

Phone: - 011-25686846
Mob : - 8415927181
Email ID:- bro-direpc@nic.in

Headquarters
Dte General Border Roads
Seema Sadak Bhawan
Ring Road, Delhi Cantt,
New Delhi -110 010

24006/DGBR/Policy/ 04/EPC Cell

29 May 2018

HQ ADGBR (North-West)
Sec-48-C, Near Motor Market
Chandigarh-160047

HQ ADGBR (East)
C/o 99 APO
Pin - 900885

HQ CE (P) -----
C/o 56 APO

HQ CE (P) -----
C/o 99 APO

Subject:- GUIDELINES FOR PROCUREMENT, PREPARATION, REVIEW AND APPROVAL OF DPR

1. The Border Roads Organization under the Ministry is involved in preparation of various DPRs / Feasibility Report for development / improvement of various sections of National Highways / other than National Highways/ bridges/ structures etc. funded by MoD, MoRT&H and other Ministries. The DPR/ Feasibility Reports are required before taking up construction / improvement of road Project for capacity augmentation and removing various deficiencies / improving road safety aspects etc. MoRT&H guidelines will be followed for the works funded by MoRT&H whereas following guidelines will be adopted for the works funded by other Ministries where specific guidelines are not issued.

2. **Sanction of Estimates for preparation of DPR:** Sanction of estimate for preparation of DPR will be done based on H-1 rates obtained through QCBS (Quality & Cost Based Selection) method. The rough cost of work will be based on MoRT&H letter No. H-39011/30/2015-P&P (Pt-I) dated 22 Aug 2016 & subsequent amendment thereof.

3. **Invitation of bids:** The requisition for preparation of DPR's would be initiated based on inclusion of road in LTRoWP /BRDB Programme/AWP and Project wise ceiling thereof. The bids proposal shall be invited centrally at HQ DGBR (EPC CELL) based on requisition forwarded by the concerned Project considering the rates on the basis of per Km cost as per MoRT&H guidelines on the subject. Standard Model Contract documents of MoRT&H shall be used.

Contd...P/2

4. **Opening and Evaluation of Bids:** The opening and evaluation of the Bid shall be done at HQ DGBR. The technical evaluation of bids shall be done as per the procedure given in tender documents through QCBS (Quality and Cost Based Selection) method. Opening of Proposals will be done through both online and manually for Technical Proposal and only online for Financial Proposal.

(a) **Proposal Evaluation**

The proposals would be evaluated by a Committee, headed by at least JD Level Officer constituted by the Employer on quarterly basis . A three-stage procedure will be adopted in evaluating the proposal. In the first stage- Proof of Eligibility, it will be examined as to whether:

- (i) The proposal is accompanied by Document fee
- (ii) The Proposal is accompanied by Bid Security of required value and of validity equal or more than the minimum required validity
- (iii) The firms(s) have required experience
- (iv) The firms(s) have required turnover
- (v) The documents are properly signed by the authorized signatories and whether the proposal contains proper POA .
- (vi) The proposals have been received on or before the dead line of submission.
- (vii) In case a Joint Venture/Association of firms, the proposal shall be accompanied by a certified copy of legally binding Memorandum of Understanding (MOU) on a stamp paper of Rs.100, signed by all firms to the joint venture/Association

In case answers to any of the above items is 'No' the bid shall be declared as non- responsive and shall not be evaluated further. However Committee may give maximum upto 07 days to submit clarification / additional documents in support of their eligibility, in case of non-submission of documents (if any).

A Consultant satisfying the minimum Eligibility Criteria as mentioned in the Data sheet and who had submitted the above mentioned documents shall be declared "pass" in Proof of Eligibility. Recommendation / evaluation of committee will be approved by ADGBR (HQ). Technical Proposals of only those consultants shall be opened and evaluated further.

(b) **Technical Proposal**

In the second stage the Technical proposal shall be evaluated as per the detailed evaluation criteria given in Data Sheet. Technical proposal will be evaluated by Committee headed by at least JD level officer alongwith a rep of IFA/ Finance. In case of any deficiency, committee may give maximum upto 10 days to submit clarification / additional documents. The marks obtained by technical evaluation from INFRACON Portal will be cross verified and in case of any variation, the same will be brought to the knowledge of the INFRACON Authorities.

A proposal securing 75 points shall be declared pass in the evaluation of Technical Proposal .**The technical proposal should score at least 75 points out of 100 to be considered for financial evaluation. The CV of the proposed Team Leader should score at least 75 % marks otherwise the entire proposal shall be considered to have failed in the evaluation of Technical Proposals** and shall not be considered for opening of Financial Proposals. Evaluation / Recommendation of Committee will be approved by ADGBR (HQ).

(c) **Financial Proposal**

(i) After the evaluation of Technical Proposals and the shortlisting of firms is finalized, the Employer may notify those consultants whose proposals were not considered as per conditions of Bid. The Employer shall simultaneously notify the shortlisted firms indicating the date and time set for opening of the Financial Proposals.

(ii) The Financial Proposals shall be opened on CPP Portal publicly in the presence of the consultants representatives who choose to attend. The name of the consultant, the technical scores, and the proposed prices shall be read aloud and recorded when the Financial Proposals are opened. The Client shall prepare minutes of the public opening.

(iii) The Evaluation Committee headed by at least JD Level Officer alongwith rep of finance will determine whether the submitted Financial Proposals are complete (i.e. whether they have included cost of all items of the corresponding proposals; if not, then the cost towards such missing items will be considered as NIL but the bidder shall, however, be required to carry out such obligations without any additional compensation.) and without computational error. In case under such circumstances, if Client feels that the work cannot be carried out within the overall cost as per the submitted financial proposal, such proposals shall be considered non responsive.

(iv) The lowest financial proposal (F_M) will be given a financial score (S_F) of 100 points. The financial scores of other proposals will be computed as follows :-

$$S_F = 100 \times F_M / F \quad (F = \text{amount of financial proposal by bidder})$$

(v) Proposals will finally be ranked according to their combined technical (S_T) and financial (S_F) scores as follows:-

$$S = S_T \times T_w + S_F \times F_w$$

Where S is the combined score, and T_w and F_w are weights assigned to Technical Proposal and Financial Proposal, which shall ordinarily be 0.80 and 0.20 respectively.

::4::

(vi) For a particular package, a consultant with “a particular team” having the maximum combined score(s) shall be declared as the most preferred bidder (H-1).

(vii) In case work has to be awarded for multiple packages, award of work to a consultant with “a particular team” either as sole or as in JV/Association shall be limited to one package only. At first, consultant who become H-1 in one package each shall be assigned the respective package. Then package in which a consultant with “a particular team” turns out to be the most preferred bidder (H-1) in more than one package shall be considered. In case a consultant with “a particular team” turns out to be most preferred bidder (H-1) in more than one package, the package which is to be awarded to this team of a consultant shall be determined on the basis of least cost after considering the Financial Quote of H-1 Bidder and H-2 Bidder limited to those packages. Procedure to be followed for awarding work based on QCBS including assessment of least cost, under special circumstances i.e when a consultant with “a particular Team” turns out to be the preferred bidder (H-1) in more than one package.

(viii) Based on the technical & financial evaluation, the documents & the list of selected consultants will be forwarded by EPC cell of HQ DGBR to IFA (BR) along with justification for acceptance of tender. On concurrence of IFA (BR), DGBR will approve in principal and approved proposal will be sent to concerned CFA for further action. Concurrence of respective IFA at lower formation is dispensed with, since proposal has already been concurred at HQ DGBR level.

5. **Approval of Tender Based Estimate:** On receipt of the tender documents from HQ DGBR, Tender based estimate for preparation of DPR/feasibility report shall be approved/sanctioned by Competent Authority as per Srl No. 18 of delegation of power of MoD issued vide MoD letter No. MoD (BR) F.No. 04/696/2015/D&P (BR-I) dated 11 Aug 2017.

6. **Acceptance of Bid :** The acceptance of bids will be done by the CFA as per Srl No. 18 (a) of delegation of power of MoD issued vide MoD letter No. MoD (BR) F.No. 04/696/2015 /D&P (BR-I) dated 11 Aug 2017.

7. **Preparation of DPR, Review and Approval of DPR/ FS:** Six sub-stages have been defined for DPR preparation, each with designated deliverables, reviewing and accepting authority.

(a) The following table shall be followed :-

S No	Sub Stage	Key Deliverables	Reviewing and Accepting Authority
(i)	Draft/Final Inception Report	Project appreciation , Detailed approach and methodology, Work programme, Proforma for data collection, Design standard and proposed cross section, Key plan and Linear plan, Development plans, Quality assurance plan, Draft design standards	CE Project

Contd...P/5

S No	Sub Stage	Key Deliverables	Reviewing and Accepting Authority
(ii)	Draft/Final Feasibility Report	Project description including possible alternatives, Finalized alignment plan, methodology, socio-economic profile, indicative design standards and Technical specification, traffic survey and analysis, environmental screening and preliminary assessment, initial social assessment and preliminary land acquisition/re-settlement plan, cost estimates based on preliminary rate analysis and bill of quantities, economic and financial analysis	CE Project Alignment plan shall be approved by ADGBR (East)/ ADGBR (NW)
(iii)	Draft/Final LA & Clearance-I Report	Strip plan along with land acquisition plan, utility relocation plan, details of properties and estimated costs of acquisition	CE Project
(iv)	Draft/Final Detailed Project Report	Main Report, Design Report, Materials Report, Environmental Assessment Report, Technical Specification, Rate Analysis , Cost Estimate, Bill of Quantities, Drawing Volume	CFA
(v)	Draft/Final Technical Schedules	Civil Work Contract Agreement	Competent Engineering Authority (CEA)
(vi)	Draft/Final LA & Clearance-II Report	Land Acquisition Report including final 3a,3 A,3D notifications, Clearance Report with final approvals from agencies for all Project related clearances	CE Project

(b) For each of the six sub-stages in 6 (a) above, quality checklists have been defined to ensure that all necessary activities pertaining to the sub-stage are completed. Compliance to checklists shall be reviewed by corresponding review and accepting authority, as mentioned in the above tables. Payments shall be linked to successful completion of the various sub-stages.

(c) The timeline for preparation of DPR shall be as per scope of work normally 8 months. Timeline for scrutiny and approval of DPR shall remain 2 months as per Standard Operating Procedures,

(d) DPR consultant shall be responsible for sharing the findings from the preparation stages during the bid process. During the bid process for a project, the DPR consultant shall support the Authority in responding to all technical queries, and shall ensure active participation of senior team members of the consultant during all interaction with potential bidders including pre-bid conference, meetings, site visits etc. In addition, the DPR consultant shall also support preparation of detailed responses to the written queries raised by the bidders. Also, the deliverables of the DPR consultant shall include editable soft copies of the final versions of all documents, including but not limited to the strip plan, plan & profile drawings, cross sections of right of way and details of structures as well as any cost workings.

(e) DPR Consultant shall also prepare the complete draft utility shifting estimates using the latest Schedule of Rates and obtain a sign-off from the corresponding utility agencies. For preparation of estimate, consultant shall use technologies for detection of sub-surface utilities as per para 7.

8. **Technology for DPR/ FS Preparation:** The following are the areas where appropriate technology shall be introduced to reduce time for DPR/ FS preparation and improve quality:

(a) **Topographic Survey:-** To conduct topographic surveys, technologies which meet the following criteria shall be used.

(i) **For land based surveys:**

- (aa) Fundamental horizontal accuracy of 2 cm or better
- (ab) Fundamental vertical accuracy of 2 cm or better
- (ac) More than 50 points shall be measured per sq. m.

(ii) **For aerial based surveys:**

- (aa) Fundamental horizontal accuracy of 5 cm or better
- (ab) Fundamental vertical accuracy of 5 cm or better
- (ac) More than 10 points shall be measured per sq. m.

To establish accuracy, a check point survey using DGPS (for horizontal accuracy) and Auto Level (for vertical accuracy) shall be carried out to establish the fundamental horizontal and vertical accuracy. A minimum of 25 check points, or check points once every 4 km shall be established, and these shall be strictly different from any geo- referencing or control network points.

The following are the set of deliverables which shall be submitted after completion of survey:

- (a) Raw DGPS data for the entire highway length and adjoining areas of interest
- (b) Point cloud data/ Data of points captured for the entire highway length and adjoining areas of interest
- (c) Topographic map of scale 1:1000 of the entire highway length and adjoining areas of interest
- (d) Contour map of 50 cm of entire highway length and adjoining areas of interest
- (e) Cross section of the highway at every 1 m in dwg format

For land based surveys, Mobile LiDAR (Light Detection and Ranging) or equivalent technology that can meet above requirements shall be adopted. For aerial based surveys, Aerial Mobile LiDAR (Light Detection and Ranging) or equivalent technology that can meet above requirements shall be adopted. Land based surveys using Mobile LiDAR or equivalent technology shall be used for most highway projects, except in cases of hilly areas, major bypasses and realignments, where aerial based surveys using aerial LiDAR or equivalent technology shall be used. In shadow areas such as invert levels below culverts, where LiDAR or equivalent technologies cannot survey accurately, traditional methods of Total Station/ Auto Level shall be used to complete the study. In case of mobile LiDAR or equivalent technology, 360 degree panoramic images of the entire highway length and adjoining areas of interest shall be submitted. In case of aerial LiDAR or equivalent technology, ortho-images of the entire highway length and adjoining areas of interest shall be submitted. In case other equivalent technologies are identified at later stages, specifications for the same shall be put up for approval to the Competent Authority.

(b) Sub-Surface Utility Mapping: -The following criteria shall be met by the process of sub-surface utility mapping:

- (i) Coverage and mapping of all sub-surface utilities within project RoW, especially those under additional carriageway width
- (ii) Accurate mapping and resolution of all sub-surface utilities up to a depth of 4 m
- (iii) Differentiation between sub-surface utilities such as live electric cables, metallic utilities and other utilities
- (iv) Sub-surface utilities radargrams further processed into utility maps in formats such as PDF, JPEG and AutoCAD.

To meet the above criteria, sub-surface utility engineering (SUE) using technologies such as Ground Penetrating Radar (GPR), Induction Locator etc. or equivalent technologies shall be adopted. In case other equivalent technologies are identified at later stages, specifications for the same shall be put up for approval to the Competent Authority.

(c) Cadastral mapping:-

All DPR consultants shall digitize land cadastral maps before preparing the land acquisition plan. The digitized map shall exactly match the original map, like a contact print, since the dimensions and area of plots, or the whole village are to be extracted from the map itself. An accuracy of 1 mm or higher in a 1 : 1 000 scale map shall be ensured, as this translates into an accuracy of 1 m or higher on ground.

(d) Traffic Count Survey:-

DPR Consultants shall use the results of traffic count surveys being done by Indian Highway Management Company Limited (IHMCL). If required, specifically in cases where a particular stretch is not being covered by Indian Highway Management Company Limited (IHMCL), DPR consultants shall carry out traffic count surveys on their own using Automatic Traffic Counter and Classifier (ATCC) systems or equivalent technologies. The Automatic Traffic Counter and Classifier (ATCC) system shall meet the following accuracy levels after validation/ correction:

- (i) Classification of vehicles: better than 95%
- (ii) Counting of vehicles: better than 98%.

Before validation and correction, the Automatic Traffic Counter and Classifier (ATCC) system shall meet the following accuracy levels:

- (i) Classification of vehicles: better than 90%
- (ii) Counting of vehicles: better than 95%.

For verification of the above mentioned accuracy levels, audit of raw ATCC data shall be done on a sampling basis. Systems such as Pneumatic Tube Detector, Inductive Detector Loop, Video Image Detection and Infrared Sensor etc or any other equivalent technologies shall be adopted to meet the above accuracy levels. In case other equivalent technologies are identified at later stages, specifications for the same shall be put up for approval to the Competent Authority

9. Payment Schedule:

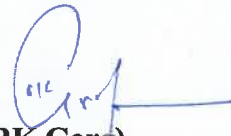
The standard form of payment schedule to be followed in RFP document has been developed for procuring consultancy services for 'preparation of Detailed Project Report (DPR) for development of Highways. Following Payment Schedule for uniformly using in RFP document for procurement consultancy service on Highway will be followed by BRO. The payment schedule has been included in Draft Contract for Consultant's Services as under:-

S.No	Item	Payment as% of contract value
1	Submission of final Inception Report	15%
2	Submission of final Alignment Plan	10%
3	Submission of final Feasibility Report	5%
4	Submission of Final Land Acquisition Report	10%
5	Submission of clearance proposals	5%
6	Submission of Draft DPR	10%
7	Approval of Final DPR	10%

S.No	Item	Payment as% of contract value
8	Approval of Technical Schedules	5%
9	3D publication	10%
10	Clearance - Stage I Approval	5%
11	Clearance - Stage II/Final Approval	5%
12	Retention to be released after 3 years	10%
	Total:	100%
13	Bonus on submission of draft 3A within 1month of alignment finalization	2.5% bonus
14	Bonus on submission of draft clearance proposals within 1 month of alignment finalization	2.5% bonus

10. Extension of Time and Variation/ Change of Scope: In case Extension of Time is required for carrying out the DPR/feasibility report, it shall be granted at the level of Chief Engineer (Project) with approval of Authority issued LOA. The matter of variation /change of scope upto 10% of consultancy contract amount for DPR/feasibility study shall be approved at the level of Chief Engineer(Project) In case, the variation/change of scope exceeds the 10% of consultancy contract amount, revised approval shall be obtained.

11. This issues with the concurrence of IFA (BR) vide ID Note No IF/W/801/VII/Misc-177/146 (25/5) dated 25 May 2018 and approval of DGBR.


(RK Garg)
 SE (Civ)
 Dir (EPC)
 For Dir Gen Border Roads

Copy to: -

HQ DGBR/DG's Sectt - For information, please.
HQ DGBR/TP Dte - -do-
HQ DGBR/East Dte - -do-
HQ DGBR/West Dte- - -do-
HQ DGBR/B&T Dte - -do-
IFA (BR) - -do-