Andhra Pradesh Capital Region Development Authority

REQUEST FOR PROPOSAL

Selection of Consultants
for
Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)

NIT no: 194/CRDA-13022(32)/2/2018 - ASSOCIATE PLAN-3-T&T-APCRDA Dt: 13.2.2018
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# SCHEDULE OF TENDER PROCESS

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Scheduled Date</th>
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<tr>
<td>RFP upload on APCRDA website</td>
<td>17th February, 2018</td>
</tr>
<tr>
<td>Date of receipt of queries if any from the applicants</td>
<td>Before 17.00 Hrs (IST) on 24-02-2018 at APCRDA Office, Vijayawada, AP</td>
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<tr>
<td>Due date for Receipt of Bids</td>
<td>15:00 Hrs (IST) on 12-03-2018</td>
</tr>
<tr>
<td>Pre-Bid Meeting</td>
<td>12:00 Hrs (IST) on 28-02-2018</td>
</tr>
<tr>
<td>Date and Time of Opening Bids (Outer Envelope &amp; Envelope-1)</td>
<td>16:00 Hrs (IST) on 12-03–2018 or any other date as intimated by APCRDA.</td>
</tr>
<tr>
<td>Opening of Envelope II (Financial Proposal)</td>
<td>Will be intimated to the qualified applicants</td>
</tr>
<tr>
<td>Cost of the RFP Document (DD should be taken in favor of Commissioner, APCRDA payable at Vijayawada in any Nationalized Banks).</td>
<td>Rs.10,000/- (Non Refundable)</td>
</tr>
<tr>
<td>Bid Security</td>
<td>Rs.1,00,000/-</td>
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Note:
- Bid security shall be paid unconditional and irrevocable bank guarantee on Rs.100/- non judicial stamp paper, valid for six months from the last date prescribed for submission of tenders, in favour of Commissioner APCRDA, Vijayawada bid security (EMD) shall be valid for 6 months from the date of submission.
- EMD of unsuccessful bidder shall be returned upon signing of agreement by successful bidder. EMD of successful bidder shall be adjusted against performance security.
- Clarifications and Amendments if any to this RFP will be uploaded only in APCRDA website [https://www.crda.ap.gov.in](https://www.crda.ap.gov.in)
DISCLAIMER

1. The information contained in this Request for Proposal document ("RFP") or subsequently provided to Applicants (Firms), whether verbally or in documentary or any other form by or on behalf of Andhra Pradesh Capital Region Development Authority (herein after referred to as APCRDA/The Authority) or any of its employees, is provided to Applicants on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

2. This RFP is not an agreement or an offer by the Authority to the prospective Applicants or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in the formulation & submission of their Proposals pursuant to this RFP.

3. This RFP includes statements, which reflect various assumptions and assessments arrived at by the Authority in relation to the Consultancy. Such assumptions, assessments and statements do not purport to contain all the information that each Applicant may require.

4. This RFP may not be appropriate for all persons, and it is not possible for the Authority and its employees to consider the objectives, technical expertise and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements and information contained in this RFP, may not be complete, accurate, adequate or correct. Each Applicant should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments and information contained in this RFP and obtain independent advice from appropriate sources. Information provided in this RFP to the Applicants may be on a wide range of matters, some of which may depend upon interpretation of law. The information given is not intended to be an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. The Authority accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on the law expressed herein.

5. The Authority and its employees/ advisors make no representation or warranty and shall have no liability to any person including any Applicant under any law, statute, rules or regulations or tort, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

6. The Authority also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Applicant upon the statements contained in this RFP.

7. The Authority may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

8. The issue of this RFP does not imply that the Authority is bound to select an Applicant or to appoint the Selected Applicant, as the case may be, for the Consultancy and the Authority reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.
1. Section - I: LETTER OF INVITATION

To,

_________________________________

_________________________________

Gentlemen,

1.1 Andhra Pradesh Capital Region Development Authority (APCRDA) intends to procure “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”. More details on the services required are provided in the Terms of Reference of this Request for Proposal (RFP)

1.2 Proposal submissions must be received not later than the due date specified in the data sheet in the manner specified in the RFP document at the address given below.

The Commissioner
Andhra Pradesh Capital Region Development Authority (APCRDA)
Lenin Centre, Governor pet, Vijayawada,
Andhra Pradesh – 520002
Phone no.: 0866- 2577475
Website: https://www.crda.ap.gov.in

1.3 This RFP has following sections:

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<td>Section – 1</td>
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<td>Section – 2</td>
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<td>Section – 3</td>
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<td>Section – 5</td>
<td>Terms of Reference</td>
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<tr>
<td>Section – 6</td>
<td>Formats for Proposal Submission (Annexure)</td>
</tr>
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</table>

1.4 The consultant firm for providing its services will be selected under Quality & Cost Based Selection (QCBS) method as described in this RFP. The Technical Proposals would be evaluated based on the qualification criteria set forth in the RFP. Price Proposals of only those firms, whose Technical Proposals qualify, will be opened and evaluated.

1.5 The Proposals shall be filled in English and all entries must be typed and written in blue/black ink. Initials of the Authorized representative of the applicant must attest all erasures and alterations made while filing the proposal. Over writing of figures in the Price Proposal is not permitted. Failure to comply with any of these conditions may render the Proposal invalid.
1.6 APCRDA shall not be responsible for any costs or expenses incurred by the applicant in connection with the preparation and delivery of Proposals, including costs and expenses related to visit to the site. APCRDA reserves the rights to cancel, terminate, change or modify this procurement/Proposal Process and/or requirements of proposal stated in the RFP, without assigning any reason or providing any notice and without accepting any liability for the same.

1.7 The Proposal shall be valid for a period of not less than 180 days from the Proposal Due Date (the "PDD"). In exceptional circumstances, prior to the expiry of the original proposal validity period, the authority may request the firms to extend the period of validity for a specified additional period. The request for the extension shall be made in writing. However, Firms will not be permitted to modify their proposals.

1.8 Clarifications and Amendments if any to this RFP will be uploaded only in APCRDA Website: https://www.crda.ap.gov.in

Date: _____________

For Andhra Pradesh Capital Region Development Authority

Commissioner
Seal of Office
2. **Section - II: INSTRUCTIONS TO APPLICANTS**

2.1 Applicants are encouraged to inform themselves fully about the assignment and the local conditions before submitting the Proposal.

2.2 All terms and conditions specified in the Request for Qualification holds good under this RFP unless otherwise explicitly stated.

2.3 Broad description of the objectives, scope of services, Deliverables, and other requirements relating to this Consultancy are specified in this RFP.

2.4 Proposals shall be prepared and submitted in the manner elaborated in this RFP as per the formats/annexure provided.

2.5 No Applicant or its Associate shall submit more than one Application for the Consultancy.

2.6 Any entity which has been barred by any agency of the Central Government, any State Government, any Statutory Authority or any public sector undertaking, as the case may be, from participating in any project, and the bar subsists as on the date of the Proposal, would not be eligible to submit a Proposal either by itself or through its Associate.

2.7 APCRDA reserves the right to terminate a firm’s participation in the tender process at any time, should APCRDA consider that a firm has, without the prior consent, failed to comply with any of the procedures and requirements prescribed in the RFP.

2.8 It shall be deemed that by submitting the Proposal, the Applicant has:
   a. made a complete and careful examination of the RFP;
   b. received all relevant information requested from the Authority;
   c. accepted the risk of inadequacy, error or mistake in the information provided in the RFP or furnished by or on behalf of the Authority or relating to any of the matters referred in the RFP;
   d. satisfied itself about all matters, things and information, including matters referred herein, necessary and required for submitting an informed Application and performance of all of its obligations there under;
   e. acknowledged that it does not have a Conflict of Interest; and
   f. agreed to be bound by the undertaking provided by it under and in terms hereof.

2.9 The Authority shall not be liable for any omission, mistake or error in respect of any of the above or on account of any matter or thing arising out of or concerning or relating to RFP or the Selection Process, including any error or mistake therein or in any information or data given by the Authority.

2.10 The proposal will be rejected for award if it determines that the Applicant recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the contract in question;
2.11 Applicant will be declared ineligible, either indefinitely or for a stated period of time, to be awarded a contract if - it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing, a contract; and

2.12 Authority will have the right to require that a provision be included requiring applicant to permit Authority to inspect their accounts and records relating to the performance of the contract and to have them audited by authorized representatives of Authority.

2.13 Applicant shall not be under a declaration of ineligibility for corrupt and fraudulent practices. Furthermore, the Applicants shall be aware of the provisions on fraud and corruption stated in the specific clauses in the General Conditions of Contract.

2.14 Applicant shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during execution of the assignment if the Applicant is awarded the Contract, in the Financial Proposal.

2.15 There shall no proposals of any Joint Venture/Association in the RFP submission.

2.16 The Proposal of a firm shall be liable for disqualification in the event of the following:
   a. If the firm refuses to accept the correction of errors in its proposal, (or)
   b. If the Firm submits a conditional Proposal which would affect unfairly the competitive provision of other firms who submitted substantially responsive proposal and/or is not accepted by APCRDA

2.17 PERFORMANCE GUARANTEE
   The successful bidder shall submit Demand Draft or Bank Guarantee equal to five percent (5%) of the quoted fee towards performance security, within seven days from the date of the Letter of Intent (LoI). The DD/ BG shall be drawn in favor of Commissioner, APCRDA payable at Vijayawada.

2.18 CLARIFICATIONS & AMENDMENT TO RFP
   a. Applicants may request clarification on any of the points contained in RFP 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, electronic mail to Principal Planner (TTP), APCRDA, Lenin Centre, Governor pet, Vijayawada, AP – 520002; Email Id: aravind.nr@apcrda.org. The Authority will respond by electronic mail to such requests to all invited Applicants who intend to submit proposals.
   b. At any time prior to the due date for submission of Proposal, the Authority may, for any reason, whether at its own initiative or otherwise, modify the RFP document by issuing Addendum/ Amendment.
   c. In order to provide the Applicants with reasonable time for taking an amendment into account, or for any other reason, the Authority may, in its sole discretion, extend the PDD.
   d. The above changes & amendments, if any, will be notified only in our website i.e. https://www.crda.ap.gov.in
2.19 CONFLICT OF INTEREST

a. The Authority requires that the Consultant provides professional, objective, and impartial advice and at all times hold the Authority's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Consultant shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carry out the assignment in the best interests of the Authority.

b. An Applicant shall not have a conflict of interest that may affect the Selection Process or the Consultancy (the "Conflict of Interest"). Any Applicant found to have a Conflict of Interest shall be disqualified.

c. An Applicant shall be deemed to have a Conflict of Interest affecting the Selection Process, if:
   i. a constituent of such Applicant is also a constituent of another Applicant; (or)
   ii. such Applicant or its Associate receives or has received any direct or indirect subsidy or grant from any other Applicant or its Associate; (or)
   iii. such Applicant has the same legal representative for purposes of this Application as any other Applicant; (or)
   iv. if a firm is engaged by the Authority to provide goods or works or services and if the Associate of such firm is engaged for providing consulting services for the same project and vice versa.
3. Section – III: DATA SHEET

<table>
<thead>
<tr>
<th>No.</th>
<th>Key Information</th>
<th>Details</th>
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<tbody>
<tr>
<td></td>
<td>RFP Details</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Project</td>
<td>“Project Preparation Consultancy Services for Integrated Public Transportation System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”</td>
</tr>
<tr>
<td>2.</td>
<td>Authority</td>
<td>Andhra Pradesh Capital Region Development Authority (APCRDA)</td>
</tr>
</tbody>
</table>

**Proposal Conditions and Evaluation**

<p>| 3.  | Proposal Validity                | Not less than 180 days from the Proposal Due Date (PDD). During this period Applicants are expected to keep available the professional staff / Key staff proposed for the assignment. Authority will make best efforts to complete negotiation within this period |
| 4.  | Minimum Eligibility Criteria     | The consultants firms shall be a single entity with the following eligibility criteria:                                                                                             |
|     |                                  | The following should be considered as minimum qualification meeting which evaluation of technical proposal will commence.                                           |
|     |                                  | (i) Demonstrated experience of not less than two (2) Comprehensive Transportation Study/Mobility Plans at least in one city/urban area with population more than 2.5 million and four (4) Traffic &amp; Transportation Studies in public transport planning/studies at least in one city/urban area with population more than 2.5 million in last 10 years. |
|     |                                  | (ii) Demonstrated experience in planning, designing and implementation (project management) of at least two (2) high capacity Public Transport System (BRTS) in cities with population more than 1.0 million in last 10 years. |
|     |                                  | (iii) Demonstrated experience of not less than three (3) Traffic &amp; Transportation infrastructure development works such as project structuring, financial modeling, bid process management for Urban Roads in cities, BRT/MRT/LRT systems of total projects costing more than 100 Crores in last 5 years. |
|     |                                  | (iv) Average Annual Turnover of not less than 50 crore (or equivalent) per annum in last 5 years evidenced by the submission of Audited Annual Accounts and certificate from Statutory Auditor.  |
|     |                                  | (Proof of experience from the client is a must for the criteria’s above)                                                                                                                   |
| 5.  | Proposal Evaluation              | • Technical and Financial Evaluation of applicants that meets the minimum eligibility criteria will only be undertaken. Applicants not meeting the minimum eligibility criteria are deemed to be disqualified from further tender evaluation process. |</p>
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<tr>
<th>No.</th>
<th>Key Information</th>
<th>Details</th>
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<tr>
<td></td>
<td></td>
<td>• <strong>Technical Evaluation:</strong> Minimum score required for technical qualification is 70 marks (max. marks = 100).</td>
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<td></td>
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<td>• <strong>Financial Evaluation:</strong> Price bids of technically qualified firms will only be opened. Lowest Price Quote will be awarded 100 marks and remaining proposals will be marked proportionately in reference to lowest quote as per the formula specified in this RFP under Financial Evaluation.</td>
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<tr>
<td></td>
<td></td>
<td>• <strong>Combined Evaluation (Technical &amp; Financial):</strong> Quality and Cost Based System (QCBS) evaluation criteria in the ratio of 80: 20 (80% technical and 20% financial weightage) as detailed in RFP.</td>
</tr>
<tr>
<td>6.</td>
<td>Criteria for selection of Consultant (Bid Parameter)</td>
<td>• The combined highest score of technical and financial proposals under QCBS evaluation in the ratio of 80:20 (80% technical and 20% financial weightage).</td>
</tr>
<tr>
<td>7.</td>
<td>Outer Envelope</td>
<td>• Cost of RFP Document (DD for the amount Rs. 10,000/-) as per the details mentioned in Schedule of Tender Process.</td>
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<tr>
<td></td>
<td></td>
<td>• Envelope 1 &amp; Envelope 2 as detailed in section 4</td>
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<tr>
<td></td>
<td></td>
<td>• Minimum Eligibility Criteria ~ <strong>Annexure A</strong></td>
</tr>
<tr>
<td>8.</td>
<td>Envelope 1: Technical Proposal (1 Original + 2 Copies)</td>
<td>• RFP document signed by authorized bid signatory on all pages.</td>
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<tr>
<td></td>
<td></td>
<td>• Checklist of Submissions ~ Annexure 1</td>
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<td></td>
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<td>• Covering Letter ~ Annexure 2</td>
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<td></td>
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<td>• Similar Experience ~ Annexure 3 along with supporting documents</td>
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<td></td>
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<td>• Project Appreciation, Approach &amp; Methodology, Work Plan, Organization &amp; Staffing ~ Annexure 3A</td>
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<td></td>
<td>• Curriculum Vitae (CV) for proposed Key Professional Staff ~ Annexure 3B</td>
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<tr>
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<td></td>
<td>• Team Composition and their Task Assignment as required by RFP ~ Annexure 4</td>
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<td></td>
<td></td>
<td>• Staffing Schedule for Key Professional, Support Technical Staff &amp; Works Schedule ~ Annexure 4A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Summary of Costs ~ Annexure 5A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Breakdown of Costs (Remuneration, Reimbursable Expenses, Miscellaneous Expenses) ~ Annexure 5B</td>
</tr>
<tr>
<td>10.</td>
<td>Presentation</td>
<td>At the time of Technical proposal evaluation, the Consultants may be called by APCRDA for presentation of their approach and methodology for the assignment. The consultants shall attend the presentation along with the key personnel’s at their own cost</td>
</tr>
<tr>
<td>11.</td>
<td>Consultancy Period</td>
<td>Eight (8) Months. Refer 5.10 of TOR</td>
</tr>
<tr>
<td>12.</td>
<td>Bid Security</td>
<td>Rs. 1,00,000/-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bid security shall be paid unconditional and irrevocable bank</td>
</tr>
<tr>
<td>No.</td>
<td>Key Information</td>
<td>Details</td>
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<tr>
<td>-----</td>
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<tr>
<td></td>
<td></td>
<td>guarantee on Rs.100/- non judicial stamp paper, valid for six months from the last date prescribed for submission of tenders, in favour of Commissioner APCRDA, Vijayawada bid security (EMD) shall be valid for 6 months from the date of submission.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• EMD of unsuccessful bidder shall be returned upon signing of agreement by successful bidder. EMD of successful bidder shall be adjusted against performance security.</td>
</tr>
<tr>
<td></td>
<td><strong>Performance Security</strong></td>
<td>• The successful Bidder once it has signed the Contract Agreement and furnished a valid Performance Security as required. The Authority may, at the Selected Bidder's option, adjust the amount of Bid Security in the amount of Performance Security to be provided by him in accordance with the provisions of the Bidding Document;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• the unsuccessful Bidders at the same time as in (c), that is, when they are informed about the successful establishment of the contract with the successful Bidder</td>
</tr>
</tbody>
</table>


4. **Section – IV: PREPARATION, SUBMISSION AND EVALUATION OF PROPOSALS**

4.1 **GENERAL**

a. The firms shall bear all costs associated with the preparation and submission of its proposal, including site visits, field investigations, data collection, analysis, etc. as also any discussions/negotiations. The authority shall not be responsible or liable for any such costs incurred.

b. The firms should submit their proposals individually.

c. Adherence to formats, wherever prescribed, is required. Non-adherence to formats might be a ground for declaring a proposal non-responsive.

d. All communication and information shall be provided in writing and in English language only.

e. All communication and information provided should be legible, and wherever the information is given in figures, the same should also be mentioned in words. In case of conflict between amounts stated in figures and words, the amount stated in words will be taken as correct and final.

f. An authorized representative shall sign all pages of Original Technical and Financial proposals. The representative’s authorization shall be in the form of a written form of power of Attorney accompanying the proposal.

4.2 **PREPARATION AND SUBMISSION OF PROPOSALS**

a. The Proposals shall be prepared in separate envelopes as under.

i. **OUTER ENVELOPE:** a) Cost of the RFP Document (DD for the amount Rs. 10,000/-) as per the details mentioned in Schedule of Tender Process b) Annexure A as per Data Sheet (Minimum Eligibility Criteria) along with supporting documents, Including Envelope I and Envelope II.

ii. **ENVELOPE I:** Technical Proposal

iii. **ENVELOPE II:** Financial Proposal

b. Cost of the RFP Document (DD for the amount Rs. 10,000/-), Annexure-A, Envelopes I and II shall be sealed, signed and placed in the Outer Envelope. The Outer Envelope, containing the said two envelopes (envelopes I & II) along with Cost of the RFP Document (DD for the amount Rs. 10,000/-) and Annexure A as per Data Sheet shall be properly signed, stamped, sealed and submitted.

*Outer Envelope shall be sealed, labelled as “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”*

The two separate sealed envelopes containing the technical and financial proposals, should be placed in one sealed cover and labeled. Proposals must be submitted no later than the following date and time: …………………………………………………

The proposal submission address is **Director, Procurement Wing, APCRDA, Lenin Centre, Governor pet, Vijayawada, Andhra Pradesh – 520002**

4.3 **SUBMISSIONS IN ENVELOPE I (TECHNICAL PROPOSAL)**

The Envelope I shall contain the following documents.
Project Preparation Consultancy Services for Integrated Public Transportation System (BRTS along with Feeder System) in APCR

a. Signed RFP document
b. Checklist of Submissions as per Annexure 1
c. Covering Letter as per Annexure 2
d. **Relevant Experience of Applicant:** Experience Details of the firm (preceding PDD) in Traffic & Transportation Projects shall be submitted in the format enclosed as Annexure 3. The experience is categorized into sectors/areas as below:
   i. **Traffic and Transportation Studies:** Conducting Traffic and Transportation Studies like Comprehensive Transportation Study, Comprehensive Mobility Plans and public Transport planning / studies in particular for the cities with criteria as mentioned in 4.(i) of data sheet;
   ii. **Planning of Integrated Public Transport System (BRTS) projects:** Planning, designing and implementation (project management) for Integrated Public Transport System (BRTS) projects in cities with criteria as mentioned in 4.(ii). Planning of feeder/IPT system for the above proposed Public Transport System must be an integral part of the study.
   iii. **Traffic & Transportation infrastructure development projects:** Project structuring, financial modeling, bid process management, etc., for traffic & transportation infrastructure development works with criteria as mentioned in 4 (iii).
e. **Project Appreciation, Approach & Methodology, Work Plan, Organization & Staffing:** Details of the assignment along with the study approach and methodology in the format as enclosed in Annexure 3A
f. **Curriculum Vitae (CV) for proposed Key Professional Staff** in the format as enclosed in Annexure 3B
g. **Team Composition and their task assignment:** Details of key personnel for engagement in this assignment in the format enclosed as Annexure 4. The proposed team shall be the existing employees/regular employees/retained consultant of bidding firm exhibiting association with bidding firm at least for the last two (2) years from the date of proposal submission.
h. **Staffing Schedule for Key Professional & Support Technical Staff & Works Schedule** in the format as enclosed in Annexure 4A

Envelope I (Technical Proposal) shall be sealed, labelled as “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”

SUBMISSIONS IN ENVELOPE II (FINANCIAL PROPOSAL)
The financial proposal shall contain the professional fee (price quote) of the firm in Indian Rupees that is inclusive of transport, printing and stationery and all other expenses except service tax. The financial proposal shall be submitted in the format enclosed as Annexure 5. Also the following supporting formats need to be submitted
- Summary of Costs ~ Annexure 5A

---

1 No project shall be repeated under different categories for claiming experience
• Breakdown of Costs (Remuneration, Reimbursable Expenses, Miscellaneous Expenses) ~ Annexure 5B

Envelope II (Financial Proposal) shall be sealed, labelled as “FINANCIAL PROPOSAL FOR “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”

4.4 SIGNING OF PROPOSALS
The Authorized Signatory shall sign or initial each page of the proposal documents along with the stamp of the firm. They should also sign & stamp each page of the RFP & return the same along with proposal to APCRDA.

4.5 OPENING OF PROPOSALS
a. Proposals received by the due date and time and in sealed condition will only be considered for opening and evaluation. Proposals other than the above will be summarily rejected.
b. Firms that submitted the proposals will be duly intimated with the date, time and venue for opening the proposals received as above. Authorized representatives of the participating firms are requested to be present during proposal opening.
c. The details of the authorized representatives (who choose to attend) present will be recorded.
d. Name of the firms that submitted the proposals will be read aloud in the presence of firm’s representatives and will be recorded.
e. Each proposal will be given a number in the ascending order and will be recorded against total number of proposals. For instance, if the total number of proposals received is five, the first proposal will be recorded as 1/5, the second as 2/5 and so on.

4.6 OPENING AND EVALUATION OF OUTER ENVELOPE
a. Outer Envelope shall be opened and checked for the following and will be recorded accordingly.
   i. Cost of the RFP Document (DD for the amount Rs. 10,000/-) as per the details mentioned in Schedule of Tender Process
   ii. Annexure A as per Data Sheet (Minimum Eligibility Criteria) along with supporting documents.
   iii. Sealed Envelope I (Technical Cover).
   iv. Sealed Envelope II (Financial Cover) ~ sealed and stamped
b. Evaluation of Outer Envelope shall be undertaken only if all the documents are submitted as above.
c. Annexure A and supporting documents will be evaluated for Minimum Eligibility Criteria as per the Data Sheet.
d. Proposals meeting the minimum eligibility criteria will only be considered for further evaluation of the Proposals.
e. Applicants not meeting the minimum eligibility criteria as above are deemed to be disqualified and will be barred from further evaluation of their tender. No correspondence or representation will be entertained and APCRDA’s decision will be final in this regard.
4.7 OPENING AND EVALUATION OF ENVELOPE I (TECHNICAL PROPOSAL)

a. Evaluation of Technical Proposal will be taken up only if the applicant meets the minimum eligibility criteria as mentioned in the data sheet.

b. The Envelope I of the eligible proposals will be opened in the ascending order (1/5, 2/5, etc.) and checked for all the mandatory documents duly signed as per the list provided above and in the prescribed formats. APCRDA shall take a decision at its sole discretion with regard to proposals without any of the said documents or documents submitted in any other format other than the prescribed.

c. Maximum marks under Technical proposal are 100, with the following breakup.

i. Experience of the Applicant: **30 marks** (refer Annexure 3)

ii. Project Appreciations, Approach and Methodology, Work Plan, Organization & Staffing (not more than 100 pages): **20 marks** (refer Annexure 3A)

iii. Team Composition: **50 marks** (refer Annexure 3B)

d. The technical proposals will be marked based on the following evaluation criteria.

- **Traffic and Transportation Studies:** Each project experience in this category as defined in clause 4.3 (d-i) will carry two (2) marks subject to a maximum of twelve (12) marks.

- **Planning of Integrated Public Transport System (BRTS) projects:** Each project experience in this category as defined in clause 4.3 (d-ii) will carry six (6) mark subject to a maximum of twelve (12) marks.

- **Transport infrastructure development projects:** Each similar sector project as defined in clause 4.3 (d-iii) will carry will carry two (2) marks subject to a maximum of Six (6) marks.

*Experience from Government/Public Agency Projects will only be considered. No project shall be repeated under different categories mentioned above. Marks will not be provided for a repeated project under any category.*

4.8 Adequacy of the proposed “Approach and Methodology” in responding to the Terms of Reference (TOR).

a. Project Appreciation: 5 marks

b. Approach and Methodology: 10 marks

c. Work Program and Organization of Staff: 5 marks

4.9 The team composition (key experts) mentioned in Terms of Reference of RFP (along with minimum experience) will only be considered for marking under clause (4.8, c-iii) above. Key experts mentioned in TOR are allocated maximum marks as below.

<table>
<thead>
<tr>
<th>Sl no.</th>
<th>Position of Key experts</th>
<th>Allocated maximum marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Team Leader and Transport Expert</td>
<td>10</td>
</tr>
<tr>
<td>2.</td>
<td>Transport Planner/Traffic and Transportation Engineer</td>
<td>6</td>
</tr>
<tr>
<td>3.</td>
<td>Urban Transport/ITS Expert</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Structural Design Engineer</td>
<td>2</td>
</tr>
<tr>
<td>5.</td>
<td>Road/Pavement Design Engineer</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>Geo-Tech/Material Specialist</td>
<td>2</td>
</tr>
<tr>
<td>7.</td>
<td>Architect/Landscape Specialist</td>
<td>3</td>
</tr>
<tr>
<td>8.</td>
<td>Social Specialist</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>Environmental Specialist</td>
<td>2</td>
</tr>
</tbody>
</table>
10. Quantity Survey Specialist 3
11. Infrastructure Engineer (Urban Systems) 4
12. Electrical Engineer 2

Total 50

Each team member will be eligible for marking (as above) only if each of them:

a. fulfills the minimum number of years of experience & qualification as stipulated in section 5.8 of the TOR,
b. is the existing employee/regular/retained consultant of the bidding firm exhibiting association with bidding firm for minimum of two (2) years from the Proposal Due Date.

Either the team leader or any one of the key professional shall be employed & located in Vijayawada for the project duration for regular project coordination.

- **Team Leader and Transport Expert**: A total of ten (10) marks are allocated to Team Leader.
- **Other Experts**: A total of fifty (40) marks are allocated between rests of the key experts as in 4.8 d iii as per experience stipulated in section 5.8 of TOR.

- Evaluation under the Team Composition shall be undertaken as per the following framework.

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relevant Educational Qualification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Relevant Post Graduation</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>Relevant Professional Experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Overall Experience</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>(b) Professional Experience specific to assignment</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Adequacy of Assignment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Number of Similar assignment*</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>(b) Additional assignments above the Similar assignment*</td>
<td></td>
</tr>
</tbody>
</table>

*"Similar assignment" means a similar role undertaken by the said expert for Traffic and Transportation Studies/Comprehensive Transportation Study/Comprehensive Mobility Plans/Public transport planning studies anywhere in the world of the same size mentioned in section 4.3 d (i), (ii), (iii) of TOR

Note: - Evaluation to be based on the attested CVs and supporting documents submitted by the bidder for each of the candidates/ key personnel. Attestations of CVs to be done by senior leadership of the bidding firms and the candidate.

# At the time of Technical proposal evaluation the Consultants may be called by APCRDA for presentation of their approach and methodology for the assignment. The consultants shall attend the presentation along with the key personnel’s at their own cost.

4.10 OPENING AND EVALUATION OF ENVELOPE II (FINANCIAL PROPOSAL)

a. The Envelope II of those Firms that scored a minimum of seventy (70) marks in the technical proposal (Envelope I) will only is opened.

b. The price proposals shall be checked for substantial compliance. If the submission is in substantial compliance with the Price Proposal, then, the review and evaluation of the
same would be undertaken. If the submission does not satisfy the criteria, the submission will be rejected and such firm will be eliminated from further evaluation process.

c. **Requirements for Substantial Compliance:** Prior to the detailed evaluation of the Price Proposal, it would be determined whether each Price Proposal:
   i. Has been properly signed and contains the required representations or commitments;
   ii. Is presented in a manner that conforms with the requirements of the RFP including the specified format;

d. **Material Deviation:** A material deviation or reservation is one
   i. Which affects in any substantial way the requirements of the RFP and performance of the Project; or
   ii. This is substantially inconsistent with the requirements of the RFP.
   iii. Whose rectification would affect unfairly the competitive provision of other competing firms presenting substantially responsive proposals.

e. **Evaluation:** The financial proposal that has the lowest quote (L1) among all the financial proposals opened shall be given one hundred (100) marks. The remaining price quotes (L2, L3, L4, etc.) will be marked in reference to L1.

4.11 **COMBINED EVALUATION OF TECHNICAL AND FINANCIAL PROPOSALS UNDER QCBS**

This is the final stage of proposal evaluation. As per the predefined QCBS evaluation criteria, 80% weightage will be given to technical score and 20% to the financial score. Accordingly, 80% of the technical marks and 20% of the financial marks will be combined/ summed up to arrive at the final marking. For example, if the technical score of a particular firm is 80 marks and financial score is 90 marks, then the combined technical and financial score in the ratio of 80:20 will be as computed below.

- 80 percent of technical score = 0.8 * 80 = 64 marks
- 20 percent of financial score = 0.2 * 90 = 18 marks
- **Total combined score** = 82 marks

4.12 **CRITERIA FOR SELECTION OF CONSULTANT**

The sole criterion for selection of the consultant is the highest combined technical and financial scores in the ratio of 80:20 respectively (80% technical score and 20% financial score). In the event of more than one firm score the same highest marks, APCRDA may call those firms (limited to only such firms) for negotiation/ resubmission of the financial proposal. In such a case, firm that offers the lowest price quote will be the selected consultant.

4.13 **COMMENCEMENT OF ASSIGNMENT**

The firm shall initiate the services within fifteen (15) days of signing the Consultancy Agreement.
5. Section – V: TERMS OF REFERENCE

5.1 INTRODUCTION

5.6.1 Andhra Pradesh Capital Region and existing Transportation Infrastructure

Andhra Pradesh, which is India’s eighth largest state by area is one of the foremost states undergoing large-scale urban development. Andhra Pradesh Capital Region Development Authority (APCRDA) was enacted by Govt. of Andhra Pradesh (GoAP) through an Act (Act no.11 of 2014) with an area of 8,603.32 Sq.km to establish a new capital for the state of Andhra Pradesh and for the purposes of Planning, Co-ordination, Execution, Supervision, Financing, Funding, Promoting and Securing the planned development. GoAP envisaged the development of world-class capital of Andhra Pradesh, i.e. Amaravati with an area of 217 Sq.Km which is located in between Vijayawada & Guntur cities within Capital Region.

Road Connectivity:
- APCR is well connected with the surrounding economic hubs such as Visakhapatnam (AP), Hyderabad (TS), Chennai (TN), Bengaluru (KA), etc., by air, rail, road, and ports. Six (6) major National Highways, eight (8) State Highways and other major roads run across the state that connects to other key cities in the country.

Rail Connectivity:
- Vijayawada Railway Junction is termed as one of the largest Railway Stations in India; there are around five (5) railway junctions in APCR. Daily more than 250 express and 150 freight trains pass through Vijayawada railway Jn. connecting Chennai, Kolkata and New Delhi.

Water Connectivity:
- National Waterway 4 (NW-4) is a 1,095 km long waterway in India between Kakinada-Pondicherry canals along with Godavari and Krishna rivers is passing in Capital Region is currently under development by IWAI.

Air Connectivity:
- Vijayawada Airport is a public international airport serving Andhra Pradesh Capital Region. The airport is located at Gannavaram near Vijayawada, where NH-16 connecting Chennai to Kolkata passes through.

The APCR continues to be the focal point of hope, aspirations and opportunities for a wide range of urban migrants seeking to improve their well-being and economic advancement. From an overall planning, economic and transportation perspective, all the urbanized areas of the Region are functioning as a single entity with people travelling between municipal jurisdictions for work, education, shopping and personal needs.

Given the growth dynamics and dimensions of Core Region such as Vijayawada, Guntur, Amaravati and surrounding urban fringes will force transportation problems leading to the need of planning and developing transportation systems on a sustainable basis. APCRDA with the Technical Cooperation/Assistance of JICA has taken up the mandate of preparing a Comprehensive Traffic & Transportation Study (CTTS) for developing short, medium, long term transportation vision and perspective for APCR.

5.6.2 Amaravati and its Planned Road Infrastructure

Amaravati, the People's capital of Andhra Pradesh, is envisioned to be a city of world-class standards with a vision of increasing Andhra Pradesh’s prominence in the world. The
Land Pooling scheme adopted by Amaravati is the largest and the most successful of its kind in India, and is a manifestation of the people's desire for a world-class capital.

Grid pattern is considered in planning the city road network of Amaravati. Radburn pattern of road network is followed in developing the township/neighborhood model. Considering the importance of transportation infrastructure for development of a city, Amaravati road network is planned by following the hierarchical system. With an objective of safe, efficient and seamless connectivity elements the public transportation system is planned well-spread over the city. The following table represents the planned transportation infrastructure and public transportation system of Amaravati.

<table>
<thead>
<tr>
<th>No.</th>
<th>Road Type</th>
<th>ROW</th>
<th>Length</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Major Arterial Road</td>
<td>60</td>
<td>51.70</td>
<td>Regional Connectivity</td>
</tr>
<tr>
<td>2</td>
<td>Arterial Road</td>
<td>50</td>
<td>88.20</td>
<td>City Transportation</td>
</tr>
<tr>
<td>3</td>
<td>Seed Access Road</td>
<td>60</td>
<td>19.30</td>
<td>Seed Area Connectivity</td>
</tr>
<tr>
<td>4</td>
<td>Sub-Arterial Road</td>
<td>50</td>
<td>158.40</td>
<td>Prioritized Public Transport Corridor</td>
</tr>
<tr>
<td>5</td>
<td>Collector Road</td>
<td>25</td>
<td>324.57</td>
<td>Township Connectivity</td>
</tr>
<tr>
<td></td>
<td><strong>Total (Km)</strong></td>
<td></td>
<td><strong>590.47</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Road Type</th>
<th>ROW</th>
<th>Length</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>LPS Roads</td>
<td>25</td>
<td>79.94</td>
<td>Township Connectivity</td>
</tr>
<tr>
<td>7</td>
<td>Township Streets (Type I)</td>
<td>17</td>
<td>579.30</td>
<td>Residential Streets</td>
</tr>
<tr>
<td>8</td>
<td>Township Streets (Type II)</td>
<td>15.6</td>
<td>355.42</td>
<td>Commercial Streets</td>
</tr>
<tr>
<td>9</td>
<td>Township Streets (Type III)</td>
<td>12</td>
<td>66.83</td>
<td>Employment Streets</td>
</tr>
<tr>
<td></td>
<td><strong>Total (Km)</strong></td>
<td></td>
<td><strong>1081.49</strong></td>
<td></td>
</tr>
</tbody>
</table>

The Capital Region Development Authority (CRDA) is leaving no stone unturned to provide cutting-edge infrastructure, comfortable livelihood and immense prosperity for the People of Amaravati.
5.2 INTEGRATED PUBLIC TRANSPORTAION SYSTEM (BRTS ALONG WITH FEEDER/IPT SYSTEM)

As per 2011 census, the population of APCR is 58,00,000 having population of Vijayawada as 10,48,240 and population of Guntur as 7,43,354 which are the second, third largest cities of AP respectively. While Vijayawada is a major trading and business center which is known as “The Business Capital of Andhra Pradesh”; Guntur is the base for agriculture exports for chilies, cotton and tobacco. These two cities and Capital City- Amaravati put together will provide the critical mass and eventually create demand for future development in the capital city region. Since, these three cities will be in close proximity it will be critical to seamlessly integrate the new city with the existing ones. Amaravati and Vijayawada will grow as twin cities in future and ultimately emerge as a Mega City by 2050. The majority of departments and officials of the AP state government along with office of the Chief Minister of Andhra Pradesh are now functioning from interim facilities located in Velagapudi, Amaravati. The Andhra Pradesh Legislature is also relocated to newly developed interim legislative buildings in Velagapudi.

APCRDA aims to develop a mass public transit system for the Capital city of Amaravati and connecting it with the key nodes within the Capital Region. Amaravati proximity to urban centres like Vijayawada and Guntur will ensure that the broader capital will provide a large talent pool and coupled with necessary infrastructure will provide a good option for companies to move into Andhra Pradesh. To accommodate the projected growth in population, a mass public transit system is necessary for the capital region to enable efficient mobility. Sub-Arterial Roads along with Seed Access Road planned in Amaravati comprises to around 180 km are proposed to have a dedicated Public Transport Corridor. Currently, bus transport service provided by the Andhra Pradesh State Road Transport Corporation (APSRTC) is the only mode of public transport presently available in the region.

The Bus Rapid Transit System (BRTS), which has been successfully launched in Vijayawada in 2008. Six BRTS corridors were proposed based on a CTTS and DPR for BRT study. The BRTS for Vijayawada was planned before the consideration of Amaravati, and therefore there is an opportunity to expand and/or incorporate the BRTS to Amaravati, as well as to satellite cities in the Capital Region. Also along with proposed Public Transportation System for its success there is a need to plan Feeder/IPT system. So there is a need to plan for Feeder/IPT system in Amaravati also to meet the needs of evolving PT corridors.

5.3 OBJECTIVES OF THE STUDY

The project preparation consultant is expected to partner APCRDA in making successful Integrated Public Transport System (BRTS along with feeder system) for Amaravati connecting Vijayawada and Guntur with its foundation of robust project preparation and procurement documentation assistance. Accordingly, the laid down objectives are:

2. Preparation of Detailed Report with Engineering, Planning and Architectural core design principals. Developing the system design which is duly integrated, implementable and optimal for Integrated Public Transport System (BRTS along with feeder system).
5.4 **SCOPE OF SERVICES**

5.4.1 **Brief Scope of Services**

The scope of services for consultancy services is provided in brief for quick appreciation but not limited to stated major heads below:

1. Identifying the Potential Public Transport corridors connecting Amaravati from Vijayawada and Guntur along with planning of BRT in Sub-Arterial Roads of Amaravati.
2. Primary data gathering and studies.
3. Establishment of Demand and Modeling.
5. Designs/Concepts for Public Transport corridor and allied infrastructure, fleet size, bus technology and ITS applications including ATC.
6. Costing, project scheduling and Economic viability.
7. Source of funding, business model and financial viability.
8. Institutional Structure.
12. Way forward on branding.
13. Skill and knowledge Transfer

These major heads are clubbed under Staged Project Preparation as:

- **STAGE I: FEASIBILITY STUDY**
- **STAGE II: DETAILED PROJECT REPORT**

5.4.2 **Detailed Scope of Services**

The detailed scope of services is provided here under towards understanding the same as the basis for meeting of the laid down objectives. In a no way it shall be construed that the detailed scope of services elaborated under different stages is the scope. It shall be read in true spirits towards addressing the assignment objectives and making Integrated Public Transportation System (BRTS along with feeder system) for APCR as implementable and successful over planned design life. All the relevant standards, specifications and best of the industry practices need to be followed while attending to the scope. Even the departure at junctures than best of the industry practices which is felt better in the interest of the project shall be duly discussed, deliberated with the client for providing justice to the best of the project preparation.

5.4.3 **Stage I: Feasibility Study**

5.4.3.1 **Contextual Document Study of Amaravati**

The Consultant shall put required efforts in gathering various approved/notified/draft/underpreparing documents and reports related to Amaravati for contextual study. It is expected that Consultant and core team understand macro perspective of Planning of Public Transportation Corridors emerging from Amaravati Master Plan in general while gathers detailed input for connectivity corridors from the surrounding cities such as Vijayawada,

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2 DPR-Pertains to Detailed Engineering, Planning, Architectural core designs with prevailing standards and best industry practices. This includes related implementation, operational, cost optimisation and safety aspects too.
Guntur, etc., in particular. Such appreciation shall enable Consultant to develop his own understanding and help in evolving methodology to address the project preparation objective of this assignment.

5.4.3.2 Identifying the Potential Public Transport corridors connecting Amaravati from Vijayawada and Guntur along with planning of BRT in Sub-Arterial Roads of Amaravati.**

Carrying forward from document study the consultant needs to review and identify the potential Public Transport corridors connecting Amaravati from Vijayawada and Guntur along with planning of BRT in Sub-Arterial Roads of Amaravati. Identification of important activities and primary/secondary transit network in Amaravati along with Vijayawada and Guntur during the initial years shall be appreciated with reference to BRTS.

Consultants need to understand the plans, ongoing activities and needs to roll out a phased plan for meeting the 80% Public Transport share objective in Amaravati by 2050. A detailed exercise in context on development activities in Amaravati needs to be worked out by the consultants. Any review in Road Network of master plan required need to be updated.

Consultants understanding the Amaravati development plan and its impact on the surrounding cities such as Vijayawada, Guntur, etc., during its development needs to propose the Public Transport Corridors connecting Amaravati to meet the required transport needs. The Potential Transport Corridors must be planned connecting the major activity centers such as Transport Terminals, Employment centers, Larger residential pockets, Activity centers, etc.,

Invariably looking at broader network plan with specific reference to BRT, the Consultant shall study the existing transit behavior in the project influence area and its due integration. While attending to such task Consultant shall also look at Master Plans, population densities and linking up of various income areas to provide mobility choices. SIIMP Master Plan, Draft Perspective Plan, CTTS-Vijayawada, BRTS-Vijayawada, etc., report shall be advantageously used to this respect.

Benchmarking of cities with best public transportation systems in the world and recommendations in developing the objectives of the study and meeting the vision of Amaravati.

5.4.3.3 Reconnaissance Survey**

Carry out reconnaissance survey on the identified proposed corridors in Amaravati and existing corridors in surrounding cities for identification of present characteristics and specific concerns such as encroachment and certain obligatory aspects.

The Consultants should make an in-depth study of the available land width (ROW) topographic/strip maps and available satellite imageries of the project area and other available relevant information collected by them concerning the existing alignment. Consultant himself has to arrange the required maps and the information needed by him from the potential sources.

The detailed ground reconnaissance may be taken up immediately after the study of maps and other data. The primary tasks to be accomplished during the reconnaissance surveys include
i. typical physical features along the existing alignment within and outside ROW i.e. land use pattern;
ii. possible alignment alternatives, vis-à-vis, scheme for the construction of additional lanes parallel to the existing road;
iii. realignment requirements including the provision of Flyovers and viaduct for pedestrian crossings with possible alignment alternatives;
iv. preliminary identification of improvement requirements including treatments and measures needed for the crossroads;
v. traffic pattern and preliminary identification of traffic homogenous links;
vi. sections through congested/constrained areas;
vii. inventory of major aspects including land width, terrain, pavement type, carriageway type, bridges and structures (type, size and location), intersections (type, crossroad category, location), land use (type, location, extent), geologically sensitive areas, environmental features:

viii. critical areas requiring detailed investigations; and,
ix. requirements for carrying out supplementary investigations.
x. soil (textural classifications) and drainage conditions
xi. type and extent of existing utility services along the alignment (within ROW).

The data derived from the reconnaissance surveys are normally utilized for planning and programming the detailed surveys and investigations. All field studies including the traffic surveys should be taken up on the basis of information derived from the reconnaissance surveys.

The data and information obtained from the reconnaissance surveys should be documented. The data analysis and the recommendations concerning alignment and the field studies should be included in the Inception Report. The data obtained from the reconnaissance surveys should form the core of the database which would be supplemented and augmented using the data obtained from detailed field studies and investigations.

The data obtained from the reconnaissance surveys should be compiled in the tabular as well as graphical (chart) form indicating the major physical features and the proposed cross section design and/or widening scheme for comments. The data and the charts should also accompany the rationale for the selection of traffic survey stations.

The consultants shall be required to carry out videography of all the corridors involved in the study. Such videography shall cover the available RoW and should be so organized as to focus on important features including encroachment, unauthorized occupations of RoW and other road features.

5.4.3.4 Secondary data**
Consultant shall collect relevant secondary data regarding:
- Right of way and Road Development Plans/Urban Transport Improvement Proposals (road widening / Improvements, flyovers. subways) of the entire corridor from the relevant planning agencies;
- Signal phasing / ATC plans for all intersections and traffic management measures along the entire corridor;
- Existing Off-Street parking provisions in the Influence area of corridor and any new parking proposals planned; and
- Bus routes with frequency and number of buses operating on the corridor.
5.4.3.5 Traffic Surveys**
To carry out detailed primary traffic and travel surveys along the corridor and data analysis with interpretations. These surveys shall include:

- **Speed and Delay survey** should be done separately for the traffic stream and for buses, both peak and off peak period to assess the journey and running speeds along with delays along the entire length of the corridor.
- **Road Network Inventory Surveys** of entire length of corridor including all Intersections and service roads in the influence area;
- **Boarding/Alighting survey** of passenger at major bus stops. This survey shall provide an estimate of bus stop loads as well as total bus passenger demand on the corridor;
- **Origin/Destination cum Opinion Survey** both for bus and Intermediate Public Transport/private modes (auto-rickshaws and two-wheelers) at all major bus stops and intersections respectively during peak periods on sample basis. The O-D survey for bus passengers shall be conducted at all the bus stops on the selected corridors and shall provide an estimate of distance wise bus passenger demand on the respective corridor. The O-D cum opinion survey for other users shall in addition provide the potential shift to the new system;
- **Direction-wise Classified Traffic Volume Survey** All types of modes shall be counted separately and Passenger Occupancy survey carried at all intersections. This survey shall provide information on section wise daily and peak hour traffic volume and composition on the corridors;
- **Traffic Signal Time and Saturation Flow Survey** at all signalized intersections for morning, midday and evening peaks as well as off peak period.
- **Pedestrian Survey** at all major intersections for peak periods. Both along and across movements need to be counted to gauge the Intensity of pedestrian Traffic for provision of requisite pedestrian facilities as well as minimizing pedestrian vehicular conflicts.
- **Stated Preference Survey** at the major rail, bus, air terminals, bus stops with the passengers who are commuting with various modes may be interviewed to under the choice of the passengers.
- Any other Survey as required to meet the objective of the study.

5.4.3.6 Reconnaissance and Strip Map**
A detailed reconnaissance along the proposed alignment of BRTS shall be conducted to map out various features within proposed RoW and constraints that may impact design and cost. A strip map prepared so shall be used in feasibility stage to develop various cross-sections and preliminary cost estimates.

5.4.3.7 Road & Pavement Investigation**
5.4.3.7.1 Pavement Composition
i. The data concerning the historical pavement composition shall be collected from concern authorities; however, the consultants shall make trial pits to ascertain the pavement composition.
ii. For each such representative test pit, the following information shall be recorded: test pit reference (Identification number, location); pavement composition (material type and thickness); and subgrade type (textural classification) and condition (dry, wet).
5.4.3.7.2 Road and Pavement Condition Surveys

i. Detailed field studies shall be carried out to collect road and pavement surface conditions. The data should generally cover:
   - pavement condition (surface distress type and extent);
   - shoulder condition;
   - embankment condition; and
   - drainage condition

ii. The objective of road and pavement condition surveys is to identify defects and sections with similar characteristics. All defects shall be systematically referenced, recorded and quantified for the purpose of determining the mode of rehabilitation.

iii. The pavement condition surveys shall be carried out using visual means. Supplemented by actual measurements and in accordance with the widely accepted methodology (AASHTO, IRC, OECD and TRL Publications) adapted to meet the study requirements. The measurement of rut depth would be made using standard straight edges.

iv. The shoulder and embankment conditions shall be evaluated by visual means and the existence of distress modes (cuts, erosion marks, failure, drops) and extent (none, moderate, frequent and very frequent) of such distress manifestations would be recorded.

v. For sections with severe distresses, additional investigations as appropriate shall be carried out to determine the cause of such distresses.

The data obtained from the condition surveys should be analyzed and the road segments of more or less equal performance may be identified.

5.4.3.8 Inventory of Bridges, Culverts and Structures **

The Consultants shall make an inventory of all the structures (bridges, viaducts, culverts, etc.) along the corridors under the project. The inventory for the bridges, viaducts and Flyover/ROBs shall include the parameters required for analyzing the same at this stage. The inventory of culverts shall be presented in a tabular form covering relevant physical and hydraulic parameters.

5.4.3.9 Hydraulic and Hydrological data**

The Consultants shall make a desk study of available data on topography (topographic maps, stereoscopic aerial photography), storm duration, rainfall statistics, top soil characteristics, vegetation cover etc. so as to assess the catchments areas and hydraulic parameters for all existing and proposed drainage provisions. The findings of the desk study would be further supplemented and augmented by a reconnaissance along the area. All important hydrological features shall be noted during this field reconnaissance. The Consultants shall collect information on high flood level (HFL), low water levels (LWL), discharge velocity etc. from available past records, local inquiries and visible signs, if any, on the structural components and embankments. Local inquiries shall also be made with regard to the road sections getting overtopped during heavy rains.

5.4.3.10 Condition Surveys for Bridges, Culverts and Structures **

The Consultants shall thoroughly inspect the existing structures and shall prepare a report about their detailed condition. The condition and structural assessment survey of the bridges / culverts / structures shall be carried out by subject experts of the Consultants.
5.4.3.11 Data Analysis and Design Basis**
Establish Transport Demand and Modelling
- The consultants shall make demand estimates and establish possible scenarios. Appropriate models shall be used to factor present and planned interventions.
- The demand estimates shall be done for a further period of 30 years.
- The models must be developed and validated.
- Consultant shall evaluate various alternatives with reference to BRTS and other systems.

5.4.3.12 Engineering Basis**
Based on primary inventory and condition of roads, structures and other related infrastructure, Consultant shall establish typical representative sections. Having their diagnostics in place existing cross section and base maps shall be prepared.

5.4.3.13 Preliminary Roadway and Infrastructure Design**
All elements of roadway design and supporting infrastructure should be covered under this stage. Options of median bus lanes/ side bus lanes should be studied and their suitability for specific corridors shall be analyzed. This shall include preparing a physical inventory of identified corridors and discussion with the stake holders to identify exact alignments, requests for land acquisition, and to know the extent of government land availability along the corridors. The following specific elements should be detailed:

5.4.3.13.1 Cross-Sections
This shall look at strategies to design appropriate cross sections for BRTS/Feeder corridors. Recommendations on setting priorities for various road users (MV traffic, cycle tracks, parking, utilities etc.) shall be given. It should look into locations for street lights and utility corridors. Various options based on past experiences as well local inputs shall be explored and final recommendations given. It shall provide options for cross sections with the advantages/disadvantages of each option detailed out to enable authorities to choose the appropriate design.

Options for street furniture including road side furniture, special vending areas, public facilities, signage system, railing/ fencing, bollards etc. shall be dealt appropriately.

5.4.3.13.2 Position and Location of Bus Stops
Various issues associated with median and kerb side bus stops need to be duly explored with standard specific situations. Accordingly appropriate recommendations with preliminary design are warranted. While addressing positioning of bus stops Consultant shall look at the spacing of bus stops from junction and/ or mid-block bus stops and pedestrian access; also the issues associated with them. It should invariably ponder upon the impacts of the location on buses clearing junctions quickly (keeping in mind proposed headway during peak hours) and recommend suitable option/s.

This in-turn should enable in proposing optimum spacing between bus stops for the entire corridor. While considering the spacing and positioning of bus stops, the points need to be kept in mind are surrounding land use, proposed future development and RoW issues etc.

5.4.3.13.3 General Arrangement of BRT Stations
The aspects of circulation of bus stops, passenger facilities, signage system, aesthetics, door and control systems, docking arrangements, ticketing system, disabled friendly design,
branding etc. need to be considered in evolving general arrangement for bus stops. It should see the flexibility of bus stop to accommodate standard as well as articulated buses. It is more important that Consultant designs general arrangement which responds to local needs, natural and/or adequate lighting and ventilation, protection from high winds and rain as well as materials. Also keeps in mind aesthetic finish, local climatic conditions, building material and architecture.

It should look at feasibility of providing amenities for passengers such as drinking water, ATM, small vending kiosks etc. It shall make provisions for electronic off board ticketing, requirements of providing sliding doors, space for advertisements to generate revenue, passenger information system space etc. (real time bus status, area maps, fare table, route information). Also need to develop the design of bus stops in terms of its dimensions, platform levels, provision for expansion in future, planning of Pedestrian Crossings from footpath and integration of NMT infrastructure.

5.4.3.13.4 Transit Infrastructure (interchanges, workshops and depots)
All transit infrastructures, including facilities for maintenance of buses shall be taken into consideration. Required interchange facilities shall be identified. Such facilities need to include design of safe, comfortable and efficient transfer between different modes (BRT, city bus, feeder services and rail) at particular location. In cases where some facilities do exist, plans for upgrading the infrastructure should be prepared. Similarly, appropriate locations for depots as well as off peak parking requirements need to be identified.

5.4.3.13.5 Intersection Treatment
Intersection treatments may cover as basic minimum; the safe geometrics of all junctions and strategies to ensure minimum signal cycle times. Options for providing turnaround facilities for buses, safe pedestrian crossing facilities, NMV safety issues and bus priority measures shall be focus areas in intersection treatments.

In addition, this should look at options for traffic management; like provision of one ways for mixed traffic/BRTS, banning of right turns, two phase signals, grade separation of intersections at critical locations etc.

5.4.3.13.6 Lighting
Appropriate recommendation of lighting standards for the entire BRTS corridor, NMT corridor keeping in mind Indian Standards is envisaged. Also lighting standards and adequate provisions for junctions, appropriateness of installing high masts and/ or other special lighting along with bus stops shall be dealt. The feasibility with options for LED/ solar powered and conventional shall be established. Cost effectiveness of various options (halogen/ mercury/ LED) may be explored and deliberated accordingly.

5.4.3.13.7 Upgrading Pedestrian and NMT Infrastructure
As part of this assignment, consultant shall suggest taking up streets for upgrading of pedestrian infrastructure, in addition to BRT corridors. Non-BRT corridors which feed into the system (connecting terminals and bus stops, interchange stations) would be identified for up gradation. This shall involve proposals for sidewalks, pedestrian crossings, disabled friendly elements, street furniture, landscaping, signage and other urban design elements. A network of such streets shall be identified for improved connectivity.
5.4.3.13.8 Preliminary Pavement Design
Preliminary designs for new pavement and overlays (Flexible as well Rigid) shall be dealt in accordance with prevailing IRC Codes. For the purpose of pavement design axle load spectrum shall be obtained with on corridor axle load surveys for pavement design for mixed carriageway. Pavement design for BRTS lane shall be attended as per the repetitions of numbers of axles due to multiple trips made by buses on BRT lane for appropriate design life. Alternative analysis of flexible, rigid and/or other options need to be carried out. BRT, Mixed traffic lanes, junctions/intersections and bus stop pavements shall be addressed adequately for specific treatment and strategy.

An effective drainage system shall be planned and designed for the drainage of mix carriageway, BRT lane and road side amenities such as rest areas, bus stops, footpath, parking area and cycle track.

5.4.3.13.9 General Arrangement Drawings for Structures
Based on detailed inventory and condition of existing structures and for requirement of new structures, Consultant shall prepare general arrangement drawings as per prevailing standards and specifications. This shall form basis of block costing and further detailed design of respective feasible corridors.

5.4.3.14 Integrated Transit Management System (ITMS) **
The primary aim of ITMS is to create an enterprise management system which would allow service in a highly coordinated manner leading to a high productivity and reliable services to the users based on the real time data. It is aimed at creating a system which continually allows the operations to be monitored against accepted service levels and provide improvement opportunities to transit managers to offer services at best operational levels. Planning of Integrated Control Centre for BRT/PT and Feeder system/IPT along with detailed architecture needs be developed by consultants.

Consultant shall examine options for fare collection (off board/ on board), access control, passenger information systems, vehicle location systems, driver communication and control system. It should look at options for integrated transit management system (ITMS). ITMS design may include transit signal management, smart card integration, passenger information system, geographic information system applications on the buses, etc.,

Options for vehicle tracking shall be explored. Route Maps – locations at bus stops, inside buses; planning of last mile connectivity hubs, etc., Integration of on road and on board CCTV cameras, etc., for security & security systems and integration with ICT infra.

Options for an Area Traffic Control System (ATCS) shall be explored. This shall contribute to faster clearing of vehicles at major intersections through signal synchronization. Docking of buses at bus stops is a critical component of BRTS. This shall look at options to enable drivers to dock safely and accurately with use of technology like RFID, infrared, wireless etc. All options should be evaluated and suitable recommendations given. Also real-time passenger and traffic demand must be analyzed on day-to-day, event basis to develop the standard operating protocols for developing the traffic signaling system, to apply TDM, TSM techniques, etc.,
Options for Automatic Fare Collection System (AFCS) should also be evaluated. Solutions for integrating with existing bus services should be looked at. Other elements of ITS such as Automated Vehicle Location System (AVLS), computer aided Vehicle Scheduling and Dispatch System (VSDS), Automated Passenger Information System (APIS) and bus ITS management system shall be analyzed here. Integration of other related citizen services at the bus stops/bus stations and also with the smart cards at kiosks, etc.

5.4.3.15 Operations Planning**
Operations plan is the backbone of any public transit service. Plan shall look at options of trunk and feeder system vis-à-vis an open, closed system and detail out advantages and disadvantages of both. The principal components of operations plan would be:

- Route definition
- Fleet optimization and utilization
- Fleet type: Electric/Hybrid/Normal buses, etc.,
- Frequency of routes in peak hour and off peak hour
- Scheduling of services
- Identification of transfer points to provide appropriate infrastructure
- Assessing boarding/alighting demand at each bus station for its sizing
- Terminal location and sizing

The operations plan shall form the basis of taking critical decisions in system design. This shall be the input for choosing type of system, bus station and junction design as well as turnaround facilities. The plan shall be based on the principles of minimum transfers and balancing demand.

The plan shall suggest locations for terminals/ interchanges/ workshops and depots based on minimizing nonrevenue kilometers. It should also assess the possibility of adapting the existing city services facilities.

The operations plan should also take into account existing bus routes and frequencies and suggest measures to integrate them with BRTS.

5.4.3.16 Feeder System/ Intermediate Para Transit (IPT)
Consultants shall review the existing Feeder System/Intermediate Para Transit (IPT) if any or need to propose an organized new Feeder System/Intermediate Para Transit (IPT) for supporting proposed Public Transport Corridors. An IPT network, routing, fleet size, etc., be developed for the influence area along the Public Transport Corridors. Required surveys, interviews needs to conduct for proposing the system. Best energy efficient systems must be compared and proposed. Fare system proposed and must be integrated along with PT system.

5.4.3.17 Block Costing
By using local unit rates and similar projects in the country the Consultant shall establish costing based on preliminary designs, concepts, general arrangements and minimum possible project specific assumptions.

5.4.3.18 Economic Analysis
For the identified corridors, the economic analysis shall be undertaken using the approach of ‘with’ and ‘without’ project. The study will quantify benefits to society such as reduction in ‘vehicle km travelled’, travel time saved, reduction in greenhouse gases etc.
The benefits shall be estimated in order to assess time series benefit for the evaluation period. The Economic Internal Rate of Return and Net Present Value of the project shall be estimated for a time period of 40 years.

5.4.3.19 Financial Analysis and Project Structuring
In the financial analysis, the study shall focus on the following:
- Costing of entire BRTS project and for each phase shall be taken from earlier tasks.
- Means of financing
- Revenue from various sources
- Fare structure
- Operations and maintenance cost estimates
- Returns assessment
- Sensitivity analysis
- Estimation of Rate of Return, risks assessment

This shall enable to explore several options of funding the project such as PPP, BOT, developer finance model etc. All options shall be explored and recommendations on the most suitable model which fits to the specific conditions of APCR shall be made.

5.4.3.20 Project Prioritization and Packaging
For the identified corridors, as per the economic analysis, study shall prioritize implementation in various phases/packages keeping about 500 crores of investment in each of the implementation package.

Draft feasibility report covering all the aspects as mentioned above shall be presented also to the Ministry of Urban Development, GoI to seek their advice and approval.

5.4.3.21 Institutional Structure
Consultant shall address the aspects of execution and management of the BRT system. Accordingly various options for managing the system including public and private sector participation shall be worked out. Each option should be analyzed and recommendations for the most appropriate structure shall be given. It would also elaborate on role of all stakeholders in implementation of the BRTS. Option of creating an independent “Special Purpose Vehicle (SPV)” to implement and operate BRTS in Capital Region shall also be explored.

5.4.3.22 Skill and knowledge Transfer
(i) The study should advise on the needs and possible scope of professional development and training in transport planning and management.

(ii) Consultant shall propose & organize study visit to minimum top three (3) international cities with best public transportation systems in the world for not less than six (6) core technical officials of APCRDA working on this study for one (1) week to understand the evolution of the system along with its institutions so as to have exposure & interaction with developers.

(iii) Consultant will train core technical official on model update and calibration so that they could use the model proficiently as a planning tool with only minimal assistance from consultants on the need basis after the study is completed.
(iv) Consultants shall conduct two (2) seminars/workshops at various stages during the study period on developing the PT system (1) With various authorities/organizations/agencies dealing with Public Transportation in various forms and (2) With infrastructure developers, operators, funding agencies, etc., to develop the steps for implementing the PT in APCR should be appropriately programmed based on the completion of each major activity wherein all the necessary technical and other support has to be arranged by the consultant only venue will be arranged by the client.

(v) Consultants in their Financial Proposal shall account the costs of above technical visit & seminar/workshop inclusive of all the associated costs. (Such as travel expense, boarding/lodging, etc).

(vi) All data, in the form of both raw data and structured database, should be fully transferred to AP CRDA.

**5.4.4 STAGE II: DETAILED PROJECT REPORT**

The approved feasibility outcome shall form the basis for further detailing of the BRT project in phases or by packages. Such corridor length will undergo detailed investigations and analysis in addition to relevant Stage-I out puts. The comments and suggestions by the Authority shall be incorporated while attending to Stage-II of the assignment. Consultants must develop the Detailed Project Report (DPR) for this study on par with the standards set by the external agencies such as World Bank, ADB, JICA, etc., so that the Authority can approach the organizations/agencies for funding the project implementation. Following are the detailed tasks need to be attended for detailing stage.

**5.4.4.1 Topographic Surveys**

The detailed topographic survey shall be carried out along the identified alignment of proposed BRT corridor. The work involves carrying out a detailed engineering, topographic survey in the city area along the roads and all road intersections for 200 m width from the edge of existing road on both sides.

The survey shall include picking up all details along the road, necessary for planning and designing dedicated lanes for buses and separate lanes for other fast and slow moving traffic, including but not limited to the following

**5.4.4.1.1 Road Right of Way**

1. Width of carriageway, footpaths, central verge, drains. where there is a sudden change in width of road, physical measurement shall be marked on the drawings;
2. Road/lane name and location of all the approach roads;
3. Level crossings (if any) with their numbers, class, manned or unmanned, Road-Over-Bridges (ROBs) Road-Under-Bridges (RUBs) and Foot-Over Bridges (FOBs), Railway bridges with their structural details, angle of crossing and road & rail levels; and
4. Storm water drains, open drains, naalahs, with bed levels, HFL and manhole details.
5. Details of existing flyovers including details of at-grade service roads at such locations.

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3 DPR-Pertains to Detailed Engineering, Planning, Architectural core designs with prevailing standards and best industry practices. This includes related implementation, operational, cost optimisation and safety aspects too.
5.4.4.1.2 Buildings and Structures**
1. Dimensions and Details of built-up areas including setbacks from building line/boundary wall, with plot numbers and Ownership such as private or government and usage i.e. residential or commercial etc. within survey limits;
2. Type of building, such as temporary, permanent including number of floors and basement details;
3. Details of religious structures such as Temple, Gurudwara, Mosque, Church, Monuments, Tombs, etc.;
4. Details of land along the route and their uses such as residential, commercial, religious, parks, green areas, vacant lands etc.;
5. Name of all the adjacent colonies including number of houses, Jhuggie Clusters with number of Jhuggies along the route; and squatters, encroachments of the right of way.

5.4.4.1.3 Utilities**
1. Utility services such as electric lines, telephone lines, H.T., L.T. Transmission lines;
2. Vertical Clearances to power line or telephone / telegraph lines at road crossings and at locations where Flyovers are proposed
3. Traffic Signals, light posts, bus stops, Junction boxes (telephone and power), wire and water hydrants (firefighting and others), transformers, telephone posts;
4. Any other structure or details which may be relevant,
5. Underground utilities (Public & Private) i.e. manholes, cables, sewers, pipelines.

5.4.4.1.4 Trees
Location of trees with girth more than 30 cm (measured at 1.2 m height from ground level) in separate Auto CAD layer. A table, showing location, type, their species, girth diameter and reference number duly shown on the plan shall be made. The trees at site to be numbered and marked with paint including the identification of trees, which can be saved (without cutting), if falling in median.

5.4.4.1.5 Profile Leveling
The work involves carrying out/recording:
1. Longitudinal sectioning along the centerline of proposed alignment. Levels shall be taken at an interval of 25 m along the proposed alignment;
2. Reduced levels at every important location e.g. road intersections, Nallah bed, bridge level, rail level etc.;
3. Height of buildings falling on the alignment,
4. Spot/Ground levels at 25 meter Intervals in longitudinal as well as transverse direction (with grid and duly marked on the drawing) and at sudden change of levels and other features etc.;
5. Levels at important locations like road junctions and area where there are major undulations of the ground.

5.4.4.2 General Instructions**
1. All survey work shall be carried out using total stations of one/two- second accuracy and traversing with DGPS. A precision auto level shall be used for carrying out the leveling work.
2. The legend for surveying and preparation of plans shall conform to the Survey of India practice.
3. Some fieldwork may have to be done at night. The consultant will have to make his own
lighting arrangements etc. for night working for which no additional payment will be
made.
4. The consultant at his cost shall ensure all road/traffic safety measures.
5. All drawings shall be prepared on Auto CAD. The Auto CAD drawings shall have
different layers for different entities like Road, Spot/Ground levels, Drain, Building,
Boundary Wall, Over Ground utility and Ground Utility, Tree, Traverse Station,
ROB/RUB etc. X, Y, Z co-ordinates of all spot/ground points shall be provided in CSV
file with point numbers and feature coding.
All the ground levels shall be plotted in the form of L-Section in computer Auto CAD with
appropriate scale.

5.4.4.3 Pavement Structural Strength **
- The Consultants shall carry out structural strength surveys for existing pavements using
  Benkelman Beam Deflection technique in accordance with the CGRA procedure given in
  Benkelman Beam Deflection Technique”).
- In road section of uniform performance, based on condition survey minimum of ten
  points should be marked at equal distance at each lane of traffic for making the deflection
  observations in the outer wheel path. The interval between the path should not be more
  than 50m. Points marked on adjacent lane should be staggered. Extra deflection
  measurements should be made at 25m on either side of point where low or high values are
  observed.
- Test pits shall be dug at every 500m and also along each homogeneous road segment to
  obtain pavement composition details (pavement course, material type and thickness) so as
  to be able to study if a correlation exists between deflection and composition. If so, the
  relationship may be used while working out the overlay thickness for the existing
  pavement.
- Benkelman Beam Deflection surveys may not be carried out for severely distressed
  sections of the road warranting reconstruction.
- In case, the Consultants wish to use any acceptable method(s) other than Benkelman
  Beam deflection technique for the evaluation of pavement strength, details of such
  methods or innovative features for deflection testing along with the methodology for data
  analysis, interpretation and the use of such data for pavement overlay design purposes
  using IRC or any other widely used practices, such as AASHTO guidelines, should be got
  approved. The sources of such methods should be properly referenced.

5.4.4.4 Subgrade Characteristics and Strength **
1. Based on the data derived from condition (surface condition, roughness) and structural
   strength surveys, the project road section should be divided into segments homogenous
   with respect to pavement condition and strength. The delineation of segments
   homogenous with respect to roughness and strength should be done using the cumulative
   difference approach (AASHTO, 1993).
2. The data on soil classification and mechanical characteristics for soils along the existing
   alignments shall be collected from concerned authority. The testing scheme is, therefore,
   proposed as given under:
   - For the widening of existing road within the ROW, the Consultants shall test at least
three sub-grade soil samples for each homogenous road segment or three samples for each soil type encountered, whichever is more.

- For the roads along new alignments, the test pits for subgrade soil shall be @2 km or for each soil type, whichever is more. A minimum of three samples should be tested corresponding to each homogenous segment.

3. The testing for subgrade soil shall include:
   - in-situ density and moisture content at each test pit
   - field CBR using DCP at each test pit
   - characterization (grain size and Atterberg limits) at each test pit and,
   - laboratory moisture-density characteristics (modified AASHTO compaction);
   - laboratory CBR (unsoaked and 4-day soak compacted at three energy levels) and swell.

4. For problematic soils, the testing shall be more rigorous. The characteristics with regard to permeability and consolidation shall also be determined for these soils. The frequency of sampling and testing of these soils shall be finalized in consultation after the problematic soil types are identified along the road sections.

5.4.4.5 Investigations for Bridges and Structure **

5.4.4.5.1 Hydraulic and Hydrological Investigations

1. The hydrological and hydraulic studies shall be carried out in accordance with IRC Special Publication No. 13 (“Guidelines for the Design of Small Bridges and Culverts”) and IRC: 5-1998 (“Standard Specifications & Code of Practice for Road Bridges, Section I General Feature of Design”). These investigations shall be carried out for all existing drainage structures along the road sections under the study.

2. The assessment of the load carrying capacity or rating of existing bridges shall be carried out under one or more of the following scenarios:
   - when the design live load is less than that of the statutory commercial vehicle plying or likely to ply on bridge;
   - if during the condition assessment survey and supplementary testing the bridge is found to indicate distress of serious nature leading to doubt about structural and / or functional adequacy, and
   - design live load is not known nor is the records and drawings available.

3. Consultant shall carryout necessary surveys and investigations to establish the remaining service life of each retainable bridge or structure with and without the proposed strengthening and rehabilitation according to acceptable international practice in this regard.

5.4.4.5.2 Geo-technical Investigations and Sub-Soil Exploration

The Consultants shall carry out geo-technical investigations and sub-surface explorations for the proposed Bridges/Road over bridges/viaducts/interchanges etc., along high embankments and any other location as necessary for proper design of the works and conduct all relevant laboratory and field tests on soil and rock samples. The minimum scope of geo-technical investigations for bridge and structures shall be as under:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Description</th>
<th>Location of Boring</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Overall length = 6 – 30 m</td>
<td>One abutment location, One intermediate location</td>
</tr>
<tr>
<td>2.</td>
<td>Overall length = 30 – 60 m</td>
<td>One abutment location and at least two intermediate locations between abutments for structures having more than one span.</td>
</tr>
<tr>
<td>3.</td>
<td>Overall length &gt;60 m</td>
<td>Each abutment and each pier locations.</td>
</tr>
</tbody>
</table>
However, where a study of geo-technical reports and information available from adjacent crossings over the same waterway (existing highway and railway bridges) indicates that subsurface variability is such that boring at the suggested spacing will be insufficient to adequately define the conditions for design purposes, the Consultants shall review and finalize the bore hole locations in consultation.

Sub-soil investigations should be done as per IRC: 78-2000. Appropriate tests to be carried out on samples collected from these bore holes to determine the suitability of various materials for use in widening of embankments or in parts of new pavement structure.

For the road pavement, bore holes at each major change in pavement condition or in deflection readings or at 2 km intervals whichever is less shall be carried out to a depth of at least 2 m below embankment base or to rock level and are to be fully logged. Appropriate tests to be carried out on samples collected from these bore holes to determine the suitability of various materials for use in widening of embankments or in parts of new pavement structure.

5.4.4.6 Detailed Design of Road and Pavements, Bridges, Structures**

5.4.4.6.1 Geometric Design

The design of geometric elements shall, therefore, take into account the essential requirements of such facilities. Based on the data collected from reconnaissance and topographic surveys, the sections with geometric deficiencies, if any, should be identified and suitable measures for improvement should be suggested for implementation.

The data on accident statistics should be compiled and reported showing accident type and frequency so that black spots are identified along the project road section. The possible causes (such as poor geometric features, pavement condition etc.) of accidents should be investigated into and suitable cost-effective remedial measures suggested for implementation.

The detailed design for geometric elements shall cover, but not be limited to the following major aspects:

- horizontal alignment;
- longitudinal profile;
- cross-sectional elements, including refuge lane (50 m) and
- junctions, intersections and interchanges.

The existing incidental spaces along the corridor and oxbow areas created due to geometric improvements/curve corrections shall be identified with reference to road chainages and shall be assessed for integrating in the overall road development with type designs such as special vending areas, areas for landscaping, wayside facilities, etc.

The alignment design shall be verified for available sight distances as per the standard norms. The provision of appropriate markings and signs shall be made wherever the existing site conditions do not permit the adherence to the sight distance requirements as per the standard norms.

In the case of closely spaced cross roads the Consultant shall examine different options such as, providing grade separated structure for some of them with a view to reduce number of at-grade crossings, services roads connecting the cross-roads and closing access from some of
the intersections and prepare and furnish appropriate proposals for this purpose keeping in view the cost of improvement, impact on traffic movement and accessibility to cross roads. The detailed drawings and cost estimate should include the provisions for realignments of the existing cross roads to allow such arrangements.

The Consultant shall also prepare design of grade-separated pedestrian crossings (viaducts) for large cross traffic of pedestrians and / or animals.

The Consultant shall also prepare details for at-grade junctions, which may be adopted as alternative to the grade separated structures. The geometric design of interchanges shall take into account the site conditions, turning movement characteristics, level of service, overall economy and operational safety. The consultant shall provide functional landscape designs at all junctions including landscaping elements such as green spaces, appropriate signage, channelizing pedestrian movements, etc.

The Consultants shall prepare design and other details in respect of congested locations and other similar locations to cater to the local traffic.

5.4.4.6.2 Pavement Design
The detailed design of pavement shall involve:
- strengthening of existing road pavement and design of the new widening pavement; and,
- Design of shoulders.

The design of pavement shall primarily be based on IRC publications. The design of pavement shall be rigorous and shall make use of the latest Indian and International practices.

For the design of pavement, each set of design input shall be decided on the basis of rigorous testing and evaluation of its suitability and relevance in respect of in service performance of the pavement. The design methodology shall accompany the design proposals and shall clearly bring out the basic assumptions, values of the various design inputs, rationale behind the selection of the design inputs and the criteria for checking and control during the implementation of works. In other words, the design of pavement structure should take due account of the type, characteristics of materials used in the respective courses, variability of their properties and also the reliability of traffic predictions. Furthermore, the methodology adopted for the design of pavement shall be complete with flow charts indicating the various steps in the design process, their interaction with one another and the input parameter required at each step.

For the design of overlays for the existing pavement, the strengthening requirement shall duly take into account the strength of the existing pavement vis-à-vis the remaining life. The overlay thickness requirements shall be worked out for each road segment homogenous with respect to condition, strength and sub-grade characteristics. The rehabilitation provisions should also include the provision of regulating layer. For existing pavement with acceptable levels of cracking, provision of a crack inhibiting layer should also be included.

The design of granular shoulder should take into account the drainage considerations besides the structural requirements. The pavement design task shall also cover working out the maintenance and strengthening requirements and periodicity and timing of such treatments.
5.4.4.6.3 Design of Embankments

The embankments design should provide for maximum utilization of locally available materials consistent with economy. Use of fly ash must be considered wherever it is available within economical leads in accordance with Government instructions.

The Consultants shall carry out detailed analysis and design for all embankments of height greater than 6m based on relevant IRC publications. The design of embankments should include the requirements for protection works and traffic safety features.

5.4.4.6.4 Design of Bridges and Structures

The Consultant shall prepare General Arrangement Drawing (GAD) and Alignment Plan showing the salient features of the bridges and structures proposed to be constructed / reconstructed along the road sections covered under the Study. These salient features such as alignment, overall length, span arrangement, cross section, deck level, founding level, type of bridge components (superstructure, substructure, foundations, bearings, expansion joint, return walls etc.) shall be finalized based upon hydraulic and geo-technical studies, cost effectiveness and ease of construction. The GAD shall be supplemented by Preliminary designs. In respect of span arrangement and type of bridge a few alternatives with cost-benefit implications should be submitted to approve the best alternative.

The Consultant shall furnish the design and working drawings for suitable protection works and/or river training works wherever required. Dismantling/ reconstruction of existing structures shall be avoided as far as possible except where considered essential in view of their poor structural conditions/ inadequacy of the provisions etc. The existing structures having inadequate carriageway width shall be widened / reconstructed in part or fully as per the latest MoSRT&H guidelines. The Consultant shall furnish the detailed design and working drawings for carrying out the above improvements.

The existing structures having inadequate carriageway width shall be widened/ reconstructed in part or fully as per the latest MoSRT&H guidelines. The Consultant shall furnish the detailed design and working drawings for carrying out the above improvements.

Suitable repair/rehabilitation measures shall be suggested in respect of the existing structures as per IRC-SP: 40 along with their specifications, drawings and cost estimate in the form of a report. The rehabilitation or reconstruction of the structures shall be suggested based on broad guidelines for rehabilitation and strengthening of existing bridges contained in IRC-SP: 35 and IRC-SP: 40.

Subsequent to the approval of GAD and alignment plan, detailed design shall also be carried out for the proposed underpasses, overpasses, elevated BRT (where applicable) and interchanges.

The Consultants shall also carry out the design and make suitable recommendations for protection works for bridges and drainage structures.

In case land available is not adequate for embankment slope, suitable design for RCC retaining wall shall be furnished. However, RE wall may also be considered depending upon techno-economic suitability to be approved by the client.
5.4.4.6.5 **Drainage System**
The requirement of roadside drainage system and the integration of the same with proposed cross-drainage system shall be worked out for the entire length of the project road section.

In addition to the roadside drainage system, the Consultants shall design the special drainage provisions for sections with super-elevated carriageways, high embankments and for road segments passing through cuts. The drainage provisions shall also be worked out for road segments passing through urban areas.

The designed drainage system should show locations of turnouts/outfall points with details of outfall structures fitting into natural contours. A separate drawing sheet covering every 2 km stretch of road shall be prepared.

5.4.4.7 **Traffic Safety Features, Road Furniture and Road Markings**
The Consultants shall design suitable traffic safety features and road furniture including traffic signals, signs, markings, overhead signboards, crash barriers, delineators etc. The locations of these features shall be given in the reports and also shown in the drawings.

5.4.4.8 **Bus Stops, Parking Areas, Way side facilities**
The consultant shall select suitable sites for bus stops, parking areas and wayside facilities and prepare suitable separate designs in this regard. The facilities should be planned appropriately addressing project specifics.

5.4.4.9 **Miscellaneous Works**
The Consultants shall make suitable designs and layout for miscellaneous works including vehicle parking areas, special electrical and telecommunication facilities etc. wherever appropriate.

The Consultants shall prepare detailed plan for the traffic management and safety and work zone safety during the construction period.

5.4.4.10 **Operational plan**
To prepare an operational plan for the corridor; it may include amongst others the following:

5.4.4.10.1 **Assessment of demand and number of buses**
- To assess travel demand on the corridor and other modes through analysis of various data collected. The demand assessed shall include the existing bus passenger demand and likely shift from other modes due to introduction of the new system. The demand assessment should take into consideration expected benefits in terms of improved and faster speeds, Comfortable journey and results of passenger opinion surveys;
- To estimate fleet requirement meeting the travel demand if operating in a closed system.
- The fleet requirement shall be assessed for each corridor on the basis of system's carrying capacity, desired frequency of service during peak hours, total BRT demand and the turnaround time for the vehicles. Consultant shall also be required to suggest the feeder buses network plan.
- To frame proposal for parking of buses during idle hours.
- To frame proposal for workshop for repair of buses and its location.

5.4.4.10.2 **Bus operation**
- Number of buses required (category wise) using the corridor including left and right turning movements at each junction;
• Preferential signaling at intersections and waiting time for buses;
• Locations where the buses will need to switch from centre to side lanes and the available length of weaving;
• Adequacy of roadway for balance traffic;
• Adequacy of side footpaths to handle the expected number of commuters;
• Provision of interchange facilities;
• Measure for removal of buses in case of breakdown or emergency exit.
• Meeting Emergencies i.e. emergency evacuation of passengers, dealing with disabled buses, fire fighting, law and order, road accidents that may or may not involve buses;
• Mechanism for overtaking;
• Provision for Depot; if depot already exists then any upgradation of existing facility be proposed.

5.4.4.10.3 Passenger handling
• Volume of passenger’s at various stops and need for Foot Over Bridges/escalators subways, if any;
• Number and location of Mid-section bus stops and additional traffic signals;
• Roadside friction and land-use and means of reducing it;
• Measures to control pedestrians crossing the road everywhere;
• Arrangements for security and safety, both for users of BRT and for non-users as well.
• Provision of boarding & alighting facilities for passengers including physically challenged passengers and provision for crossing of pedestrians at selected intervals/locations.

5.4.4.11 Formulation of Business Plan and Institutional Framework for Bus Operation
• A business plan has to be proposed by the consultant which takes in to consideration the present and projected demand, bus fleet size, bus specification and cost, operational plan and frequency, non-fare box revenues, maintenance and other allied issues. Ticket pricing, fare collection and distribution are integral to such plan.
• Specifications for type design of buses and fare collection technology
• Service Quality agreement with the bus operators

5.4.4.12 Implementation Framework
The consultant shall, as a part of the study make a detailed recommendation about project implementation framework. Phasing of the project needs to be recommended by the consultants. This will be besides the institutional arrangement for implementation and shall also include the preparation of activity schedule for construction work. This will clearly define the start and end time for various items of works including the material requirements and the funds required.

5.4.4.13 Estimation of Quantities and Project Costs
The Consultants shall prepare detailed estimates for quantities (considering designs and mass haul diagram) and project cost for the entire project, including the cost of environmental and social safeguards proposed based on MoSRT&H’s Standard Data Book and market rate for the inputs. The estimation of quantities shall be based on detailed design of various components of the projects. The estimation of quantities and costs would have to be worked out separately for each Package as defined in this TOR.
The Consultants shall make detailed analysis for computing the unit rates for the different items of works. The unit rate analysis shall duly take into account the various inputs and their basic rates, suggested location of plants and respective lead distances for mechanized construction. The unit rate for each item of works shall be worked out in terms of manpower, machinery and materials.

5.4.4.14 System Maintenance Plan
Preparation of a ‘system maintenance plan’ for the BRT corridor and related infrastructure is integral part of Consultant’s scope. All elements to be taken up under this plan shall be highlighted and the institutional mechanisms need to be worked out and proposed with realistic support.

5.4.4.15 Branding and Image
Consultant need to provide strategies for promoting BRTS as a brand. It needs to work on creating a corporate identity for the system including name, logo, symbol, standard colours, bus graphics, etc. Consultant shall also suggest strategies to effectively market the BRTS through regular dissemination of work progress and information sharing to various types of media. However, actual implementation of work including posters, models, brochures etc. would not be included as part of scope of work.

5.4.4.16 Impact Assessment
5.4.4.16.1 Environmental Impact Assessment
The main objective of Environment Impact Assessment (EIA) is to ensure that the project design and implementation are environmentally sound and sustainable. The Environmental Impact Assessment shall be carried out to achieve the following objectives:

- Establish the environmental baseline in the study area, and to identify any significant environmental issues;
- Assess impacts of the project, and provide for measures to address the adverse impacts by the provision of the requisite avoidance, mitigation and compensation measures;
- Integrate the environmental issues in the project planning and design; and
- Develop appropriate management plans for implementing, monitoring and reporting of the environmental mitigation and enhancement measures suggested.

5.4.4.16.2 Social Impact Assessment
The main objective of Social Impact Assessment (SIA) is to assess the social impacts of the project, identify social issues of concern and assess consequent risk to the project due to acquisition of land.

Identification of institutional responsibilities for the implementation of the recommended RAP is an important aspect of social assessment. As part of this task, responsibilities for implementation of the RAP will be clearly described/delineated. Appropriate monitoring and evaluation arrangements as well as grievances and appeals mechanism will be evolved for effective implementation of RAP.

Estimates of R&R costs of proposed project proposal will be prepared for the estimated land acquisition requirements and compensation packages for project affected persons. R&R policy of state government and the land/property values of project area shall be the guiding principles in deciding the estimation of R&R costs. The cost of each activity such as payment...
of the difference between compensation amount and replacement value, organizing economic activities, various allowances, costs towards implementation, monitoring and evaluation and other anticipated costs will be clearly delineated.

5.4.4.17 Project Clearances and Utility Shifting Plan

Necessary (project related) clearances (such as from MOEF, Railways in respect of ROB/RUBs, Irrigation Department and any other concerned agencies) shall be obtained by the consultant and submitted to the Client so that project implementation can straight away proceed without any hold up.

The consultant will produce plan for the permanent relocation of any utilities that will need to be moved to permit the construction of the BRT. Also the designs for any new utilities required to provide service to the BRT corridor, including new road side development and/or included in the BRT corridor works.

A detailed Utility Shifting Plan will outline the works required to relocate utilities to accommodate the BRT alignment. This plan shall contain drawings and sufficient detail for relocation works to begin. These plans are then to be discussed and agreed with concerned local authorities.

5.4.4.18 Stakeholder Consultations

Throughout the detailed design stage, Consultant will ensure good interface with identified project stakeholders. In addition, their valid viewpoints need to be appropriately addressed through project preparation process. During this stage stakeholders need to be kept informed on progress and impacts of the process. The Consultant throughout the detailed design process will take care of following:

- Ensure relevant communication to interested parties, concerned stakeholders and the relevant authorities on the design process and implications to ensure cooperation and coordination, and integration where necessary. Numerous interfaces need to be actively managed.
- Identify civil society groups, businesses and NGOs in the BRT Corridor and adjacent areas who represent local views.
- Organize meetings with identified groups as well as public meetings to obtain feedback on their understanding of the BRT, and feedback on the designs at various stages in the design process for civil works, stations and service plans.
- Ensure public feedback is taken into account by designers of civil works and service plans.

The Consultant shall discuss with the Authority about the methodology for public communication and feedback to ensure that adequate consultation and local community forums take place. This can include:

- Larger public information presentations and forums for interested parties representing various sections of civil society
- Smaller community presentations and forums for local site issues
- A static display at an advertised address showing models, diagrams and explanations for community perusal and comment
- Small advertising events along the corridor to ensure local stakeholder are aware and informed.
5.4.4.19 Update Packaging

Under this task consultant shall review the packaging considered in feasibility stage and if required rationalize it further incorporating updated costing and feedback from stakeholders regarding implementation strategy and available funding/resources.

Draft detailed project report covering all the aspects as mentioned above shall be presented also to the Ministry of Urban Development, GoI to seek their advice and approval.

NOTE:

**The information, surveys, plans, works, proposals related to the Public Transportation corridors within Amaravati as per the notified Master Plan and ongoing studies must be reviewed, followed to meet the study objectives. The above same may be shared and updated to the consultant based on the availability with the client and other related stakeholders.**

5.5 PROJECT TEAM AND INDICATIVE INPUT

The Consultant will provide the services of team of subject experts with required skills and experience in urban transport infrastructure design. It is estimated that about 40 staff months of key professional staffs, 48 staff months of technical support professionals are required (details as shown in table below). The below mentioned list and man months of the Key staff & Support staff are tentative and consultants are requested to take decision as per the activities of the study

A. Key Professionals

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Position</th>
<th>Number</th>
<th>Staff-month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Team Leader and Transport Expert</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Transport Planner/Traffic and Transportation Engineer</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Urban Transport/ITS Expert</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Structural Design Engineer</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Road/Pavement Design Engineer</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Geo-Tech Specialist</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Architect/Landscape Specialist</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Social Specialist</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Environmental Specialist</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Quantity Survey Specialist</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Infrastructure Engineer (Urban Systems)</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>Electrical Engineer</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>Economics and Financial Expert</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

B. Technical Support Staff

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Position</th>
<th>Number</th>
<th>Staff-month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Road Engineers/Pavement Engineers</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>Transport Planners/Traffic and Transportation Engineers</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Structural Design Engineer</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Architect/Landscape Specialist</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Quantity Surveyor</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
5.6 DURATION OF SERVICES AND DELIVERABLES

5.6.1 Duration of Services
The staged study is required to be completed as per following time lines:

<table>
<thead>
<tr>
<th>No.</th>
<th>Stage</th>
<th>Duration from Start of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feasibility Study (4 months)</td>
<td>Four Months (04)</td>
</tr>
<tr>
<td>2</td>
<td>Detailed Project Report (4 months)</td>
<td>Eight Months (08)</td>
</tr>
</tbody>
</table>

5.6.2 Deliverable Schedule
Project deliverables schedule is stipulated as follows:

<table>
<thead>
<tr>
<th>Stage -1</th>
<th>Description</th>
<th>Duration from Start of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inception Report</td>
<td>Not later than 1 month</td>
</tr>
<tr>
<td>2</td>
<td>Data and Concept Report</td>
<td>Not later than 2 months</td>
</tr>
<tr>
<td>3</td>
<td>Interim Report- Feasibility</td>
<td>Not later than 3 months</td>
</tr>
<tr>
<td>4</td>
<td>Feasibility Report</td>
<td>Not later than 4 months</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage -2</th>
<th>Description</th>
<th>Duration from Start of the Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Interim Report- DPR for each Package</td>
<td>Not later than 5 months</td>
</tr>
<tr>
<td>6</td>
<td>Draft Detailed Project Report (DPR) for each Package</td>
<td>Not later than 6 months</td>
</tr>
<tr>
<td>7</td>
<td>Project Clearances and Utility Shifting Plan for each Package</td>
<td>Not later than 7 months</td>
</tr>
<tr>
<td>8</td>
<td>EIA and SIA Documentation for each Package</td>
<td>Not later than 7 months</td>
</tr>
<tr>
<td>9</td>
<td>Final Detailed Project Report (DPR)</td>
<td>Not later than 8 months</td>
</tr>
</tbody>
</table>

Note: Reports in DPR stage will be separate for each package as decided in the feasibility.

5.7 DATA AND FACILITATION BY APCRDA
APCRDA shall provide all possible assistance to the Consultant, specific facilitation includes:
1. APCRDA will support consultants in procuring the available Data and reports relevant to this assignment.
2. Any support facilitation for data gathering from concern government authorities.

5.8 TEAM COMPOSITION
All the key professionals on board are required to be proficient in English. The consultant shall deploy adequate numbers of suitably qualified technical support professionals to assist the key professionals to render these services in a time bound manner. The key expertise required as the minimum is presented below.

Table 1: Study Team

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Transport Economist/Financial Analyst</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Auto Cad Draftspersons</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Environmental Specialist</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Social Specialist</td>
<td>1</td>
</tr>
</tbody>
</table>

Total: 48
<table>
<thead>
<tr>
<th>No.</th>
<th>Position</th>
<th>Professional Experience</th>
<th>Minimum Education/ Qualification/ Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Team Leader and Transportation Expert</td>
<td>Overall minimum experience of not less than 20 years in Transportation. Recent experience of continuous 5 years in similar projects will be advantageous</td>
<td>Person shall have Master degree in Transportation Engg./Planning from accredited college/university. Shall have experience as Team Leader/Project Manager in transport planning in minimum two (2) assignments of similar magnitude and nature. Should have experience as Team Leader in formulation of transport strategy and investment program covering Public Transport system in major city with population more than 2 million.</td>
</tr>
<tr>
<td>2.</td>
<td>Transport Planner/ Traffic &amp; Transportation Engineer</td>
<td>Overall minimum experience of not less than 15 years in transportation of which 10 years 4/6 lanes of Highway/ urban transport.</td>
<td>Person shall have Master degree in Transportation Engg./Planning from accredited college/university. The person should be involved as Transport Planner for minimum two (2) assignments in planning and design of urban Corridors/Public Transport Corridors; He would be responsible for assessing capacity needs, safety measures, operational infrastructure, lighting, traffic management system, logistics of various operations, etc. Additional experience in the field of design, construction or operation of BRTS will carry an added advantage.</td>
</tr>
<tr>
<td>3.</td>
<td>Urban Transport/ ITS Expert</td>
<td>Overall minimum experience of not less than 15 years in transportation of which 5 years in ITS and its applications.</td>
<td>Person shall have Master degree in Transportation Engg./Planning from accredited college/university. The person should be involved in minimum two (2) assignments as an ITS expert for developing the smart ticketing system for any PT system, system architecture, integration with other modes, etc.. Involved in designing ITC assignments for a city will be an added advantage.</td>
</tr>
<tr>
<td>4.</td>
<td>Structural Design Engineer</td>
<td>Overall minimum experience of not less than 15 years in design of bridge/structures.</td>
<td>Person shall have Master degree in Structural/Bridge Engg. with graduation in Civil Engineering from an accredited college/university. The person should be involved in minimum two (2) assignments as a structural design engineer for any PT System. Knowledge of various nationally/internationally accepted design codes &amp; methodologies and familiarity with international ‘best practices’ is essential. The candidate must have capability to verify the strengths and capacities of existing bridges. Experience in designing and implementing bridge construction and rehabilitation is must. The candidate must have the experience of planning &amp; monitoring geotechnical and hydraulic investigations for the bridges and interpreting the findings thereof.</td>
</tr>
<tr>
<td>5.</td>
<td>Road/ Pavement Design</td>
<td>Overall minimum experience of not less than 15 years in High Quality</td>
<td>Person shall have Master degree in Highway/Traffic and Transportation Engg. with graduation in Civil Engg. from an accredited college/university. The person should be involved in minimum two (2) assignments as a Road Designer/Pavement Engineer in design of Road/Pavement projects. The candidate should have experience in planning, design, construction and monitoring of road/pavement projects. The candidate must have the experience of designing and implementing pavement projects.</td>
</tr>
<tr>
<td>No.</td>
<td>Position</td>
<td>Professional Experience</td>
<td>Minimum Education/ Qualification/ Expertise</td>
</tr>
<tr>
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<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6</td>
<td>Geo-Technical Specialist</td>
<td>Overall minimum experience of not less than 15 years in Highways of which 5 years in Urban roads</td>
<td>Person shall have Master degree in Soil Mechanics/ Geo-Technical Engg, with graduation in Civil Engg, from an accredited college/university. The person should be involved in minimum two (2) assignments as Geo-Technical/Material engineer for any PT System. Thorough knowledge on modern techniques of materials investigation and laboratory testing is essential. The candidate must have wide experience on designs using alternative and local materials, in designing pavement structures and in preparing specifications for construction materials.</td>
</tr>
<tr>
<td>7</td>
<td>Architect/ Landscape Specialist</td>
<td>Overall minimum experience of not less than 15 years as an architect of which 5 years in similar assignment</td>
<td>Person shall have Master degree in Urban Design/ Landscape Architecture with graduation in Architecture from an accredited college/university. The person should be involved in designing of bus shelters/stops, landscapes and urban development for minimum two (2) assignments as a design architect. Experience in Urban Transport is prerequisite.</td>
</tr>
<tr>
<td>8</td>
<td>Social Expert</td>
<td>Overall minimum experience of not less than 15 years of which 5 years in similar assignment</td>
<td>Person shall have Master degree in sociology/economics/geography/public administration from an accredited college/university. The person should be involved in minimum two (2) assignments as Social Expert for any PT System. Experience in working as social/resettlement expert for major Civil Engineering Projects including Highway/Urban Transport Projects. The knowledge of World Bank/ADB’s prevailing guidelines and/or policies related to R&amp;R is essential. Experience in legal analysis of land records is desirable. Experience in qualitative &amp; quantitative analysis of data, participatory consultation is essential.</td>
</tr>
<tr>
<td>9</td>
<td>Environmental Expert</td>
<td>Overall minimum experience of not less than 15 years of which 5 years in similar assignment</td>
<td>Person shall have Master degree in Environmental Engg/Planning/Sciences from accredited college/university. The person should be involved in minimum two (2) assignments as environmental Expert for any PT System. Experience in environmental impact assessment of development</td>
</tr>
<tr>
<td>No.</td>
<td>Position</td>
<td>Professional Experience</td>
<td>Minimum Education/ Qualification/ Expertise</td>
</tr>
<tr>
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</tr>
<tr>
<td>10</td>
<td>Quantity Survey Specialist</td>
<td>Overall minimum experience of not less than 15 years of which 5 years in similar assignment.</td>
<td>Person shall have Master degree in Engg./Planning/Management with graduation in Civil Engg. from accredited college/university. The person should be involved in minimum two (2) assignments as Quantity Survey Specialist for any PT System. In-depth knowledge and experience on preparation of civil works bid documents and analysis of rates are essential. Working experience in similar capacity for urban transport projects is necessary.</td>
</tr>
<tr>
<td>11</td>
<td>Infrastructure Engineer</td>
<td>Overall minimum experience of not less than 15 years of which 5 years in similar assignment.</td>
<td>Person shall have Master degree in Engg./Planning/Management with graduation in Civil Engg. from accredited college/university. The person should be involved in minimum two (2) assignments as Infrastructure Engineer/Planner for any PT System in designing infrastructure, urban transport systems, drainage, roadway works in urban areas. Person must have full knowledge of the infrastructure related standards and specifications, framing of bid documents and costing associated with the same. The person must have the experience of preparing urban infrastructure DPR/supervising &amp; monitoring implementation of such designs for at-least 5 years.</td>
</tr>
<tr>
<td>12</td>
<td>Electrical Engineer</td>
<td>Overall minimum experience of not less than 15 years of which 5 years in similar assignment.</td>
<td>Person shall have Master degree in Electrical Engg./or its equivalent with graduation in Electrical Engg. from accredited college/university. The person should be involved in minimum two (2) assignments as Electrical Engineer for any PT System in designing infrastructure, urban transport systems. Design experience of all electrical works for various projects, electrical supply to the stations, terminals and depots with good knowledge about preparation of electrical specifications and technical sections of the contract documents. Experience on design of energy-efficient street lighting/ lighting are very much essential.</td>
</tr>
<tr>
<td>13</td>
<td>Economist and Financial Expert</td>
<td>Overall minimum experience of not less than 15 years of which at least 5 years of PPP experience on Transportation</td>
<td>Person shall have a Master degree in Transportation Planning/Economics/MBA-Finance. The person should be involved in minimum two (2) assignments as Economical/Financial analyst for any PT System. Experience in working out Transport Economics and preparation of Economic/Financial models for Urban Transport projects.</td>
</tr>
</tbody>
</table>
In addition to the above key personnel in the study team, Consultants are expected to deploy required man months of key staff and support technical staff from various disciplines required to perform the scope of services defined in the TOR for all activities. In the technical proposal, the details of support technical staff proposed for the assignment shall be provided in a statement format with name, expertise and their role in the assignment. The supporting staff will not be considered for technical proposal evaluation.

5.9 DELIVERABLES AND PAYMENT SCHEDULE

The study shall be completed within a period of 8 months from the date of signing the Agreement. The deliverables and completion time for various stages would be as given hereinafter:

<table>
<thead>
<tr>
<th>No.</th>
<th>Report/Submittal</th>
<th>from the date of Contract Agreement</th>
<th>No. of hard Copies</th>
<th>Payment Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inception Report</td>
<td>Not later than 1 month</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Data &amp; Concept Report</td>
<td>Not later than 2 months</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>Interim Report- Feasibility</td>
<td>Not later than 3 months</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>Feasibility Report</td>
<td>Not later than 4 months</td>
<td>4</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>Interim Report- DPR for each Package</td>
<td>Not later than 5 months</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Draft Detailed Project Report (DPR) for each Package</td>
<td>Not later than 6 months</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Project Clearances and Utility Shifting Plan for each Package</td>
<td>Not later than 7 months</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>EIA &amp; SIA Report for each Package</td>
<td>Not later than 7 months</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>9</td>
<td>Final Detailed Project Report (DPR)</td>
<td>Not later than 8 months</td>
<td>4</td>
<td>10%</td>
</tr>
</tbody>
</table>

Drawings / Output Data set:
(a) All maps and drawings mentioned in the scope of work shall be in appropriate scale.
(b) The number of maps and drawings are as mentioned in the above deliverables.

5.10 PERIOD OF CONSULTANCY

Period of consultancy is 8 (Eight) months, for completing the study. The consultant can carry out activities parallel and the deliverables and payment schedule shall be as above.

If necessary the Authority will extend the period of the consultancy depends on the study progress. The payment will be made as per the deliverables as mentioned above.
6. **Section – VI: FORMATS FOR SUBMISSION OF PROPOSAL**

(Annexures)

**ANNEXURE A: (OUTER ENVELOPE)**

In support of Eligibility criteria 1

**FORMAT FOR FINANCIAL SUMMARY DATA**

**TURNOVER RELATED DATA** *(All figures in INR Crore)*

<table>
<thead>
<tr>
<th>Description</th>
<th>Past Five Financial Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 01</td>
</tr>
<tr>
<td>Consultancy Revenue</td>
<td></td>
</tr>
<tr>
<td>(add) Other Revenue</td>
<td></td>
</tr>
<tr>
<td><strong>Total Turnover</strong></td>
<td></td>
</tr>
</tbody>
</table>

Financial Year: 1st April to 31st March or the particular accounting year followed and audited.

Note:
1. The applicant shall submit Audited Balance Sheets/ Annual Reports
2. The annual Turnover & Net worth data should be certified by a practising Charted Accountant.

SIGNATURE ___________________
NAME __________________________
DESIGNATION _______________________
COMPANY SEAL
COMPANY __________________________
DATE ___________________________

**Note:** in case of consortium, both members need to submit the above information separately.
v. **Information and evidence for Minimum Eligibility Criteria’s No.1, 2 & 3.**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Eligibility Requirement</th>
<th>Eligible Projects</th>
<th>Client</th>
<th>Documentary Evidence submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Experience of not less than two (2) Comprehensive Transportation Study/Mobility Plans at least in one city/urban area with population more than 2.5 million and four (4) Traffic &amp; Transportation Studies in public transport planning/studies at least in one city/urban area with population more than 2.5 million in last 10 years.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Experience in planning, designing and implementation (project management) of at least two (2) high capacity Public Transport System (BRTS) in cities with population more than 1.0 million in last 10 years. Planning of feeder/IPT system for the above proposed Public Transport System must be an integral part of the study.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Experience of not less than three (3) Traffic &amp; Transportation infrastructure development works such as project structuring, financial modeling, bid process management of total size more than 100 Crores in last 5 years.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Proof of experience from the client is necessary for the criteria’s 1, 2 & 3)

**Signature of the Authorized Signatory**

**Authorized Signatory of lead member in case of consortium**
Annexure 1

**Format for**

**CHECKLIST OF SUBMISSIONS IN ENVELOPES I & II**

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Enclosures to the Proposal</th>
<th>Status (Submitted / Not Submitted)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Signed RFP document</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Covering Letter (Annexure 2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Firm’s Profile and Specific Experience Details (Annexure 3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Project Appreciation, Approach &amp; Methodology, Work Plan, Organization &amp; Staffing (Annexure 3A)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Curriculum Vitae (CV) for proposed Key Professional Staff ~ Annexure 3B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Team Composition and their Task Assignment as required by RFP (Annexure 4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Staffing Schedule for Key Professional &amp; Support Technical Staff &amp; Works Schedule ~ 4A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Financial Proposal (Annexure 5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Format for

COVERING LETTER (LETTER OF PROPOSAL)

(On Applicant’s Letter Head/Lead member in case of consortium)

To, Date:
The Commissioner,
Andhra Pradesh Capital Region Development Authority (APCRDA)
Lenin Centre, Governor pet, Vijayawada,
Andhra Pradesh – 520002

Sub: Appointment of “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)”. – Reg.

With reference to your RFP Document dated ------------------------, I, having examined all relevant documents and understood their contents, hereby submit our Proposal for selection as Consultant (the "Consultant") for the subject project. The proposal is unconditional and unqualified.

2. I acknowledge that the Authority will be relying on the information provided in the Proposal and the documents accompanying the Proposal for selection of the Consultant, and we certify that all information provided in the Proposal and in the Appendices are true and correct, nothing has been omitted which renders such information misleading; and all documents accompanying such Proposal are true copies of their respective originals.

3. This statement is made for the express purpose of appointment as the Consultant for the aforesaid Project.

4. I shall make available to the Authority any additional information it may deem necessary or require for supplementing or authenticating the Proposal.

5. I acknowledge the right of the Authority to reject our application without assigning any reason or otherwise and hereby waive our right to challenge the same on any account whatsoever.

6. I certify that in the last five years, we have neither failed to perform on any contract, as evidenced by imposition of a penalty by an arbitral or judicial authority or a judicial pronouncement or arbitration award against the Applicant, nor been expelled from any project or contract by any public authority nor have had any contract terminated by any public authority for breach on our part.

7. I declare that:
(a) I have examined and have no reservations to the RFP Documents, including any Addendum issued by the Authority;

(b) I do not have any conflict of interest as mentioned in the RFP Document;

(c) I have not directly or indirectly or through an agent engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in respect of any tender or request for proposal issued by or any agreement entered into with the Authority or any other public sector enterprise or any government, Central or State; and

(d) I hereby certify that we have taken steps to ensure that in conformity with the provisions of this RFP, no person acting for us or on our behalf will engage in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

8. I understand that you may cancel the Selection Process at any time and that you are neither bound to accept any Proposal that you may receive nor to select the Consultant, without incurring any liability to the Applicants in accordance with the RFP document.

9. I certify that in regard to matters other than security and integrity of the country, we or any of our Associates have not been convicted by a Court of Law or indicted or adverse orders passed by a regulatory authority which would cast a doubt on our ability to undertake the Consultancy for the Project or which relates to a grave offence that outrages the moral sense of the community.

10. I further certify that in regard to matters relating to security and integrity of the country, we have not been charge-sheeted by any agency of the Government or convicted by a Court of Law for any offence committed by us or by any of our Associates.

11. I hereby irrevocably waive any right or remedy which we may have at any stage at law or howsoever otherwise arising to challenge or question any decision taken by the Authority (and/ or the Government of India) in connection with the selection of Consultant or in connection with the Selection Process itself in respect of the above mentioned Project.

12. I agree and understand that the proposal is subject to the provisions of the RFP document. In no case, shall I have any claim or right of whatsoever nature if the Consultancy for the Project is not awarded to me/us or our proposal is not opened or rejected.

13. I agree to keep this offer valid for 180 (One hundred and eighty) days from the PDD specified in the RFP.

14. In the event of my/our firm being selected as the Consultant, I agree and undertake to provide the services of the Consultant in accordance with the provisions of the RFP and that the Team Leader shall be responsible for providing the agreed services himself and not through any other person or Associate.

15. I have studied RFP and all other documents carefully. We understand that we shall have no claim, right or title arising out of any documents or information provided to us by the
Authority or in respect of any matter arising out of or concerning or relating to the Selection Process including the award of Consultancy.

16. The Technical and Financial Proposals are being submitted in separate covers along with Annexure-A to prove our financial details. The contents provided in Annexure-A, Envelopes I & II shall constitute the Application which shall be binding on us.

17. I agree and undertake to abide by all the terms and conditions of the RFP Document. In witness thereof, I/we submit this Proposal under and in accordance with the terms of the RFP Document.

Yours faithfully,

(Signature, name and designation of the authorized signatory)

(Name and seal of the Applicant)
Annexure 3

Format for Applicant’s Experience

A. Consultant’s Organization
(Provide not more than 3 pages by each member of Consortium)

B. Consultants Experience and Specific Experience (relevant services carried out in the last ten years that best illustrate qualifications, using the format below, provide information on each reference assignment for which your firm/ Consortium and also specific experience as defined in 4.3.d(i), (ii), (iii) (Not exceeding more than 40 pages)

<table>
<thead>
<tr>
<th>Assignment Name:</th>
<th>Country:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location within Country:</td>
<td>Professional Staff Provided by Your Firm/Entity (Profiles).</td>
</tr>
<tr>
<td>Name of Employer:</td>
<td>No. of Staff:</td>
</tr>
<tr>
<td>Address:</td>
<td>No. of Staff-Months: Duration of Assignment:</td>
</tr>
<tr>
<td>Start Date (Month/Year):</td>
<td>Completion Date (Month/Year):</td>
</tr>
<tr>
<td>Name of Associated Consultants, if any:</td>
<td>No. of Months of Professional Staff, provided by Associated Consultants:</td>
</tr>
<tr>
<td>Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:</td>
<td></td>
</tr>
<tr>
<td>Narrative Description of Project:</td>
<td></td>
</tr>
<tr>
<td>Description of Actual Services Provided by Your Staff:</td>
<td></td>
</tr>
</tbody>
</table>

Signature ______________________
Name ______________________
Designation ______________________
Company ______________________
Date ______________________

Notes:
* The claimed experience shall be supported by project completion certificates issued by the clients towards documentary evidence
Annexure 3A

Format for

PROJECT APPRECIATION, APPROACH & METHODOLOGY
You are suggested to present your Technical Proposal (100 pages, inclusive of charts and diagrams) divided into the following four chapters:

Project Appreciation:
(i)
(ii)
(iii)

Approach & Methodology:
In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

Work Plan:
In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule.

Organisation and Staffing:
In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.

Signature ______________________
Name ______________________
Designation___________________
Company _____________________
Date _________________________
Annexure 3B

Format for

CURRICULUM VITAE (CV) FOR PROPOSED KEY PROFESSIONAL STAFF

Proposed Position:

Name of Firm:

Name of Staff:

Profession:

Date of Birth:

Years with Firm/ Entity: ________________  Nationality: __________

Detailed Tasks Assigned:

Education Qualifications:
[Summarize college/ university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained.]

Employment Record:
[Starting with present position, list in reverse order every employment held. List all positions held by staff member since graduation, giving dates, names of employing organizations, titles of positions held, and locations of assignments]

Specific Projects/ Experience:
[Give on outline of staff member’s experience most pertinent to tasks on assignment. Describe position held by staff member on relevant specific assignments, client, project cost, give dates, locations, etc.]

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

Certification:
I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describes me, my qualifications, and my experience.

Signature of the proposed personnel, Date: ________________  Day/Month/Year
Contact Address, Phone No, Email id.

Signature of the authorized Personnel submitting the proposal. Date: ________________  Day/Month/year
### TEAM COMPOSITION and TASK ASSIGNMENT

#### 1. Key Professional / Personnel:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Position</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
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<td>5</td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 2. Support Technical Staff

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Position</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<td>4</td>
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<td>5</td>
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<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Authorized Signature: _____________________

Name        ________________

Designation_____________________

Company ______________________

Date    _________________________
Format for

STAFFING SCHEDULE FOR KEY PROFESSIONAL, SUPPORT TECHNICAL STAFF & WORKS SCHEDULE

A) Key Professionals:

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Position</th>
<th>Months (in the Form of a Bar Chart)</th>
<th>Number of Months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7 - - 23 24</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>Sub Total (1)</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Sub Total (2)</td>
</tr>
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<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td>Sub Total (14)</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>Sub Total (15)</td>
</tr>
</tbody>
</table>

Note: The month wise program should match with the scope of work and assignment period

B) Support Technical Personnel: Similar Tabular form

C) Works Schedule: A. Field Investigation and Study Item

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Item of Work/Task/Sub-Task</th>
<th>Month-wise Program (in form of Bar Chart)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1st, 2nd, etc. are months from the start of assignment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1st 2nd 3rd 4th 5th 6th 7th 8th</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D) Completion and Submission of Reports

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Report*</th>
<th>Programme (Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inception Report</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Interim Report1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Interim Report2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Interim Report3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final Report</td>
<td></td>
</tr>
</tbody>
</table>

* As indicated in ToR and may be additionally added by Consultants based on Approach and Method as required for the Assignment. (Consultants will indicate as per the requirement)

Authorized Signature: ______________________
Name ______________________
Designation ______________________
Company ______________________
Date ______________________
To, 

The Commissioner,
Andhra Pradesh Capital Region Development Authority (APCRDA)
Lenin Centre, Governor pet, Vijayawada,
Andhra Pradesh – 520002

Sub: Financial Proposal for providing “Project Preparation Consultancy Services for Integrated Public Transport System (BRTS along with feeder system) in Andhra Pradesh Capital Region (APCR)” – Reg.

Sir:

As a part of the Proposal for providing consultancy services for the subject Project, we hereby submit the following Professional Fee quotation to the Andhra Pradesh Capital Region Development Authority.

We quote Rupees __________ (Rupees in words followed by Rs. in figures in brackets) plus applicable service tax towards our total Professional fee to be paid as per payment schedule specified in the RFP.

We abide by the above quote, terms and conditions of the RFP, if APCRDA selects us as the Consultant for this particular project.

We also understand that, in case any difference between the quoted amount in words and figures, the quote in words will be taken as final.

We agree that this offer shall remain valid for a period of one hundred and eighty (180 days) from the Proposal Due Date or such further period as may be mutually agreed upon.

Yours faithfully,

(Signature of Authorized Signatory)
(Name, Title, Address, Date)

Note: The financial proposal to be submitted strictly as per the above format. Noncompliance to the above format shall disqualify the firm’s proposal.
### SUMMARY OF COSTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Costs (INR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remuneration</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Reimbursable Expenses</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Miscellaneous Expenses</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Taxes Assessed and payable on fees/services provided by foreign Personnel, including duties on equipment imported, if any</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>TOTAL COSTS (excluding Service Tax)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Service Tax</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>TOTAL COSTS (inclusive of all Taxes)</td>
<td></td>
</tr>
</tbody>
</table>
### BREAKDOWN OF COSTS

#### Remuneration

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Position</th>
<th>Staff Months</th>
<th>Remuneration</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Indicate Currency</td>
<td>Rate</td>
</tr>
<tr>
<td>1</td>
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<td></td>
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</tr>
</tbody>
</table>

**Total Remuneration (INR)**

#### Reimbursable Expenses

<table>
<thead>
<tr>
<th>No.</th>
<th>Description *</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Return Flights between ___ and ___</td>
<td>Trip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Miscellaneous Travel Expenses</td>
<td>Trip</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Subsistence Allowance</td>
<td>Day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Local Transportation Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Office Rent/ Accommodation, Clerical Assistance, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Surveys (each survey to be given separately)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total Reimbursable Expenses (INR)**

#### Miscellaneous Expenses

<table>
<thead>
<tr>
<th>No.</th>
<th>Description *</th>
<th>Unit</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Office Supplies, Utilities and Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Drafting reproduction of reports</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Office Furniture and Equipment:, Computers, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Software</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Training</td>
<td></td>
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<tr>
<td>6.</td>
<td>Office and establishment set up</td>
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</tbody>
</table>

**Total Miscellaneous Expenses (INR)**

- Consultants to add more rows as required.
7. **Section – VII: DRAFT CONTRACT FOR CONSULTANT’S SERVICES**

**CONTRACT FOR CONSULTANTS’ SERVICES**

*by & between*

__________________________________________

(APCRDA)

and

__________________________________________

(‘Consultant’)

___________, 2018
[On a Non-judicial stamp paper of appropriate value]

This CONTRACT (hereinafter referred to as the “Contract”) is made at__________ on this the __________ day of __________, 2013

by & between

ANDHRA PRADESH CAPITAL REGION DEVELOPMENT AUTHORITY (APCRDA), a statutory body constituted by Government of Andhra Pradesh, through an Act (Act no.11 of 2014) to establish a new capital for the state of Andhra Pradesh and for the purposes of Planning, Co-ordination, Execution, Supervision, Financing, Funding, Promoting and Securing the planned development and having its Office at “APCRDA Office, Vijayawada”, represented herein by its Commissioner (hereinafter referred to as “Authority” which expression, shall unless repugnant to the context or the meaning thereof, include its successors and assigns) of the ONE PART

and

__________________, a company duly incorporated under the Companies Act, 1956 [I of 1956], and having its registered office at __________________________ (hereinafter referred to as the “Consultant”) of the OTHER PART.

WHEREAS

(a) The Authority has requested the Consultant to provide certain consultancy services as defined in this Contract (hereinafter referred to as the “Services”).

(b) The Consultant, having represented to the Authority that it has the required professional skills, and personnel and technical resources & expertise, has agreed to provide the Services on the terms and conditions set forth in this Contract.
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;
   (b) The Special Conditions of Contract;
   (c) The following Appendices:
       Appendix A: Services
       Appendix B: Key Personnel of the Consultants
       Appendix C: Form of Performance Guarantee
       Appendix D: Form of Advance Security Guarantee
       Appendix E: Facilities to be provided by the Authority

2. The mutual rights and obligations of the Authority and the Consultant 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 Authority 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 APCRDA (‘Authority’)  
________________________________________
(Authorized Signatory)

For and on behalf of __________________________ (‘Consultant’)  
________________________________________
(Authorized Signatory)
I. General Conditions of Contract


Unless the context otherwise requires, the following terms & expressions, whenever used in this Contract, shall have the following meanings hereinafter respectively ascribed to them:

(a) “Applicable Law” shall mean and include any law, rule, regulation, ordinance, order, treaty, judgment, notification, decree, bye-law, governmental approval, directive, guideline, requirement or other governmental restriction, or any similar form of decision of, or determination by, or any interpretation, policy or administration, having the force of law and shall include any of the foregoing, injunction, permit or decision of any central, state or local, municipal government, authority, agency, court having jurisdiction over the matter in question, whether in effect as on the date of this Contract or thereafter, in any jurisdiction.

(b) “Consultant” shall mean and refer to _________ that will provide the Services to the Authority under the Contract.

(c) “Contract” means the Contract signed by the Parties and all the attached documents listed in its Clause 1 hereto, that is General Conditions (GC), the Special Conditions (SC), and the Appendices, as of the date hereof, and as amended or supplemented, from time to time, in accordance with the provisions hereto.

(d) “Contract Price” means the price to be paid for the performance of the Services, in accordance with Clause GC 6;

(e) “Effective Date” means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1.

(f) “GC” means these General Conditions of Contract.

(g) “Government” means the Government of State of Andhra Pradesh.

(h) “Local Currency” means the currency of Authority’s country.

(i) “Material Adverse Effect” means circumstances which may or do (i) render any right vested in a Party by the terms of this Contract ineffective; or (ii) adversely affect or restrict or frustrate the ability of any Party to observe and perform in a timely manner its obligations under this Contract; or (iii) adversely affects the legality, validity, binding nature or enforceability of this Contract.

(j) “Member” means any of the entities that make up the joint venture/consortium/association, and “Members” means all these entities.

(k) “Party” means the Authority or the Consultant, as the case may be, and “Parties” means both of them.

(l) “Performance Security” shall mean performance security to be furnished by Consultant by way of bank guarantee in terms of this Contract and Appendix C.

(m) “Personnel” means persons hired by the Consultant or by any Sub-Consultants and assigned to the performance of the Services or any part thereof.

(n) “SC” means the Special Conditions of Contract by which the GC may be amended or supplemented.

<table>
<thead>
<tr>
<th>1.1 Definitions</th>
<th>Unless the context otherwise requires, the following terms &amp; expressions, whenever used in this Contract, shall have the following meanings hereinafter respectively ascribed to them:</th>
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<tr>
<td>(n) “SC”</td>
<td>“SC” means the Special Conditions of Contract by which the GC may be amended or supplemented.</td>
</tr>
</tbody>
</table>
1.2 Law Governing Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

1.2.1 Relation between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of agent and principal as between the Authority and the Consultant or Personnel. The Consultant, subject to this Contract, have complete charge of Personnel performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

1.3 Language

This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.3.1 Heading

The headings shall not limit, alter or affect the meaning of this Contract.

1.4 Notices

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the SC.

1.4.1 A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.

1.4.2 Notice will be deemed to be effective as specified in the SC.

1.5 Location

The Services shall be performed at such locations as are specified in work order.

1.6 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Authority or the Consultant may be taken or executed by the officials specified in the SC.

1.6.1 Authority of Member in Charge

In case the Consultant is a joint venture of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Authority under this Contract, including without limitation the receiving of instructions and payments from the Authority.

1.7 Taxes and Duties

The Consultant, Sub-Consultants, and their Personnel shall pay all such indirect taxes, duties, fees, and other impositions levied under the Applicable Law. The amount of which is deemed to have been included in the Contract Price.
# 2. **Commencement, Completion, Modification and Termination of Contract**

| **2.1 Effectiveness of Contract** | This Contract shall come into effect on the date the Contract is signed by both Parties and such other later date as may be stated in the SC. The date the Contract comes into effect is defined as the Effective Date. |
| **2.2 Commencement of Services** | The Consultant shall commence the Services as specified in the SC Clause 2.2. |
| **2.3 Expiration of Contract** | Unless terminated earlier pursuant to Clause GC 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC. |
| **2.4 Modifications or Variations** | Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, can only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party. Any additional scope of work beyond scope of work mentioned in this agreement and corresponding additional commercial terms are also to be through a formal written communication between the parties. |
| **2.5 Force Majeure** | (a) For the purposes of this Contract, “Force Majeure” means an event or circumstance or combination of events or circumstances which prevents the Party claiming Force Majeure (the ‘Affected Party’) from performing its obligations under this Contract and which event or circumstance (i) which is beyond the reasonable control and not arising out of the default of the Affected Party; (ii) the Affected Party has been unable to overcome such circumstance or event by the exercise of due diligence and reasonable efforts, skill and care; and (iii) which has a Material Adverse Effect on the subsistence of this Contract. Such events or circumstances shall include, without limitation, the effect of any natural element or other acts of State or God, including but not limited to, fire, flood, earthquake, lightning, cyclone, landslides or other natural disasters, strikes or other industrial disturbances, war, riots, civil commotion, terrorist attacks, embargoes, blockades, governmental restriction, intervention of civil, naval or military authorities, change in Applicable Law. |
| **2.5.1 Definition** | (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party’s sub consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to, both
| | ▪ take into account at the time of the conclusion of this Contract; and
| | ▪ avoid or overcome in the carrying out of its obligations hereunder. |
| **2.5.2 No Breach of Contract** | (c) Force Majeure shall not include insufficiency of funds or personnel or failure to make any payment required hereunder. |
| | The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force
<table>
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<tr>
<th>2.5.3 Measures to be taken</th>
<th>Majeure, provided that (a) the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract; and (b) has informed the other Party as soon as possible, but not later than 2 (two) days from such event, about the occurrence of such an event.</th>
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<tr>
<td>2.5.4 Extension of Time</td>
<td>(a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party’s inability to fulfill its obligations hereunder with a minimum of delay. (b) A party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any event not later than seven (7) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible. (c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.</td>
</tr>
<tr>
<td>2.5.5 Payments</td>
<td>Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.</td>
</tr>
<tr>
<td>2.5.6 Consultation</td>
<td>During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to the payment accrued to it till date as per the payment schedule set forth as GC clause 6.3.</td>
</tr>
<tr>
<td>2.6 Termination</td>
<td>Not later than thirty (30) days after the Consultant, as the result of an event of Force Majeure, have become unable to perform a material portion of the Services or in case the Authority is not able to perform any of its obligations, the Parties shall consult with each other with a view to agreeing on appropriate measures to be taken in the circumstances.</td>
</tr>
<tr>
<td>2.6.1 By the Authority</td>
<td>The Authority may terminate this Contract in case of occurrence of any of the events specified in paragraphs (a) through (f) of this Clause GC 2.6.1. In such an occurrence, the Authority shall give not less than thirty (30) days written notice of termination, to the Consultant and sixty (60) days in case of the event referred to in (e). (a) If the Consultant does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Authority may have subsequently approved in writing. (b) If the Consultant becomes insolvent or bankrupt. (c) If the Consultant, in the judgment of the Authority has engaged in corrupt or fraudulent practices in competing for or in executing the Contract. (d) If, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days. (e) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.</td>
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</table>
2.6.2 By the Consultant

The Consultants may terminate this Contract, by not less than thirty (30) days’ written notice to the Authority, such notice to be given after the occurrence of any of the events specified in paragraphs (a) through (c) of this Clause GC 2.6.2:

(a) If the Authority fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 7 hereof within sixty (60) days after receiving written notice from the Consultant that such payment is overdue.

(b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.

(c) If the Authority fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.

2.6.3 Payment upon Termination

Upon termination of this Contract pursuant to Clauses GC 2.6.1 or GC 2.6.2, the Authority shall make the following payments to the Consultant (after offsetting against these payments any amount that may be due from the Consultant to the Authority):

(a) payment pursuant to Clause GC 6 for Services satisfactorily performed prior to the effective date of termination;

2.7 Suspension

The Authority may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant fail to perform any of their obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) days after receipt by the Consultant of such notice of suspension.

2.8 Cessation of Rights and obligations

Upon termination of this Contract pursuant to Clauses 2.6 or 2.7 hereof, or upon expiration of this Contract pursuant to Clause 2.3 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause 3.3 hereof, and (iii) any right which a Party may have under the Applicable Law.

1. OBLIGATIONS OF THE CONSULTANT

3.1 General

The Consultant shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Authority, and shall at all times support and safeguard the Authority’s legitimate interests in any dealings with Sub-Consultants or third Parties.
| 3.1.2 Performance Guarantee | The Consultant shall as security for the due and faithful performance and discharge of all its Consultants obligations in terms of the provisions of this Contract, procure and furnish to the Authority a Performance Guarantee from a scheduled bank acceptable to the Authority for an amount equivalent to ‘Rs _________’, and shall be valid for the period stated in the SC Clause 2.1 (b).4 Such guarantee shall be in the form set forth in Appendix C hereto, or in such other form, as the Authority shall have approved in writing. |
| 3.2 Prohibition of Conflicting Activities | The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract. |
| 3.3 Confidentiality | Except with the prior written consent of the Authority, the Consultant and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services. |
| 3.4 Consultant’s Actions Requiring Information to Authority | The Consultant shall obtain the Authority’s prior approval in writing during undertaking any of the following actions: (a) entering into a subcontract with the Sub-Contractors for the performance of any part of the Services, (b) appointing such members of the Personnel not listed by name in Appendix B, and (c) any other action that may be specified in the SC. |
| 3.5 Reporting Obligations | (a) The Consultant shall submit to the Authority the reports and documents specified in SC hereto, in the form, in the numbers and within the time periods set forth in the said SC. (b) Final reports shall be delivered in CD ROM in addition to the hard copies specified in said SC. |
| 3.6 Documents Prepared by the Consultant to be the Property of the Authority | (a) All plans, drawings, specifications, designs, reports, other documents and software submitted by the Consultant under this Contract shall become and remain the property of the Authority, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Authority, together with a detailed inventory thereof. (b) The Consultant may retain a copy of such documents and software. The consult will not use these documents for their future use except, with the written consent of the Authority. |
| 3.7 Law Governing services | Primary responsibility of complying with all the requirements of the Applicable Laws/ local customs and practices shall be of the Consultant and the Consultant shall keep the Authority (including its Directors, employees, agents and representatives) fully indemnified against all cost’s, charges, damages, penalties or litigation that may arise on account of any contravention or violation thereof. |
3.8 Compliances of Labour Laws

(a) The Consultant shall employ its own competent, experienced staff/employees/personnel for the purpose of providing the Services.  
(b) This Agreement does not and shall not be construed to create any employer-employee or principal–agent relationship between Authority and any employees, representatives and personnel engaged by the Consultant in the performance of Services.  
(c) The Consultant, inter alia, agrees that the Services shall be rendered in strict compliance with the provisions of all Applicable Laws. The Consultant shall make statutory payments/remittances, applicable tax deductions including service taxes etc., as are required to be made Applicable Laws. The Authority reserves the right to recover from the Consultant or withhold any amounts payable to the Consultant towards discharge of any claim or statutory obligations arising out of the breach of any of the contract or other Applicable Laws by the Consultant, without prejudice to any of its rights and other remedies herein stated or available under other Applicable Laws.  
(d) The Consultant shall be solely responsible for payment of all salaries and any expenses of the personnel employed including, without limitation, all amounts payable towards State employee insurance, provident fund, pension, or employment compensation, or any other payment to be made under the Applicable Law and/or otherwise to the professionals, technicians or workmen employed and/or contracted in relation to the provision of Services under this Agreement.  
(e) The Consultant shall, in timely manner, obtain and / or maintain the licenses, registrations, employment records, registers, certificates and other records and file returns as are required under various Act/ Rules / Regulations of the State Government in force or as amended from time to time and furnish proof of the same to the Authority on demand. The Consultant shall abide by and comply with all the statutory requirements under the existing Central, State and local body regulations, laws or those made applicable from time to time, such as the Contract Labour (Regulations and Abolition) Act 1965, the Employees Provident Fund and (Miscellaneous Provisions) Act, 1952 and Payment of Gratuity Act, 1972, Employees State Insurance Act, 1948, Minimum Wages Act 1949, Payment of Wages Act 1936, Payment of Bonus Act 1965, Public Liability Insurance Act, 1991, respective State Shops and Establishments Act, and other the labour related laws and regulations as are applicable and in force from time to time and all lawful orders made by the Competent Authority/authorities under the aforesaid Acts. The Consultant shall obtain requisite registrations, statutory permissions, licenses from concerned authorities and furnish proof of the same to the Authority on demand. The Consultant shall have the absolute control and /or supervision on its employees/staff/contract labour there being no nexus of employment between the Consultant and the Authority. The Authority shall not be liable for any dispute, which may arise between the Consultant and its employees. The Consultant shall itself regulate the engagement of its employees and their working
conditions, providing statutory benefits, at its sole discretion in accordance with Applicable Law.

(f) During the validity of this Agreement, the Consultant shall be solely responsible for:
(g) All acts and/or omissions by the employees and other personnel engaged in the performance of the Services as set forth in this Agreement;
(h) Health, safety and security of the employees and other personnel engaged in the performance of the Services as set forth in this Agreement;

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<tr>
<th>3.9 Indemnification</th>
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<tbody>
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<td>The Consultant hereby agrees to indemnify and defend the Authority and its representatives and employees, and hold the Authority, its representatives, employees harmless from:</td>
</tr>
<tr>
<td>(a) Against all and any claims or other lawsuits or proceedings, that may arise on account of breach of any of the applicable labour and other related laws and/or that may arise out of breach of any covenants of this Agreement including those arising out of any accident that may occur during or in relation to the Services as may be proceeded against the Authority for any reason whatsoever and assume full responsibility for whatsoever including the payment of indemnification, penalties, attorneys’ fees, legal costs and other charges, if any;</td>
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<tr>
<td>(b) Damages and losses caused by its negligent or intentional act or omission or any damages and losses caused by the negligent act of any third party or sub-contractor or agency engaged by Consultant;</td>
</tr>
<tr>
<td>(c) Damages and losses resulting from the non-compliance with the obligations established hereunder;</td>
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<tr>
<td>(d) Any environmental damages caused by it and/or its representatives or employees or employees of any third party or sub-consultant or agency engaged by the Consultant;</td>
</tr>
<tr>
<td>(e) Breach (either directly by it or through its representatives and/or employees) of any representation and warranty declared herein by it;</td>
</tr>
<tr>
<td>(f) Any and all claims, actions, suits, proceedings, taxes, duties, levies, costs, expenses, damages and liabilities, including attorneys’ fees, arising out of, connected with, or resulting from or arising in relation to this Agreement due to neglect, omission or intentional act of the Consultant.</td>
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<tr>
<th>4. CONSULTANT’S PERSONNEL</th>
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<tr>
<td>4.1 Description of Personnel</td>
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<td>The Consultant shall employ and provide such qualified and experienced Personnel and Sub-Consultants as are required to carry out the Services. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultant’s Key Personnel are described in Appendix B.</td>
</tr>
<tr>
<td>4.2 Removal and/or Replacement of Personnel</td>
</tr>
<tr>
<td>(a) Except as the Authority may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Consultant, such as retirement, death, medical incapacity, among others, it becomes necessary to replace any of the Key Personnel, the Consultant shall provide as a replacement a</td>
</tr>
</tbody>
</table>
person of equivalent or better qualifications. The upper limit of substitution on account of various reasons including on health ground should not exceed 15% of the total key personnel
(b) If the Authority finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultant shall, at the Authority’s written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Authority.
(c) The Consultant shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.
(d) The Authority may at his discretion impose penalty if it is observed that if there is frequent changes in the key personnel’s of the study team

5. OBLIGATIONS OF THE AUTHORITY

5.1 Assistance and Exemptions
The Authority shall use its best efforts to ensure that the Government shall provide the Consultant such assistance and exemptions as specified in the SC.

5.3 Facilities
The Authority shall make available free of charge to the Consultant the facilities listed under Appendix D.

5.4 Access to land
Subject to Applicable Laws, the Authority warrants that the Consultant shall have, free of charge, unimpeded access to all land in the Government’s country in respect of which access is required for the performance of the Services.

5.5 Change in applicable law
If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties on the subject matter of this Contract or in relation thereto, which increases or decreases the cost or reimbursable expenses incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Clause 6.2.

6. PAYMENTS TO THE CONSULTANT

6.1 Lump-Sum Payment
The total payment due to the Consultant shall not exceed the Total Fee for the Services described in Appendix A and subject to deduction of tax at source as per Applicable Laws.

6.2 Total Fee
Total Fee payable to the Consultant shall be in terms of the provision of SC Clause 6.2.

6.3 Terms and Conditions of Payment
(a) Payments will be made to the Consultant according to the payment schedule stated in the SC Clause 6.3., after the conditions listed in the SC for such payment have been met, and the Consultant has submitted an invoice to the Authority specifying the amount due.

6.4 Responsibility for Accuracy of Project Documents

6.4.1 Notwithstanding Clause 6.3, the Consultant shall be responsible for
### 6.4.2 Notwithstanding Clause 6.3, the Developer/ Contractor shall be fully responsible for the accuracy of design and drawings of the structures. All the designs and drawings for structures including all their components shall be fully checked by Independent Engineer after completion of the designs by the selected Developer. All drawings for structures shall be duly signed by the (a) Designer or (b) Senior Checking Engineer or (c) Senior Bridge / Structure Expert. The designs and drawings not signed as mentioned above shall not be accepted. The Independent Engineer appointed shall indemnify the Authority against any inaccuracy / deficiency in the designs and drawings of the bridges and structures noticed during the construction and even thereafter and the Authority shall bear no responsibility for the accuracy of the designs and drawings submitted by the Developer.

### 6.5 Penalty for delay

In case of delay in completion of Services, a penalty equal to 0.05% of the contract price per day subject to a maximum 5% of the Contract Price will be imposed and shall be recovered from payments due/performance security. However in case of delay due to reasons beyond the control of the consultant, suitable extension of time will be granted.

In case of delay in payment by the Authority beyond 60 days from the invoiced date of the Consultant, the Authority shall pay an interest of 0.016% per day of the invoiced amount from 61st day of invoiced date till the date of such payment is made.

### 7. Good Faith

#### 7.1 Good Faith

The Parties undertake to act in good faith with respect to each other’s rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

### 8. Settlement of Disputes

#### 8.1 Amicable Settlement

The Parties agree that early resolution of disputes is crucial for a smooth execution of the Contract and the success of the assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

#### 8.2 Dispute Resolution

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party’s request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.
## II SPECIAL CONDITIONS OF CONTRACT

<table>
<thead>
<tr>
<th>Number of GC Clause</th>
<th>Amendments of, and Supplements to, Clauses in the General Conditions of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.2</td>
<td>The English language shall be the official language for all purposes; and English language may be changed to any other language with the agreement of both the parties</td>
</tr>
</tbody>
</table>
| 1.3                 | The addresses are:  
**Authority**: ________________________________  
Attention: ____________________________  
Facsimile: ____________________________  
E-mail: ____________________________  
**Consultant**: ________________________________  
Attention: ____________________________  
Facsimile: ____________________________  
E-mail: ____________________________  
**1.3.3** Notice will be deemed to be effective as follows:  
(a) in the case of personal delivery or registered mail, on delivery;  
(b) in the case of telexes, 24 (twenty four) hours following confirmed transmission.  
(c) In the case of telegrams, 24 (twenty four) hours following confirmed transmission; and  
(d) In the case of facsimiles, 24 (twenty four) hours following confirmed transmission. |
| 1.5                 | The Authorized Representatives are:  
**For the Authority**: ________________________________  
**For the Consultant**: ________________________________ |
| 1.7                 | The Consultants and the personnel shall pay the taxes, duties, fees, levies and other impositions levied under the existing, amended or enacted laws during life of this contract and the Authority shall perform such duties in regard to deduction of such tax as may be lawfully imposed. |
| 2.2                 | The date for the commencement of Services shall be from _________ which is the date of issue of the work order (herein referred to as the ‘**Work Order**’). The time period shall be fifteen (15) days or such other time period as the Parties may agree in writing. |
This Contract shall be valid for a period of ____________ from the Effective Date or such other period as the parties may agree in writing.

The Consultant shall furnish within 15 (fifteen) days of the issue of work order, an unconditional Bank Guarantee from the Bank (ACCEPTABLE TO AUTHORITY) of an amount equivalent to ……………’ 5% of the total Contract Price to be received by it towards Performance Security valid for a period of Two (2) years beyond the date of completion of Services. The Bank Guarantee will be released by AUTHORITY upon expiry of 24 (twenty four) months beyond the date of completion of Services. The Bank Guarantee shall be extendable till the completion of civil contract works and rectification of errors if any, found during implementation of Services. In the event the Bank Guarantee or any portion thereof, is en-cashed by the Authority, then immediately following such encashment, the Consultant shall replenish the Bank Guarantee to the original amount.

The risks and the coverage shall be as follows:

(a) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Government’s country by the Consultant or its Personnel or any Sub-Consultants or their Personnel, with a minimum coverage as per Motor Vehicles Act 1988;

(b) Third Party liability insurance, with a minimum coverage of ____________ for the period of consultancy.

(c) Professional Liability Insurance, with a minimum coverage of ________________; 4 Consultants will maintain at its expense; Professional Liability Insurance including coverage for errors and omissions caused by Consultant’s negligence, breach in the performance of its duties under this Contract from an insurance company permitted to offer such policies in India, for a period of 5 (five) years beyond completion of Services commencing from the Effective Date, (A) For an amount not exceeding total payments for Professional Fees and Reimbursable Expenditures made or expected to be made to the Consultants hereunder or (B) the proceeds, the Consultants may be entitled to receive from any insurance maintained by the Consultants to cover such a liability, whichever of (A) or (B) is higher with a minimum coverage of [insert amount and currency].

The indemnity limit in terms of “Any One Accident” (AOA) and “Aggregate limit on the policy period” (AOP) should not be less than the amount stated in the Contract. In case of joint venture or ‘in association’, the policy should be in the name of joint venture / in association entity and not by the individual partners of the joint venture/association.

(d) Employer’s liability and workers’ compensation insurance in respect of the Personnel of the Consultant and of any Sub-Consultants, in accordance with the relevant provisions of the Applicable Law, as well as, with respect to such Personnel, any such life, health, accident, travel or other insurance as may be appropriate; and

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4 To be decided as per the finalized terms.
(e) Insurance that may be necessary to protect the Authority, its employees and assets including rioting and all force majeure events that are insurable.

(f) any other insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant’s property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.

*All insurances and policies should start from the date of commencement of services and remain effective as per relevant requirements of Contract Agreement*

<table>
<thead>
<tr>
<th>3.5</th>
<th>The schedule of deliverable is as follows⁵</th>
</tr>
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<tbody>
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The starting date shall be the date of issue of work order. The delivery schedule must be adhered to by the Consultant.

| 3.6 | The Consultant shall, as a consideration for the services rendered towards the Assignment, be entitled to an agreed fees (hereinafter referred to as the “Consultancy Fees”) for an aggregate amount equivalent to Rs. _____/- (Rupees ______ only), plus applicable Service Tax as may be levied under the laws of India (subject to tax deduction at source as per Applicable Law).

*The Consultancy Fee, as and when becoming payable as per terms hereof, shall be inclusive of all out of pocket expenses including manpower costs, and costs of deliverables.*

**OR**

The Total Fee to be paid to the Consultant shall be ___________________ ⁶ which is an all inclusive lump-sum payment for the Services covering all costs, out of pocket expenses and taxes (including service tax, education cess etc) (hereinafter referred to as the “Consultancy Fees”). The Consultancy Fee shall be subject to tax deductions at source as per Applicable Law.

The Consultant shall, while raising the invoice for the payments, provide the breakup of service tax, surcharge, cess and any other applicable tax as included in the payment for which invoice is being raised. The Consultant shall also quote the service tax registration number, nature of service for which registration is obtained and it’s PAN No. on all the invoices raised for the payment.

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<tr>
<th>3.7</th>
<th>Payment Schedule:⁷</th>
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<td></td>
<td>Payments shall be made according to the following schedule for each task of Contract. Payment will be made when deliverables are submitted.</td>
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</tbody>
</table>

*(Milestones to be kept same as per the RFP conditions)*

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<tr>
<th>3.8</th>
<th>Disputes shall be settled by arbitration in accordance with the following provisions:</th>
</tr>
</thead>
</table>

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⁵ Indicative schedule only. To be finalized as per the nature of each assignment.

⁶ To be modified and filled in based on agreed terms

⁷ Indicative schedule only. To be finalized as per the nature of each assignment
### Dispute Settlement

8.2 (i) Any dispute, controversy, or claim arising out of or relating to this contract, or the breach, termination or invalidity thereof shall be settled by arbitration in accordance with following provisions:

8.2 (ii) Each dispute submitted by a Party to arbitration shall be heard by a sole arbitrator or an arbitration panel composed of three arbitrators, in accordance with the following provisions:

(a) Where the Parties agree that the dispute concerns a technical matter, they may agree to appoint a sole arbitrator or, failing agreement on the identity of such sole arbitrator within thirty (30) days after receipt by the other Party of the proposal of a name for such an appointment by the Party who initiated the proceedings, either Party may apply to the ____________, \(^8\) for a list of not fewer than five nominees and, on receipt of such list, the Parties shall alternately strike names there from, and the last remaining nominee on the list shall be the sole arbitrator for the matter in dispute. If the last remaining nominee has not been determined in this manner within sixty (60) days of the date of the list, the __________ \(^9\), shall appoint, upon the request of either Party and from such list or otherwise, a sole arbitrator for the matter in dispute.

(b) Where the Parties do not agree that the dispute concerns a technical matter, the Authority and the Consultants shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the arbitrators named by the Parties do not succeed in appointing a third arbitrator within thirty (30) days after the latter of the two arbitrators named by the Parties has been appointed, the third arbitrator shall, at the request of either Party, be appointed by as per the provisions of Indian Arbitration and Conciliation Act, 1996.

### Rule of Procedure:

Arbitration and proceedings shall be conducted in accordance with procedure of Arbitration & Conciliation Act 1996, of India.

### Substitution of Arbitrators:

If for any reason an arbitrator is unable to perform his function, a substitute shall be appointed in the same manner as the original arbitrator.

### Miscellaneous:

In any arbitration proceeding hereunder:

(a) Proceedings shall, unless otherwise agreed by the parties, be held at __________ \(^10\).

(b) The English language shall be the official language for all purposes; and English language may be changed to any other language with the agreement of both the parties

The decision of the sole arbitrator or of a majority of the arbitrators (or of the third Arbitrator if there is no such majority) shall generally be binding on the parties.

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\(^8\) To be filled up based on the particular sector for which consultancy is being provided

\(^9\) To be filled up based on the particular sector for which consultancy is being provided

\(^10\) To be filled as per the agreed terms.
IV. Appendices

Appendix A

Description of the Services

11 To be filled in as per the requirements of the assignment.
Appendix B

Key Personnel and Sub-Consultants\(^\text{12}\)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Proposed Key Position</th>
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\(^{12}\) To be filled in as per the requirements of the assignment.
Appendix C Format for Bank Guarantee for Performance Security

BANK GUARANTEE FOR PERFORMANCE SECURITY

[To be stamped in accordance with Stamp Act, if any, of the Country of Issuing Bank]

To

______________________________

In consideration of “APCRDA” (hereinafter referred as the “Authority”, which expression shall, unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s_________ having its Registered office at ______________________________ (Hereinafter referred to as the “Consultant” which expression shall repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns), a contract by issue of Authority’s Work Order dated ______________ and the same having been unequivocally accepted by the Consultant, resulting in a Contract valued at ______________ excluding Service Tax for Consultancy Services for the ________________________(Hereinafter called the “Contract”), and the Consultant having agreed to furnish a Bank Guarantee to the Authority as “Performance Security to secure the due, faithful and punctual discharge of and compliance with all the Consultant’s obligations and responsibilities in terms of and as stipulated by the Authority in the said contract for performance of the above Contract amounting to ____________________________________.

We, ……………………………..having registered office at ……………., a body registered/constituted under the ………………………. (hereinafter referred to as the Bank), which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee the due and punctual performance & discharge by the Consultant of all its obligations under the Contract and undertake to pay the Authority immediately on demand, without any deductions, set-off or counterclaim whatsoever, any or, all money demanded by the Authority to the extent of ______________ as aforesaid at any time up to ______________, without any demur, reservation, contest, recourse, cavil, arguments or protest and/or without any reference to or enquiry from the Consultant and without your needing to prove or show grounds or reasons for your demand for the sum specified therein. Any such demand made by the Authority on the bank shall be conclusive and binding notwithstanding any difference between the Authority and the Consultant or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. We agree that the Guarantee herein contained shall be irrevocable and shall continue to be enforceable till the Authority discharges this guarantee.

The Authority shall have the fullest liberty without affecting in any way the liability of the Bank under this Guarantee, from time to time to vary or to extend the time for performance of the contract by the Consultant. The Authority shall have the fullest liberty without affecting
this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Consultant and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Authority and the Consultant any other course or remedy or security available to the Authority. The Bank shall not be relieved of its obligations under these presents by any exercise by the Authority of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Authority or any other indulgence shown by the Authority or by any other matter or thing whatsoever which under law would but for this provision have the effect of relieving the Bank.

The Bank also agrees that the Authority at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Consultant and notwithstanding any security or other guarantee that the Authority may have in relation to the Consultant’s liabilities.

The Authority shall be entitled to make unlimited number of demands under this Bank Guarantee. Any demand shall be deemed to be served, if delivered by hand, when left at the property address for service; and if given or made by pre-paid registered post or facsimile transmission, on receipt.

Any waivers, extensions of time or other forbearance given or variations required under the Contract or any invalidity, unenforceability or illegality of the whole or any part of the Contract or rights or any Party thereto or amendment or other modifications of the Contract, or any other fact, circumstances, provision of statute of law which might entitle the Bank to be released in whole or in part from its undertaking, whether in the knowledge of the Bank or not or whether notified to the Bank or not, shall not in any way release the Bank from its obligations under this Bank Guarantee.

(Signature of the Authorised Official)
Appendix E: Facilities to be provided by the Authority\textsuperscript{13}

\textsuperscript{13} To be filled in as per requirements of the assignment.
POWER OF ATTORNEY FOR SIGNING PROPOSAL
(On a Stamp Paper of relevant value)

POWER OF ATTORNEY

Know all men by these presents, we (name and address of the registered office) do hereby constitute, appoint and authorize Mr./Ms. (name and address of residence) who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our proposal for the “Name of work __________________________________” in the state of Andhra Pradesh, including signing and submission of all documents and providing information/ responses to Andhra Pradesh Capital Region Development Authority (“APCRDA”), Government of Andhra Pradesh, representing us in all matters before GoAP, and generally dealing with APCRDA in all matters in connection with our proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

(Signature)
(Name, Title and Address)

I Accept

(Signature)
(Name, Title and Address of the Attorney)

Notes:
1. The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
2. Also, where required, the executant(s) should submit for verification the extract of the charter documents and documents such as a resolution / power of attorney in favour of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the Firm.
3. In case the Proposal is signed by an authorized Director of the Firm, a certified copy of the appropriate resolution / document conveying such authority may be enclosed in lieu of the Power of Attorney.