# "STUDY OF BEHAVIOUR OF BENDABLE CONCRETE"

# PROJECT REPORT

**Submitted by**


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# ABSTRACT

A new type of fiber-reinforced bendable concrete will be used for the first time in Michigan. Developed by University of Michigan scientists, the new concrete looks like regular concrete, but is 500 times more resistant to cracking and 40 percent lighter in weight. Tiny fibers that comprise about 2 percent of the mixture's volume partly account for its performance, and also the materials in the concrete are designed for maximum flexibility. Because of its long life, the Engineered Cement Composites (ECC) is expected to cost less in the long run, as well. The ductile or bendable concrete is made mainly of the same ingredients as in regular concrete minus the coarse aggregate. It looks exactly like regular concrete, but under excessive strain, the ECC concrete gives, the specially coated network of fibers veining the cement is allowed to slide within the cement, thus avoiding the inflexibility that causes brittleness and breakage. The key factor is that ECC is engineered; means in addition to reinforcing the concrete with micro scale fibers that act as ligaments to bond the concrete more tightly. Scientists were design the ingredients of concrete to make it more flexible and bendable. In the present investigation an attempt has been made to develop and study the behavior of bendable concrete in the laboratory by using different percentages of PVA fibers along with fly ash and RHA.