

Resilient Stratford South End Strategy: Protect



Case Study 1

Naugatuck River Levee and Derby Greenway Trail Derby, CT



Problem

Vulnerability of 70 acres of industrial, residential, and commercial property to flooding by the Naugatuck and Housatonic Rivers

Strategy

Levee (1973): USACE built concrete flood walls, earthfill dikes, and sluice gates as flood protection

Greenway (2021): The City of Derby and the Naugatuck Valley Council of Governments built a 2-mile multi-use trail atop the levee

Cost:

Levee = \$8.6M in federal funds (\$56M in 2022 dollars)

Greenway Trail = \$3.8M, primarily state and federal grants

Impact:

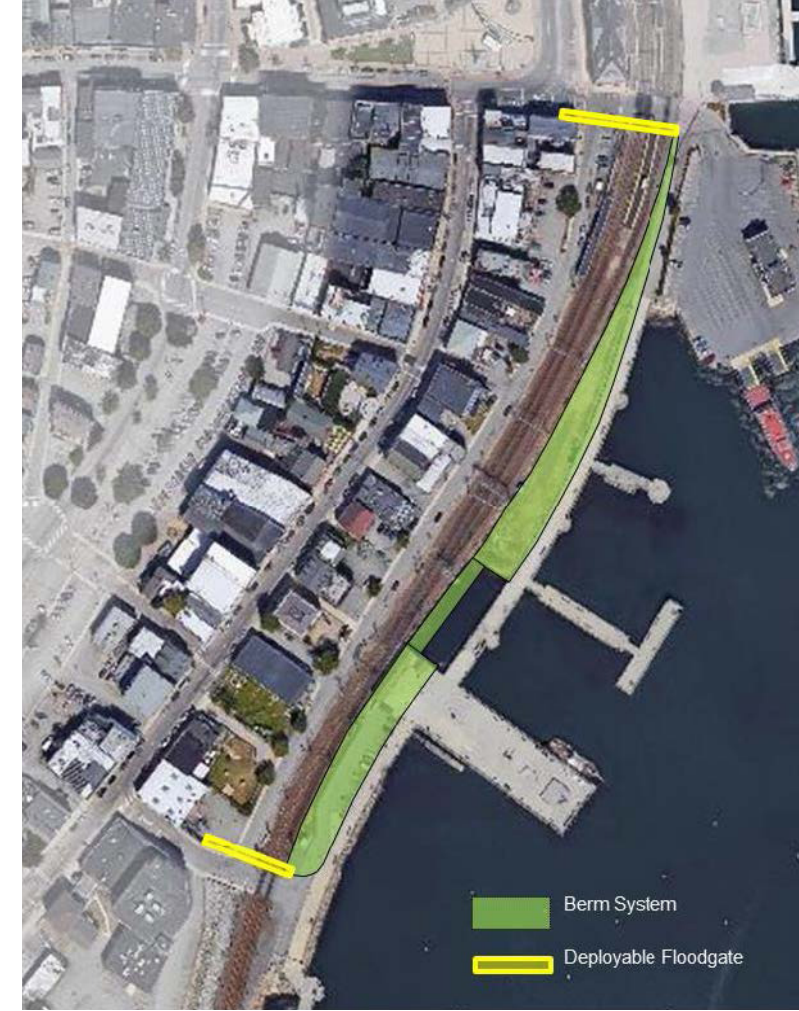
Estimated annual visits = 300,000+
Est. value of health impact = \$36.5M (based on existing community health conditions)
Est. protected property value = \$123M



Top & Left: Naugatuck Valley Council of Governments (2017); Right: Connecticut Trail Finder (ND)
Sources: Naugatuck Valley Council of Governments (2022, 2021, 2017); USACE National Levee Database (2022)

Case Study 2

Bank Street - South Water Street Project New London, CT



Problem

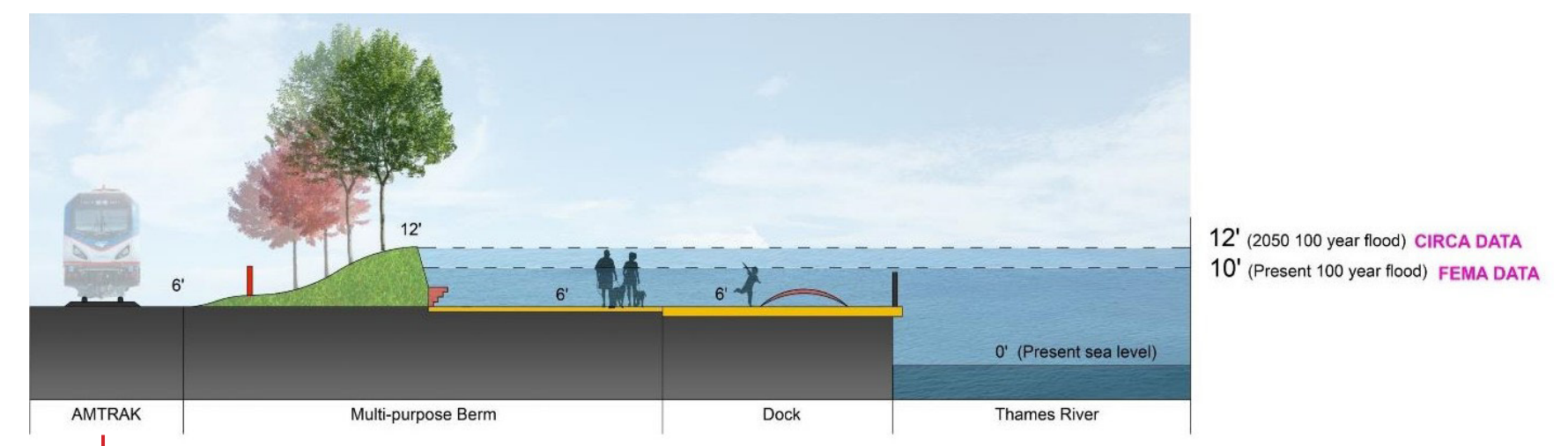
Storm surges and flooding of downtown residential and commercial property, Amtrak railroad, and city-owned waterfront

Strategy

A 2018 study by CIRCA and UConn proposed three options - using a berm, a flood wall, and land fill of private property - with varying degrees of protection and public/private expenses

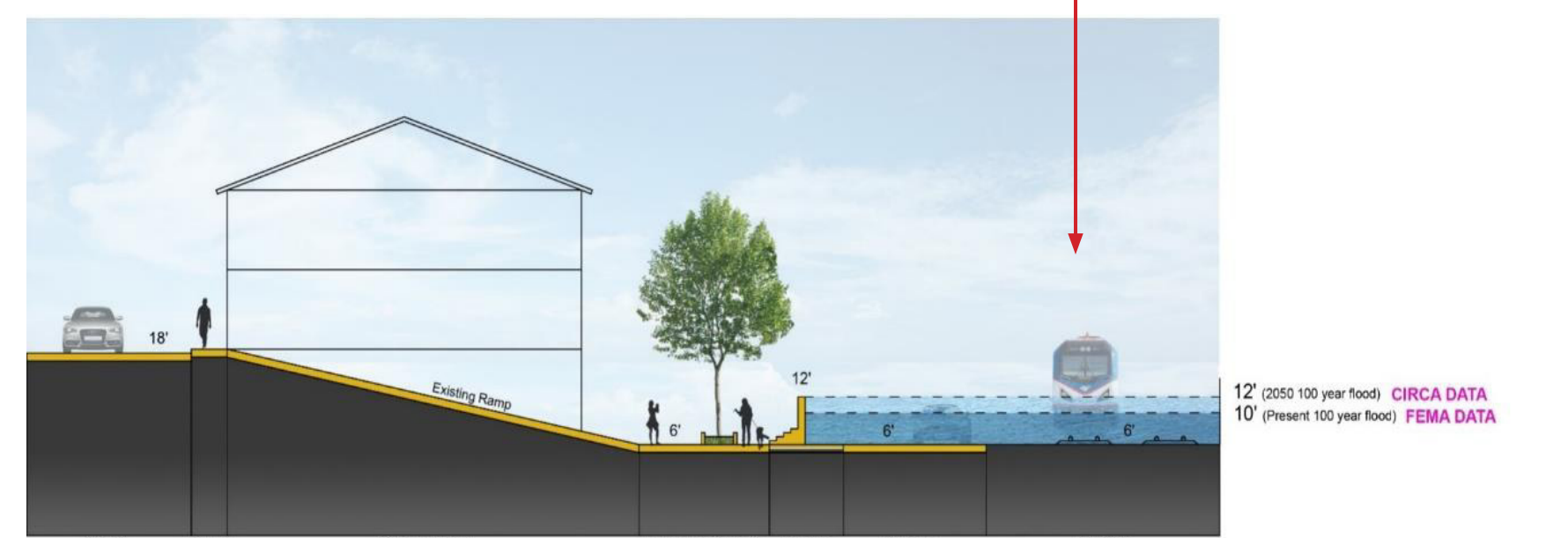
Option 1:

Berm



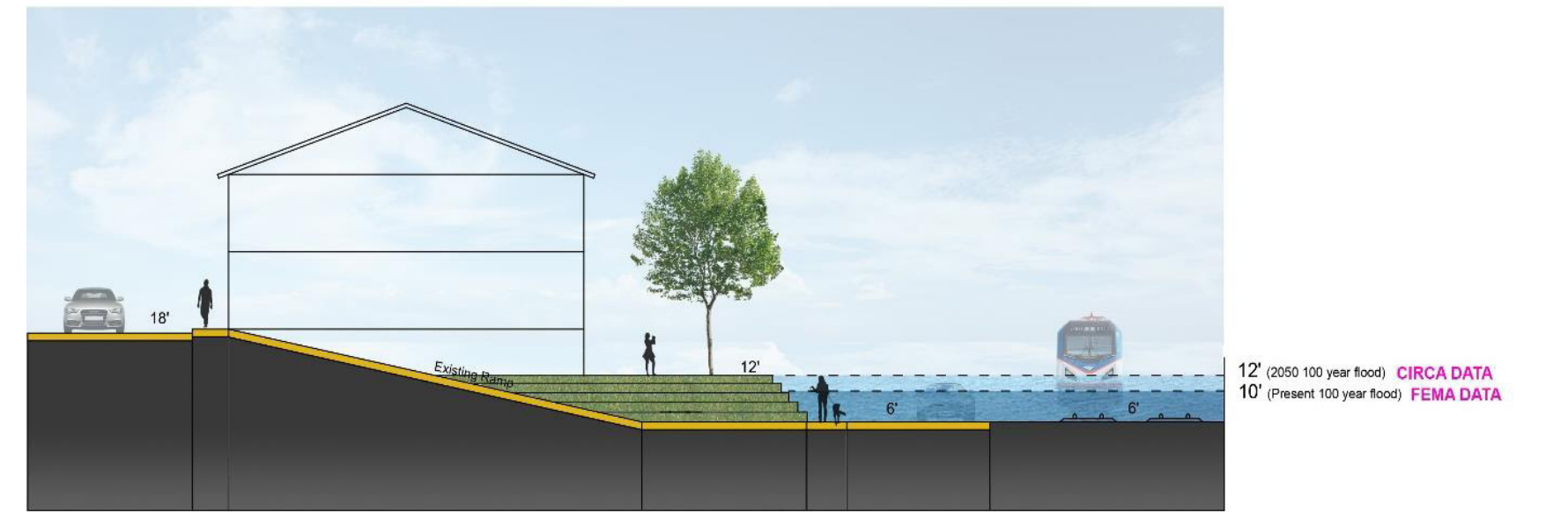
Option 2:

Flood wall



Option 3:

Elevate private property



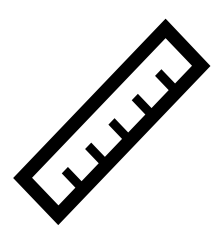
Source: UConn's Community Research & Design Collaborative and Miniutti et al. (2018)

What does it mean?

Protect

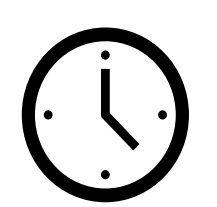


Physical interventions designed to hold back flood waters from developed areas and prevent loss of land



Scale

Region, town, or neighborhood



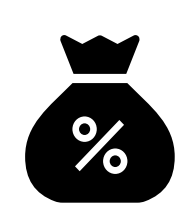
Timeframe

Long-term



Cost

Expensive



Funding

Town, state, & federal

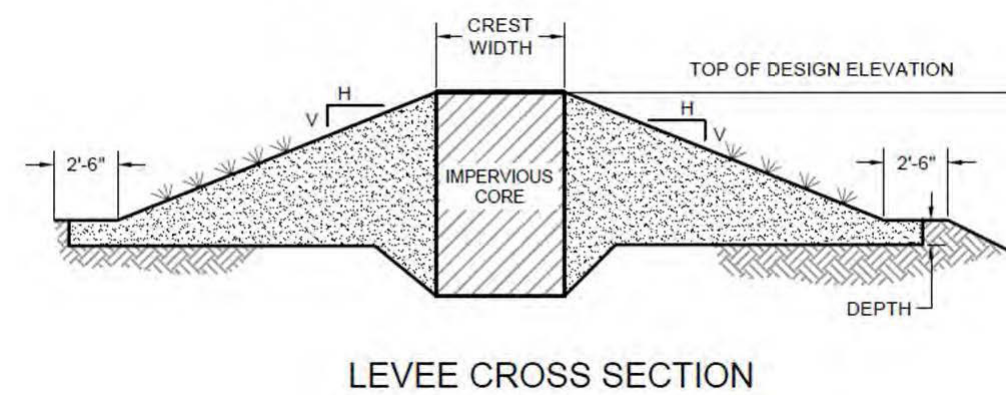


Type of Projects

Physical infrastructure

Examples

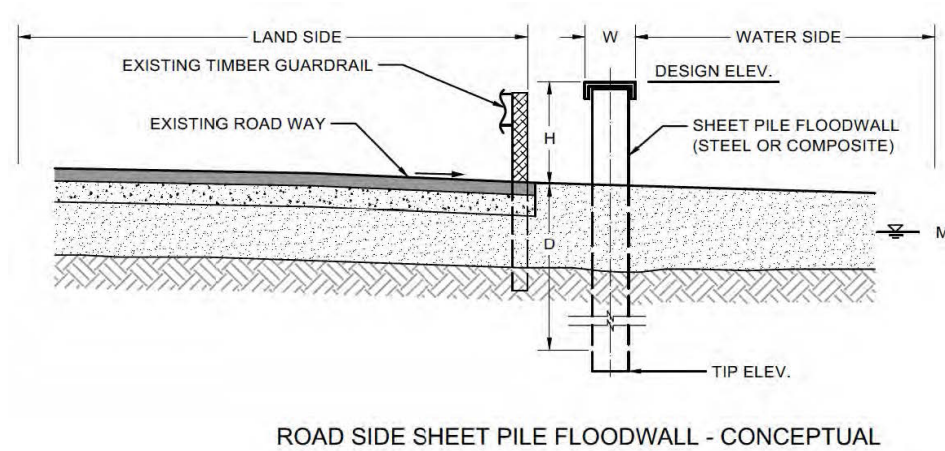
Levees & berms



Left: GZA / Stratford Community Resiliency Plan (2016); Right: Grand Forks, ND - FEMA / Brenda Risky



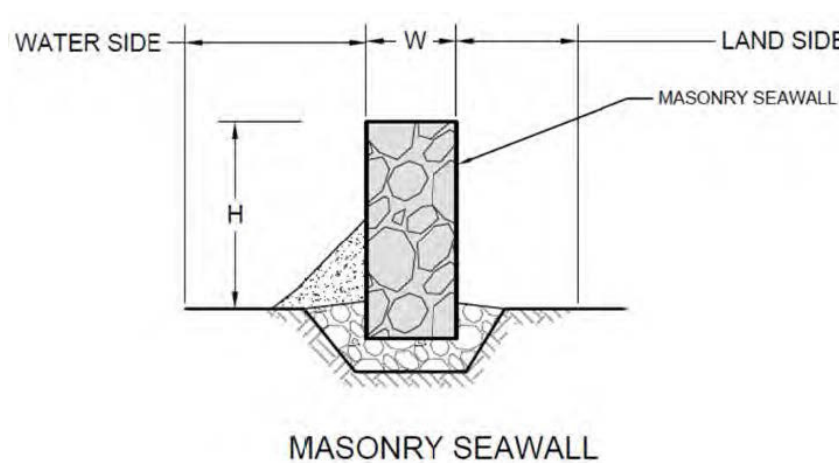
Flood walls



Left & Right: GZA / Stratford Community Resiliency Plan (2016)



Sea walls



Left: GZA / Stratford Community Resiliency Plan (2016); Right: Old Saybrook sea wall - CREST Map Viewer / Joel Stocker



Hybrid built & natural systems



Left & Right: Saugatuck Shores, Westport - CT DEEP Living Shorelines Storymap