry out following in both project (i) During construction Stage (ii) Completion of Instruction (Pre-Opening) as per IRC : SP 88.2010
- (i) Collect the required data/drawings/reports regarding Safety audit report (if any) of the Traffic Management Plans of the work zones ie safety management plan (including night time safety) for the project highway and review the same. On the basis of the review suggest any additional measures/modifications required to the above reports/data/drawings.
- (ii) Review the ongoing Project Highway taking into consideration the construction planning and work zone safety management for the project as prepared by the Contractor. Identify the safety issues in the construction planning and work zone safety management.
- (iii) Carry out the Safety Audit to assess the adequacy of safety measures adopted and provided in construction zone(s) (Details of Work Zone Safety Audit are given below)

- (iv) Consultants shall prepare Safety Report after inspection of each road. This report shall include identifying gaps in provision of safety features as per the construction planning and work zone safety management. A report also includes additional low cost safety measures (Short term / long term) required (including night times safety) with the details of cost, if any, those are considered essential for reducing accident hazards on the Project Highway.
- (v) Consultant shall prepare safety report for stage-4 during construction stage and stage-5 completion of construction (Pre-Opening) stage as per separate sheet attached here, which is taken by IRC SP – 88-2010

WORK ZONE SAFETY AUDIT

Task A: Review Contractual Provisions in respect of the traffic management in work zones and Establish Work zone Safety Audit Procedure

Review and understand various safety provisions relating to work zones as provided in the contract documents of the particular projects. This should include an assessment of the compliance of the safety provisions as given in various acts, rules and regulations of GoI/Gujarat State Government where project is situated including MoRTH/Indian Roads Congress (IRC) specifications/codes; and safety provisions under the EMP(s) for the project.

- i. Review the existing systems being followed /adopted by the Concessionaire and IEs in planning, execution, documentations and reporting through collection and assessment of primary and secondary data/information.
- ii. Identify the major hazards and risks associated with various roads construction activities and establish a work zone safety audit procedure.

Task B: Conduct detailed Work Zone Safety Audit and Recommend corrective Actions

- iii. Carry out a detailed assessment of safety provisions at worksite [A worksite includes the highway and service roads (including structures), access/haul roads, main and ancillary campsites (including labor camps), all plant sites (including crusher operated by the project contractors), quarries operated by the project contractors, borrow areas, material stackyards and workshops. The safety of access/haul roads is to be done as applicable to the works traffic and its impact on normal traffic passing through the work site. This review and safety audit must include, but may not be limited, to the following aspects pertaining to:

- a) **Traffic Management Plan:** The Consultant will review the relevance, adequacy of the Traffic Management Plan(s) prepared and implemented by the Contractors. The consultant shall also

review and monitor the procedures to be followed by the Independent Engineer (IE) with regard to the approval and ensuring the implementation of the traffic management plans at the work sites on the ground.

- b) Traffic Safety Measures:** The review should address the adequacy and quality of various safety measures such as installation of signs, delineation, barricading and lighting in the construction zones in line with the provisions covered in the contract agreement and IRC guidelines (SP:55:2014) and other good International practices. The assessment should also include various safety aspects/issues pertaining to safety at night time and safety at/near excavations, structure construction sites, diversions and population settlements apart from assessing maintenance of existing road surface and riding quality at diversions/detours.
- c) Worker's Safety:** Review of the compliance of the contractual provisions and applicable legal provisions, the review should cover aspects pertaining to provisions and use of Personal Protective Equipment such as helmets, masks, safety harness/belts, boots, gloves, eye and hearing protection devices. The assessment should also include review of safety provisions during operations such as loading and unloading of materials; bar bending and cutting; gas cutting/welding, pile driving, excavation work; working near equipment/machinery; working at heights (including aspects pertaining to ladder, scaffolding, working platform, railing safety); safety during concrete works (including reinforcement erection, formwork and concrete pouring/pumping); drilling and blasting; safety during placement of traffic control devices; tree cutting etc. The compliance with regard to occupational health and safety precautions in relation to hazards associated with dust, toxic fumes, noise, vibration and biological factors (snake and insect bites) should also be assessed.
- d) Safety during construction of structures including design and suitability of temporary structural arrangements, structures construction methodologies, etc.** Adequacy of the process of review and approval of the Contractor/ Concessionaire proposals with respect to structures construction methodology (ies) including design of temporary structures and erection arrangements by the IE also to be reviewed.
- e) Fire Safety Practices:** The assessment should include (a) the risks and hazards associated with storage, transportation, handling and use of various inflammable materials/explosives and (b) precautions and preparedness in case of the fire accident/s at camp/s, plant sites, construction sites and quarries.
- f) Electrical Safety Practices:** This should include electrical safety review at plant sites, workers camp sites and work sites and near habitations.
- g) Mechanical Safety Practices:** The review should include general safety precautions/practices during plant, machinery, equipment and vehicle operations and condition of such mechanical devices that are being used for the contract operations. This will include review of the fitness of various plant and machinery (static and mobile), practices with respect to periodic maintenance and licensing/certification of fitness of equipment, as well as suitability of machinery operators including practices with respect to adherence to licence /certification/ formal training of operators.
- h) Dust Control and Suppression Arrangements.**

- i) Transportation, Storage, handling and use of various toxic and hazardous materials (including spill management) used in road construction.
 - j) **First aid:** The review should include the provision of the first aid arrangements (including lifesaving equipment), availability of qualified staff and health checks-up of workers (such as those for drivers/operators), as specified under the regulatory framework.
 - k) **Emergency Response Arrangements:** The review should include an assessment of the provisions to meet the emergencies with regards to warning systems and record keeping of accidents of traffic, workers plant and machinery.
 - l) **Accident records:** The review should look at whether accident records are being maintained by the Contractor/Concessionaires on a regular basis.
 - m) **Housekeeping** (including circulation pattern, storage of materials and disposal of hazardous wastes).
 - n) Any other
 - o)
- iv. Assess the knowledge and awareness of safety requirements at various levels of the Concessionaires and IE's staff, and make recommendations for improving the same if and where required.
 - v. Assess the role of IEs and R & B department, and performance and response of the IEs (including approval system, issuing of instructions and record keeping) in ensuring/enforcing worksite safety, and make recommendations thereto as required.
 - vi. Recommend specific actions that are required to overcome safety deficiencies and to strengthen/improve safety conditions in the project's contracts.
 - vii. Identify and suggest a comprehensive list of items/aspects to be covered in the monthly reviews and reports. Also, identify and prepare a comprehensive checklist of items to be monitored on monthly basis at site for rating the contractors' performance on work sites safety management.
 - viii. Monitoring the complaisance of the recommendations made in the Audit Reports (contract specific) in the project sites.

- ix. Assist R & B department in reviewing and revising/issuing instructions to the Contractors/Concessionaire and IE (specifying the roles and responsibilities of each) and in establishing a system for conducting performance review of contractor/Concessionaire and IE.
- x. Propose measures that cover technical, contractual and institutional dimensions with respect to safety during road construction works keeping in mind the issues identified in safety audit. These should also cover the aspects related to implementation / enforcement mechanism with regard to safety management during the construction stage.

Task D: Suggesting a format for Work Zone Safety Report and training in the preparation of the same by the contractor and IEs.

Task E: Imparting training to R & B department officials (approximately 15-20 officers) on Road Safety Audit to be conducted in two stages (for one day – 1st half in R&B office and 2nd half in the field (Road will be select by R&BD officials) at the beginning of the project as per the deliverables schedule (Training-I).

Organize and conduct a One day Workshop on findings of Safety Audits and follow up action, which will be attended by the representatives from R & B department (approximately 15-20 officers) at the end of the project as per deliverables schedule (Training-II).

(All the logistics Cost including the venue, boarding/lodging etc. for holding such Trainings to be included in the financial proposal)

2.2 The Safety Consultants shall provide the services as keeping following criteria in mind:

- (i) Applicable Laws and Applicable Permits;
- (ii) Manual for Safety in Road Design, issued by IRC/MOSRT&H;
- (iii) Relevant Standards/Guidelines of IRC relating to road geometric, bridges, culverts, road signs, pavement marking and roadside furniture;

- (iv) Provisions of the contractual obligations Agreement; and
- (v) Best Industry Practice.
- (vi) Interaction with R & B/the Concessionaire/Independent Engineer (IE)
- (vii) The consultant shall interact with the authorized representatives of R & B/the concessionaire/Independent Engineer (IE) for smooth implementation of Road Safety Requirements.
- (viii) During the contract period, the Safety Consultants shall provide necessary assistance/clarifications/advice to the Contractor/Concessionaire as desired/directed by the R&BD of Gujarat.
- (ix) The consultant shall also provide technical assistance to R & B as the situation arises during the period of engagement.

2.3 Establish a road safety indicator baseline : The Consultant shall define indicators/bench marks relevant to monitor the road safety situation of the Project Highway. It shall also establish the corresponding baseline, in order to describe the existing issues and correct the same to meet the bench marks.

2.4 It is estimated that approximately 1200 kms (may increase or decrease) of roads may have to be audited for work zones safety by the consultant.

3. INPUTS FROM R&BD, GOVERNMENT OF GUJARAT

3.1 The necessary permission from local police and other concerned bodies/ agencies shall be obtained by R&BD, Government of Gujarat to enable smooth conduct of the needed field activities. All available data/ information/ records/ reports/drawings etc., will be provided to the agency immediately after the award of the study.

3.2 R&BD will provide to the consultant all the available related reports and background documents needed for performing the task.

4. DELIBERABLES

- 4.1 The appointment of the Consultant shall be initially for a period of **18 months**. The proposed manpower deployment for this period shall be as per the requirement of activities to be performed during the said period.
- 4.2 Time schedule for important deliverables of the Consultancy and the payment schedule linked to the specified deliverables is given below:

SrNo.	Description of Deliverables	No. of Hard copies	No. of soft copies (CD/ DVD)	Due Timing (from mobilization)
1	Inception Report (includes methodology and implementation plan which will essentially contain methodology for conducting audit, check list, and detailed procedure to be adopted)	3	3	Within 15 days
2	Methodology and Implementation Plan finalization and Training-I	-	10	Within 20 days
3	Submission of Road Safety Audit reports for 20% of the total kilometer	3	3	Within 60 days
4	Submission of Road Safety Audit reports for the next 20% of the total kilometer	3	3	Within 90 days
5	Presentation on progress of consultant, findings of Safety Audits and follow up action, which will be attended by the representatives from R & B department (Venue-R&B department)	-	3	Between 90 days to 100 days
6	Submission of Road Safety Audit reports for the next 30% of the total kilometer	3	3	Within 120 days
7	Submission of Road Safety Audit reports for the next 30% of the total kilometer	3	3	Within 150 days
8	Training - II	B	10	Within 165 days

Table 2.3 Guidelines for Organizing RSA at Different Stages of the Project

SI. No	Scheme Type	During Const.	Pre-Opening
1	Major Road Schemes		
2	Major Rehabilitation Schemes		
3	Minor Road Schemes		
4	Traffic Management Schemes/ Traffic Calming		

5	Accident Remedial Schemes		
6	Major Maintenance Schemes		
7	Major Development Schemes		
8	Minor Development Schemes		
9	Temporary Traffic Management of Major Schemes		

Source: MORTH Manual For Safety in Road Design (1998)

2.9 Ways of Organising a Road Safety Audit

There are many ways of organizing a road safety audit. However, the two essential attributes of road safety auditor are that the person should be skilled and independent. Practically, two options are there for conducting a road safety audit:

- Audit by specialist auditors,
- Audit by those within the original design team or by other road designers.

The benefits of road safety audit are numerous. They range from the more obvious direct improvements in a design to aspects as broad as enhancement of corporate safety policies. Other important benefits are:

- * Safer roads through accident prevention and accident severity reduction.
- * More explicit consideration of the safety needs of vulnerable road users.
- * Enhancement of road safety engineering.
- * Reduced whole life-costs of road schemes.
- * Eliminating or avoiding need to modify new schemes after they are built.
- * Incorporating safety parameters in standards and procedures.

There are clear, positive benefits from the road safety audit process. The cost of an audit is low (in the order of 0.1 percent of the total project cost). With such low costs and potential for high returns, road safety audit is a process that should become a practice at all levels of governments.

STAGES OF ROAD SAFETY AUDIT

Safety Audit can be applied on (a) new roads and (b) existing roads. On new roads, safety audit will lead to avoiding building accident-prone situations and on existing roads, audit will lead to improved roads from the safety point of view. It should be realized that safety audits are a necessary cost, and not an additional expense. As project is audited, it provides further scope to improve/ enhance safety. In projects where there is a choice of route or standards, or there are known safety problems, the designer should discuss these with auditors at the initial stage. The safety audit shall be carried out on road and traffic improvement projects.

Safety audit during construction stage is a new concept and no country has developed any checklists for carrying road safety audit during construction stage.

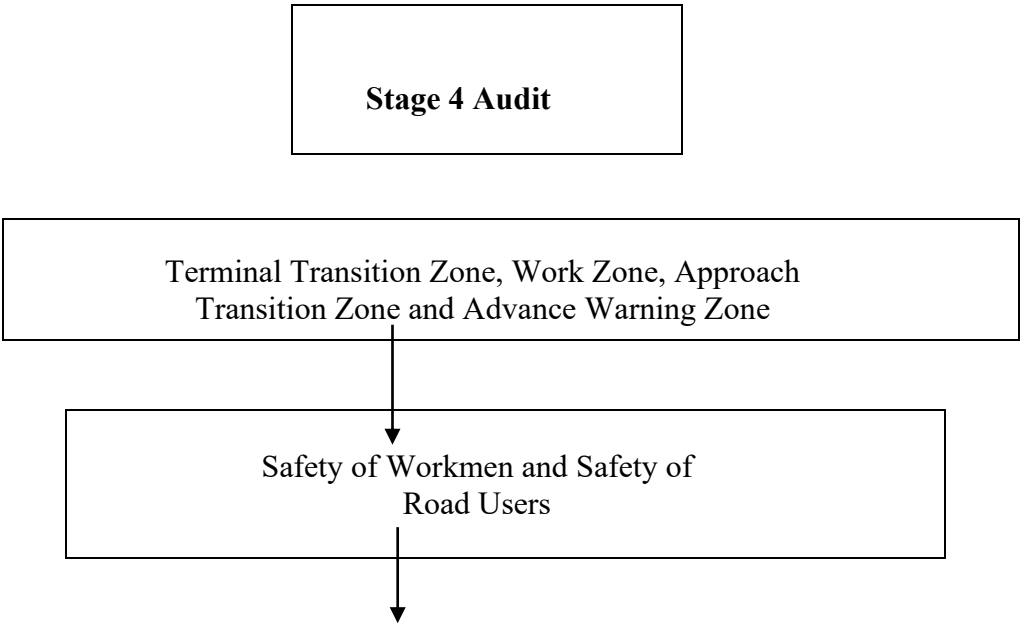
a) New Construction

During Construction Stage	Stage 4 Audit
Completion of Construction (Pre-opening)	Stage 5 Audit

Stage 4 Audit (During Construction Stage)

Construction zone is that area of the road which is affected by the works and which affects traffic flow and safety of workers and road users. In this context it can also be called Traffic Control Zone'. In rural areas, problem at these zones is accentuated by the reduced availability of carriageway, acquisition of land for diversions, etc. In urban areas, the problems are even more acute as diversions may have to be over adjacent road street of the road network as well as the sharing of road space by different categories of road users. Traffic control zone can be divided into three major components i.e.. Advance Warning Zone, Transition Zone and Work Zone. Manual on Traffic Management at Construction Zones is published by the Indian Roads Congress as IRC:SP:55 should be referred to. Steps involved in Stage 4 Audit are given in Fig. 3.4.

- Examination of Terminal Transition Zone, Work Zone, Approach Transition Zone and Advance Warning Zone with respect to safety point of view.
- Examination of safety measures adopted for workmen and road users.
- Examination of traffic control devices adopted at construction zone.



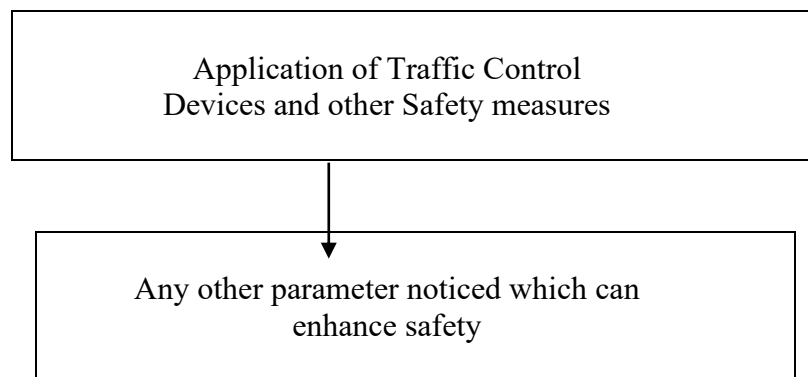


Fig. 3.4 Steps

Involved in Stage 4

Audits

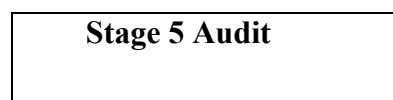
Motorists need to know about safe driving requirements in construction zones. Major problems in work zones are attentiveness and speed. It is necessary to help the drivers to be more attentive by using signages, rumble strips and any thing that brings alertness and gets them to realize that there is something different about this stretch of road and there would be lower speed limits in the work zones. Work zone safety measures should be aggressive and comprehensive. It should include public service announcements, safety training for workers in work zones, lower speed limits in work zones, rumble strips and other speed reducing measures, proper signages, flagman to control and guide traffic, stepped-up enforcement.

Stage 5 Audit (Completion of Construction) (Pre-opening)

Stage 5 is recommended immediately prior to opening of scheme, involving the site staff and local traffic police in car and truck. This should take the form of driving and when appropriate, walking and/or cycling the new route. This is checked during night time also to ensure that required night time safety standards have been achieved.

- A final review of the finished construction, to check from the standpoint of road safety that it is ready to be opened for traffic. It is particularly important to check the location and visibility of markings and other traffic control devices especially where changes were made during the construction period. The finished scheme should be assessed from the road users' point of view indaylight and in darkness.
- After opening for one or two months, the auditor should examine whether or not road users are using the project facility in an appropriate manner.

Many schemes are constructed with the road open to traffic throughout the entire construction phase. When there is no question of an actual opening for traffic, an overall examination is to be carried out to audit whether the markings and all traffic control devices are in place. This examination is to be carried out by the auditor independently in the first instance and thereafter along with the Project Manager of the Contractor. Steps involved in Stage 5 Audit are given in Fig. 3.5.



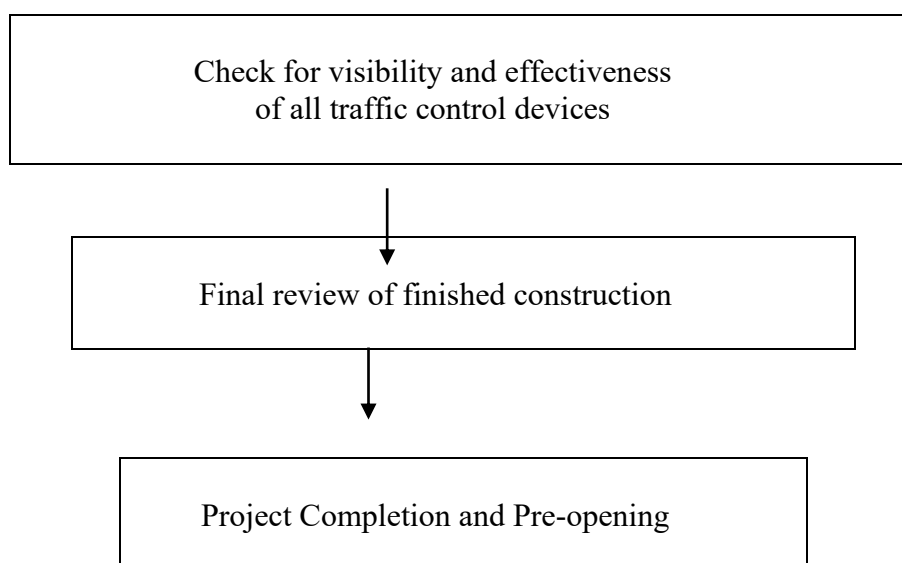


Fig. 3.5 Steps Involved in Stage 5 Audit

Where specific additional skills are required in case of complex projects, a specialist can be invited to be part of the audit team for a limited time to provide advice on the relevant issues. The one essential ingredient in any road safety audit team is road safety engineering experience. Selection of audit team for different stages of audit is presented in Section 2.1 0. The audit team should full fill the following checklists:

- a) Is the auditor independent? - Can he/she apply 'fresh eyes' to the task?
- b) Is the auditor trained and/ or experienced? - At least attended a training workshop and worked on a previous audit.
- c) Has the auditor got the necessary skills in the areas of road safety engineering, traffic engineering, traffic management, road design and accident investigation and prevention?
- d) Does the auditor have an aptitude for the task? - To see potential safety problems from different road users' points of view.

4.1 .2 Enhancing availability of skilled personnel for road safety audit

The Audit Team should associate one person to get groomed in Road Safety Audit work under orders of Auditor/Employer.

4.1 .3 Providing T fie background information

Objective: To provide t fie audit team with the necessary information and documents for assessment of the project from safety point of view

Consultant or audit team has to get all relevant data's for their work for audit process at their own cost.

a) Statement of the Expected Outcome

b)

The client should provide the auditor with the expected outcome from the audit. This may require a written brief or a simple TOR (Terms of Reference) for the proposed audit of the project.

b) Project intent

This sets out the purpose of the project and the design standards adopted. The client may highlight, any deficiencies that need to be addressed, any design compromises that have been made and the

reasons and any community input from prior discussion, correspondence and consultations.

c) Site Data

- 1) Accident history, including period, type, time and frequency to assist with site inspection.
- 2) Classified Traffic volume counts as available
- 3) Safety issues which remain unresolved from previous audits, if any
- 4) Design standards
- 5) Environmental impacts
- 6) Any other information relevant to safety enhancement

d) Plans and Drawings

- 1) All Drawings including the vertical and horizontal alignment and other relevant information, at that particular stage of the audit.
- 2) Any plans of adjacent roads or land and its uses, which may be affected by the project or by the traffic changes, it may induce.
- 3) If the engineering designs and drawings for different parts of the project have been prepared by different consultants or in-house teams of the client, a set of all such designs and drawings to be furnished.

Zero date for commencement of Audit would be after these documents are provided to the Auditor.

7.3.5 Check lists

The following checklists are relevant for the PMGSY projects.

SI No.	Stage	Check List No.
1	Completion of construction, pre-opening	5,8,9,10,11,12
2	Completed projects	6,8,9,10,11,12

The Audit Team may develop specific check lists keeping the above check lists in view for the PMGSY projects. For example, in check list 3, item no. 8, 10, 11, 17, 18 and 20 to 32 may not be necessary. Similarly, in check list 5, item no. 11, 12, 13, 14 may not be necessary. Also the auditors may add other checklist considered relevant for rural roads.

8 CHECKLISTS

8.1 General

Checklists are useful to assist the audit team. These checklists describe the performance and situations that can affect the road safety of selected types of project and audit stage. Checklists have been prepared for Stage 1 to Stage 6. These checklists will cover planning, alignment, cross-section, junctions, link road, traffic signs, road markings, road lighting, roadside hazards, road side furniture, vulnerable road users, cross-drainage structures etc. These checklists should be used as a guide to focus audit towards important matters that should be covered and not overlooked. Each project is different and will raise specific issues that may contain further safety implications. When reviewing each of the points, the team should consider that the road user would have to cope with conditions at night and in adverse weather conditions also.

The safety audit team should visit the site for identifying the deficiencies from safety angle of the stretch and should suggest remedial measures. The team should check planning, cross-sections, alignment, roadside furniture and facilities available, junctions, facilities for vulnerable road users, signs, marking and lighting and also road side hazards as suggested in the previous paragraph. Some sort of questionnaire should be prepared for each kilometre. The questionnaire should include various aspects covered under the methodology of the safety audit.

8.2 Purpose of Checklists

Road Safety Audit checklists are presented in Annex A. These checklists have been designed as a prompt. They are not a substitute for knowledge of local conditions and experience: they are an aid for the application of that knowledge and experience. The checklists are to help an auditor not to overlook something important. It is stressed that a road safety audit is not an audit of the design standards, though these will need to be referred to, and their proper use makes a good starting point with any design. The written audit report should contain sufficient explanation of its recommendations, without any need to refer to notes on checklists. Designers can make use of the checklists to help them identify potential safety problems and cover the solutions in their designs.

8.3 When to use Checklists

The checklists are for use during an audit when

- Assessing the documentation; in particular, when the project drawings are being examined
- inspecting the site. At this point, it is important to visualise how the project will fit into the existing features
- Writing the audit report - to re-check that the relevant issues have been Addressed

These checklists can be used on existing roads, new roads, roadwork traffic schemes, rehabilitation works, etc.

8.4 How to use Checklists

Determine which set of checklists is needed. It should be remembered that an audit may cover more than one stage in the design process. More details can be entered on checklists, on plans. A successful audit is not achieved by simply ticking off checklists. The topics listed in Annex A cover the more common elements of design and practice. While the list is sufficiently exhaustive, the audit team should use their own skills, experience and judgement in refining and amplifying these checklists.

ANNEX A

(Clause 8.4)

CHECKLISTS FOR CARRYING OUT ROAD SAFETY AUDIT FOR DIFFERENT STAGES OF THE PROJECT

Checklists have been prepared to assist the members of the Audit Team. These checklists describe the problems and situations that can affect the road safety of selected types of project and audit stage.

The checklists for different stages of audit are presented hereunder:

Checklist 5	-	Stage 5 Audit
Checklist 6	-	Stage 6 Audit
Checklist 8	-	Alignment
Checklist 9	-	Cross Section
Checklist 10	-	Intersections and Interchanges
Checklist 11	-	Road Signs
Checklist 12	-	Road Markings

CHECKLIST 5 - STAGE 5 AUDIT (COMPLETION OF CONSTRUCTION/PRE-OPENING)

- 1) Have all recommendations from the previous stages been followed? If not, why not?
- 2) Involve the site engineer
- 3) Test the installations of traffic control devices as a road user: by car, by truck, by bus, by cycle and on foot - from disabled road user angle. Also in the dark/ night hours.
- 4) Examine the carriageway for defects, especially at junctions to existing roads.
- 5) Has the opening of the road facility been adequately publicized?
- 6) How will the transition phase proceed?
- 7) Check that provision for emergency vehicle access and stopping is safe?
- 8) Check that all delineators and pavement markings are correctly in place.

- 9) Check that all signs and other traffic control devices are correctly in place. Check that they are likely to remain visible at all times.
- 10) Check that the road markings as installed have sufficient contrast with the surfacing and are clear of debris.
- 11) Check that all lighting operating is effective from safety point of view.
- 12) Check that no roadside hazard has been installed or overlooked.
- 13) Check that the form and function of the road and its traffic management are easily recognised under likely operating conditions.
- 14) Check that all temporary arrangements, signing, etc, have been removed and replaced by permanent arrangements.
- 15) Other checks made at discretion of auditor or client.

CHECKLIST 6 - STAGE 6 AUDIT (ON EXISTING ROADS OR DURING OPERATION & MANAGEMENT)

- 1) Carryout inspection - do not forget to take the results of accidents analysis and relevant checklists with you.
- 2) Does the actual function of the road correspond to its intended function?
- 3) Are the prevailing speed levels within desirable limits?
- 4) Do the equipment and standard of the road correspond to its function, speed level and classification? (Use checklist 2 and 3, as well as any specific checklists, which are relevant.)
- 5) Do road users park in ways that could constitute hazards?
- 6) Do plantations obscure visibility or the view of signs?
- 7) Are the surface and carriageway markings in good condition?
- 8) Are there any signs that road users drive over islands or kerbs or that the routes taken by motorists through junctions and bends are less than ideal?
- 9) Are there signs of other conflict situations and minor accidents?
- 10) Are the specified distances to rigid obstacles maintained for all groups of road users?
- 11) Are medians and islands of adequate width for the likely users.
- 12) Are there signs of pedestrian traffic in places that seem hazardous to pedestrians?
- 13) Does there appear to be a need for more or better crossing facilities for pedestrians?
- 14) Does there appear to be a need for more or better facilities for cyclists?

- 15) Has due consideration been given to children, the elderly, persons with disabilities?
- 16) Are bus stops and bus bays safely located with adequate visibility and clearance to the traffic lane.
- 17) Any provisions for parking satisfactory in relation to traffic operations and safety?
- 18) Are all locations free of construction or maintenance equipment, and any signing or temporary traffic control devices that are no longer required?
- 19) Are overtaking opportunities available for heavy vehicles where volumes are high?
- 20) Are the road boundaries free of any activities that are likely to distract drivers?
- 21) Is the location of rest areas and truck parking areas along the route appropriate and adequate?
- 22) Is sufficient warning provided in advance of breaks in service roads and openings in medians for traffic using multilane highway?
- 23) Are there reasonable traffic calming measures in place for the road stretches passing through habitations and built up areas?
- 24) Other checks made at discretion of auditor or client.

CHECKLIST 8 - ALIGNMENT

- 1) Is the proposed design speed appropriate to the function of the road, the mix of traffic likely to use it, and the road environment? (Check whether different sections need different design speeds?).
- 2) If the speed is not up to the mark of design speed, whether proper cautionary sign have been provided?
- 3) Does the alignment (horizontal and vertical) give sufficient forward visibility for the selected design speed? (Check for inadequate stopping sight distances)
- 4) Check for consistency throughout the route; note any location where alignment standard changes abruptly and is not as would be expected by drivers.
- 5) Do the horizontal and vertical alignments fit together comfortably? (Check for bad combinations, such as a sharp bend immediately after a summit curve, and sag curve within a bend).
- 6) Does the alignment provide safe overtaking opportunities? Does it avoid creating situations where the forward visibility is marginal for overtaking (neither clearly adequate nor inadequate)?
- 7) Does the treatment at curves, proposed if any, make appropriate, adequate and safe provision for transition curves, super elevation and carriageway and formation widening?
- 8) Does the vertical alignment pose excessive demands on the power of heavy vehicles? Has it been designed so those maximum grades are interspersed with recovery grades? Are there passing places to enable faster vehicles to overtake slow-moving heavy vehicles?

- 9) Is the transition between project road and the existing road(s) i.e., access roads handled safely?

CHECKLIST 9 - CROSS-SECTION

- 1) Are the widths of the carriageway, shoulders, medians (if any), service roads in accordance with standards and adequate for the function of the road and volume and the mix of traffic likely to use it?
- 2) Check whether bridges have footpaths and they have proper gradients/crash barriers.
- 3) Note any location where the cross-section standard changes abruptly along the route or is otherwise inconsistent with driver expectations.
- 4) Identify any locations where the capacity of the roadway is restricted and note locations of regular traffic congestion.
- 5) Have the shoulders and side slopes been designed to a safe standard and note any locations with inadequate shoulder width?
- 6) Have the side drains been designed to a safe standard? Are the batter slopes and drains safe for run-off vehicles to traverse?
- 7) Is the transition between the project road and the existing road(s) handled safely? (Check for major changes in standards).
- 8) Check whether the cross-section has adequate provision for the Vulnerable Road Users including persons with disabilities:
 - a) Pedestrians: Have paved footpath, adequate refuge width on median and proper ramps, up and down kerbs, where there is regular pedestrian traffic?
 - b) Bicyclists: Segregated areas (e.g. paved shoulders) where numbers are significant

CHECKLIST 10 - JUNCTIONS

a) General

- 1) Is the general layout of junction caters safely for all road users including disabled road users? (Check whether there are other junctions too close to it. Check whether approaching drivers will get a clear view of it. Check with respect to pedestrians, cyclists and two wheelers etc.)
- 2) The type of junction (T-type, staggered, signal controlled, roundabout) suitable for the function of the two or more roads, the traffic volume, the traffic movements (pedestrians and vehicular) and the site constraints? Is it safest alternative?
- 3) Is the layout of the junction adequate for all permitted vehicular movements and for all types of vehicles?
- 4) Will the general type of junction, its layout and the priority rules be recognised by approaching drivers well in time? Is the route through junction as simple and clear as possible? (Check for unusual or over-complicated layouts? Check that signages and marking are correct and clear?)
- 5) Does the layout encourage slow controlled speeds at and on the approach to stop/ give way lines and other critical decision points? (Check for Y and skew junctions, which can be a problem. Also roundabout with inadequate deflection?)
- 6) Are the sight lines at and on the approach to stop/give way lines and other critical decision points adequate and unobstructed? (Check for Y and skew junction, which can be problem. Check signs, lighting columns, pedestrian guardrails etc.?)
- 7) Is there adequate provision for channelising the different streams of traffic? (Check the provision for right turn lanes, deceleration lanes and acceleration lanes?)
- 8) Is adequate provision made for pedestrians and non-motorised vehicles? 9) Is the provision of night time lighting adequate, if not what are the deficiencies?
- 10) Are junction(s) at that stretch having proper markings, signs and studs to avoid accidents?

b) Roundabouts

- 11) Is the geometry simple and easily understood? (Pay attention to roundabouts which are not circular, or which have awkward entry paths).
- 12) Are there too many entries for safe efficient operation? Are they sufficiently separated from each other to avoid confusion?
- 13) Does the design deflect entering traffic sufficiently to ensure entry speeds are safer? (Check entry path curvature, centre island size and positioning).
- 14) Is there visibility for entering traffic adequate? (Check if visibility is too good, if encourage entry speeds which are too high)

- 15) Is the visibility for circulating traffic adequate?
- 16) Has the Central Island been designed to be forgiving to errant vehicles?
- 17) Has adequate provision been made for pedestrians to cross the arms of the junction?
- 18) Have the needs of cyclists and other non-motorised vehicles been considered? Does the signing make the priorities clear? (Entering traffic must give way to circulating traffic).

c) Signal-Controlled Junction

- 20) Does the signal sequence conform to the requirements of the regulations and standards?
- 21) Do the signals clearly indicate which movements are allowed at any one time? Are the timings of various phases of signal cycle adequate?
- 22) Are the signal heads positioned so that drivers can see them easily, and in time to react (stop or go)?
- 23) Are the signals for competing phases located in such a way that they are visible only to the traffic for which they are intended?
- 24) Are all right turning movements protected as far as possible?
- 25) Does the signing; marking and channelisation make it clear to drivers what path they should take through the junction?
- 26) Are pedestrian crossing places marked, and are pedestrians channeled to these crossings?
- 27) Are the pedestrian signals positioned so those pedestrians can see them?
- 28) Whether the pedestrian crossing signal controls are provided where appropriate? If so, there is a need for the crossing movements to be fully protected from conflicting traffic movements for example where there will be serious conflicts with turning traffic.

d) Vegetation and Plantation

- 29) Is the top of vegetation in the traffic island as well as channelisers, dividers less than 600 mm above the road top level for a length of 15 m from the end of the dividers?
- 30) Is the vegetation/plantation at the corners of the junction retracted for enough back from the edge of the shoulders to afford clear view of approaching traffic to the driver?
- 31) Are there no branches of trees projecting over the road berms/pavement at a height less than

7 m?

CHECKLIST 11 - ROAD SIGNS

- 1) Is the provision for road signs (regulatory, warning and informatory signs and delineators) adequate and in accordance with standards? (Check with respect to size, shape and placement etc.)
- 2) Check for any unauthorized traffic signs and use of non-standard signs (colour and shape).
- 3) Location and spacing of signs
 - a) Note locations where there are too many signs placed i
 - b) Note the signs placed too close to each other
- 4) Note if all traffic signs are clearly visible and are prominently displayed for the intended road users.
- 5) Find any instances where the legibility of the information on traffic signs is inadequate, bearing in mind the speed of vehicles and the amount of information displayed.
- 6) Determine effectiveness of traffic signs by observing them at night and identify any lack of reflectivity.
- 7) Examine type of sign posts used and record situations where sign posts constitute a fixed roadside hazard or where the use of frangible sign posts should be considered.
- 8) Are there any situations where traffic signs themselves are obstructing essential 'Line of Sight' for drivers and pedestrians.
- 9) Regulatory and Warning signs
 - a) Are appropriate regulatory signs provided where necessary?
 - b) Are warning signs provided only where they are warranted?
- 10) Informatory signs
 - a) Has signing been done on a systematic route or regional strategy that it is logical and meets needs of unfamiliar driver?
 - b) Are all important junctions provided with advance direction sign, distance information sign and intersection sign etc.?
 - c) Are these signs correctly positioned to enable the required timely action to be

taken by the intended drivers?

- d) Find instances of poor legibility and poor arrangement of information on signs.
- e) Overhead signs - size, message information adequate, languages as per IRC standards.

CHECKLIST 12 - ROAD MARKINGS

- 1) General adequacy and visibility of road markings, during day/night time and in wet/ dry weather conditions
- 2) Has correct type of markings been used in various situations (e.g. lane line, edge line etc.)?
- 3) Are correct colours used for laying road markings?
- 4) Is there any deficiency in the delineation of merge and diverge areas, including situations where 'through' traffic may inadvertently lead into auxiliary and turn lanes?
- 5) Are zebra crossing markings provided at junctions and mid-blocks of the sections (depending upon the movement of pedestrian)?
- 6) Is positioning of stop lines appropriate?
- 7) Are the directional arrows marked on the pavement guiding the driver or creating confusion to the driver?
- 8) Are there locations where there is a lack of 'Hazard markings' at approach end of island, medians and culverts/ bridges etc.?
- 9) Have retro-reflective markers been installed? Where coloured markers are used, have they been installed correctly?
- 10) If chevron alignment markers are installed, have the correct types of markers been used?

I. FORM OF CONTRACT

COMPLEX TIME-BASED ASSIGNMENTS

THIS CONTRACT (hereinafter called the "Contract") is made on the _____ day of the month of _____ 2021 between, on the one hand, Government of Gujarat, Roads and Buildings Department (hereinafter called the "Client") and, on the other hand, under this Contract, namely (hereinafter called the "Consultants").

WHEREAS

- (a) The Client has requested the Consultants to provide certain consulting services as defined in the General Conditions attached to this Contract (hereinafter called the "Services").
- (b) the Consultants, having represented to the Client that they have the required professional skills, personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract; and
- (c) the Client has received the fund from the Government towards the cost of the Services and intends to apply to eligible payments under this Contract, it being understood (i) that payments will be made only at the request of the consultant and, (ii) that such payments will be subject, in all respects, to the terms and conditions of the agreement, and (iii) that no party other than the Client shall derive any rights from the agreement proceeds.

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) The General Conditions of Contract (hereinafter called "GC");
 - (b) The Special Conditions of Contract (hereinafter called "SC");
2. The mutual rights and obligations of the Client and the Consultants shall be as set forth in the Contract; in particular;
 - (a) The Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) The Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

FOR AND ON BEHALF OF

Government of Gujarat, Roads and Buildings Department

By _____

Executive Engineer

Authorized Representative

FOR AND ON BEHALF OF

Consultant's Name

By _____

Authorized Signatory

ANNEXURE – I

ABSTRACT OF THE WORKS

Sr No	Name of Bridge	Length	Put to Tender Cost In Cr	Tender Cost In Cr
1	2	3	4	5
1	CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST-BANASKANTHA.	4.720 Km	29.18	23.90

**Executive Engineer
R&B (P) Division,
Palanpur**

ANNEXURE – II

ABSTRACT OF THE WORKS

Sr No	Name of Division	Name of Work	Estimated Cost Rs. in Cr.
1	2	3	
1	R&B (P) Division Palanpur	CONSULTANCY SERVICES FOR TECHNICAL AUDIT AND QUALITY ASSURANCE AND CARRYING OUT THE SAFETY AUDIT AS PER IRC MORTH GUIDELINES FOR THE WORK OF CONSTRUCTION OF MAJOR BRIDGE ACROSS BANAS RIVER ON MALGADH DOLIVAS ROAD TA.DEESA DIST- BANASKANTHA.	29.18

**Executive Engineer
R&B (P) Division,
Palanpur**

Special Condition

1. Road Safety Audit work is included as a scope of this work, for work having estimated cost more than 10.00 crores. The document necessary for Road Safety audit is attached herewith. Road Safety Audit shall be carried out by consultant with engaging approved empanelled Road Safety consultant of GIDB / MORTH. Charges of Road Safety Audit shall be paid by consultant. Final Closer Report to be Submitted to concern executive Engineer regarding execution of all work as per safety audit report by executing agency.
2. Agency have to submit Quality assurance Certificate to Sub Division office in each running bill raised by work agency.
3. Agency also have to submit Quality Assurance Certificate and stability certificate for whole work with final bill mentioning that the newly constructed bridge is safe for vehicular traffic in all respect with a copy of Load Test.

Deputy Executive Engineer
R and B (Panchayat) Subdivision
Deesa

Executive Engineer
R and B (Panchayat) Division
Palanpur