

Structures

ETG Members:

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Structures ETG Problem Statement Review Considerations:

The Structures Expert Task Group is responsible for reviewing research problem statements pertaining to structural issues of bridges, tunnels, and viaducts. Particular high priority research areas are the following:

- Determining the load capacity of in-place structural elements and using high performance materials to increase the integrity of those elements.
- Developing non-destructive evaluation technologies for monitoring the real-time behavior and long-term health of structures such as post-tensioning strands in metal ducts.
- Improving and characterizing cathodic protection technologies and explaining the factors that lead to premature deterioration.
- Reducing the impact of earthquakes and tsunamis on bridges.
- Developing structural component fabrication and connection methods that reduce the construction time and life-cycle costs of bridges.
- Planning for serviceability of decks, deck joints, and bearings during design and quantifying the benefits of using high performance materials and preservation actions such as cleaning or sealing to increase service life.
- Reducing the life-cycle costs of bridge decks such as through the use of improved concrete mixes.

The Structures ETG considers the following criteria when evaluating problem statements:

- Is the project research?
- Does the project address a high priority research area identified by the Structures ETG?
- Has prior research already addressed the issue adequately, or is there research in progress that is investigating the issue?
- Does the project continue or supplement a project previously sponsored by the Structures ETG?
- Are there significant barriers to implementing outcomes?
- Can the project outcomes be applied to many structures?
- Does the project enhance safety?
- Does the project improve ODOT's ability to protect the environment?
- Do the outcomes improve the reliability and resiliency of Oregon's transportation system?
- Does the project extend the service life and/or reduce the life cycle cost of structures?