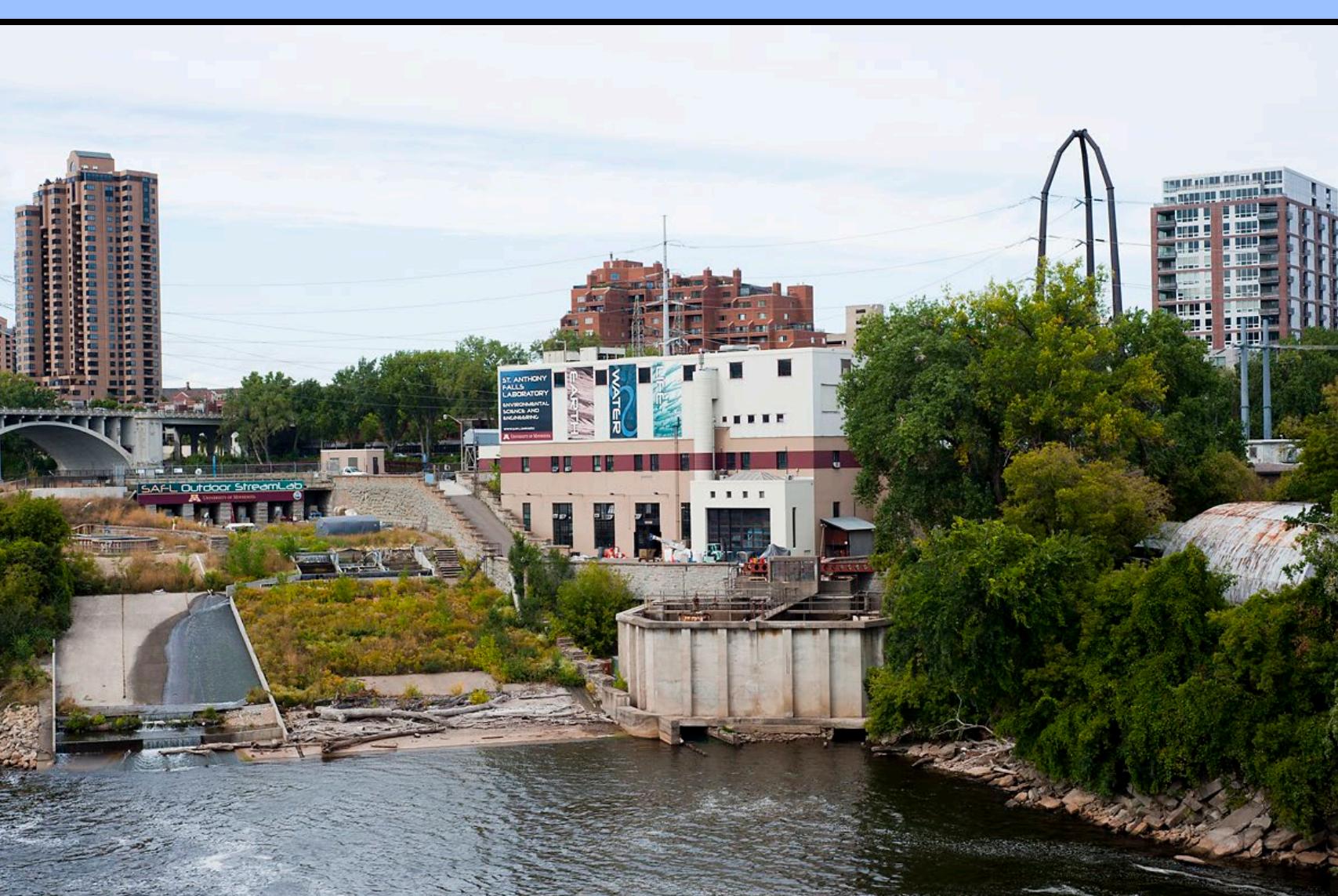
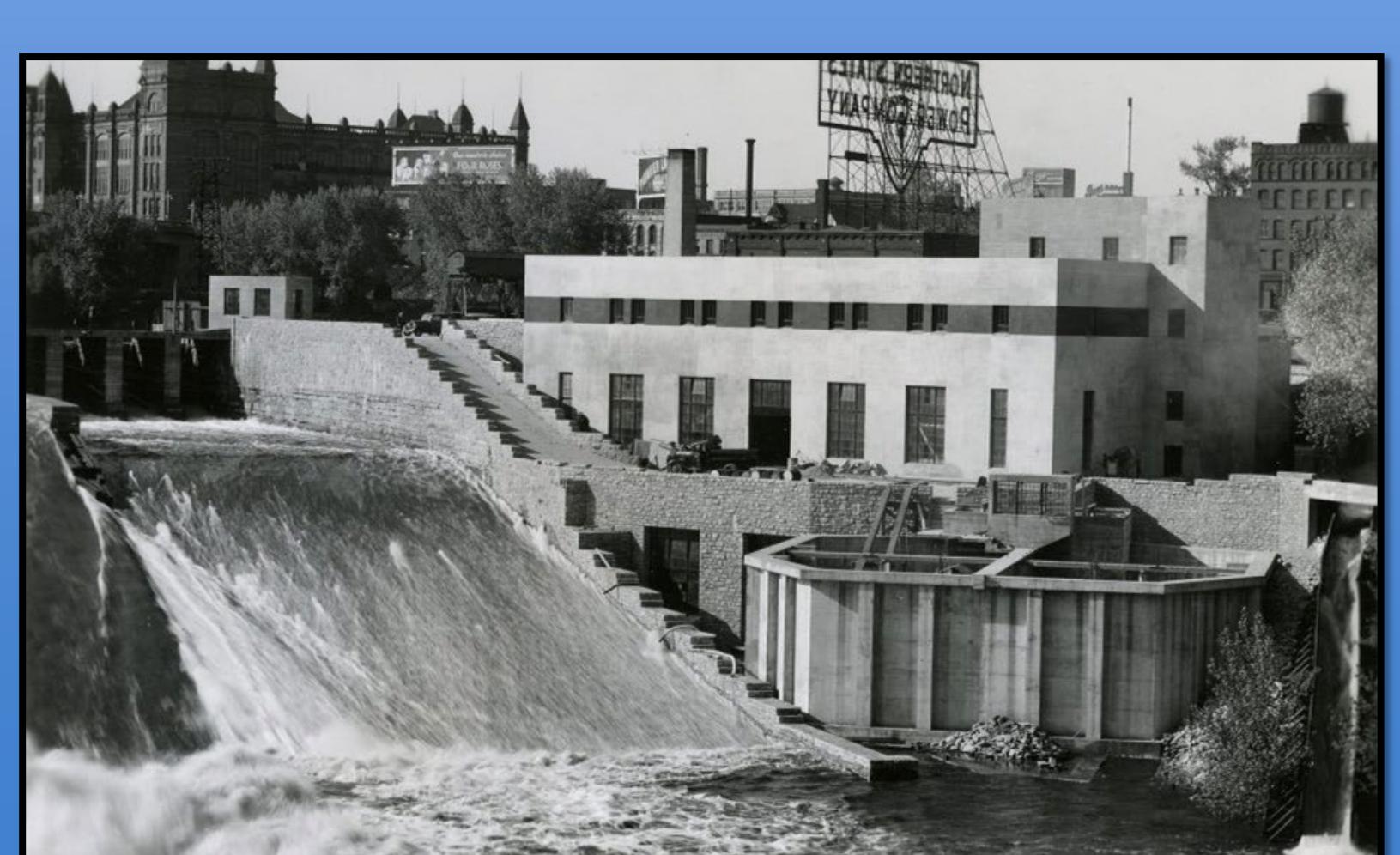
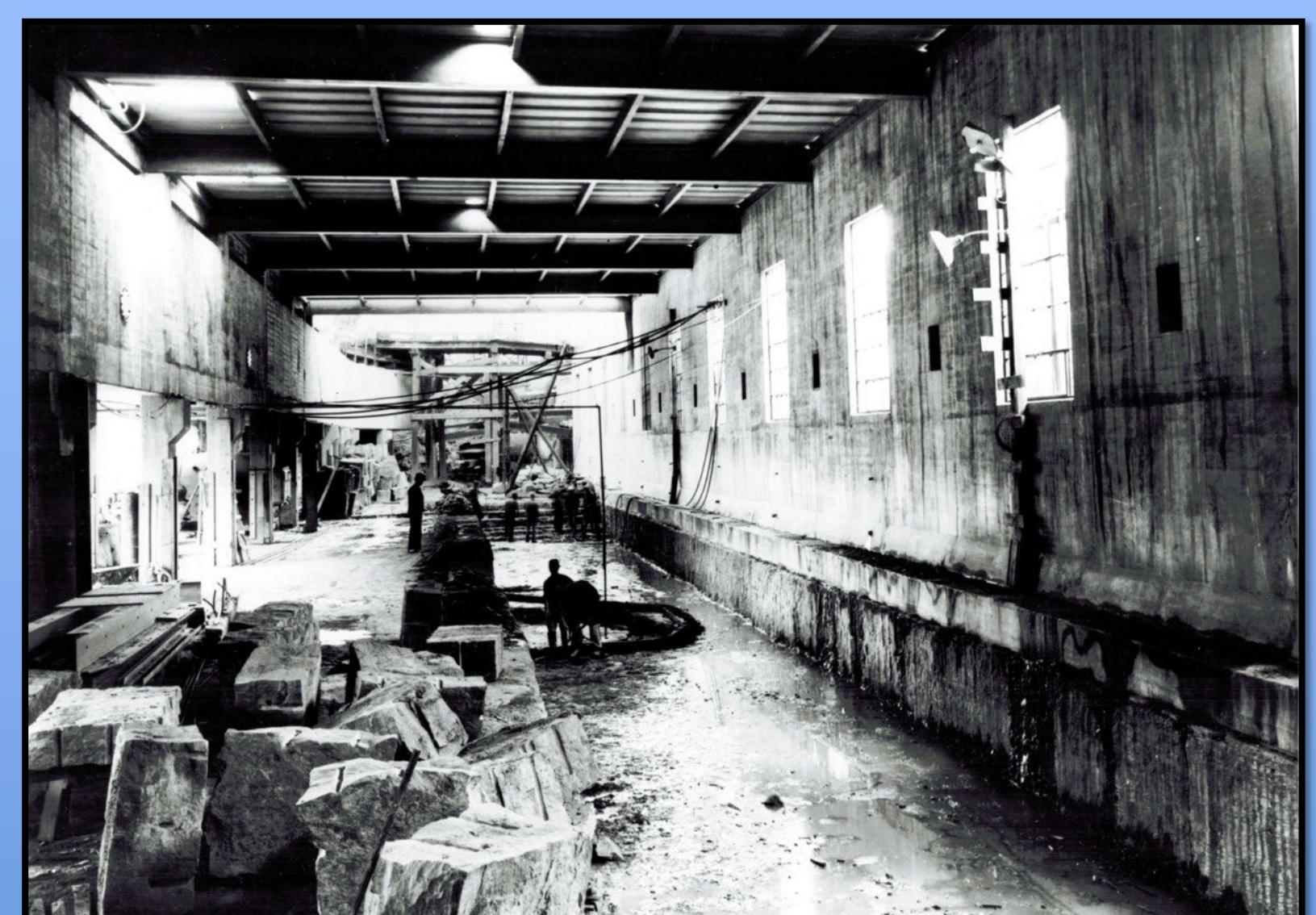


# The St. Anthony Falls Laboratory, University of Minnesota: 86 years of hydraulic modeling and simulation research

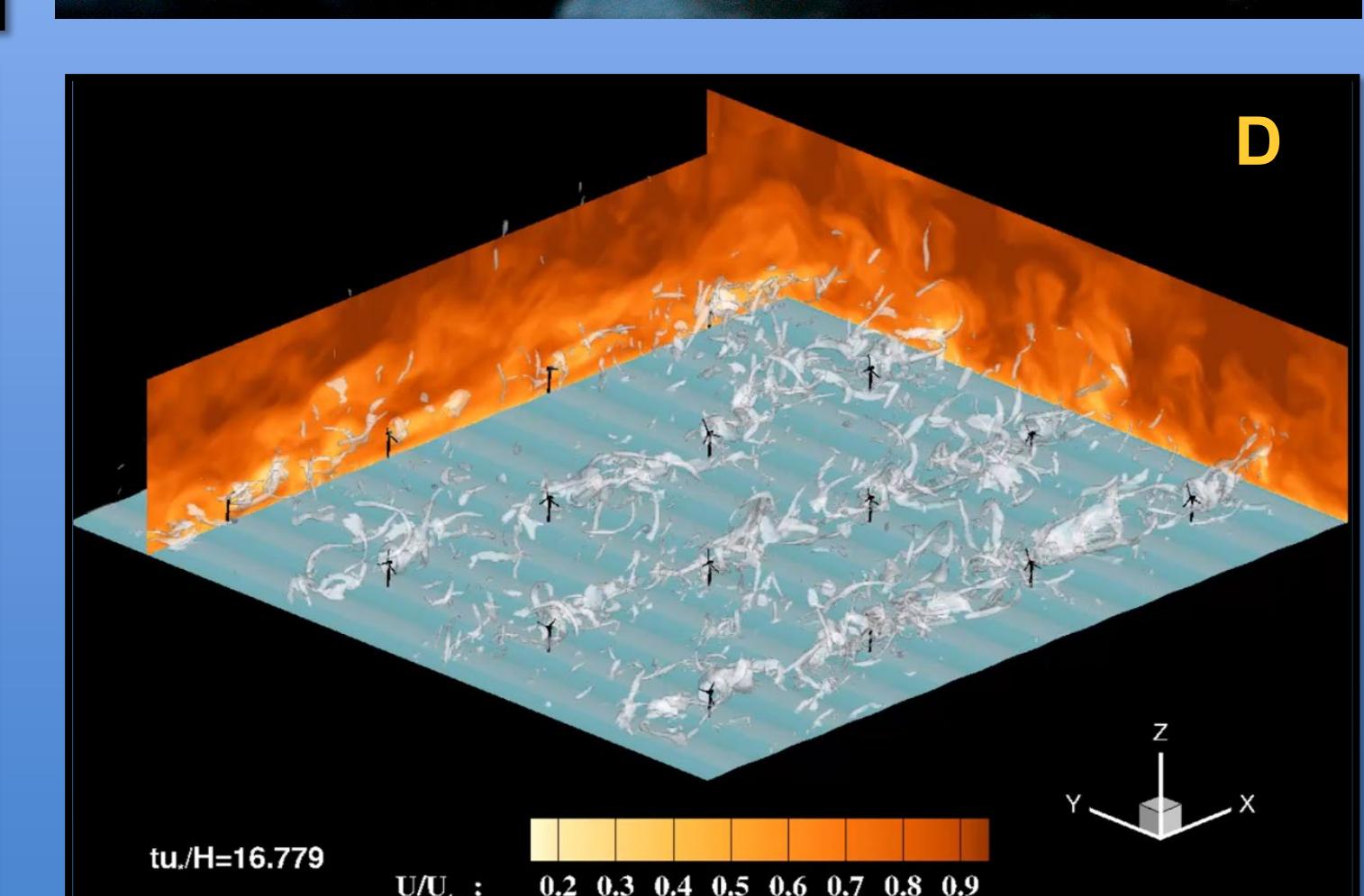
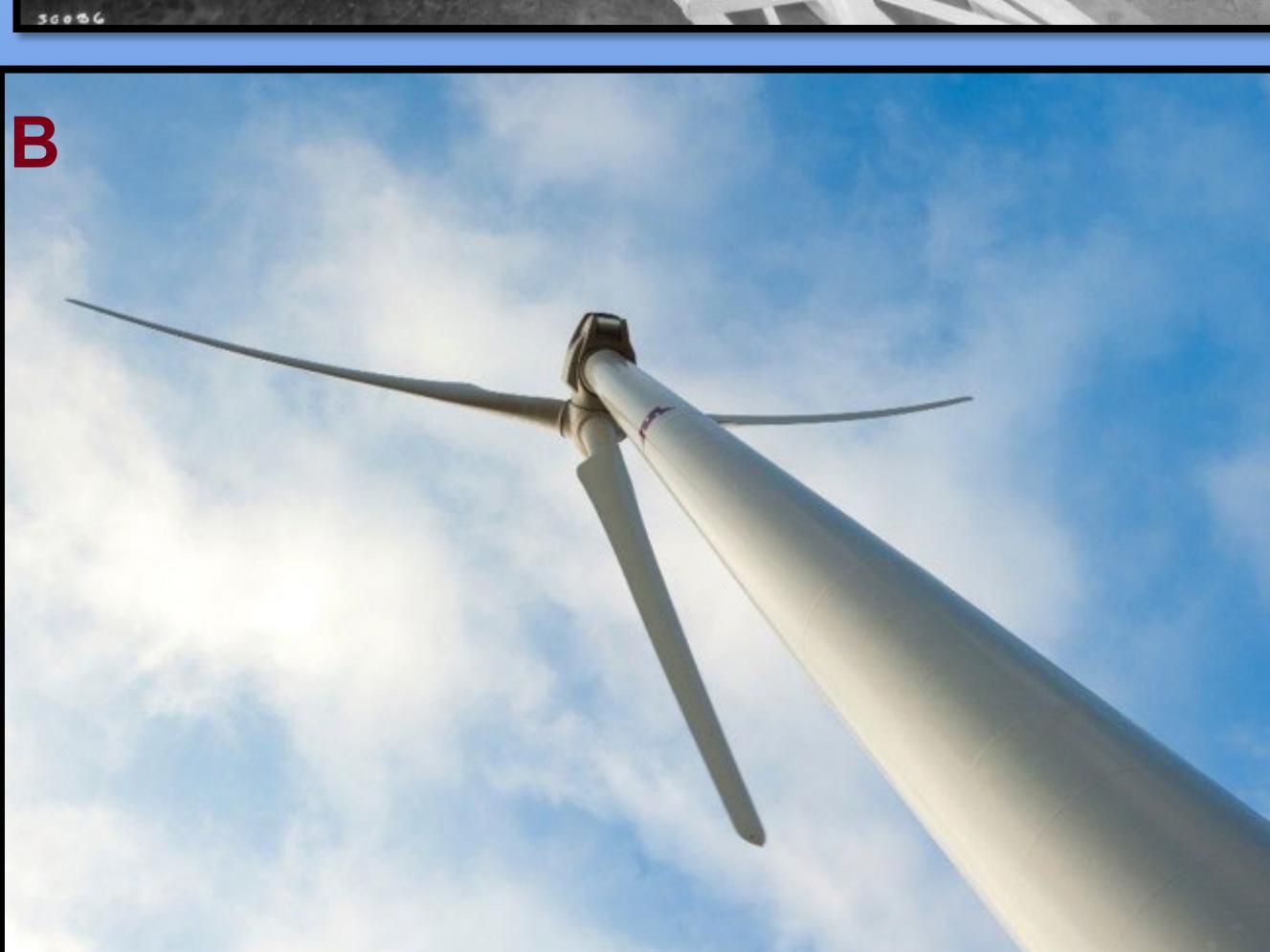
Jeffrey Marr, Michele Guala, Lian Shen, Chris Feist, Matt Hernick

University of Minnesota, St. Anthony Falls Laboratory

## Construction 1937-38

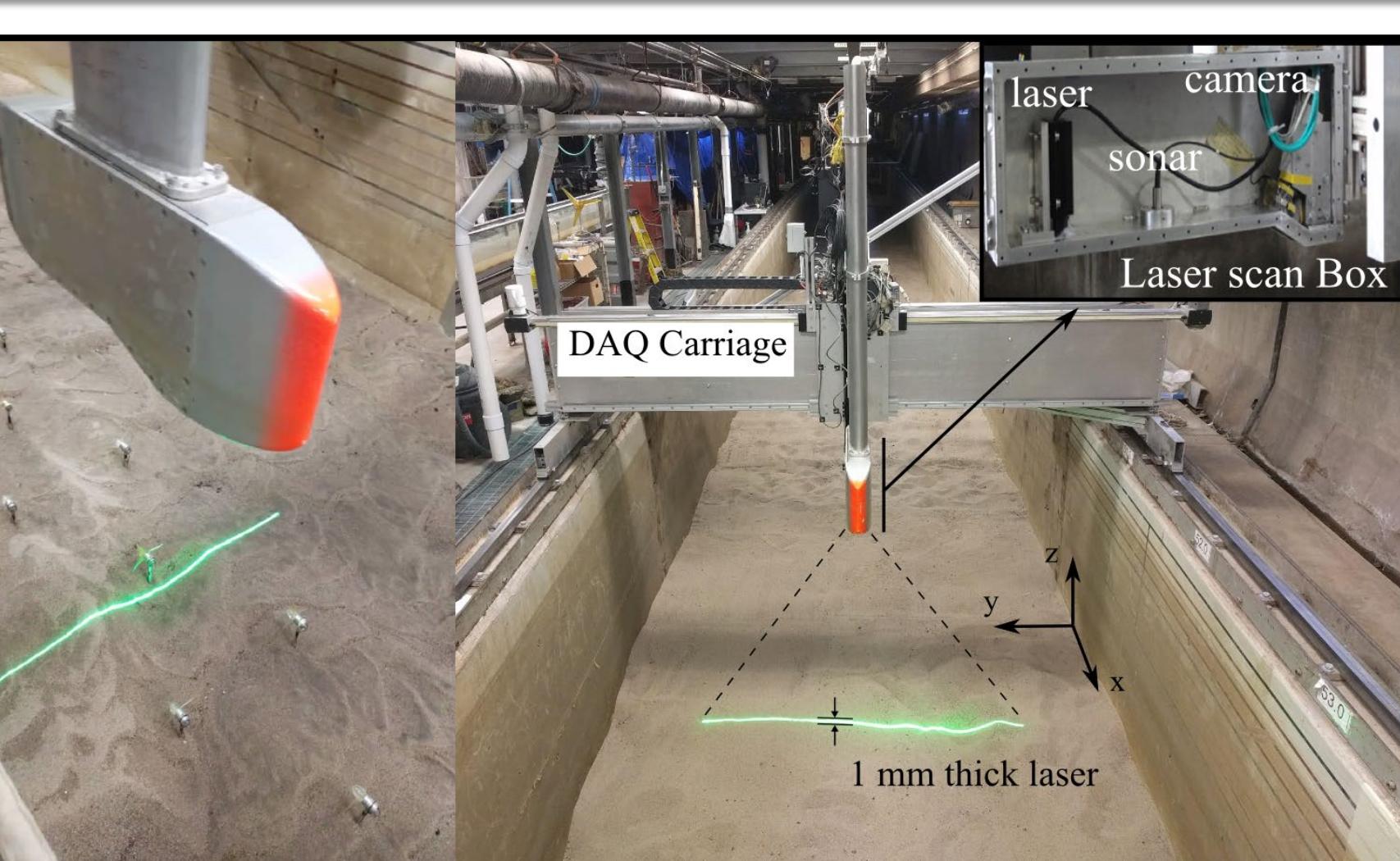
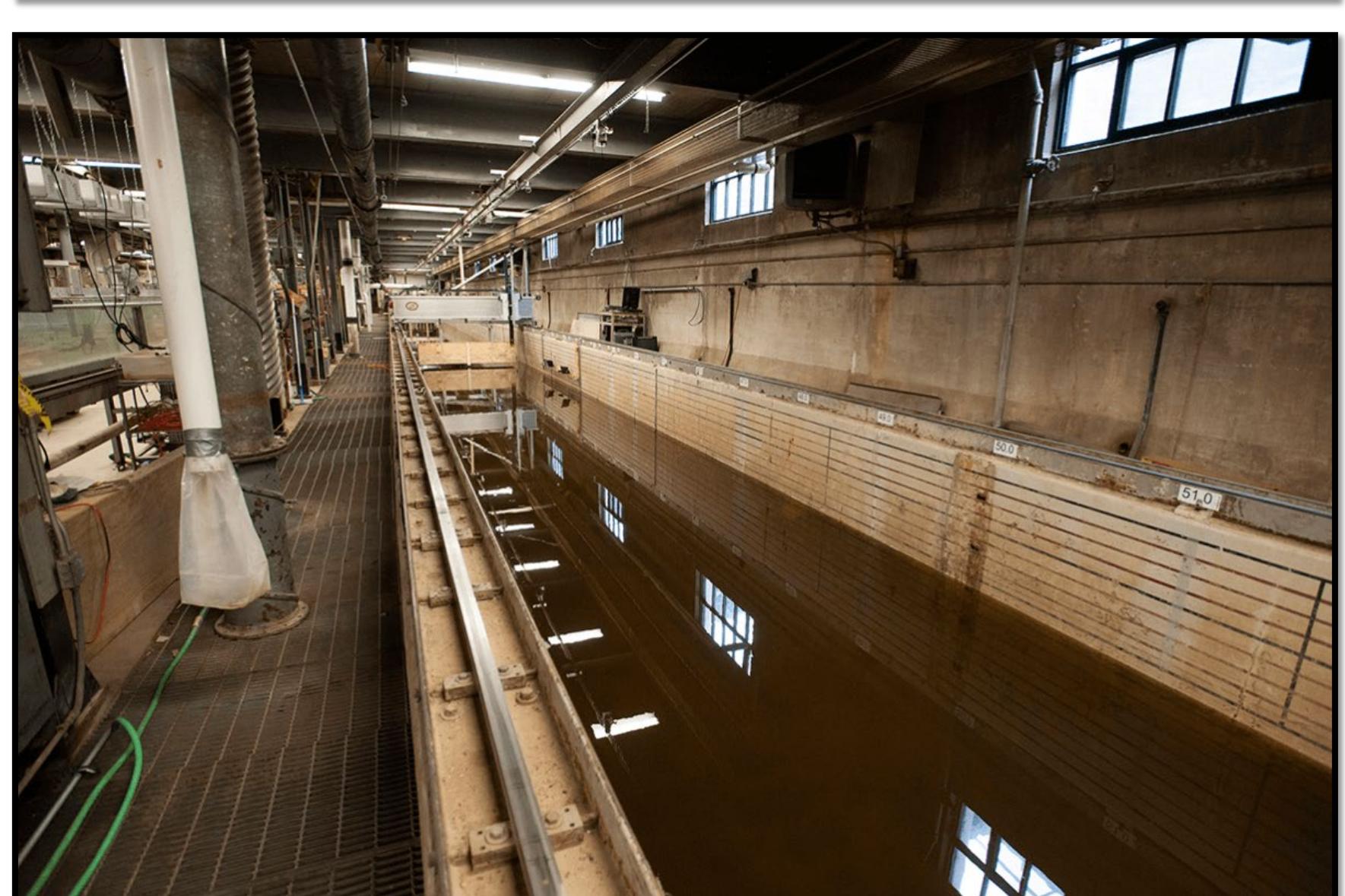
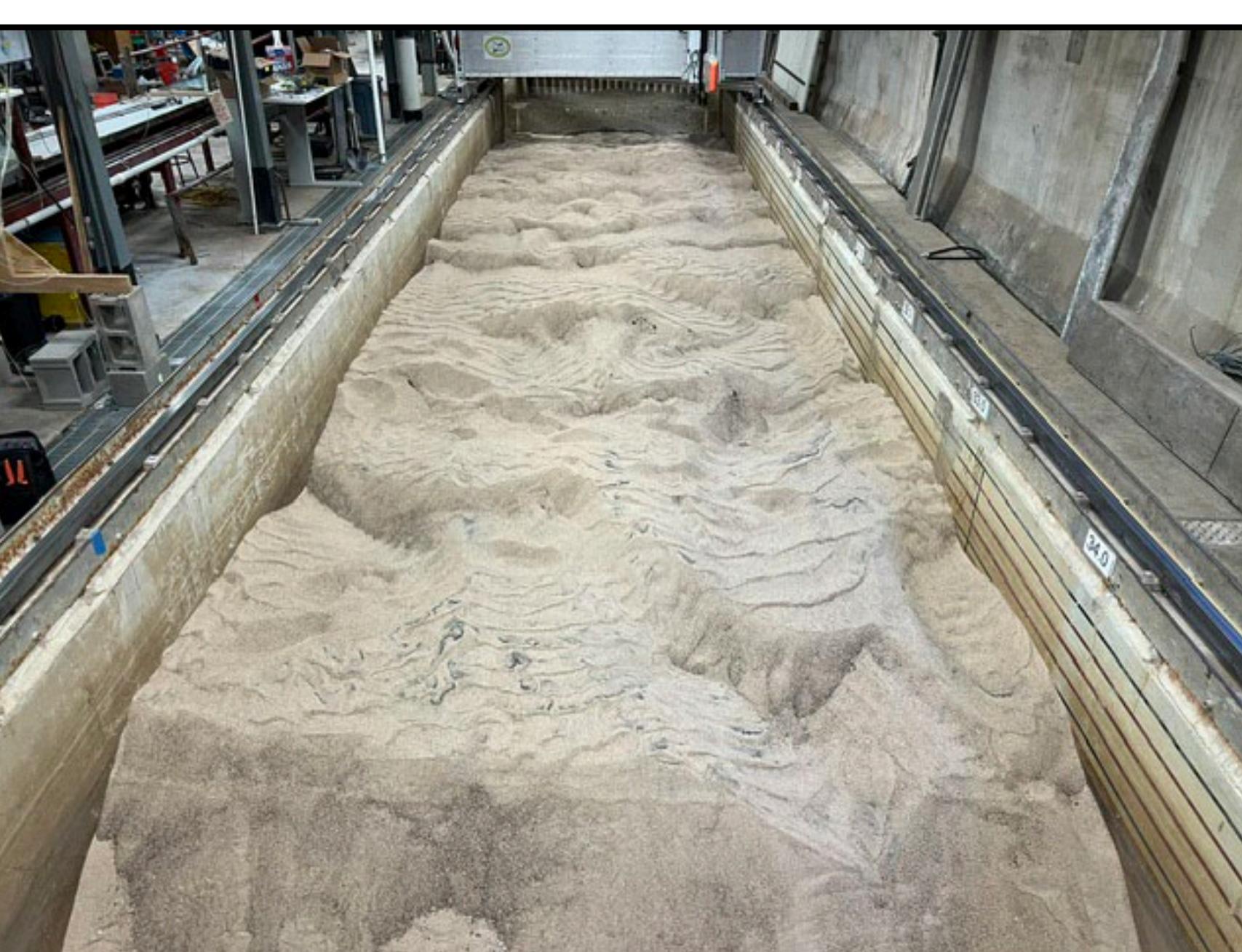
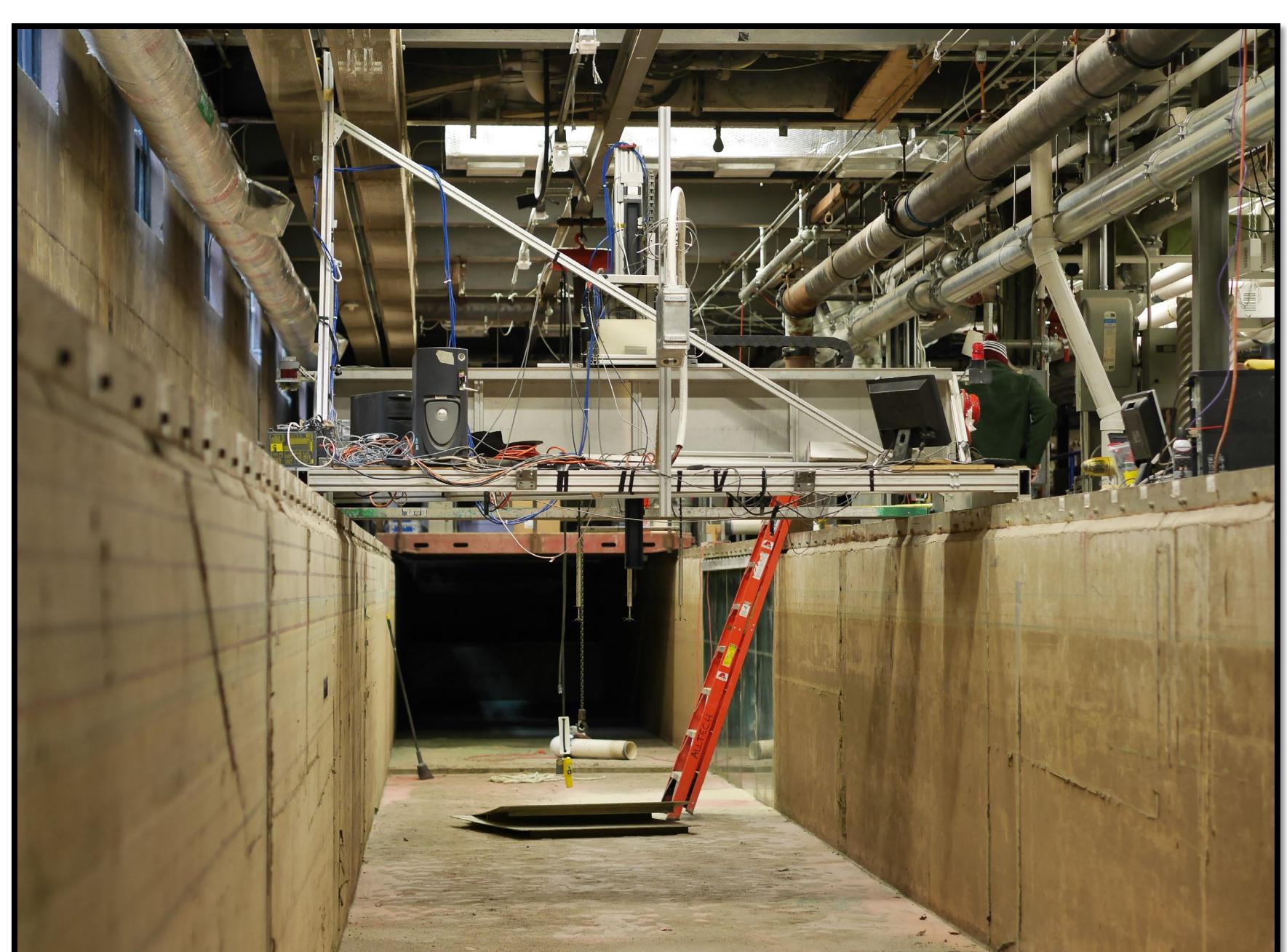


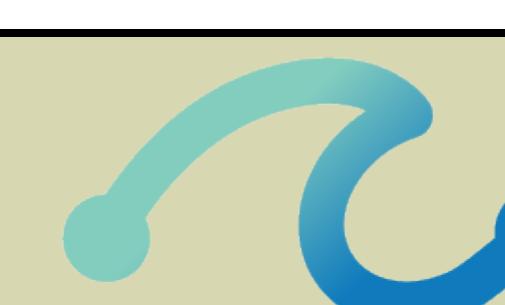
## Modeling, Simulation, Research



A) Early river model study of St. Anthony Falls; B) A view of UMN's 2.5 MW Wind Research Turbine; C) Cavitation image taken in SAFL's High Speed Water Tunnel; D) CFD simulation of floating wind farm with a wave environment.

## Main Channel Facility



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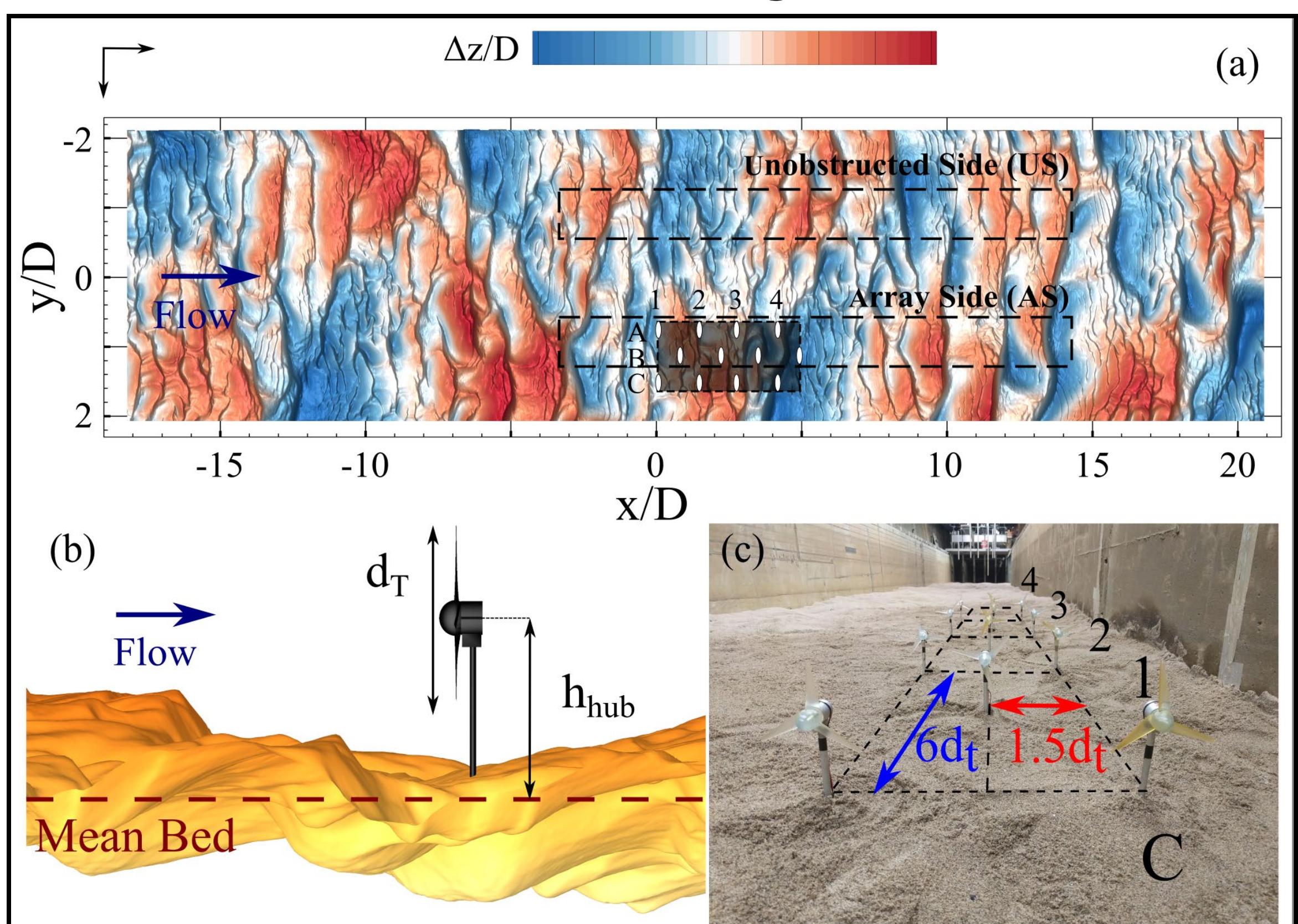
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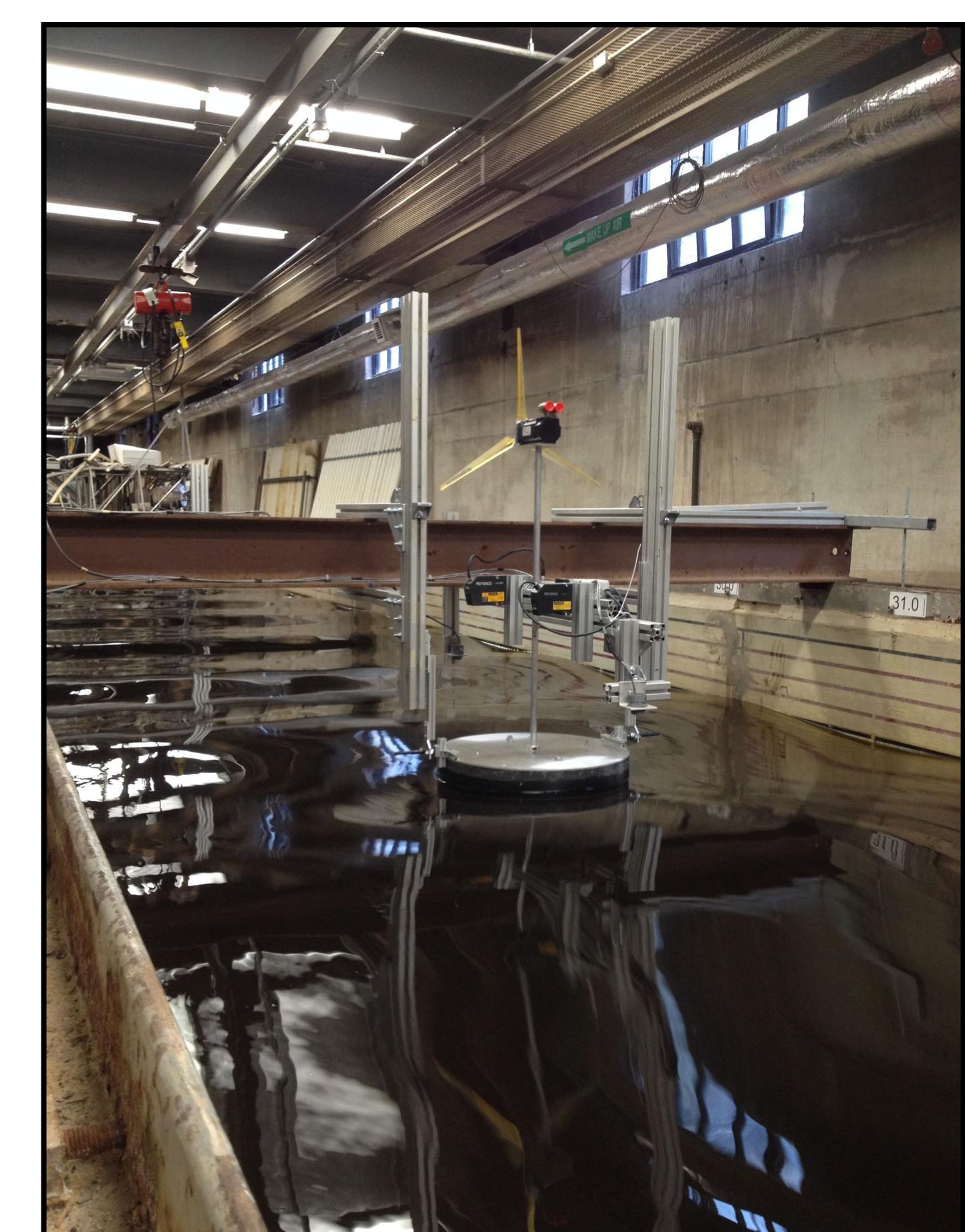
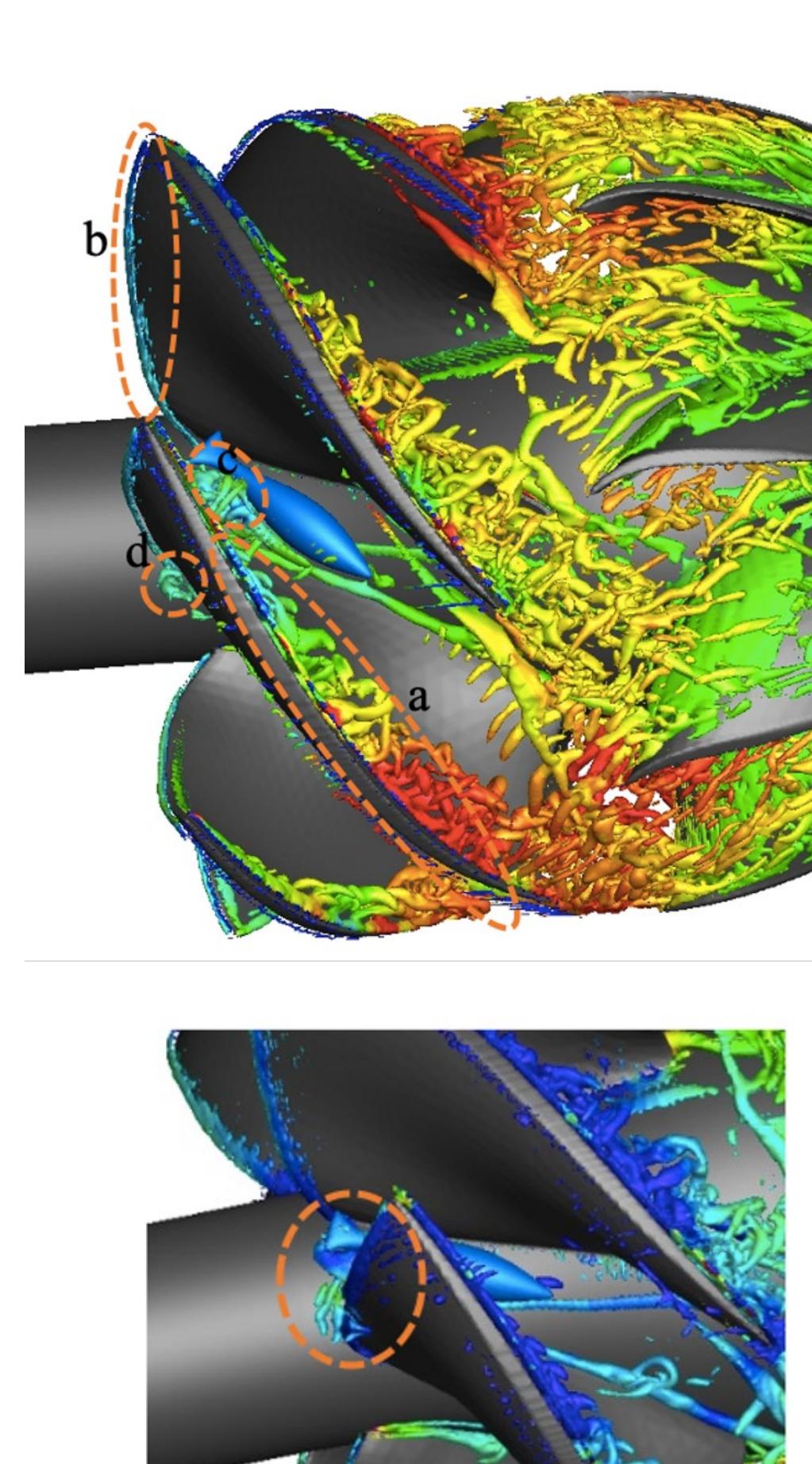
Jeff Marr (Associate Director of  
Engineering and Facilities)

## Marine and Hydrokinetic Energy Research



Musa, M., Hill, C., Sotiropoulos, F., and Guala, M. (2018). Performance and resilience of hydrokinetic turbine arrays under large migrating fluvial bedforms. *Nature Energy*, 3(10), 839. [DOI](#).

## CFD & Offshore Floating Wind Energy Research



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