



## DEEP FOUNDATIONS INSTITUTE

# News Release

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## DFI 2005 OUTSTANDING PROJECT AWARD

The Deep Foundations Institute is pleased to announce that two projects, one for a domestic project and one for an international project, will be awarded the 2005 Outstanding Project Award. Massman Construction Company will receive the award for their \$106 million Olmsted Approach Walls project on the Ohio River and Arup will receive the other 2005 award for their £85 million Moor House Redevelopment project in London, England.

Both awards will be presented to company representatives on September 23, 2005 at the Awards Banquet of DFI's 30<sup>th</sup> Annual Conference on Deep Foundations in Chicago, Illinois, USA. Team recognition awards will also be given to the U.S. Army Corps of Engineers, Louisville District, Olmsted Resident Office for the Olmstead Approach Walls project and Skanska Cementation London, foundation contractor; Skanska Construction UK Ltd., shaft contractor; and WJ Groundwater Ltd., dewatering contractor, all for their work on the foundations for the Moor House Redevelopment project.



The Olmsted Approach Walls project completed by Massman Construction Company, Kansas City, MO was the first phase of a Corps of Engineers locks and dam facility at Mile 964 on the Ohio River. The project was unique in that it overcame numerous design, logistical, construction and transport related issues as twenty-seven out of the thirty-seven ten foot diameter shafts were redesigned due to subsurface conditions. The shafts, typically 150' in length, were installed under open river conditions to support the nose piers and fixed approach wall. A 100-ton, two-level pile template supported on eight 6-foot

diameter spuds that would not deflect under the river current more than 1/16th of an inch was designed, fabricated and installed. This allowed the four permanent drilled shafts to be installed within 1-1/2" of their plan location, less than half of the 4-inch specified tolerance. They were founded 100' below the riverbed in soil formations varying by location from soil-like to rock-like in nature. The reinforced concrete shafts were designed with full-length stay-in-place steel shell casings up to 2-1/8" wall thickness and weighing as much as 130 tons. This was done to achieve the required flexural strength for the structures.



Contact DFI HQ for color  
electronic photos

Arup's Moor House Redevelopment Project is a new 19-story, 302,000 square foot office and retail building in the City of London. In addition to a two-level basement extending to 30 feet below ground level, the building incorporates an underground commuter rail service – Crossrail. In order to meet the challenge of integrating the Crossrail, Arup successfully designed and constructed a 27 foot diameter, 130 foot deep temporary lining for the Crossrail draught relief shaft below the basement of the building. They also utilized the longest base grouted piles in central London and adapted traditional piling techniques to increase their load carrying capacity. Frictionless sleeves were used on the upper section of the piles where significant ground movement was anticipated. Extensive pre-contract testing was performed to prove the design. The variety of innovative design and construction techniques adopted make this project truly worthy of the Outstanding Project Award.

These projects were chosen from the over 20 projects submitted and judged based on the following criteria: ingenuity of design, ingenuity of construction technique, how the design met the owner's needs and how the design or technique solved geotechnical conditions.