7 Howland Hook

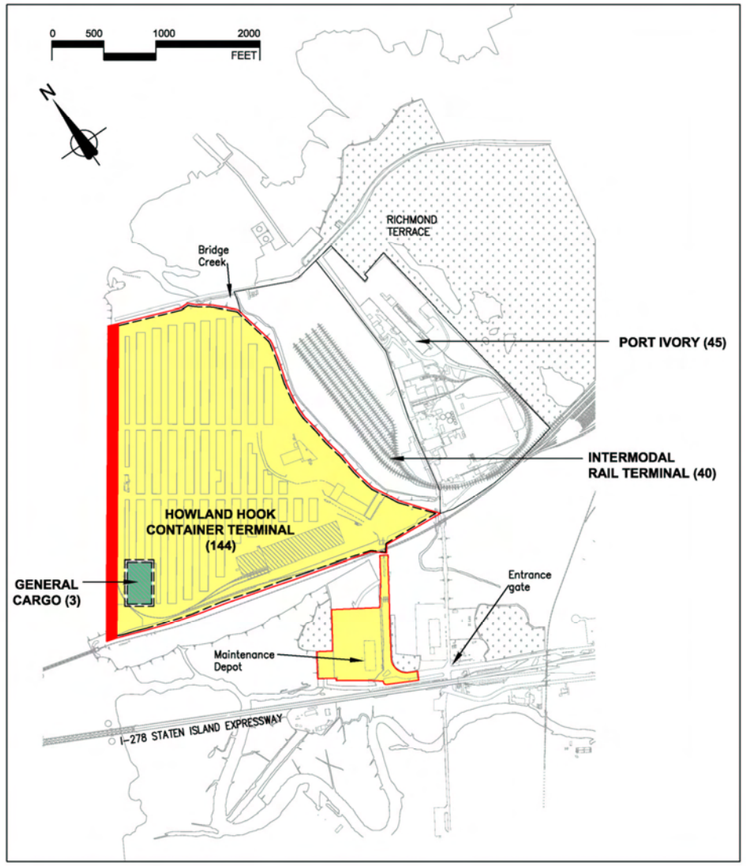

Fig 7.1 - Existing Layout

Container Terminal
Auto Terminal
Off Terminal Warehousing & Support
Dry Bulk
Liquid Bulk
General Cargo

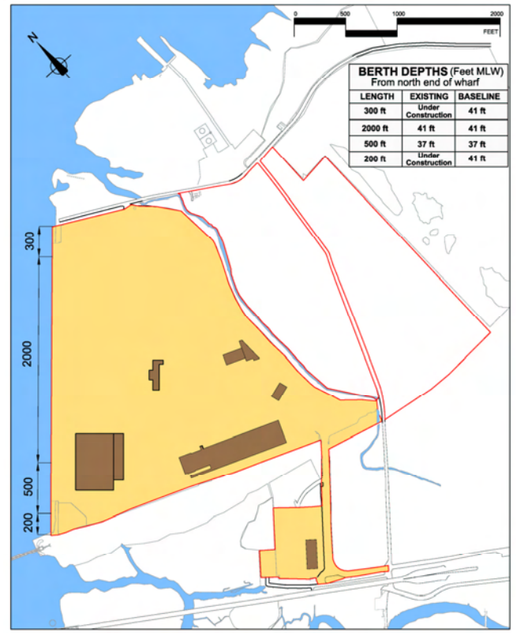

Fig 7.2 - Existing and Baseline Berth Depths

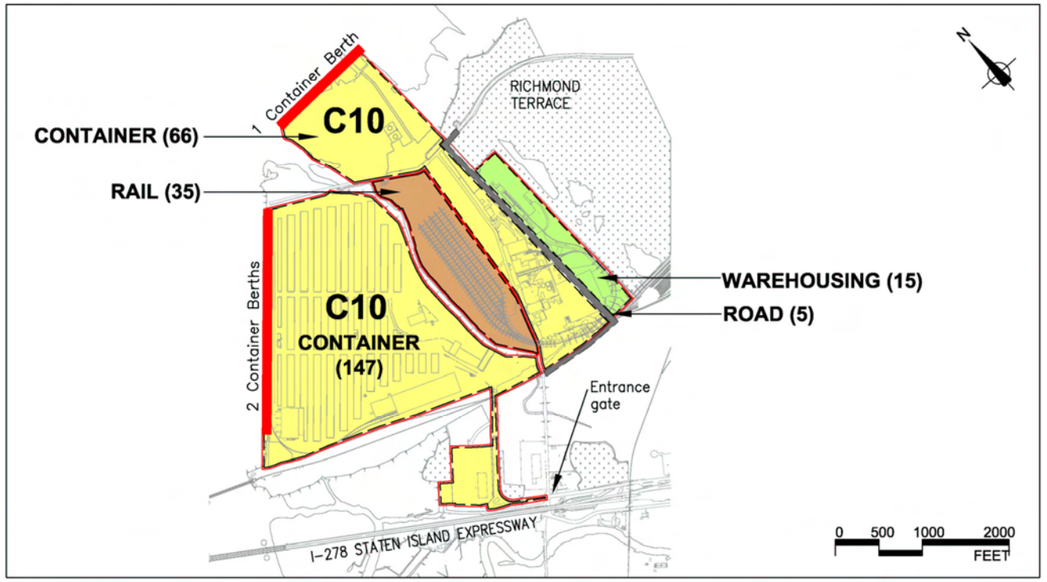

Fig 7.3 - Orange Scenario

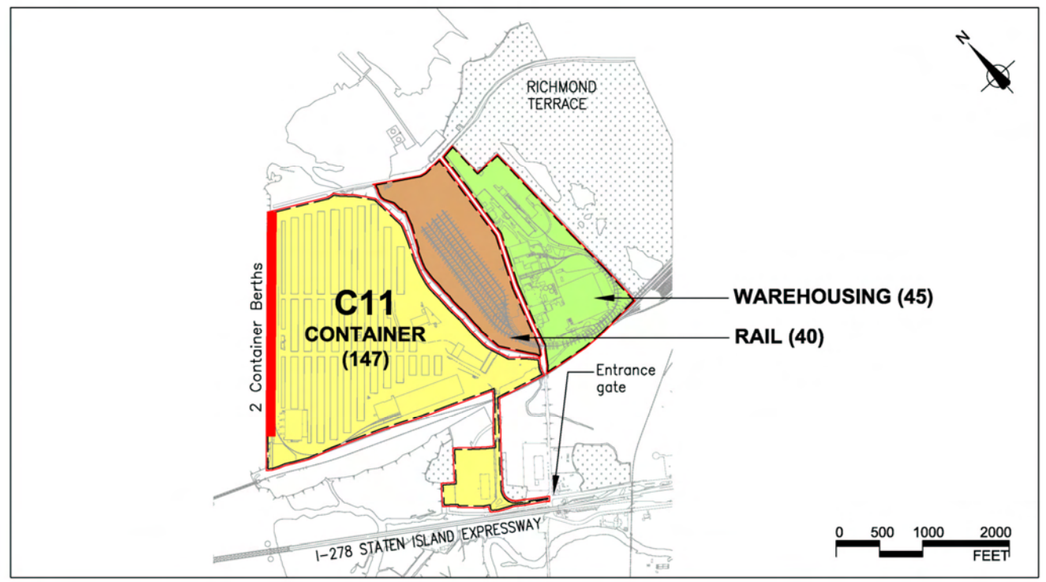

Fig 7.4 - Red, Yellow and Blue Scenarios

Existing site area and berths			
Terminal	**Type**	**Area (acres)**	**# berths**
Howland Hook	Container	144	3
Howland Hook	General Cargo	3	Inc in above

Table 7.1
Ref : Chapter 5, Volume 1, CPIP.

Existing terminal assessed capacity		
Container	144 acres	846,600 TEU/year
General	3 acres	130,000 tons/year

Table 7.2
Ref : Chapter 5, Volume 1, CPIP.

Land allocation								
Scenario	**Containers**		**Road & Rail**	**Warehousing & terminal support industries**	**Total area**	**Area made from**		
	Option	Area				**Existing**	**Waterfront fill**	**Acquired**
Orange	C10	213	40	15	**268**	147	3	118
Red, Yellow & Blue	C11	147	40	45	**232**	147	0	85

Table 7.3
Ref : Chapter 7, Volume 1, CPIP.

2060 Site Options and provisions					
Terminal	**Type**	**Area (acres)**	**# Berths**	**Land capacity**	**Berth capacity**
C11	Container	147	2	1,249,500 TEU/year	1,271,000 TEU/year
C10	Container	213	3	1,810,500 TEU/year	2,096,100 TEU/year

Table 7.4
Ref : Chapter 7, Volume 1, CPIP.

Option evaluation

C11	C10
P1	P4
P2	P5
P4	F2
P5	F3
E4	E4
E5	T1
T1	T2
T2	T3
T3	T5
T5	T6
T6	E1
F1	E2
F2	E3
F3	T4
E1	P1
E2	P2
E3	P3
T4	E5
P3	E6
E6	F1

	Criterion
	Port Planning
P1	Phasing, plan flexibility and relationship to existing land and berth use
P2	Appropriateness of land shape for cargo handling
P3	Ease of navigation to site along the main approach channels
P4	Space in the adjacent waterway for ship manoeuvring to the berth
P5	Effects of operations on neighbouring port operations
	Financial and Economic
F1	Financial analysis – breakeven price
F2	Economic impact – job creation
F3	Economic impact – tax revenue created
	Environmental Issues
E1	Light
E2	Noise
E3	Dust and odors
E4	Traffic
E5	Wildlife habitat
E6	Waterfront access
	Transportation Issues
T1	Highway access
T2	Local highway congestion
T3	Local highway improvement cost
T4	Rail access
T5	Rail terminal on-site availability
T6	Rail terminal on-site cost

Key

F1 Relatively good evaluation under financial criterion F1

E1 Indifferent evaluation under environmental criterion E1

P3 Poor Evaluation under planning criterion P3

Criterion is not applicable

Table 7.5
Ref : Chapter 15, Volume 1, CPIP.

1. Access Channels

Access to Howland Hook is by the Upper New York Bay stretch of the Anchorage Channel whose present depth of 45 ft is planned to be deepened to 50 ft, and then by the Kill van Kull Channel followed by a short stretch of the Arthur Kill Channel.

2. Restrictions

Howland Hook is affected by the air draft limitations of Bayonne Bridge which spans the Kill van Kull Channel.

This may be problematic in the future when container ships get larger. The air draft at Verrazano Narrows Bridge is more than adequate for the foreseeable future.

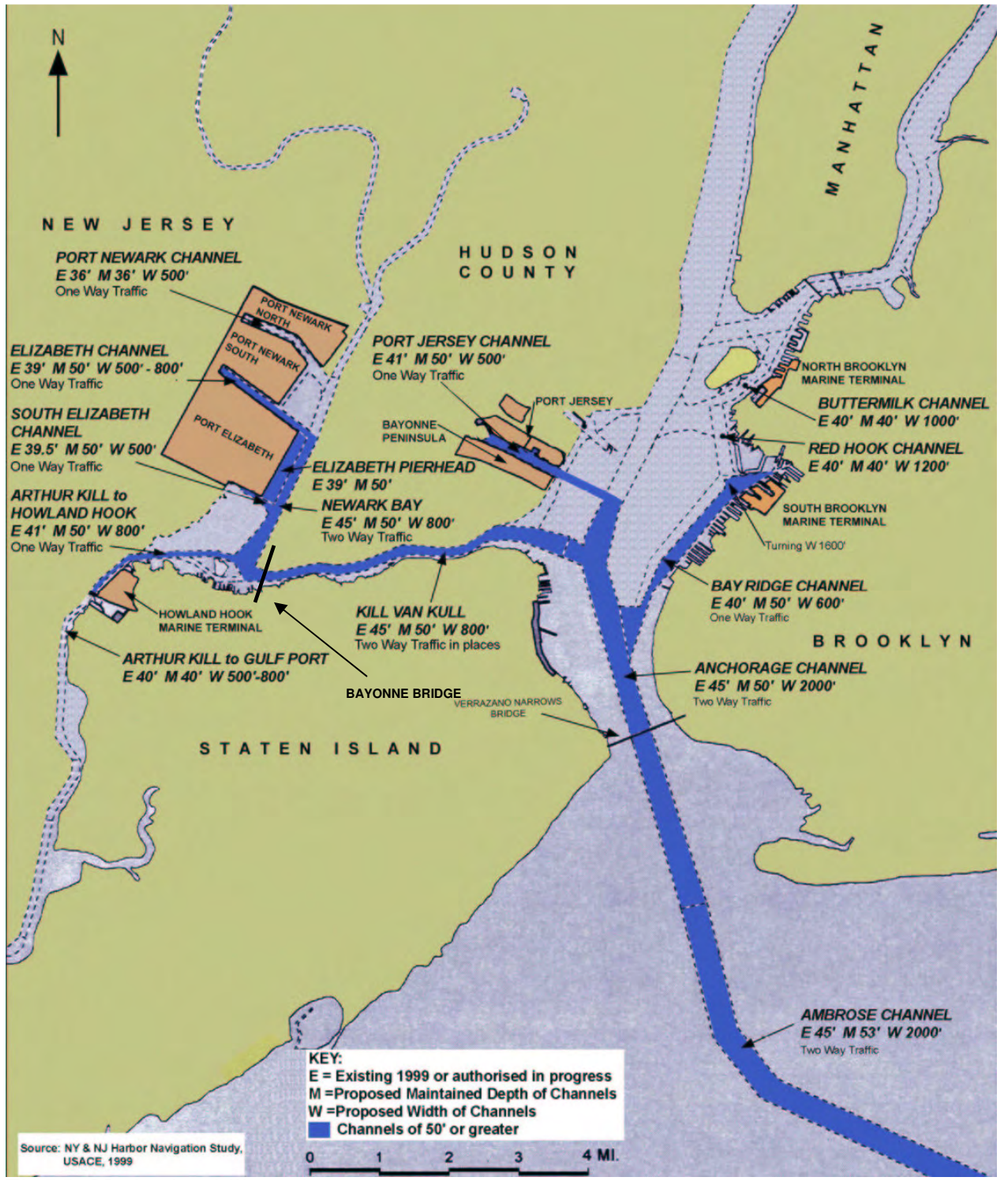

Fig 7.5 - Navigational Channels

Approach channel depths		
Channel name	**Existing, or in progress, depth (ft MLW)**	**Future maintained depth (ft MLW)**
Ambrose	45	53
Anchorage	45	50
Kill van Kull	45	50
Arthur Kill	41	50

Table 7.6
Ref : Chapters 5 & 6, Volume 1, CPIP.

Berthing channel width		
Channel name	**Overall width (ft)**	**Dredged width (ft)**
Arthur Kill	One sided	-

Table 7.7
Ref : Chapters 5 & 6, Volume 1, CPIP.

Howland Hook

Howland Hook's present depth in the Arthur Kill channel off the berths of around 38 ft (41 ft authorized) is planned to be deepened to 50 ft. The existing and currently planned depths at the berths are shown on page 7.1

Infrastructure capital cost		
	C10	C11
Site clearance	5.5	0.0
Berths	48.1	9.0
Paving	16.3	0.0
Buildings	6.7	2.5
Other	111.4	25.2
Contingency & design	94.0	18.3
Total $m	**282.1**	**55.0**

Table 7.8
Ref : Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Financial ranking of container terminal Options				
Rank (from 14 options)	Project		Additional capacity (000 TEU)	Breakeven price per unit
9	**C11**	Howland Hook	282	168
13	**C10**	Howland Hook	843	191

Table 7.9
Ref : Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Economic impact			
	Unit	C10	C11
Additional units		843,137	282,137
Employment			
Direct	jobs	2,990	1,001
In other industries	jobs	3917	1,311
Gross State Product	($m)	379.7	127.1
Income	($m)	229.9	76.9
Federal taxes	($m)	48.5	16.2
State taxes	($m)	15.4	5.1
Local taxes	($m)	22.4	7.5
Rank		9	13

Table 7.10
Ref : Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Overall ranking of terminal Options			
Terminal Option	Additional capacity (units)	Financial rank	Economic rank
Container Terminals	**(000 TEU)**		
C3 Port Elizabeth	1,777	3	2
C4 Port Elizabeth	1,209	4	4
C13 Port Elizabeth	912	2	7
C9 Bayonne	1,275	6	3
C2 Port Newark South	1,025	5	5
C12 Port Elizabeth	672	1	11
C14 South Brooklyn	2,210	12	1
C8 Bayonne	850	8	8
C7 Port Jersey	965	11	6
C1 Port Newark South	345	7	12
C6 Port Jersey	765	10	10
C10 Howland Hook	**843**	**13**	**9**
C11 Howland Hook	**282**	**9**	**13**
C5 Port Jersey	200	14	14

Table 7.11
Ref : Chapter 11, Volume 1, CPIP.

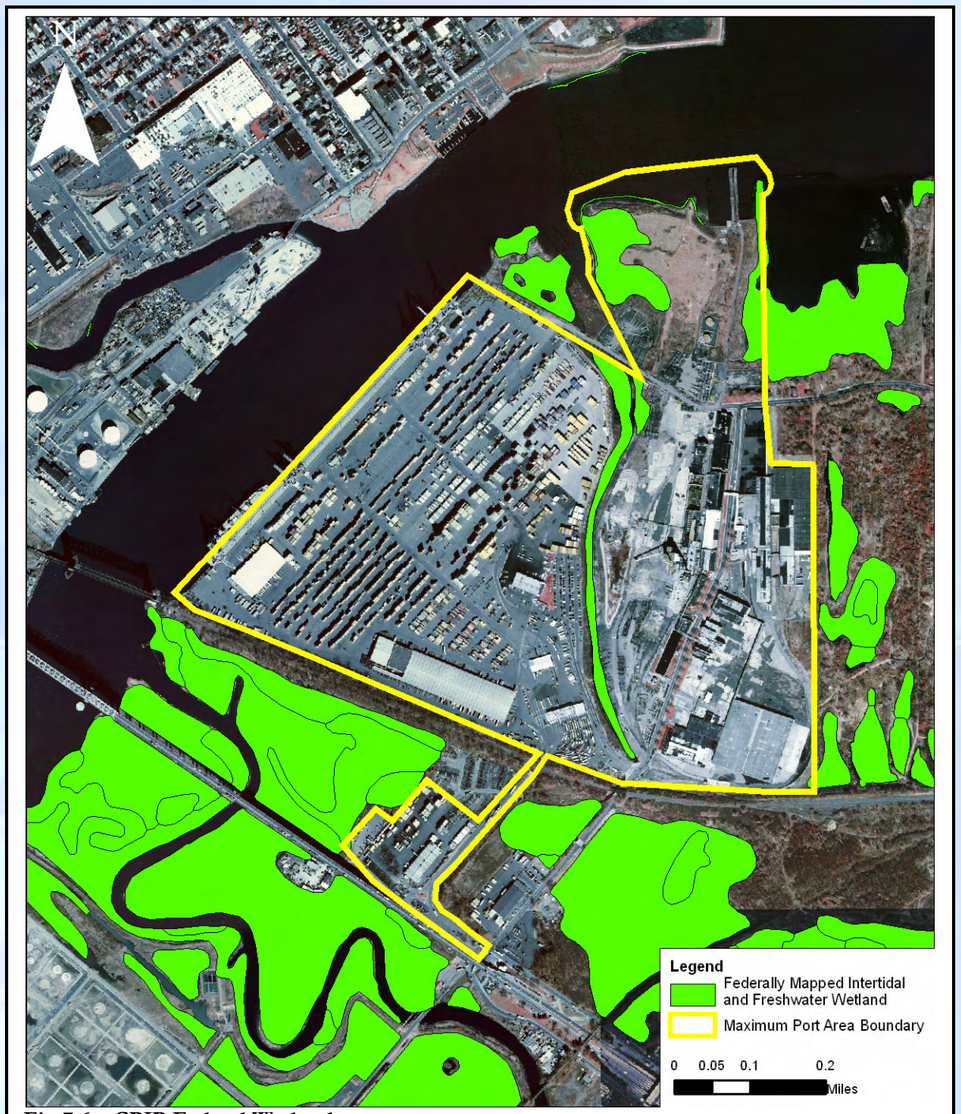

Fig 7.6 – CPIP Federal Wetlands
Source: CPIP-EIS Consultant (ESEC)

Note: The wetlands shown along the edges of Bridge Creek are within the boundaries of the ongoing terminal expansion works. It is understood that Bridge Creek will be retained and any impacts mitigated as part of the on-dock rail terminal project.

Estimated wetland usage in Options	
Option	**Estimated wetland area (acres)**
C10	15

Table 7.12
Ref : Chapter 12, Volume 1, CPIP.