Center for Infrastructure Renewal
Requested Amount: $5 Million in Debt Service

The State of Texas expects to spend more than $23 billion over the next biennium to address transportation infrastructure needs. It is critical that the state spend these funds as efficiently and effectively as possible, and avoid wasting taxpayer dollars on construction projects using outdated technology. Limited state resources for infrastructure require that repair and replacement be accomplished at a lower cost with a longer lifespan and constructed in less time. Development of new infrastructure construction methods and materials cannot be addressed by universities alone, but will require partnerships with the construction industry. To assist the state, we propose creation of the Center for Infrastructure Renewal (CIR): a facility where state-of-the-art methods and technologies for infrastructure construction will be created. CIR will serve as a research and training hub for federal, state and local governments, universities, and private industry. Below are examples of projects that could be conducted in this first-in-class facility:

- **Saving money on materials** – Texas spends more than a billion dollars annually on asphalt infrastructure. The Texas A&M Transportation Institute estimates savings of $75 million annually by increasing the amount of recycled asphalt used in road construction. The CIR would bring experts together to evaluate how this higher percentage recycled asphalt performs under real world conditions.

- **Reducing traffic congestion** – Development of accelerated construction methods and materials is projected to lower time required for infrastructure rehabilitation, reconstruction and repair by 70 percent, which reduces traffic congestion and disruption to the public. Development and testing of faster-curing concrete will be critical to meet this goal and will be developed in the CIR.

- **Strengthening structures against hurricanes** – Weather experts predict more hurricanes in Texas this year. We need to develop stronger materials that keep our buildings and bridges standing under these extreme conditions to protect the people and property of Houston, Galveston and the extended coastal bend region. The CIR would provide larger test facilities to evaluate structures under high wind conditions.

- **Enhancing gas and water pipeline stability** – Reduction of leaks in strained and aging pipeline systems can be achieved through the use of alternative pipe materials which will increase the stability and safety of pipelines for petroleum, gas and water distribution. Performance of large pipes constructed from new materials would be evaluated using the large structural testing laboratory in the CIR.

We are asking for $5 million in debt services from the state, which we will leverage into $65 million toward construction of the CIR. Texas infrastructure engineering businesses have endorsed construction of this facility and we expect to raise another $35 million from the private sector for state-of-the-art equipment to outfit this building.

The return on investment for this facility has the potential to be exponential. Texas is at a critical juncture: do we continue to invest enormous sums of taxpayer dollars in construction projects using outdated technology or do we invest a small percentage of infrastructure appropriations into new technology development that could save hundreds of millions of dollars in construction expenses over the long term?