



**CSIR - STRUCTURAL ENGINEERING RESEARCH CENTRE,**  
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## **EXPRESSION OF INTEREST**

**FOR**

# **EMPANELMENT OF CONSTRUCTION COMPANIES TO IMPLEMENT CUSTOMISED DESIGN SOLUTIONS FOR “TEMPORARY AND SHORT-TERM HOSPITAL STRUCTURES”**

**TRADE:** Composite Works (Civil & Electrical)

**Tender Reference number:** 313(II.c.7.2)/COVID-19\_Empanel Dt. 27.11.2020

Category 1: **CW-1:** Project cost up to Rs. 15 Crore

Category 2: **CW-2:** Project cost above Rs. 15 Crore

**Last date for submission of Applications:** 14.30 hrs. on 21.12.2020

## EMPANELMENT OF CONSTRUCTION COMPANIES TO IMPLEMENT CUSTOMISED DESIGN SOLUTIONS FOR “TEMPORARY AND SHORT-TERM HOSPITAL STRUCTURES”

### EXPRESSION OF INTEREST (EOI)

#### 1. Introduction

CSIR-SERC invites Expression of Interest (EOI) for **EMPANELMENT OF CONSTRUCTION COMPANIES TO IMPLEMENT CUSTOMISED DESIGN SOLUTIONS FOR “TEMPORARY AND SHORT-TERM HOSPITAL STRUCTURES”**

CSIR-Structural Engineering Research Centre (CSIR-SERC), Chennai, India is one of the national laboratories under the Council of Scientific & Industrial Research (CSIR), India. Established in June 1965, CSIR-SERC has built up excellent facilities and expertise for the analysis, design and testing of structures and structural components. Services of the laboratory are being extensively used by the central and state Governments and public and private sector undertakings. The Centre is recognized at the national and international levels as a leading research institution in the field of structural engineering. CSIR-SERC has been certified as ISO 9001:2015 quality institution. CSIR-SERC is engaged with R&D under four different thrust areas and thus has developed sustainable technologies for industrial and societal applications.

This is EOI is for empaneling the construction companies to implement the customized design solutions developed by CSIR-SERC, Chennai.

Sl. No.	File No.	Item Description
01.	313(II.c.7.2)/COVID-19_Empanel	<b>EMPANELMENT OF CONSTRUCTION COMPANIES TO IMPLEMENT CUSTOMISED DESIGN SOLUTIONS FOR “TEMPORARY AND SHORT-TERM HOSPITAL STRUCTURES”</b>

#### 2. Objective

The objective of this EOI is to empanel the competent and interested construction companies for implementing the customized design solutions developed by CSIR-SERC, Chennai for **“Temporary and short-term hospital structures for addressing the COVID-19 pandemic”** in various parts of India.

#### 3. Application Form and Online Submission:

The application form for the EOI can be downloaded free of cost directly from Central Public Procurement Portal (CPPP) of Government of India website <https://etenders.gov.in/eprocure/app> and CSIR-SERC website [www.serc.res.in](http://www.serc.res.in). Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <https://etenders.gov.in/eprocure/app>. The portal enrolment is free of cost.

Manual submission will not be accepted. The “Application Form for Empanelment” and

the “Required Documents (please refer Sl. No. 9 below)” in the pdf format should be submitted online. Bidders are advised to go through instructions provided at ‘Instructions for online Bid Submission’ given in Annexure I.

**The applicant willing to apply for more than one category should “Tick Mark” in the application form the categories interested. The documents required for the categories selected should be submitted along with the application form.**

**4. Schedule for submission:**

The Schedule for Submission of proposals and Opening of proposals is as follows: -

Date & Time of Submission of proposals		Date and Time of Opening of proposals	
Date	Time (IST)	Date	Time (IST)
<b>21 December 2020</b>	<b>14.30 hrs.</b>	<b>22 December 2020</b>	<b>14.30 hrs.</b>

**5. Tender Fee and EMD:** Not applicable

**6. Instruction for online submission of EOI:** Please refer Annexure I.

**7. Details about the customized design solutions:** Please refer Annexure II.

**8. Eligibility criteria:**

i. The category wise minimum eligibility criteria is given in the table below:

S.No	Trade	Category	Similar work Executed/ completed last 5 years	Average Turnover of last 3 financial years	Experience of firm
1	Composite Works (Civil & Electrical)	CW1 Up to Rs.15 Crore	One work of Rs.12 Crore or Two works of Rs.7.5 Crore each or Three works of Rs. 6 Crore each during the last 5 years ending on 31st March 2019.	Rs. 5.0 Crore	Minimum 5 Years
2	Composite Works (Civil & Electrical)	CW2 Above Rs. 15 Crore	One work of Rs.120 Crore or Two works of Rs.75 Crore each or Three works of Rs. 60 Crore each during the last 5 years ending on 31st March 2019.	Rs.50 Crore	

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- ii. The applicant should be bonafide resourceful and well experienced contractor/agency/firm, registered/empaneled with PS Banks/ PWD/ CPWD/ MES/ RLY/ CSIR/PSUs.
  - iii. The applicant should have experience in having successfully completed similar works of value as prescribed in table above for construction works for Government/Semi-Government/PSUs/PSBs during the last 5 years ending on 31<sup>st</sup> March 2019. The information must be supported with the copies of Work Order, Satisfactory Completion Certificate.
  - iv. Applicants should have minimum average annual turnover prescribed in above table during last 3 years ending on 31.03.2019-
  - v. The applicant should be equipped with necessary infrastructure like construction equipment, machinery and tools, labour strength, etc.
  - vi. The applicant should not have been disqualified/debarred/terminated on account of poor or unsatisfactory performance/blacklisted from any Government, Semi-government, PSU, Banks or any other organizations during last 7 years as on the date of publication of this notice. **A self-declaratory letter in this regard must be enclosed** on the Letter Head of the Firm duly signed by the Authorized Signatory. The application of disqualified/debarred/blacklisted/terminated agency/contractor/vendor on account of poor or unsatisfactory performance shall be summarily rejected.

**9. Documents to be submitted:**

The following documents pertaining to the applicant should be submitted online along with the application form:

- a) The applicant is required to furnish registration certificate of the firm/company along with their PAN No, GST Registration details of firm, etc.
- b) Documentary proof for registration/empanelment with PS Banks/PWD/CPWD/ MES/ RLY/ CSIR/PSUs (as stipulated in Section 8. ii. above).
- c) Documentary evidence (work order and satisfactory completion certificate) for major works executed and completed for Government/Semi-Government/PSUs/PSBs/CSIR during the last 5 years ending on 31<sup>st</sup> March 2019 as per the trade given in section 8 (Eligibility Criteria), (as stipulated in Appendix-A in the application form).
- d) Documentary evidence (copies of LOI/work order/agreement) for major works under execution for Government/Semi-Government/PSUs/PSBs/CSIR for which work order is released before 31 March 2019, as per the trade given in section 8 (Eligibility Criteria) (as stipulated in Appendix-B in the application form).
- e) Documentary evidence (copies of LOI/work order/agreement/satisfactory completion certificate) for completed projects involving steel structures during the last 5 years ending on 31<sup>st</sup> March 2019/ ongoing projects involving steel structures for which work order is released before 31 March 2019, for Government/Semi-Government/PSUs/PSBs (as stipulated in Appendix-C in the application form).
- f) Documentary evidence (copies of LOI/work order/agreement/ satisfactory completion certificate) for completed projects of hospital building structures during the last 5 years ending on 31<sup>st</sup> March 2019/ ongoing works of

hospital building structures for which work order is released before 31 March 2019, for Government/Semi-Government/PSUs/PSBs (as stipulated in Appendix-D in the application form).

- g) For assessing the Annual Turnover applicant must submit the Certificate of Turnover (as given in Appendix-G in the application form) for the last 3 years period ending on 31.03.2019 duly certified by the Chartered Accountant. (as stipulated in Section 8. iv. above).
- h) Self-certified letter about holiday listing/black listing in the applicant's letter head.

#### 10. Empanelment of Construction companies

- i) Purpose of this Eoi is to only empanel the Construction companies interested in implementing the customized design/technological solutions developed by CSIR-SERC to construct temporary and short-term hospital structures for addressing the COVID-19 pandemic in various parts of India. The empaneled applicants will be informed of the further modalities at a later date.
- ii) For specific requirement towards the construction of temporary and short-term hospital structures, a limited tender will be called from the empanelled list of construction companies.

#### 11. Evaluation method

Sl. No	Criteria	Maximum Marks
1	For the total project value of the projects completed during the last 5 years ending on 31 <sup>st</sup> March 2019 as per the trade given in section 8 (Eligibility Criteria) (details to be provided in Appendix A of the application form), the marks will be assigned as given as below: CW-1: 1 mark for each 1 crore of the total project value CW-2: 1 mark for each 10 crore of the total project value	50
2	For the total project value of the ongoing projects for which work order is released before 31 March 2019, as per the trade given in section 8 (Eligibility Criteria) (details to be provided in Appendix B of the application form), the marks will be assigned as given as below: CW-1: 1 mark for each 1 crore of the total project value CW-2: 1 mark for each 10 crore of the total project value	30
3	For the total project value of the completed projects involving steel structures during the last 5 years ending on 31 <sup>st</sup> March 2019 and ongoing projects involving steel structures for which work order is released before 31 March 2019 (details to be provided in Appendix C of the application form), the marks will be assigned as given as below: CW-1: 0.5 mark for each 1 crore of the total project value CW-2: 0.5 mark for each 10 crore of the total project value	10
4.	For the total project value of the completed projects of Hospital building Structures during the last 5 years ending on 31 <sup>st</sup> March 2019 and ongoing projects of Hospital building Structures for which work order is released before 31 March 2019 (details to be provided in Appendix C of the application form), the marks will be assigned as	10

given as below: CW-1: 0.5 mark for each 1 crore of the total project value CW-2: 0.5 mark for each 10 crore of the total project value	
Total	100

All applicants securing the minimum required marks (60 percent in aggregate) should be shortlisted.

## 12. Clarifications on the EOI Document

Any clarification in the EOI document may be sent in writing to the following through email:

*Head, Business, Knowledge, Management & Development Division*

**email: *bkmd@serc.res.in***

## 13. Terms and Conditions and Amendments of EOI:

- CSIR-SERC may at its discretion or as a result of a query, suggestion or comment of party/entity, may modify the EOI document by issuing an amendment or a corrigendum at any time before opening the EOI. Any such Addendum or Corrigendum will be uploaded on CPPP Portal <https://etenders.gov.in/eprocure/app> and CSIR-SERC's website and the same will be binding on all the party/entity, as the case may be.
- CSIR-SERC at its discretion may extend the due date of submission of EOI and the decision of CSIR-SERC in this respect would be final and binding on the respondents. In the event of changes in the time schedule, CSIR-SERC shall notify the same only through its CSIR-SERC website [www.serc.res.in](http://www.serc.res.in). Interested party/entity are advised to check the above website regularly for corrigendum / addendum, if any, which will be published only in the web site.
- No oral modification or interpretation of any provisions of this EOI shall be valid. Written communication shall be issued by CSIR-SERC when changes, clarifications or amendments to the EOI document are deemed necessary by CSIR-SERC at its sole discretion.
- EOI submission should be in English language. EOI response should be free from correction, over writing, errors or omissions, etc. Duly authorized representative of the party/entity shall sign on each page of the EOI documents.
- If at any time during the examination, evaluation and comparison of EOI, CSIR-SERC at its discretion can ask the applicant for the clarification of its EOI. The request for clarification and the response shall be in writing.
- Canvassing by applicant in any form, including unsolicited letters on EOI submitted or post corrections shall render their EOI response liable for summary rejection.
- Conditional offers will be summarily rejected. EOI which is found to be incomplete in content and / or attachments and / or authentication, etc. is liable to be rejected.
- No Agent/Agents or third party/parties are engaged by CSIR-SERC in this process.
- CSIR-SERC may choose to carry out physical inspection of works mentioned by the applicants in their application forms, in addition to calling for confidential

reports from the respective employer/client/department to ascertain their capability and quality of works.

- The shortlisted/empaneled construction companies will be informed of the further modalities at a later date.
- The performance of all the empaneled construction companies shall be reviewed by CSIR-SERC periodically and the companies with unsatisfactory performance and also those who do not respond to three consecutive enquiries without any valid reasons shall be re-moved from the panel without notice and no correspondence will be entertained in this regard.
- CSIR-SERC is not responsible for any firm/agency or representing to express himself/herself/themselves to be the agent or third party representing CSIR-SERC in this process.
- Disregard of any instruction may result in offer being ignored.
- All cost and expenses associated with submission of EOI shall be borne by the applicant while submitting the EOI. CSIR-SERC shall have no liability, in any manner in this regard, or if it decides to terminate the process of short listing for any reason whatsoever.
- Any Dispute or claim arising out of or relating to this EOI shall be first tried to solve through mutual discussions by authorized representatives of both the Parties. If no conclusion is arrived at through such mutual discussions within a period of 30 days, then the dispute should be settled by arbitration in accordance with Delhi International Arbitration Center (DIAC), Delhi High Court, New Delhi.
- The Director, CSIR- Structural Engineering Research Centre, Chennai, India reserves the right to accept or reject any or all EOI Notification/tenders/offers or withdraw the Notice at any stage of processing without assigning any reason whatsoever, such an event would not cause obligation of any kind to CSIR-SERC

**Enclosures;**

- 1. Annexure – I**
- 2. Annexure – II**



**Annexure – I**

**Instructions for Online Submission of EOI**

The bidders are required to submit soft copies of the EOI application form and the documents electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://etenders.gov.in/eprocure/app>.

**REGISTRATION**

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrollment” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**SEARCHING FOR TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / email in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.



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## **PREPARATION OF BIDS**

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.
- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of the Bid.

## **SUBMISSION OF BIDS**

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 4) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener’s public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 5) The uploaded tender documents become readable only after the tender

opening by the authorized bid openers.

6) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

7) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

#### **ASSISTANCE TO BIDDERS**

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP

## Annexure – II

### Details of typical Customized Design Solutions for Temporary and short-term hospital structures for addressing COVID-19 Pandemic

CSIR-SERC has come out with optimum designs for construction of lightweight transit hospital structures to support the efforts of the government in tackling the emergency condition that has risen due to the spread of COVID-19. The following typical customized design/ technological solutions based on their R&D expertise in structural engineering for supplementing the healthcare facilities of the country specifically catering to the COVID-19 pandemic are developed:

1. Poli-Tal 1 (Portable modular unit for immediate requirements)
2. Pre-Tal (Prefabricated structure for short-term requirements)

Brief description of each of the customized design/ technological solutions is given below:

In the present situation of quickly developing spacious structures for temporary/quarantine hospitals, even in villages/remote places, it will be required to develop innovative concepts for prefabricated, lightweight and modular structures. Utilizing the expertise of CSIR-SERC on analysis and design of light weight structures and considering the different requirements, designs for three types of hospitals, catering to the immediate- and short-term- requirements have been proposed. The designs utilize optimum material (thus light weight), extremely stable and can be executed in fast track construction mode.

**Table 1 Salient Details of Proposed Hospital Structures**

<b>Feature</b>	<b>Portable and lightweight transit hospital structure (Poli-Tal) (For a 10 bed hospital structure)</b>	<b>Lightweight and Prefabricated Structure for Quarantine Hospitals (Pre-Tal) (For a 40-50 bed hospital structure)</b>
Suitable for	immediate requirements	short-term usage
Implementation period		
Site preparation and marking of layout	1 day	2 day
Excavation for foundation	1-2 days	1-2 days
Concreting and curing of foundation and floor slab	7 days	14 days
Erection of	3-5 days	7-10 days

superstructure with roof and cladding		
Erection of partition walls	3-4 days	5-6 days
Electrical and plumbing works	3 days	3-5 days
Furniture and other equipment	2 days	3 days
Structural details		
Type	Modular	Pre-Engineered Building
Structural Scheme	Steel truss type structure	Steel portal frame
No. of beds that this scheme can accommodate	10-100 beds (each modular unit can accommodate 4 beds)	50/100/200 beds (each building can accommodate 40-50 beds)

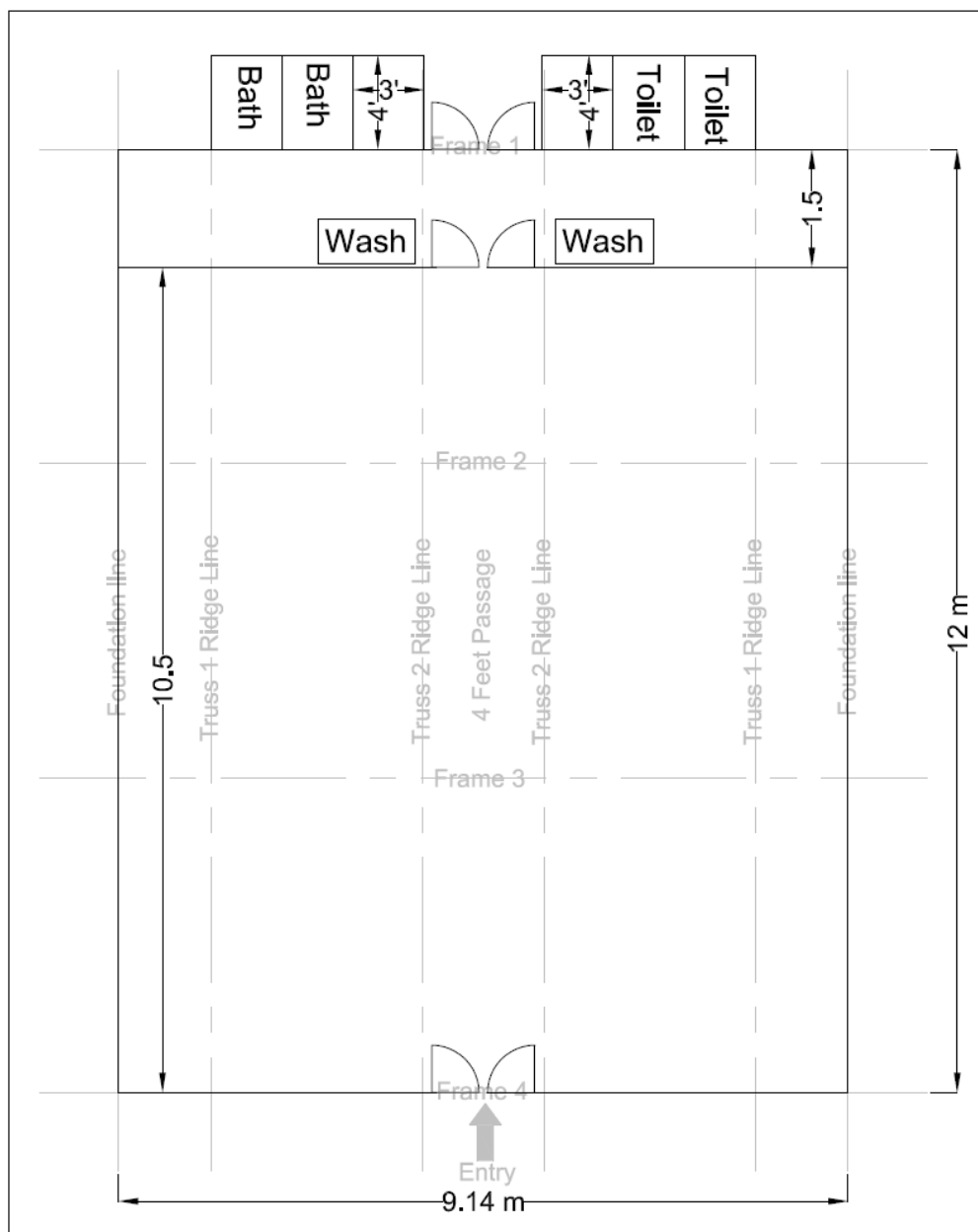
### **Portable and lightweight transit hospital structure (Poli-Tal-1)**

#### **Salient Features**

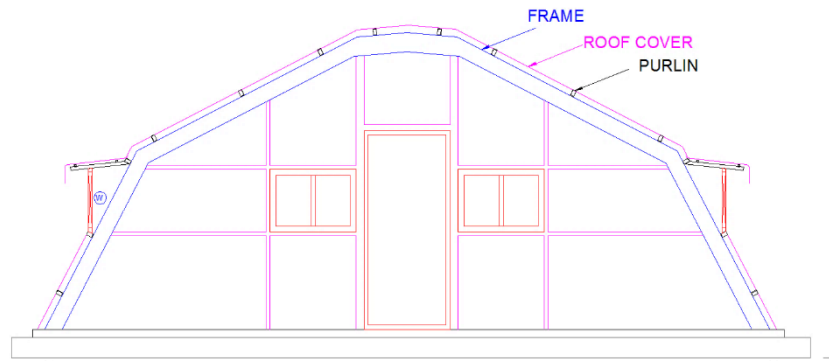
- Light weight structure with ready to assemble components.
- Flexible to accommodate 4 to 50 beds by increasing the number of repetitive units of size 9.14 x 4.0 m.
- 4 beds can be accommodated in every unit at any point of time.
- Multiples of such units can be joined to cover the available space and requirements.
- Easily erectable in both rural and semi-urban areas without much requirement of skill, labour and sophisticated/large equipments.
- All the joints are detachable and can be fixed within few hours.
- The components of the structure will be prefabricated in factory and can be quickly assembled at site.
- With the ready to build site and minimum preparation, the erection of one units should not take more than 6 hours.
- Flooring will be plain cement concrete or equivalent as available at the site or as preferred by the manufacturer for faster erection of the structure.

- Pre-painted galvanised (PPG) iron profiled roofing sheet or any other material available with acceptable quality can be used to cover the unit structures.
- Owing to the size and shape of the units, any plan area can be adjusted with ease. The system like radial or linear arrangements can be adopted.
- Other functional requirements including air conditioning can be accommodated in the proposed scheme.

### Structural Scheme



**Layout Sketch for 10-Bedded Hospital Structure**



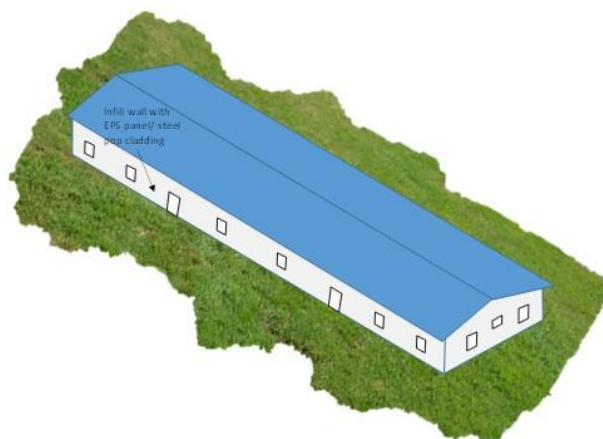
**Elevation of Poli-Tal 1 Hospital Structure**

### **Lightweight and Prefabricated Structure for Quarantine Hospitals (Pre-Tal)**

#### **Salient Features**

- Capacity per building – 40-50 beds
- Number of such structures can be established based on the requirements.
- Structural system – steel portal frame (at spacing of 3m c/c)
- Infill walls – EPS panels/steel pop cladding
- Partition walls – EPS panels
- Foundation – concrete with embedded end plate and anchor bolts
- Roof – corrugated metal sheet / steel pop sheet
- Toilets – prefabricated toilets made using CSIR-SERC technology can be provided at the ends or at the middle as per the requirements
- Other functional requirements including air conditioning can be accommodated in the proposed scheme.

#### **Structural Scheme**



**Pre-Tal Schematic view of erected hospital**

In addition, to this Eol, CSIR-SERC expresses its willingness to provide “**Consultancy services**” for executing any other major projects taken up by the bidder connected with providing healthcare facilities to fight against the COVID-19 pandemic.