

# Steel Fast: Accelerating Quay Wall Execution with Prefabricated Elements

**8**  
QUAY WALL PORT  
PROJECTS DELIVERED



**RO+BG**  
ROMANIA & BULGARIA

# The 8-Port Execution Program

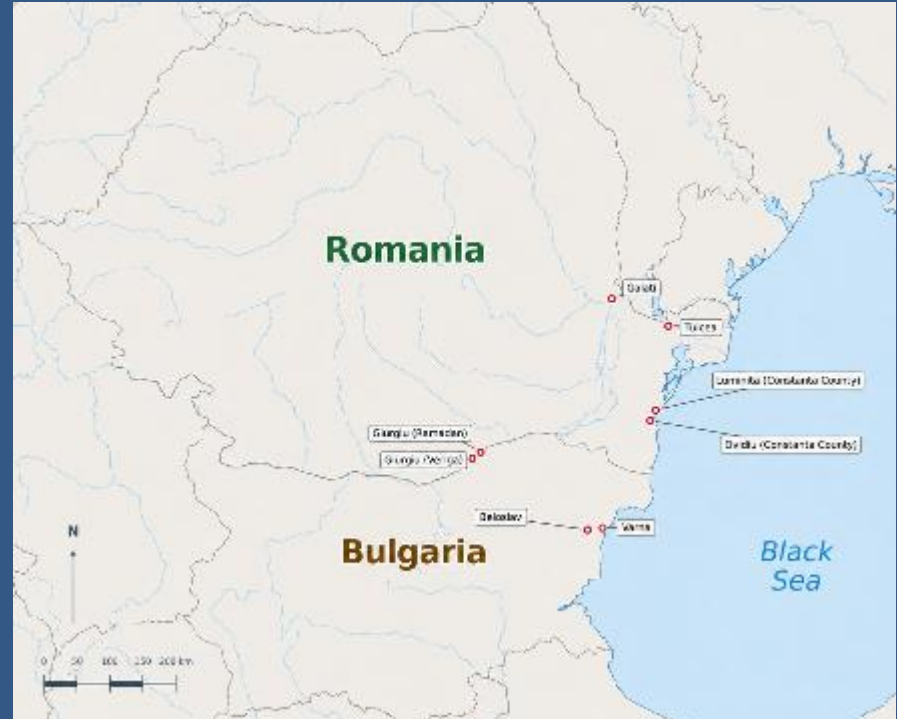


## Romania — 6 Ports

- Black Sea coast & Danube corridor
- Diverse soil conditions and water depths
- Range of quay wall typologies

## Bulgaria — 2 Ports

- Black Sea facing, strategic trade nodes
- Higher complexity – Deep Sea Ports



# Three Core Technologies



## HZM Combi Wall

- Primary elements: large steel H profiles
- Secondary: sheet pile infills
- Ideal for deep water & heavy loads
- Highest bending capacity



## Steel Sheet Piles

- U, Z profiles
- Fast installation — high speed
- Suited to moderate loads
- Used with tie rods & anchors



## Steel Tubes

- Large-diameter primary piles
- Bearing & retaining combined with sheet piles
- Used as king piles
- Reinforced and filled with concrete in some applications



ROMANIA

# Port Case Studies



Six Romanian ports — full execution stories

ROMANIA PORT 01

# Port Veriga - Giurgiu



## Project Scope

- Total quay length: 220 linear metres
- Wall retention height: 10.5m
- Solution type: HZM combi wall
- Client: APDF Giurgiu Romania

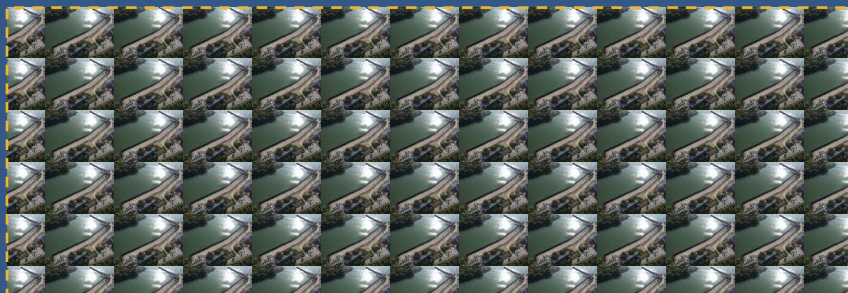
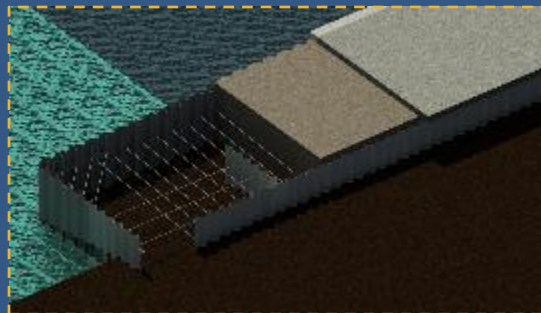
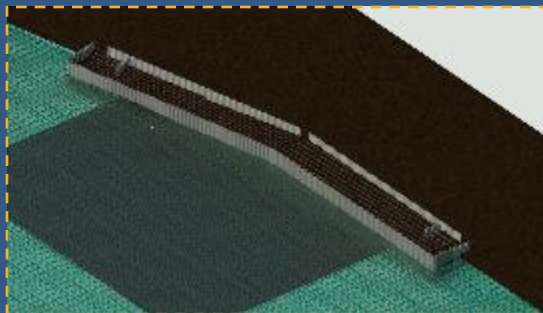
## Site Conditions and Timeline

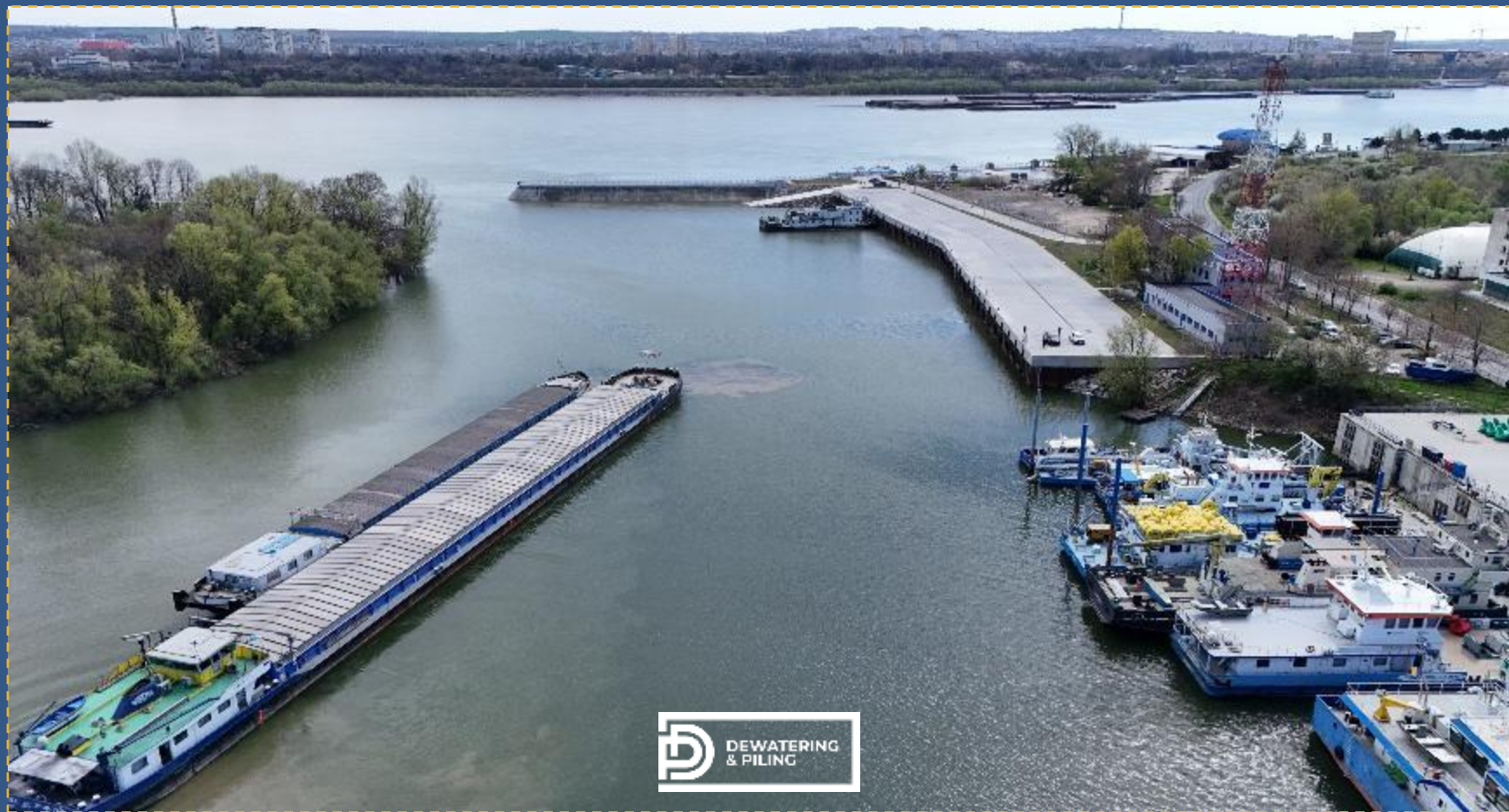
- Soil type - sand, LWL-HWL – 5m
- Font wall, anchor wall and tie rods - 3 months



Port Veriga Giurgiu

# Execution Progress





## ROMANIA PORT 02

# Port Ramadan - Giurgiu



## Project Scope

- Total quay length: 400 linear metres
- Retention height: 10.5m
- Solution type: HZM combi wall
- Client: APDF Giurgiu

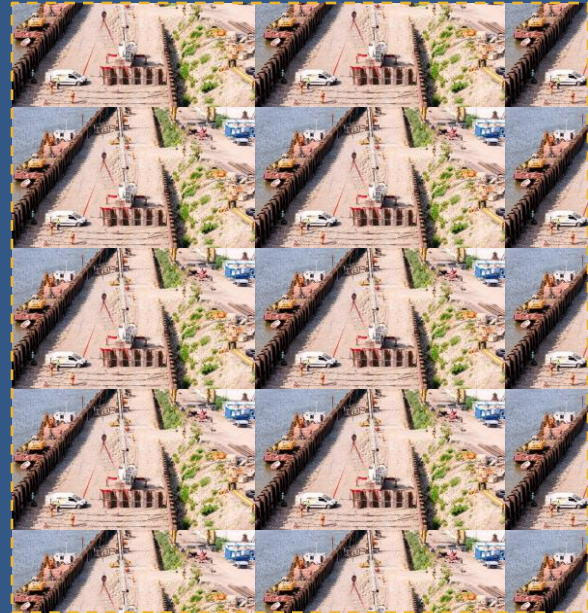
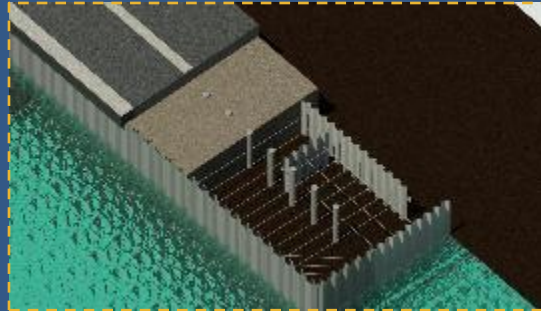
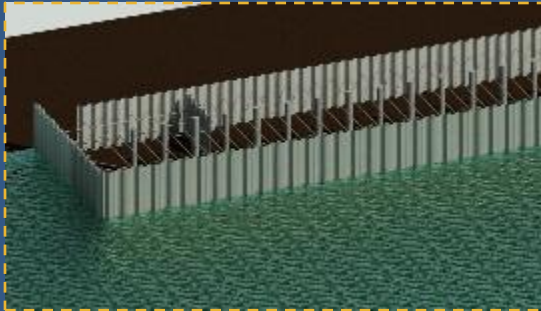
## Site Conditions and Timeline

- Soil type – sand, limestone, LWL-HWL: 6m
- Quay steel structure executed in 4 months



PORT RAMADAN - GIURGIU

# Execution Progress





## ROMANIA PORT 03

# Port Galati



## Project Scope

- Total quay length: 420 linear metres
- RO-RO Ramp
- Retention height: 12m
- Solution type: Sheet piles / HZM combi wall
- Client: Danube Maritime Port Authority

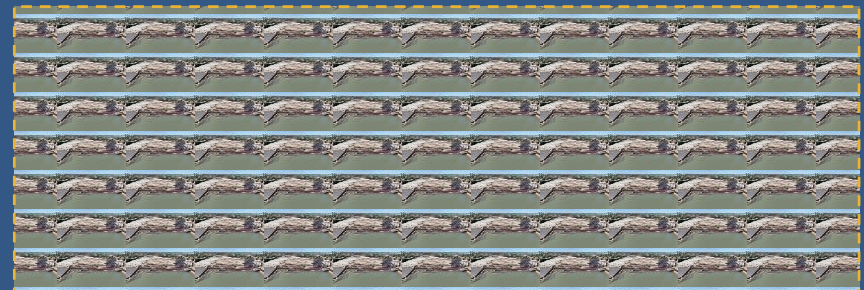
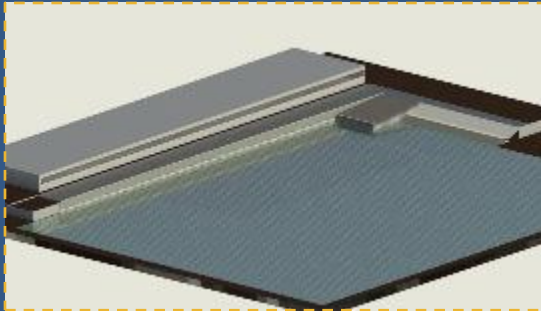
## Site Conditions and Timeline

- Soil type - clay, nearby existing building monitored
- Steel structure including ramp installed in 6 months



PORT GALATI

# Execution Progress





ROMANIA PORT 04

# PORT OVIDIU



## Project Scope

- Total quay length: 360 linear metres
- Retention height: 10m
- Solution type: Sheet piles
- Client: Constanta Canals (ACN)

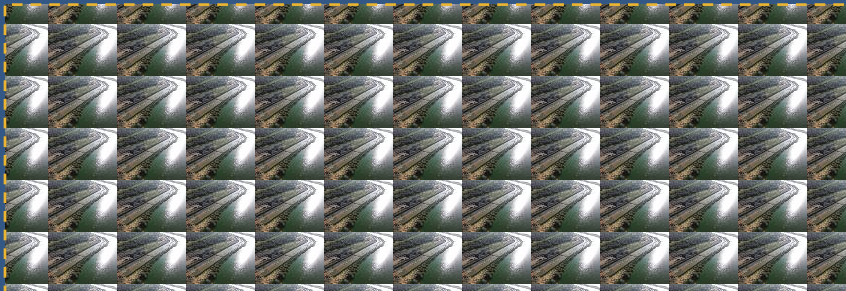
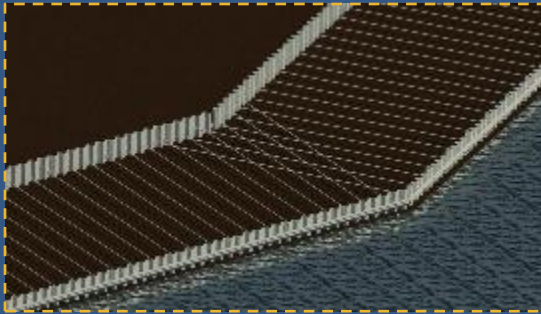
## Site Conditions and Timeline

- Soil type –clay, limestone.
- Steel structure including installed in 4 months



Port Ovidiu, Constanta

# Execution Progress





## ROMANIA PORT 05

# PORT LUMINITA, Constanta



## Project Scope

- Total quay length: 480 linear metres
- Retention height: -10.5m
- Solution type: Deck on piles – concrete piles with permanent steel casing
- Client: Constanta Canals (ACN)

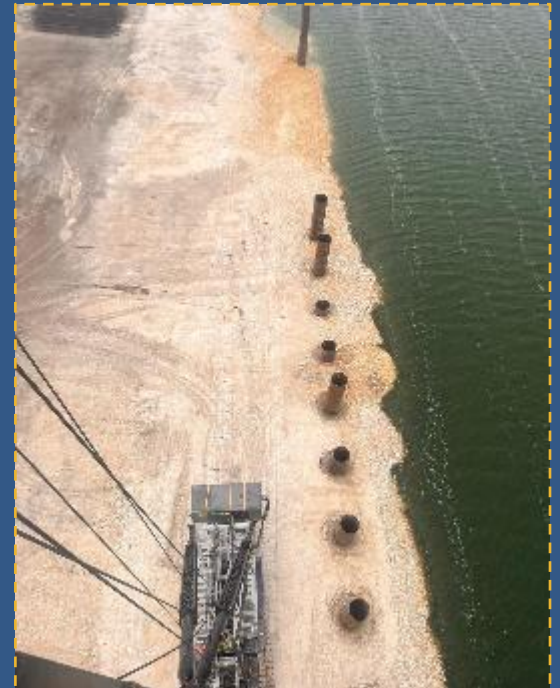
## Site Conditions and Timeline

- Soil type – sand, limestone
- Piles installed in 5 months



Port Luminita, Constanta

# Execution Progress





ROMANIA PORT 06

# PORT TULCEA



## Project Scope

- Total quay length: 325 m
- Retention height: 10.5m
- Solution type: Permanent– steel cased piles, sheet piles.
- Client: Danube Maritime Port Authority

## Site Conditions

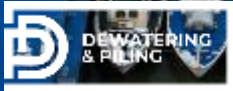
- Soil type – silty clay
- Project executed in 3 months



Commercial Port Tulcea

# Execution Progress





BULGARIA

# Deep sea Port Case **Studies**



Two Bulgarian ports — full execution stories

BULGARIA PORT 07

# Port Odessos PBM, Varna



## Project Scope

- Total quay length: 230 linear metres
- Draft: -12.5m
- Solution type: HZM Combi Wall
- Client: Port Odessos PBM

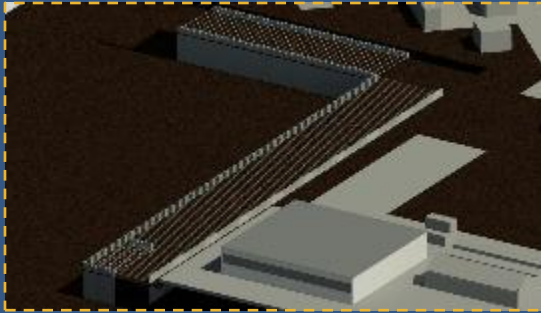
## Site Conditions and Timeline

- Soil type - sand
- Executed in 6 months



Port Odessos PMB, Varna

# Execution Progress





## BULGARIA PORT 08

# Logistic Center Varna



## Project Scope

- Total quay length: 400m in the first stage
- Draft: -14.5m
- Solution type: HZM (L=33m) combi wall
- Client: Logistic Center Varna

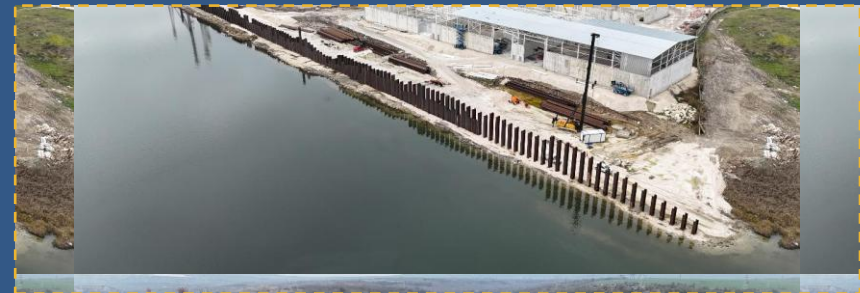
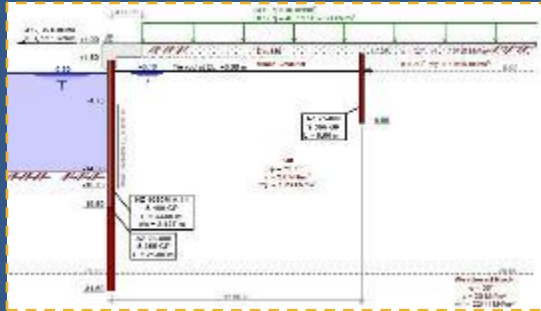
## Site Conditions and Timeline

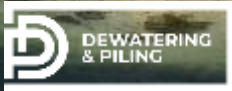
- Soil type – silty clay, limestone
- Steel structure executed in 7 months



Logistic Center Varna

# Execution Progress







New project in **KRZ Port**  
**Burgas**



# Speed Comparison

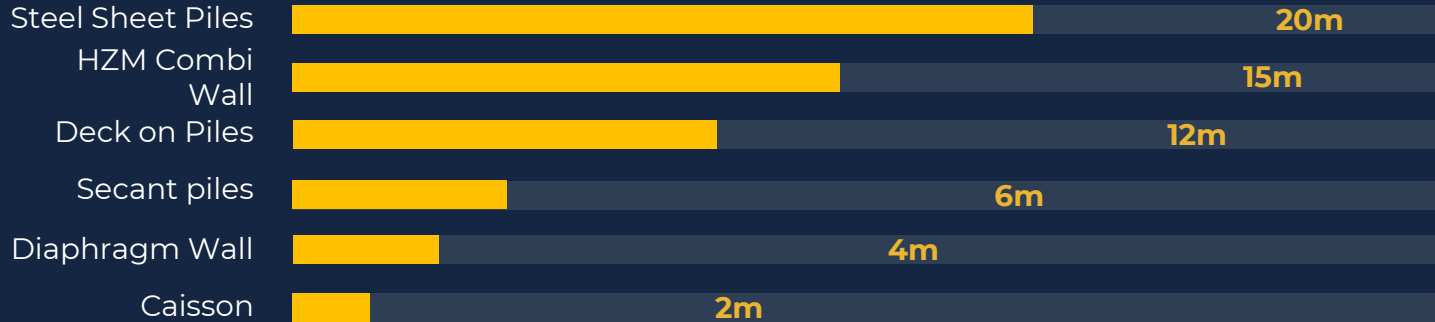


From 2 to 20 metres per day

# Cross-Solution Execution Benchmark



Average Linear Metres Executed per Day per solution



## SUMMARY

# Key Takeaways



- Consistent delivery across multiple soil profiles.
- Steel systems proved much faster than traditional concrete alternatives.
- We can help you with the design and the execution for hydrotechnical projects, port quay walls, marinas, precast piles, CFA piles and more.

**Thank You | Black Sea Ports and Logistics 2026**