

## Great Lakes Ports & Harbor Infrastructure Cost Range Estimates (2010 costs)

### Structure Costs (\$/ft) vs. Depth Ranges Interior Structures

Structure Type	New/Repair	8'-13'	14'-25'	26'-35'	Notes
SSP Bulkhead w/Concrete Cap <b>(I-1)</b>	New	1250-1600	1700-4300	3300-5300	
	Repair	835-1350	1400-2500	2240-3360	1
SSP Bulkhead w/ Stone Cap <b>(I-2)</b>	New	1200-1950	2015-3600	3225-4830	
	Repair	780-1270	1315-2350	2100-3150	1
SSP Bulkhead w/wood or Composite Cap <b>(I-3)</b>	New	1155-1880	1950-3425	3110-4665	
	Repair	740-1200	1245-2225	1990-2990	1
Timber Crib w/Concrete Cap <b>(I-4)</b>	New	1000-3075	3185-5700	*	2,3
	Repair	1000-1625	1700-5400	*	3
Timber Sheet Piling w/Concrete Cap <b>(I-5)</b>	New	*	*	*	3
	Repair	780-1270	1315-2395	2100-3150	4
Soldier Pile Wall w/Timber <b>(I-6)</b>	New	920-1500	1540-2750	2475-3700	
	Repair	300-475	490-875	784-1175	5
Soldier Pile Wall w/Concrete <b>(I-7)</b>	New	990-1610	1620-2970	2660-4000	
	Repair	365-595	615-1100	980-1425	5
New Fixed Fishing Pier <b>(I-8)</b>	Steel Piles <b>(I-8a)</b>	1840-2990	1925-3450	2680-4025	6
	Concrete Piles <b>(I-8b)</b>	2160-3510	2200-3950	3000-4500	6
	Composite Piles <b>(I-8c)</b>	2280-3700	2310-4125	3125-4680	6
Wharf Pile Repair <b>(I-9)</b>	Steel Jackets <b>(I-9a)</b>	550	550	550	7
	Fiberglass Jackets <b>(I-9b)</b>	385	385	385	7
	HDPE Jackets <b>(I-9c)</b>	320	320	320	8

\* = See specific note at right of column

- Notes:
- 1) New front sheet pile wall only
  - 2) 12' wide x 20' long Oak cribs with treated timber tops
  - 3) No estimates given (unlikely structure for those depths; or replaced with newer options, typically steel sheet pile walls)
  - 4) Replaced with new steel sheet pile in front of old timber
  - 5) Panel replacement only
  - 6) Per foot of 10' pier assumed
  - 7) 12" pile (per foot of pile repair)
  - 8) 18" pile (per foot of pile repair)