Review Form 1.7

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_99745**
Title of the Manuscript:	**Summary of Research on Shear Strength of Keyed Joints in Segmental Precast Assembled Bridge**
Type of the Article	**Minireview Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	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)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	**1.** Precast segmental assembly technology is a construction method that has gradually been developed in recent decades to achieve energy savings, environmental protection, and fast, safe, efficient, and beautiful construction concepts without increasing infrastructure investment, which is in line with national and people's expectations for large infrastructure projects. Precast concrete segmental bridges with dry joints have the advantages of rapid construction speed and low cost. The shear strength and shear behavior of dry joints with castellated keys in precast concrete segmental bridges are still debatable. The shear strength of dry joints plays an important role in the design of prestressed segmental structures. However, the formulations of different design codes do not conform to the behavior of multiple-keyed joints. One problem that affects the bridges is the development of longitudinal or reflective cracks on the road surface because of failure of the shear keys. **2. yes** **3. yes** **4. yes** **5. yes** **6. could be improved** Hou, W.; Peng, M.; Jin, B.; Tao, Y.; Guo, W.; Zhou, L. Influencing Factors and Shear Capacity Formula of Single-Keyed Dry Joints in Segmental Precast Bridges under Direct Shear Loading. Appl. Sci. 2020, 10, 6304. https://doi.org/10.3390/app10186304 Haibo Jiang; Li Chen; Zhongguo John Ma, F.ASCE; and Wenxian Feng Shear Behavior of Dry Joints with Castellated Keys in Precast Concrete Segmental Bridges. Journal of Bridge Engineering/Volume 20 Issue 2 - February 2015 Ghafur Ahmed & Omar Aziz, Shear strength of joints in precast posttensioned segmental bridges during 1959–2019, review and analysis. Elsevier, Structures, Volume 20, August 2019, Pages 527-542	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	yes	
Optional/General comments	The conception, development, and worldwide acceptance of segmental construction in the field of precast concrete segmental bridges represent one of the most interesting achievements in civil engineering. The structural behavior of segmental bridges depends largely on the behavior of the joints between segments. The construction of both medium and long span precast concrete segmental bridges is widely spread throughout Spain. Usually, the segments have multiple-keyed epoxy joints, and are assembled by internal prestressing. Yet, there is a more recent type of bridge with dry joints and external prestressing. In these last ones, shear is transferred through physical support between keys and friction between faces of the compressed joint. The manuscript is well structured and presents an extensive analysis of the research carried out regarding the shear strength of keyed joints in segmental precast-assembled bridges. Even if the manuscript is an exposition of the results obtained by different researchers regarding the shear strength of keyed joints in segmental precast assembled bridges, in order for the readers to better understand certain aspects of this problem, it is recommended that the manuscript be completed with a graphic part (the shape or configuration of the joint key; the assembly of the elements; a finite element model of the single or multiple-keyed dry joint; a tension damage distribution diagram and crack development process, etc.). What do you think about the influence of the temperature?	

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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Reviewer Details:

Name:	**Mihaela Toderas**
Department, University & Country	**University of Petrosani, Romania**