Review Form2

Book Name:	Current Approaches in Engineering Research and Technology
Manuscript Number:	**Ms_BPR_2485**
Title of the Manuscript:	**EXPLORATION OF AVAILABLE OFFSITE CONSTRUCTION METHODS IN INDIAN CITIES FOR COST AND TIME SAVINGS IN HOUSING CONSTRUCTION**
Type of the Article	**Book chapter**

PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment**	**Author's Feedback***(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimumof 3-4 sentences may be required for this part.	This manuscript is crucial for the scientific community as it addresses the urgent need for efficient housing solutions in rapidly growing Indian cities. 1. By exploring offsite construction methods, it provides valuable insights into reducing both costs and construction time, which are critical factors in meeting the housing demands. 2. I appreciate this manuscript because it not only highlights innovative construction techniques but also offers practical solutions that can significantly impact urban development and sustainability. 3. However, it could benefit from more detailed case studies to illustrate the real-world application of these methods.	
Is the title of the article suitable? **(If not please suggest an alternative title)**	The current title is quite descriptive and informative, but it could be made more concise and engaging. Here's an alternative suggestion: **"Optimizing Housing Construction in Indian Cities: Cost and Time Savings through Offsite Methods"** This title maintains the focus on cost and time savings while emphasizing the optimization aspect, which might attract more readers.	

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Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	The abstract is quite comprehensive and covers the key points effectively. However, here are a few suggestions to improve clarity and readability: (may be consider) 1. **Introduction:** The first sentence could be more concise. Consider rephrasing to: "The rapid growth of Indian cities has created a significant demand for urban housing, with a current shortage of 20 million dwelling units." 2. **Problem Statement:** Highlight the drawbacks of traditional construction methods more clearly. For example: "Traditional construction methods face challenges such as increased pollution, construction waste, and worker safety issues, leading to higher costs and longer project timelines." 3. **Objective and Methodology:** Clarify the objective and the methodology used. For instance: "This study aims to identify the most suitable offsite construction methods by comparing them with traditional and composite construction techniques. We evaluate these methods based on cost and time parameters using AHP analysis, considering technical specifications, manufacturer data, on-site performance, and literature." 4. **Findings and Conclusion:** Summarize the findings and conclusion more succinctly. For example: "Our analysis concludes that GFRG is the most effective offsite technique for low to medium-rise mass housing construction, offering significant reductions in cost and construction time."	
Are subsections and structure of the manuscript appropriate?	This structure follows the IMRaD format (Introduction, Methods, Results, and Discussion), which is widely used in scientific writing. It ensures that your manuscript is organized logically and that readers can easily follow your arguments and findings.	
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimumof 3-4 sentences may be required for this part.	The manuscript appears to be scientifically robust and technically sound for several reasons: 1. **Comprehensive Evaluation:** The study evaluates multiple construction methods (GFRG, VME pre-cast, and EPS panels) using a weighted scoring system, which provides a quantitative basis for comparison. 2. **Contextual Relevance:** The findings are contextualized for different housing categories (LIG, EWS, MIG, and HIG), demonstrating an understanding of varying requirements and constraints. 3. **Acknowledgment of Limitations:** The manuscript does not shy away from discussing the limitations and challenges associated with GFRG panels, such as transportation costs and the need for skilled labor. 4. **Sustainability Focus:** The emphasis on sustainable construction practices, including reduced waste and pollution, aligns with current global priorities in the construction industry.	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references provided are comprehensive and cover a range of relevant topics related to huge demand for urban housingand offsite construction techniques. However, to ensure the manuscript is up-to-date and covers recent advancements, you might consider including the following additional references: 1. **Pavan N.Ghumare, Krupesh A. Chauhan, Sanjay M. Yadav (2020).** "Housing attributes affecting buyers in India: Analysis of perceptions in the context of EWS/LIG consumers view" International Journal of Housing Markets and Analysis, Emerald Publishing Limited. This paper can complement your manuscript by providing a detailed analysis of the factors influencing affordable housing in urban areas, which aligns well with your study's focus on offsite construction techniques for different housing categories. The reference provided is indeed relevant and adds valuable insights into the housing attributes affecting buyers in India, particularly for the EWS and LIG segments. 2. **Cherian, P., Paul, S., Krishna, S. R. G., Menon, D., & Prasad, A. M. (2017).** Mass Housing	

	Using GFRG Panels: A Sustainable, Rapid and Affordable Solution. *Journal of The Institution of Engineers (India): Series A*. This paper provides an overview of research and development carried out at IIT Madras on GFRG panels, highlighting their performance and sustainability. 3. **Ragav, S. (2020)**. Review Study on Glass Fibre Reinforced Gypsum (GFRG) Panels. *Sustainable Practices and Innovations in Civil Engineering*. This paper provides review discusses the structural requirements, design, and erection process of GFRG panels, emphasizing their eco-friendliness and cost-effectiveness.	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	The language and English quality of the article are generally suitable for scholarly communications. However, there are a few areas where minor revisions could enhance clarity and readability: 1. **Consistency and Grammar:** Ensure consistent use of tenses and correct minor grammatical errors. For example, “Achieving such huge demands in a short time using traditional construction methods have a lot of drawbacks” should be “Achieving such huge demands in a short time using traditional construction methods has a lot of drawbacks.” 2. **Sentence Structure:** Some sentences are quite long and could be broken down for better readability. For instance, “Here we identify the suitable and most convenient approach of construction that can be followed by comparing offsite construction with traditional construction and composite construction” could be split into two sentences for clarity. 3. **Technical Terms:** Ensure that all technical terms are clearly defined when first introduced. For example, “AHP analysis” should be expanded to “Analytic Hierarchy Process (AHP) analysis” , “GFRG panel system” should be expanded to “Glass Fiber Reinforced Gypsum (GFRG) when first mentioned. 4. **Flow and Coherence:** Improve the flow between sections by adding transitional phraseslike, - “This study aims to provide a comprehensive evaluation of these methods to determine the most effective approach for urban housing in India.” - “Research Gap and Contribution” section, you could add a sentence like, “This study aims to provide a comprehensive evaluation of these methods to determine the most effective approach for urban housing in India.” - Improve the flow between sections by adding transitional phrases. For example, at the end of the paragraph discussing the drawbacks, you could add a sentence like, “Despite these challenges, the integration of lean principles with green construction concepts can significantly enhance the efficiency of off-site construction.” By addressing these minor issues, the manuscript will be more polished and easier to understand for a scholarly audience.	
Optional/Generalcomments	Overall, the manuscript is well-structured and addresses a critical issue in India’s housing shortage. Here are a few optional/general comments to enhance it further: 1. **Visual Aids:** Add charts, graphs, and tables to illustrate the comparative analysis. 2. **Case Studies:** Include real-world examples of successful offsite construction projects. 3. **Future Research**: Outline specific future research directions to guide other researchers. 4. **Stakeholder Perspectives:** Incorporate views from policymakers, construction companies, and end-users. 5. **Environmental Impact:** Expand on the environmental benefits of offsite construction. These suggestions aim to improve clarity, impact, and relevance.	

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PART 2:

	Reviewer's comment	**Author's comment***(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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