

August 15, 2024

NEx Request for Proposals Notice

NEx encourages you to submit proposals focused on the topic described below:

NEx RFP Id: SG25.08

Proposal Title: Development of guidelines for applications of polymer concrete

Background

Polymer concrete is a specialized material that incorporates polymers to enhance the properties of traditional concrete, such as improved durability, reduced permeability, and increased resistance to chemicals and environmental factors. While polymer concrete has been effectively used in various applications, including manholes, sewer pipes, and other underground structures, its potential extends to a broader range of uses. Notably, precast polymer concrete can be utilized in special applications such as railroad ties, architectural, structural and building panels, corrosion resistant tiles, bricks and linings, etc., offering potential benefits like reduced weight, enhanced longevity, and resistance to environmental conditions. Developing comprehensive guidelines for these diverse applications will facilitate the effective and innovative use of polymer concrete in construction and infrastructure projects.

Proposal Request

The current industry lacks detailed guidelines for the diverse applications of polymer concrete, including its use in precast underground structures (e.g., sewers, vaults, drainage channels, able trenches), equipment pads and support structures, architectural and structural panels and cladding, railroad ties, etc. Without standardized guidelines, the adoption of polymer concrete in these applications may be inconsistent, leading to underutilization of its benefits and potential safety and performance issues. Developing thorough and specific guidelines will provide the necessary framework for engineers, builders, and manufacturers to effectively utilize polymer concrete, ensuring optimal performance and safety across various applications.

NEx is seeking proposals from qualified organizations or research teams to develop comprehensive guidelines for the specific applications of polymer concrete. These include but are not limited to examples listed above (e.g., see ACI 548.1R, and ACI 548.6R for additional examples). The goal is to create a set of guidelines that will facilitate the effective and innovative use of polymer concrete, enhancing performance, durability, and sustainability in a range of construction and infrastructure projects.

NEx Mission Statement

Collaborate globally to expand and accelerate the use of nonmetallics in the built environment to drive innovation, research, education, awareness, adoption, and deployment.

NEx is committed to achieving its mission through Research and Development, Standards and Guidelines, Professional Development, and Advocacy and Awareness.

Funding Policy

NEx will impose a limit of 15% on indirect costs (overhead) by project organizations for any project it funds. The organization must waive the remainder of the indirect costs.

Award Amount

NEx does not impose any limit on the overall funding request; however, the anticipated budget for this project is to be around \$30,000 to \$50,000. Proposals with higher budget estimate will be accepted with information on budget spending relevant to the value added to the project scope. Co-funding and co-sponsoring proposals with other organizations are welcomed.

Proposal Evaluation

NEx project proposals will be evaluated by the NEx Steering Committee. A winning proposal will be forwarded to the NEx Board of Directors with recommendations for funding.

Proposal evaluation criteria will include technical content, methodology, PI's relevant experience, potential impact/ industry adoption, budget and time, proposed deliverables, and outcome. Typically, NEx funded project duration ranges from 6 to 24 months.

Awarded Proposals

The awarded proposal is expected to commence within the first quarter of 2025

- NEx will enter into a contract with the awarded entity. As part of the contract, it is mandated that the overhead or indirect return be set at no more than 15% of the direct cost of the project funding requested from NEx. Any overhead over the maximum allowed 15% that is waived by the awarded entity shall be considered as cost sharing and shall be indicated on the budget table as waived overhead, separate from other co-funding. Non-compliant proposals in this regard shall be returned without review.
- The schedule of payments contingent upon milestone deliverables will be contained in the contract and will include, at a minimum, a final report deliverable to NEx. Quarterly progress reports will be identified in the final contract.
- If principal investigators (PI) from two organizations are collaborating on the project, the award must be to a single organization, which will then subcontract with the second organization.
- NEx will only consider funding projects that involves the use of proprietary products if the goal of the project is to advance knowledge in a particular area of study and not solely on a proprietary product.
- In case of any co-funding arrangement with other organization(s), commitment letter(s) from co-funding organization(s) is required before funds are dispersed from NEx.
- The results of NEx-funded project will be owned by NEx, and possibly by other co-founding organization(s). PI should notify NEx before publishing any results.

Where and How to Submit Proposals

Submitted proposals will be evaluated by the NEx Steering Committee and subject matter experts. Anyone who evaluates a proposal is required to agree and abide by NEx policies on confidentiality and conflict of interest.

Please email the proposal and supporting information to info@nonmetallic.org, by end of the day,

October 7, 2024. The email subject line and file name shall include project ID (see top of page 1) and the name of the proposing organization (For example: "RD24.xx University of xyz").

If you have any questions regarding the proposal requirements or process, please contact NEx Technical Director, Aparna Deshmukh (aparna.deshmukh@nonmetallic.org).

Proposals submitted to NEx shall be provided in **one unprotected PDF** using [NEx provided template](#).