

6 Bayonne Peninsula



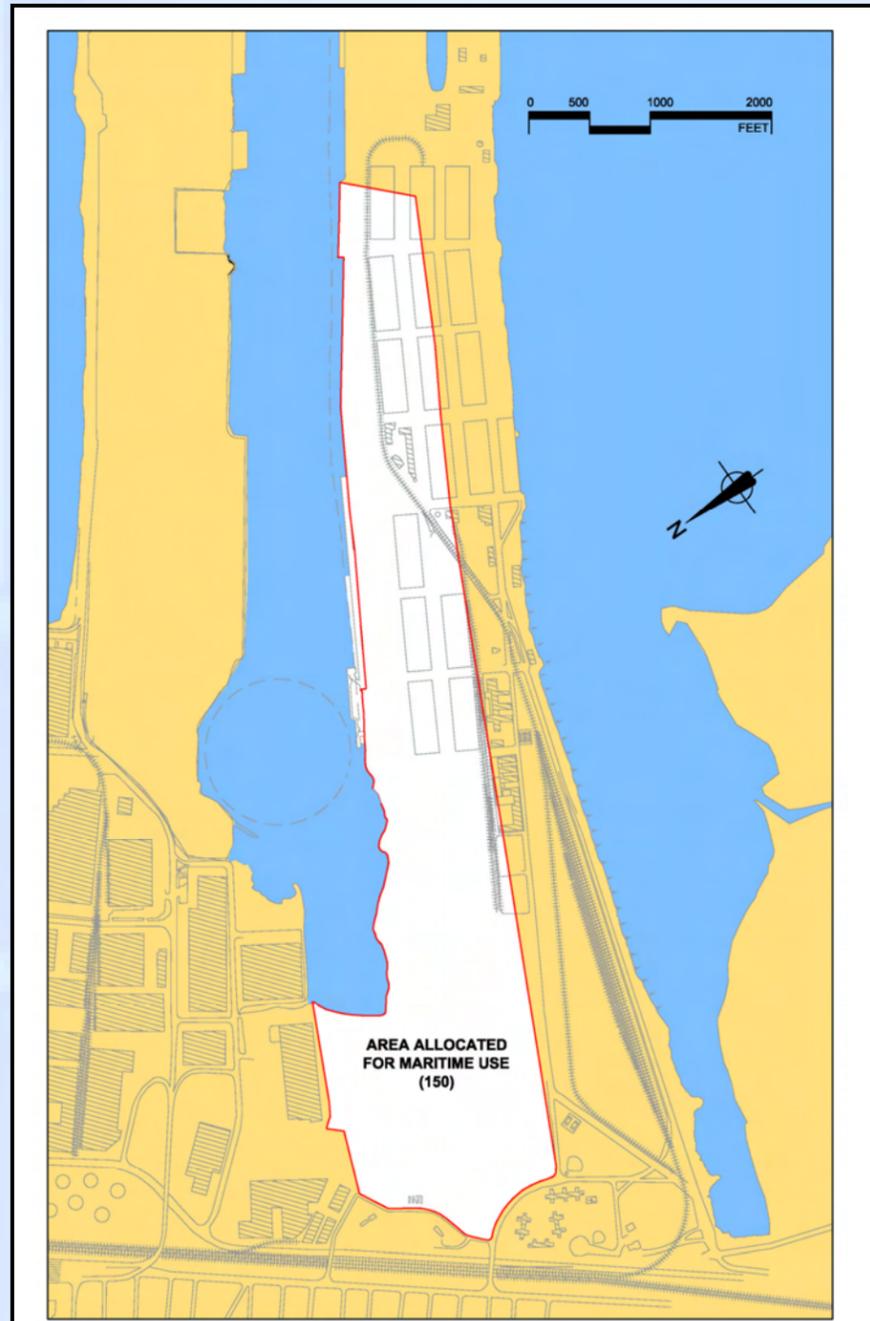


Fig 6.1 - Existing Layout

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

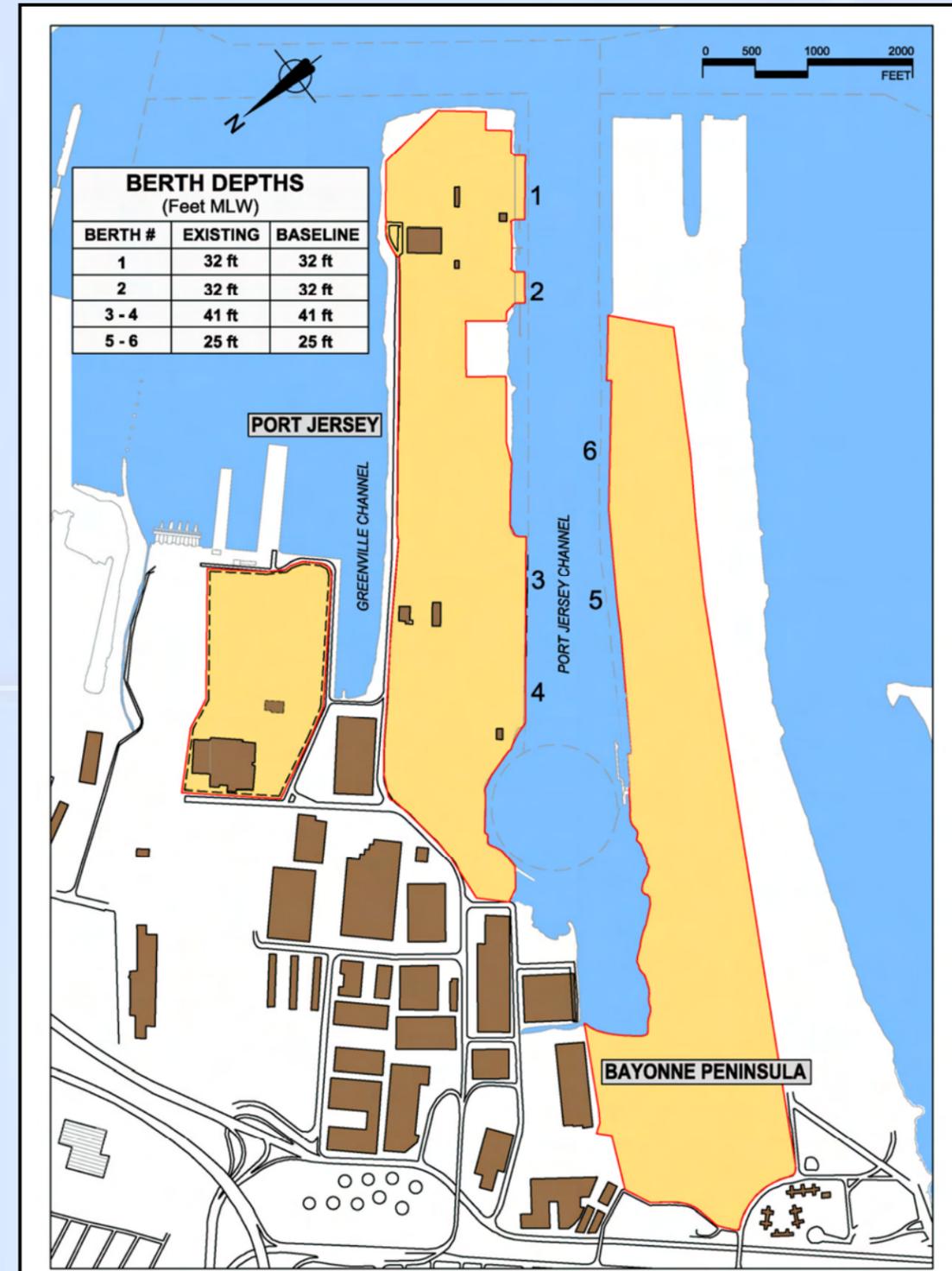


Fig 6.2 - Existing and Baseline Berth Depths

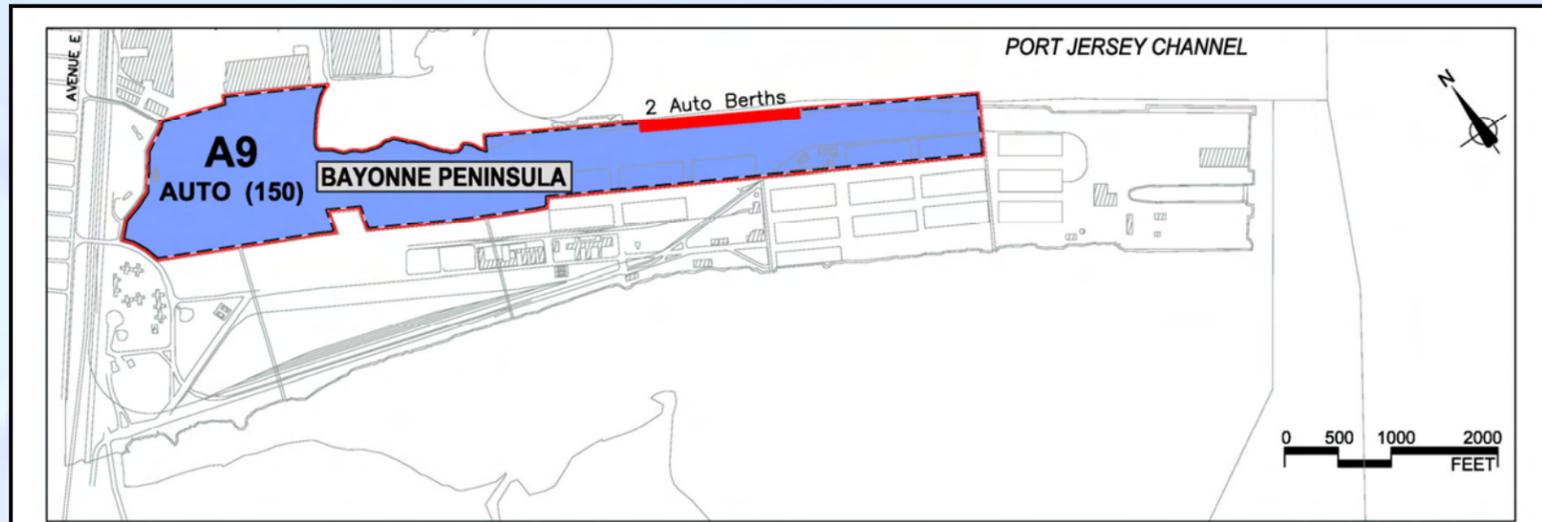


Fig 6.3 - Orange and Blue Scenarios

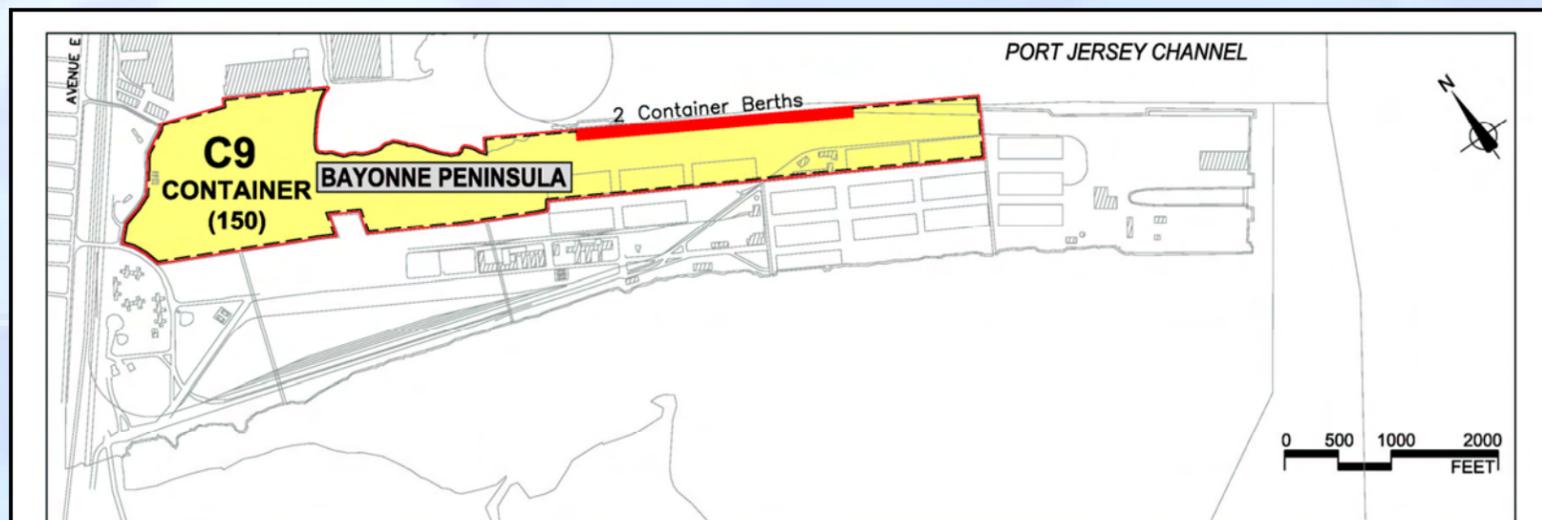


Fig 6.4 - Red Scenario

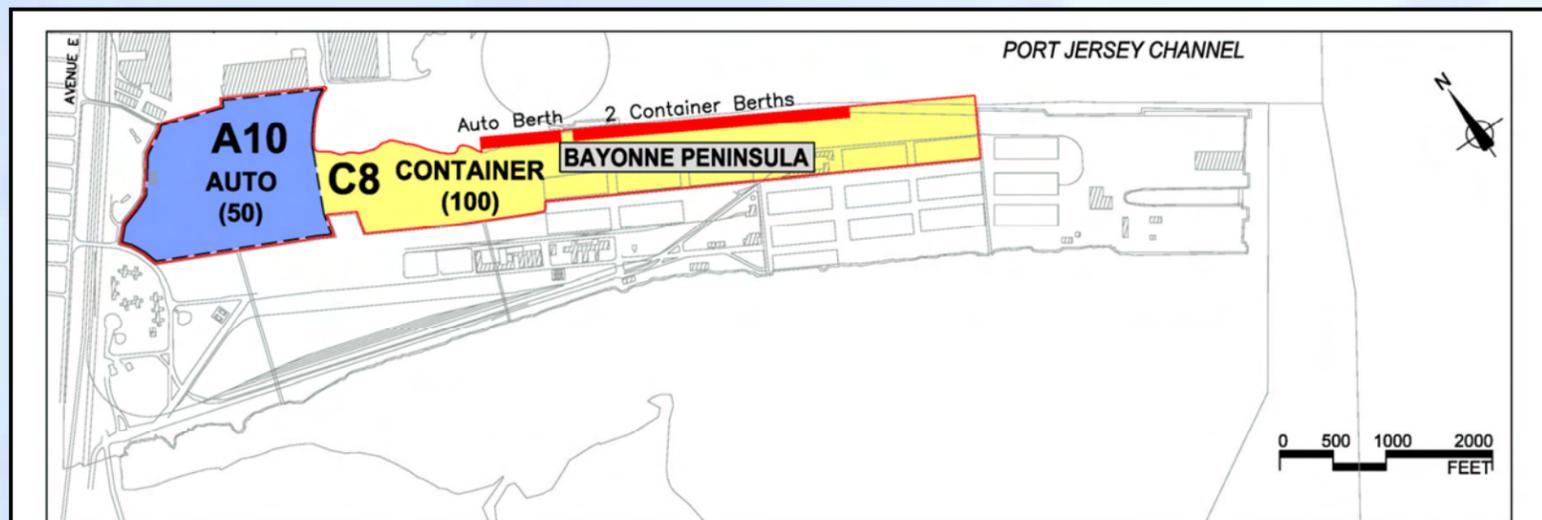


Fig 6.5 - Yellow Scenario

Existing site area and berths			
Terminal	Type	Area (acres)	# berths
Not used			

Table 6.1
Ref: Chapter 5, Volume 1, CPIP.

Existing terminal assessed capacity		
Not used		

Table 6.2
Ref: Chapter 5, Volume 1, CPIP.

Land allocation										
Scenario	Containers		Autos		Road & Rail	Warehousing & terminal support industries	Total area	Area made from		
	Option	Area	Option	Area				Existing	Waterfront fill	Acquired
Yellow	C8	100	A10	50			150	150	0	0
Red	C9	150					150	150	0	0
Orange & Blue			A9	150			150	150	0	0

Table 6.3
Ref: Chapter 7, Volume 1, CPIP.

2060 Site Options and provisions					
Terminal	Type	Area (acres)	# Berths	Land capacity	Berth capacity
C8	Container	100	2	850,000 TEU /year	1,110,000 TEU/year
C9	Container	150	2	1,275,000 TEU/year	1,275,000 TEU/year
A10	Auto	50	1	95,000 units/year	108,200 units/year
A9	Auto	150	2	285,000 units/year	391,000 units/year

Table 6.4
Ref: Chapter 7, Volume 1, CPIP.

Option evaluation			
-------------------	--	--	--

C8	C9	A9	A10	Criterion
P5	P5	P2	P5	Port Planning
F2	F2	P5	E1	P1 Phasing, plan flexibility and relationship to existing land and berth use
F3	F3	E1	E2	P2 Appropriateness of land shape for cargo handling
E5	P3	E2	E3	P3 Ease of navigation to site along the main approach channels
F1	F1	E3	P3	P4 Space in the adjacent waterway for ship manoeuvring to the berth
E1	E1	P3	P4	P5 Effects of operations on neighbouring port operations
E2	E2	P4	T1	Financial and Economic
E3	E3	F2	T4	F1 Financial analysis – breakeven price
P3	T1	F3	T6	F2 Economic impact – job creation
T1	T4	T1	F1	F3 Economic impact – tax revenue created
T4	P1	T4	P1	Environmental Issues
P1	P2	T6	P2	E1 Light
P2	P4	P1	F2	E2 Noise
P4	E4	F1	F3	E3 Dust and odors
E4	E5	E4	E4	E4 Traffic
E6	E6	E5	E5	E5 Wildlife habitat
T2	T2	E6	E6	E6 Waterfront access
T3	T3	T2	T2	Transportation Issues
T5	T5	T3	T3	T1 Highway access
T6	T6	T5	T5	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 6.5
Ref: Chapter 15, Volume 1, CPIP.

Bayonne Peninsula Navigation

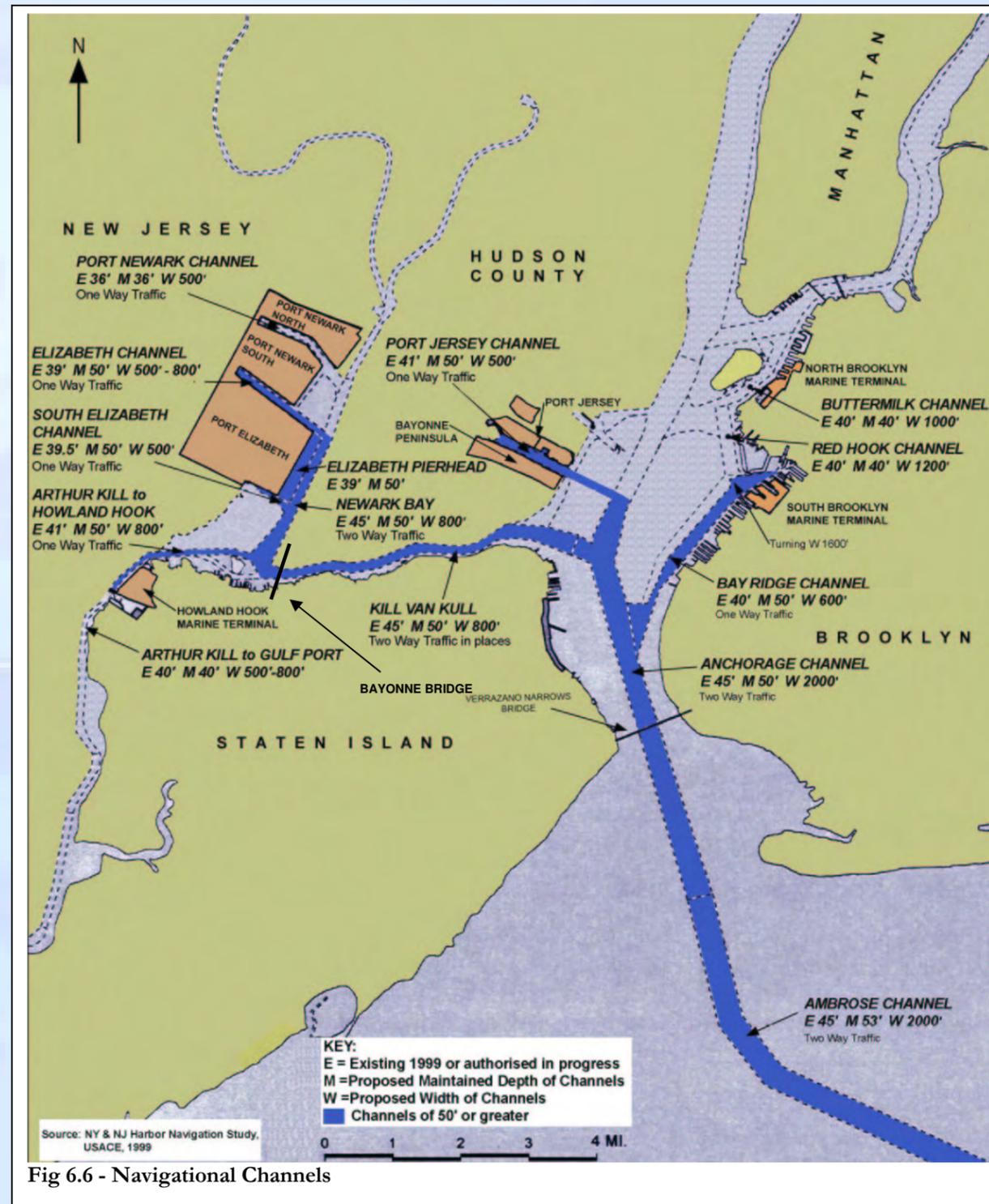
1. Access Channels

Access to Bayonne 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. The route also uses the open sea part of the Port Jersey Channel, which links the berthing channel with the Anchorage Channel.

2. Restrictions

Bayonne is not affected by the air draft limitations of Bayonne Bridge which spans the Kill van Kull Channel.

The air draft at Verrazano Narrows Bridge is more than adequate for the foreseeable future.



Approach channel depths		
Channel name	Existing, or in progress, depth (ft MLW)	Future maintained depth (ft MLW)
Ambrose	45	53
Anchorage	45	50
Port Jersey	41	50

Table 6.6

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

Berthing channel width		
Channel name	Overall width (ft)	Dredged width (ft)
Port Jersey Channel	620 - 830	500

Table 6.7

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

Bayonne

Bayonne is served by the Port Jersey Channel. The present channel depth of 41 ft is planned to be deepened to 50 ft. The existing and currently planned depths at the berths are shown on page 6.1

The width of the Port Jersey Channel is not ideal for a double-sided access channel for large container ships. However, with care, and hence an increase in berthing maneuvering time, access is considered acceptable. Please see Section 6.3.2 of Volume 1 for further details.

Bayonne Peninsula Financial & Economic

Infrastructure capital cost				
	C8	C9	A9	A10
Site clearance	42.6	43.4	2.9	0.9
Berths	27.5	27.5	0.0	7.4
Paving	20.1	30.1	6.0	3.7
Buildings	11.1	16.7	12.9	4.4
Other	17.8	25.9	19.9	11.3
Contingency & design	59.5	71.8	20.9	13.8
Total \$m	178.5	215.4	62.6	41.5

Table 6.8

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

Economic impact					
	Unit	C8	C9	A9	A10
Additional units		850,000	1,275,000	285,000	95,000
Employment					
Direct	jobs	3,014	4,521	303	101
In other industries	jobs	3,949	5,924	430	143
Gross State Product	(\$m)	382.8	574.2	45.6	15.2
Income	(\$m)	231.8	347.6	27.8	9.3
Federal taxes	(\$m)	48.9	73.3	5.7	1.9
State taxes	(\$m)	15.5	23.3	1.8	0.6
Local taxes	(\$m)	22.5	33.8	2.7	0.9
Rank		8	3	3	8

Table 6.11

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

Overall ranking of terminal Options			
Terminal Option	Additional capacity (units) (000 TEU)	Financial rank	Economic rank
Container Terminals			
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
Automobile Terminals	Unit		
A15 Port Newark South	522,500	3	1
A4 Port Newark South	399,000	2	2
A13 Port Newark South	247,000	1	4
A9 Bayonne	285,000	5	3
A14 Port Newark South	228,000	4	5
A11 South Brooklyn	95,000	6	7
A12 South Brooklyn	152,000	7	6
A10 Bayonne	95,000	8	8
A2 Port Newark N	76,000	9	10
A1 Port Newark N	9,500	10	9
A8 Port Jersey	-	11	11

Table 6.12

Ref : Chapter 11, Volume 1, CPIP.

Financial ranking of container terminal Options			
Rank (from 14 options)	Project	Additional capacity (000 TEU)	Breakeven price per unit
6	C9 Bayonne Peninsula	1,275	156
8	C8 Bayonne Peninsula	850	162

Table 6.9

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

Financial ranking of auto terminal Options			
Rank (from 11 options)	Project	Additional capacity (units)	Breakeven price per unit
5	A9 Bayonne Peninsula	285,000	55
8	A10 Bayonne Peninsula	95,000	84

Table 6.10

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



Estimated wetland usage in Options	
Option	Estimated wetland area (acres)
C9	17
A9	17
A10	17

Table 6.13
Ref : Chapter 12, Volume 1, CPIP.