

# State Pier Offshore Wind Port Infrastructure Improvements New London, Connecticut



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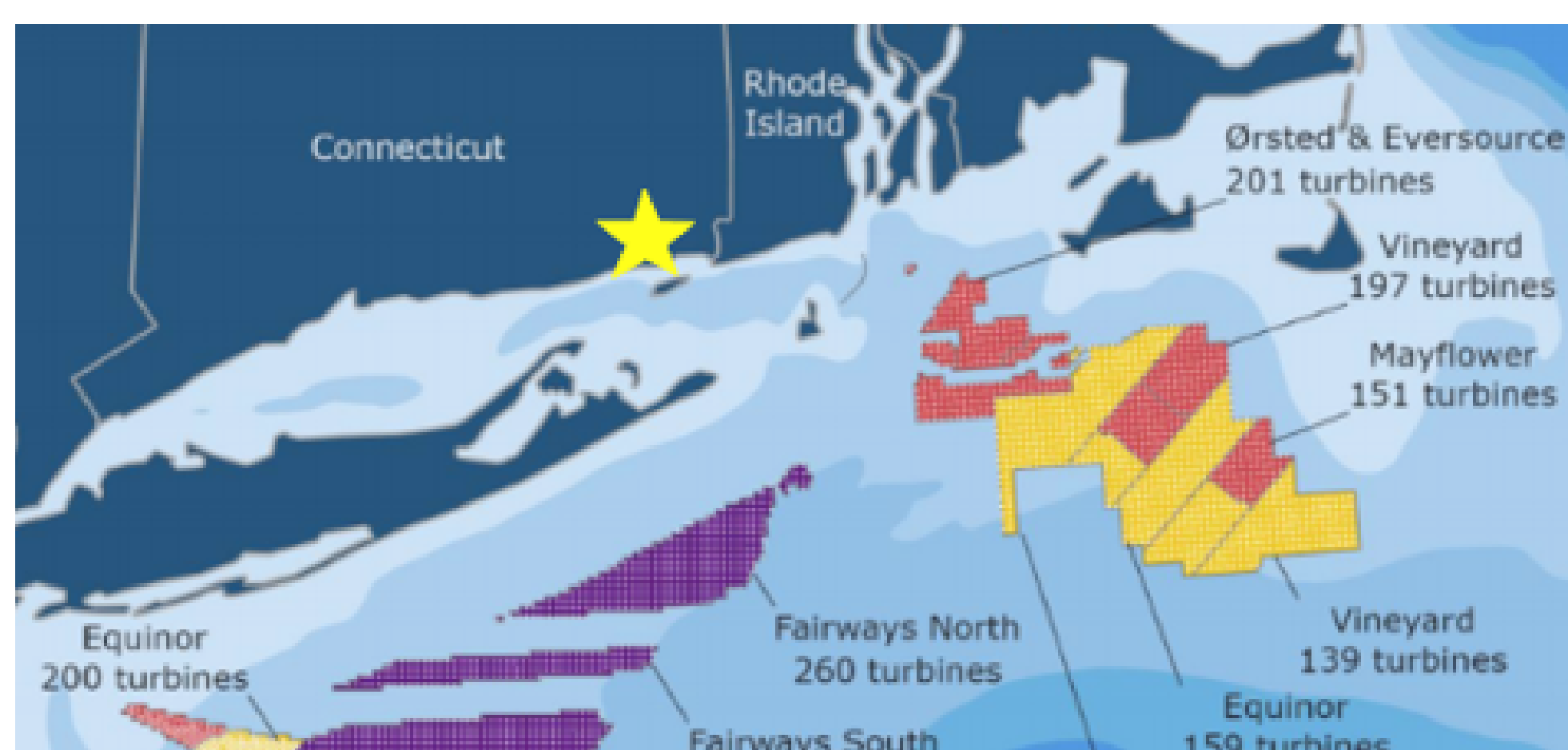
GZA's Offshore Wind Interactive PDF

## The role of value engineering in offshore wind port development

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## Introduction

Many U.S. ports currently struggle to meet the needs of the growing offshore wind industry. This project involves upgrading the existing state pier complex in New London, CT into a 16-acre, heavy-lift-capable marshaling port that can accommodate all components of offshore wind farms.



## Geotechnical Challenges

Project required filling between two existing piers.

- Approximately 400,000 cubic-yards of fill required.
- Fill needed to be placed through 40 feet of water and then densified to meet high bearing pressure requirements for offshore wind components.
- Very soft organic sediment needed to remain in place. Filling could not displace or "mud wave" the organic sediment into the Thames River.
- Closure wall required to connect ends of pier and retain new fill. Construction needed to be carefully sequenced with filling and densification operations.



Images Courtesy of Connecticut Port Authority. Rendering Artist: Jennifer Gottlieb, AIA NCARB at AECOM

## Value-Engineered Geotechnical Solutions

Project specifications were performance-based allowing alternate designs by Contractor to maximize efficiency and reduce construction costs.



Tandem Vibrocompaction Rig - First in U.S.

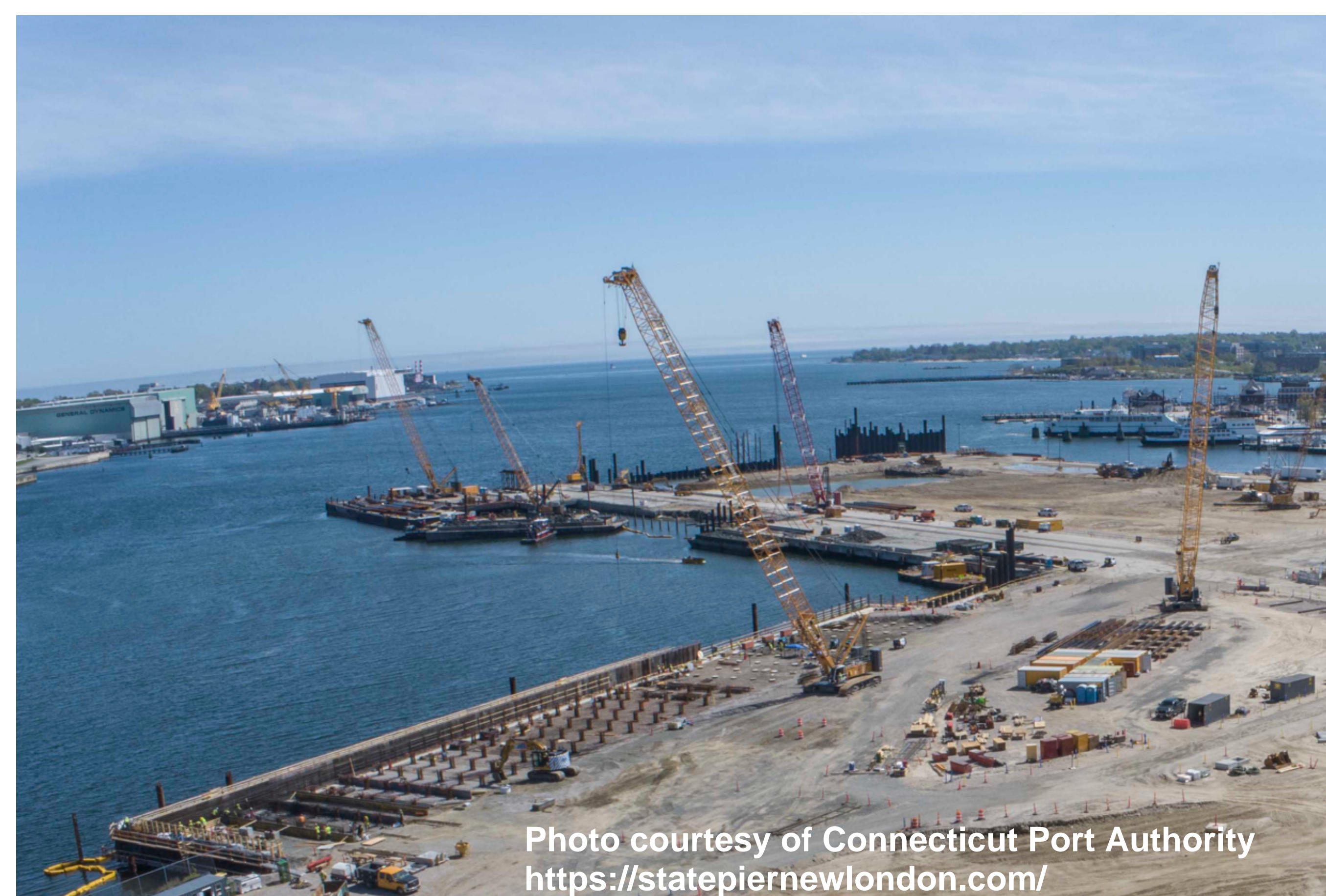
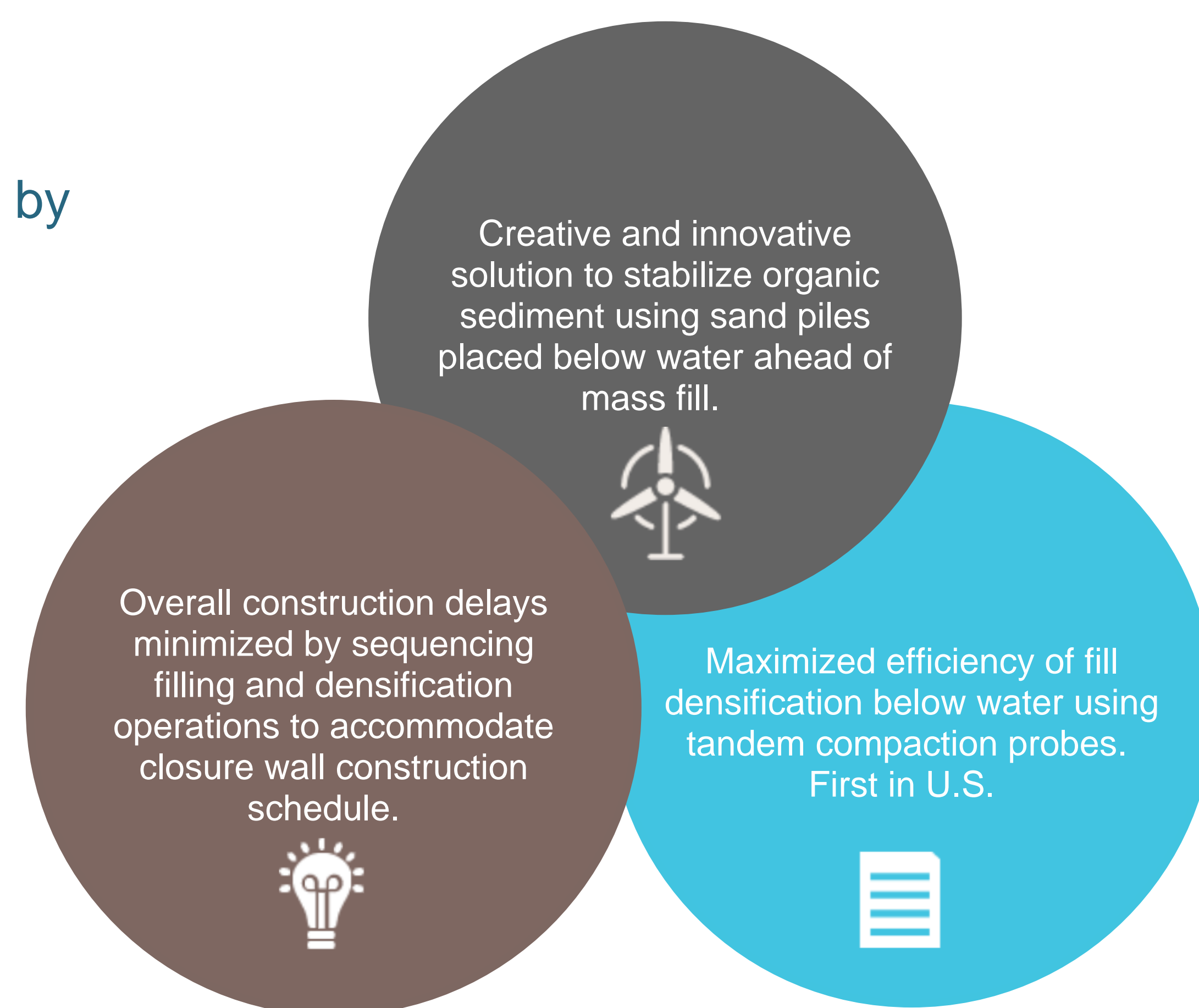


Photo courtesy of Connecticut Port Authority  
<https://statepiernewlondon.com/>