

2024 Damper Proposal Requirements and Rubric

Only teams that want to incorporate a damper in their structure are required to submit this damper proposal. The proposal will be evaluated by the SDC Chairs, and the result will be communicated to each team's team captain.

Remember, this proposal is not compulsory to participate in the 2024 Seismic Design Competition.

This document describes items that must be included in the damper proposal and provides guidelines for teams to submit a high-quality proposal. Scoring of the damping proposals will be based on the requirements and rubric provided in this document. This document does not override the Official Rules; it is meant to supplement the official rules by providing formatting and content requirements of the design proposal.

1. Formatting Requirements

- **The proposal shall not exceed 2 pages**, including the title page.
- Any deviation from the formatting requirements will result in substantial deductions from the proposal score at the discretion of the SDC Chairs.

2. Plagiarism Requirements

- Plagiarism is strictly prohibited and may result in disqualification or non-invitation to compete. Any citation style is accepted, as long as it is consistent. Works Cited or References pages are required but do not count toward the page limit. See Section 5.1 of the Official Rules for more information.

3. Page Content Requirements

- Pages 1-2: Content
 - Name of the school, image(s) of the proposed damper device, and detailed description of the damper's materials, construction, mechanism, installation locations and reasoning behind the usage of this damper.
 - Proposals will be judged on the mentioned rubric below.
- Page(s) 3(+): Works Cited
 - Teams must cite the references that they use in creating their proposal.
 - No additional content for the proposal may be included on the Works Cited page(s).

4. Submission Requirements

A PDF of the document must be emailed to the SDC Chairs at the following email address by the date listed on the competition website. The SDC Chairs will confirm the submission within 48 hours of receiving it. If the team does not hear back from the SDC Chairs, please reach out to confirm the submission was received.

sdc@eeri.org

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5. Rubric

This rubric is intended to serve as a guide to describe how teams can perform better in each category of the design proposal.

Category/Description	An excellent proposal...	A poor proposal...	Points
Device Description and Mechanism: Description of the damper's components, materials, and illustration of how the damper would dissipate the energy.	delivers a complete definition of the shape of the damper, including the materials used; has a clear interpretation of the mechanism of the damper.	demonstrates limited description of the damper; demonstrates limited understanding of the mechanism.	3
Structural Benefits and Research: Explaining the reason(s) behind incorporating a damper into your structure and the research done around it.	demonstrates the effect of the damper on the relative displacement of the structure; proposes relevant installation locations to maximize the use of the damper; shows a clear understanding of the energy dissipation in the structure and the effect of the damper's location.	provides minimalist information on the effect of the damper, its location and how energy dissipates throughout the entire structure.	3
Overall Structural Analysis: Structural analysis of the structure performance with the proposed damper.	describes expected relative displacement and acceleration of the structure with and without the damper; Cost analysis demonstrating the cost of implementing the damper in real building.	hasn't shown the impact of the damper on the overall structural performance; couldn't provide a prediction on the cost of using this damper in a building.	3