

3 Port Newark South



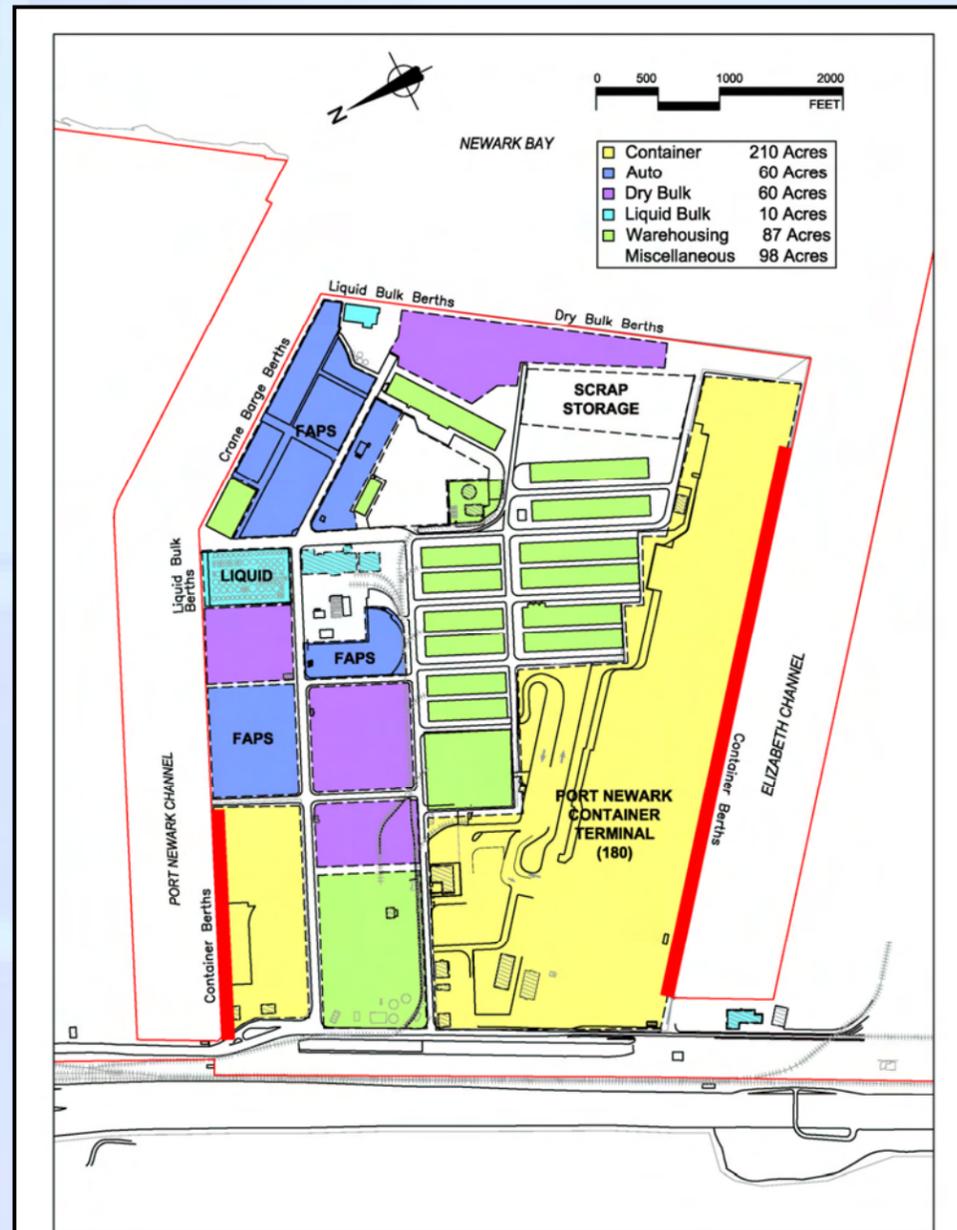


Fig 3.1 - Existing Layout

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

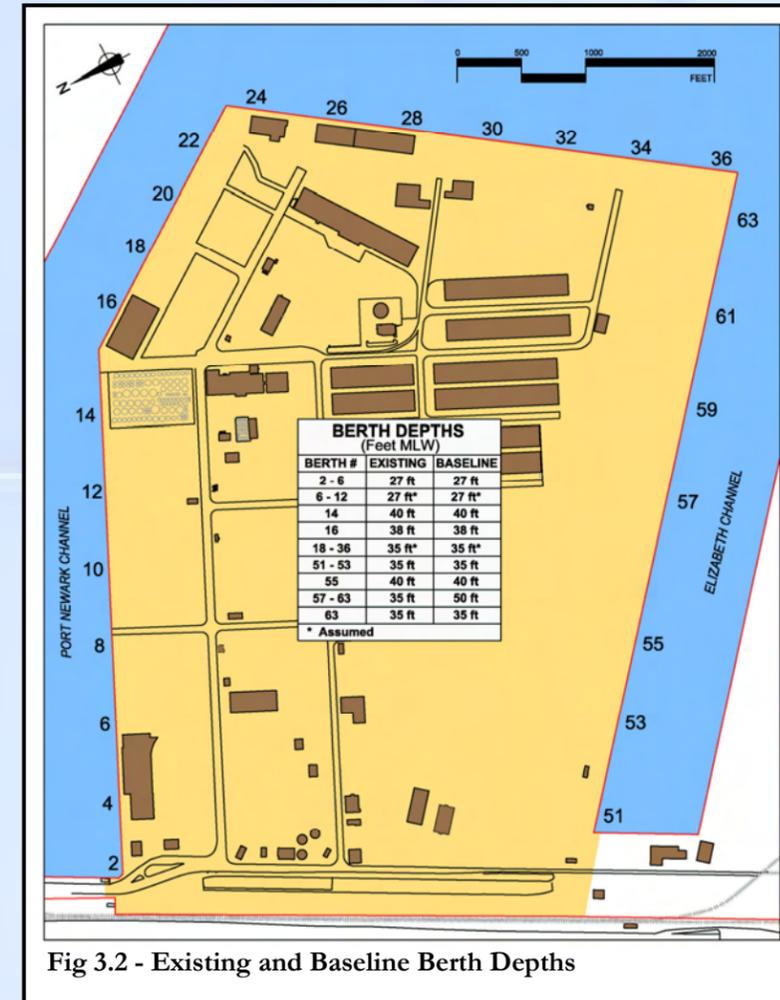


Fig 3.2 - Existing and Baseline Berth Depths

Port Newark South Site Plans

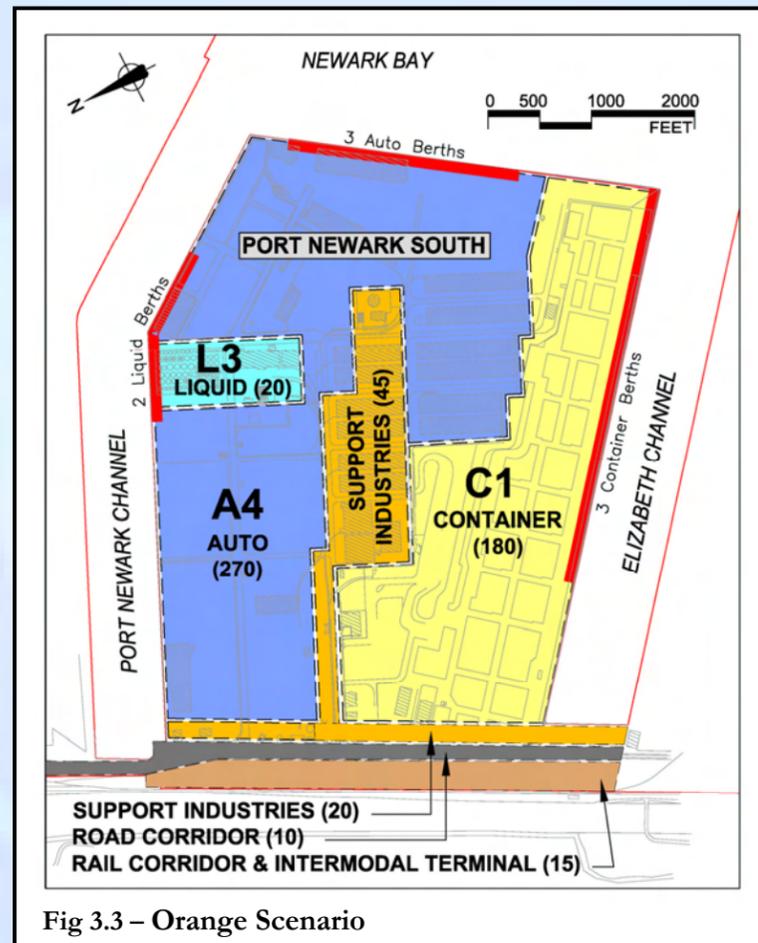


Fig 3.3 - Orange Scenario

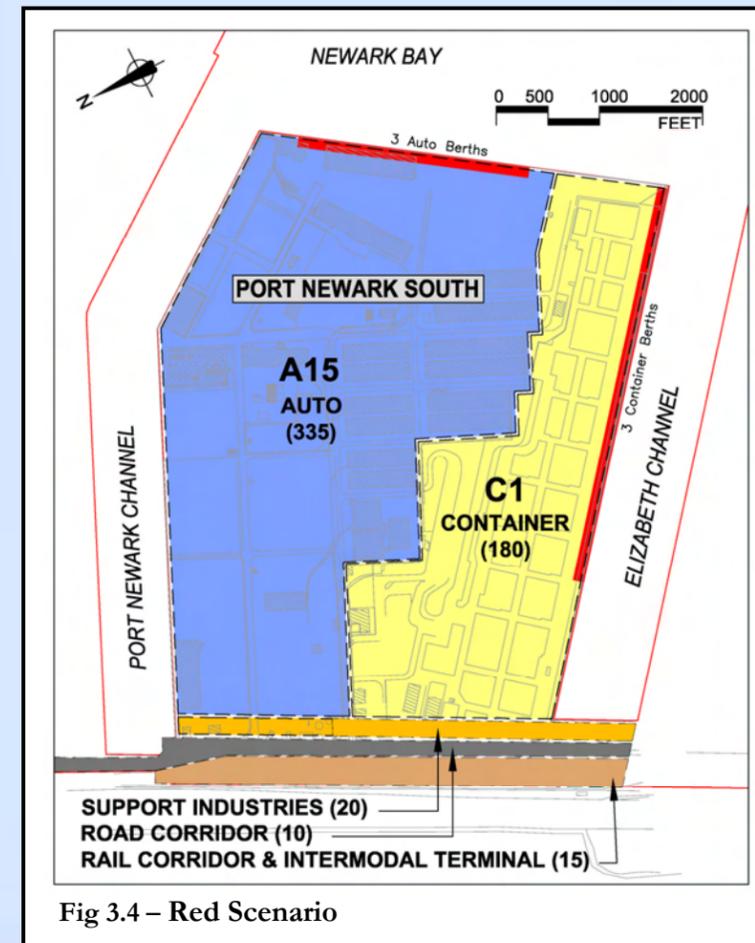


Fig 3.4 - Red Scenario

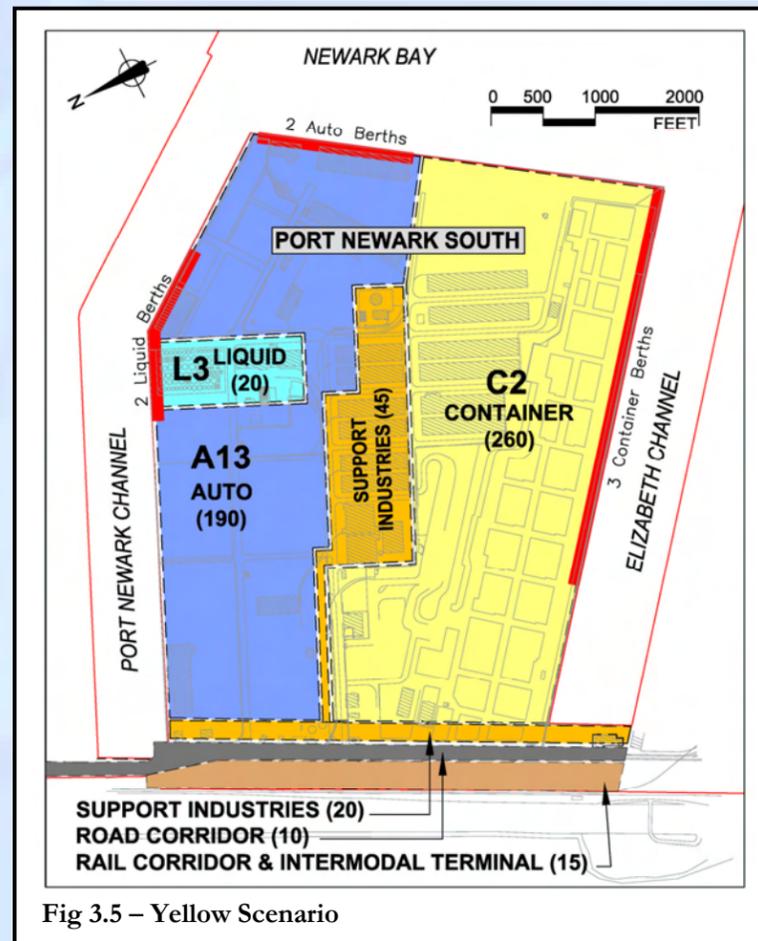


Fig 3.5 - Yellow Scenario

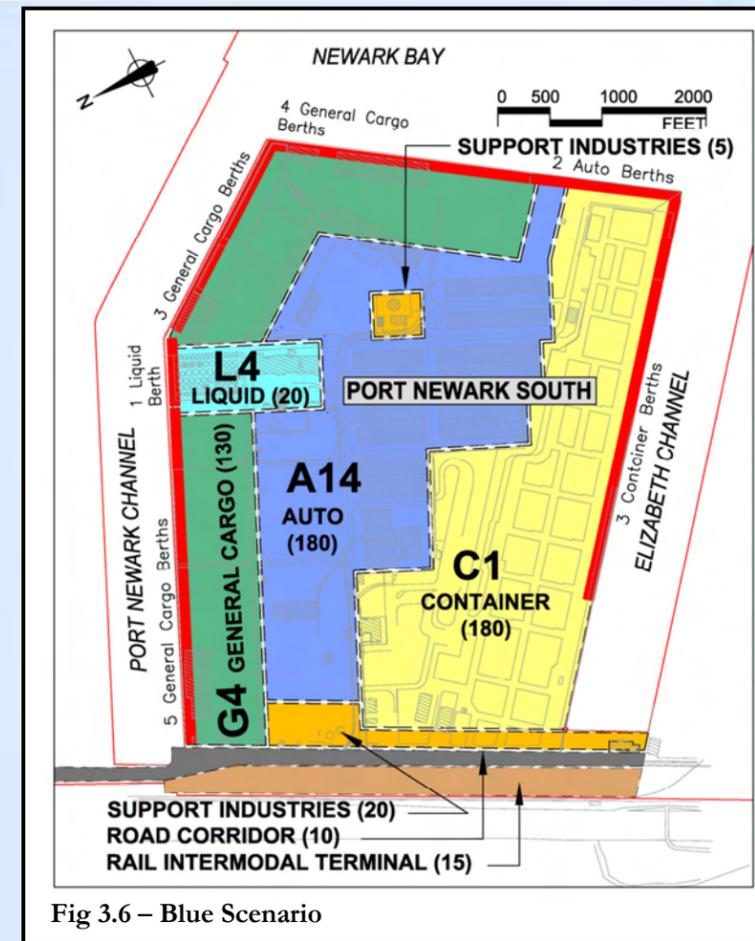


Fig 3.6 - Blue Scenario

Port Newark South Site Information

Existing site area and berths			
Terminal	Type	Area (acres)	# berths
PNCT	Container	180	4.9
ASI Marsh Street	Container	30	2
FAPS	Auto	60	0
Port Newark Dry Bulk	Dry Bulk	60	4
Port Newark Liquid Bulk	Liquid Bulk	10	2

Table 3.1
Ref: Chapter 5, Volume 1, CPIP.

Existing terminal assessed capacity		
PNCT	180 acres	901,000 TEU/year
ASI Marsh St	30 acres	171,700 TEU/year
FAPS	175 ¹ acres	208,982 units/year
Dry Bulk	70 ¹ acres	4,857,750 tons/year
Liquid Bulk	20 ¹ acres	5,699,760 tons/year

Table 3.2
Ref: Chapter 5, Volume 1, CPIP.
¹ Total in Port Newark North and South

2060 site options and provisions					
Terminal	Type	Area (acres)	# berths	Land capacity	Berth capacity
C1	Container	180	3	1,530,000 TEU/year	2,096,100 TEU/year
C2	Container	260	3	2,210,000 TEU/year	2,291,600 TEU/year
A4	Auto	270	3	513,000 units/year	737,000 units/year
A13	Auto	190	2	361,000 units/year	391,000 units/year
A14	Auto	180	2	342,000 units/year	391,000 units/year
A15	Auto	335	3	636,500 units/year	737,000 units/year
G4	General Cargo	130	12	2,613,000 units/year	2,728,000 tons/year
L4	Liquid Bulk	20	1	5,700,000 tons/year	1,800,000 tons/year
L3	Liquid Bulk	20	2	5,700,000 tons/year	6,494,000 tons/year

Table 3.3
Ref: Chapter 7, Volume 1, CPIP.

Land allocation														
Scenario	Containers		Autos		General Cargo		Liquid Bulk		Road & Rail	Warehousing & terminal support industries	Total area	Area made from		
	Option	Area	Option	Area	Option	Area	Option	Area				Existing	Waterfront fill	Acquired
Orange	C1	180	A4	270			L3	20	45	65	580	580	0	0
Red	C1	180	A15	335					45	20	580	580	0	0
Yellow	C2	260	A13	190			L3	20	45	65	580	580	0	0
Blue	C1	180	A14	180	G4	130	L4	20	45	25	580	580	0	0

Table 3.4
Ref: Chapter 7, Volume 1, CPIP.

Option evaluation									
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C2	C1	A4	A13	A14	A15	G4	L4	L3	
P2	P1	P2	P2	P2	P2	P2	P1	P1	
P5	P5	P3	P3	P3	P3	P3	P2	P2	
F1	E4	P4	P4	P4	P4	P5	P5	P5	
F2	E5	P5	P5	P5	P5	E1	E1	E1	
F3	T1	F1	F1	E1	E1	E2	E2	E2	
E4	T4	E1	E1	E2	E2	E4	E4	E4	
E5	T6	E2	E2	E3	E3	E5	E5	E5	
T1	P2	E3	E3	E4	E4	F1	F1	T1	
T4	P4	E4	E4	E5	E5	T1	T1	T4	
T6	F1	E5	E5	T1	T1	T4	T4	T5	
P1	F2	T1	T1	T4	T4	T5	T5	T6	
P4	F3	T4	T4	T5	T5	T6	T6	P3	
E1	E1	T5	T5	T6	T6	P1	P3	P4	
E2	E2	T6	T6	P1	F1	P4	P4	F1	
E3	E3	P1	F2	F1	F2	E3	E3	E3	
T2	T2	F2	F3	F2	F3	T2	T2	T2	
T5	T5	F3	T2	F3	T2	E6	E6	E6	
P3	P3	T2	P1	T2	P1	T3	T3	T3	
E6	E6	E6	E6	E6	E6	F2	F2	F2	
T3	T3	T3	T3	T3	T3	F3	F3	F3	

	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 3.5
Ref: Chapter 15, Volume 1, CPIP.

Port Newark South Navigation

1. Access Channels

Port Newark South is served by both the Elizabeth Channel, at the south of the site, and by the Port Newark Channel, located at the north of the site.

Access to Port Newark South 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. Access is then by the Kill van Kull and the Newark Bay Channel, both of whose present depth of 45ft is planned to be deepened to 50 ft.

2. Restrictions

Port Newark South is affected by the air draft limitations of Bayonne Bridge which spans the Kill van Kull Channel. The limitations are applicable to container ships only, and may be problematic in the future when ships get larger. The air draft at Verrazano Narrows Bridge is more than adequate for the foreseeable future.

There are height restrictions at the inner end of the Newark Channel which could limit the

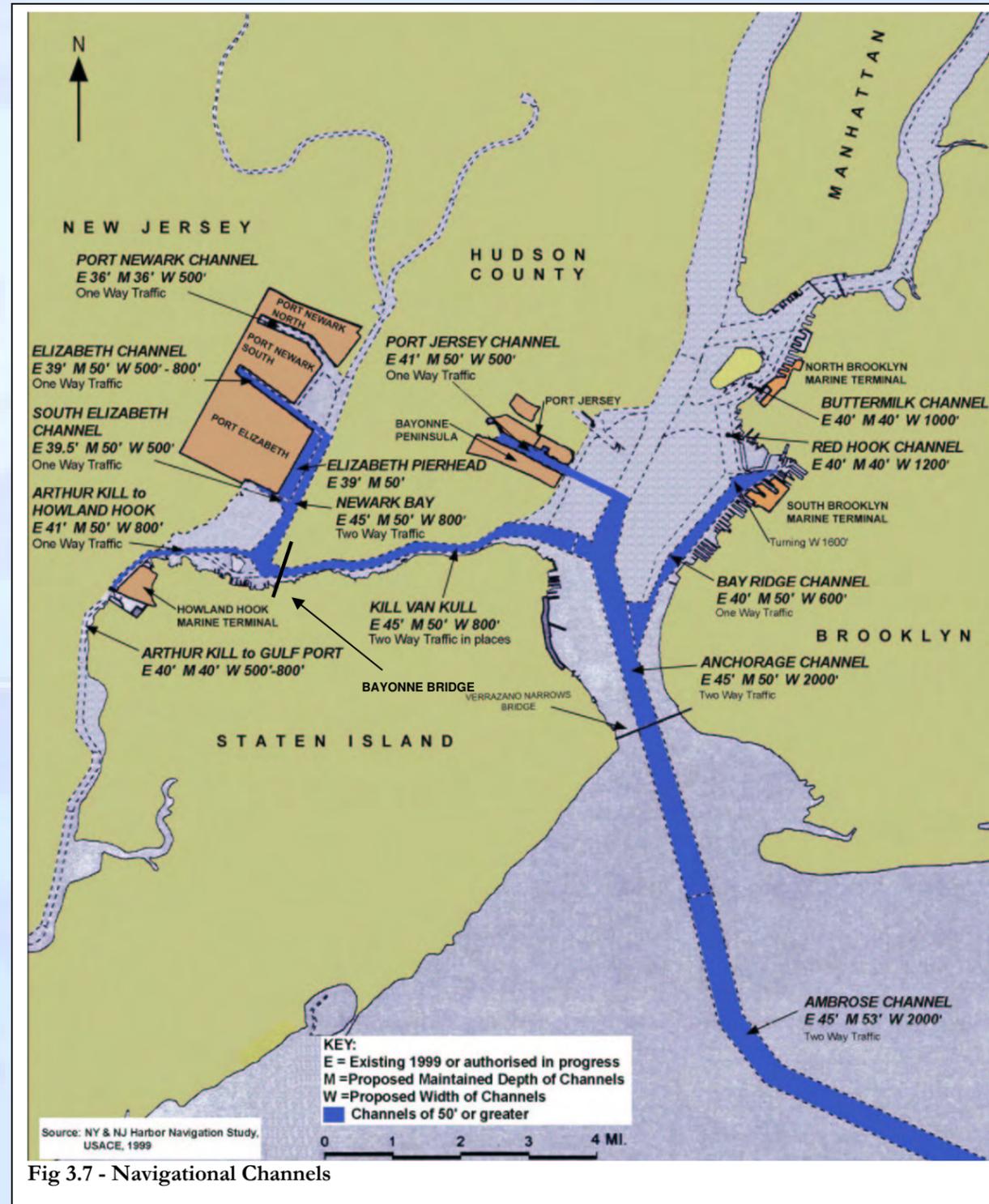


Fig 3.7 - Navigational Channels

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
Newark Bay	45	50
Elizabeth	39	50
Port Newark	36	Not recommended for deepening
Newark S Pierhead	36	Not recommended for deepening

Table 3.6

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

Berthing channel width

Channel name	Overall width (ft)	Dredged width (ft)
Elizabeth Channel	790	500
Port Newark Channel	655	500

Table 3.7

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

Port Newark South

Port Newark Channel's present and future planned depth is 36ft, and Elizabeth's is 39ft, planned to 50ft. The existing and currently planned depths at the berths are shown on page 3.1

Infrastructure capital cost									
	C1	C2	A4	A13	A14	A15	G4	L3	L4
Site clearance	2.3	24.2	10.3	5.6	16.4	34.9	10.5	3.3	1.6
Berths	8.6	8.6	0.0	0.0	0.0	0.0	85.8	27.4	13.4
Paving	2.2	18.3	1.4	0.3	1.0	3.6	1.1	0.0	0.0
Buildings	0.0	7.2	0	0.0	0.0	0.0	84.5	6.3	0.0
Other	3.0	6.1	4.2	2.4	4.6	6.4	6.5	0.5	0.3
Contingency & design	8.1	32.2	7.9	4.1	11.0	22.5	94.2	18.7	7.7
Total \$m	24.3	96.6	23.8	12.4	33.0	67.4	282.6	56.2	23.0

Table 3.8
Ref: Chapter 11, Volume 1, CPIP.

Economic impact							
	Unit	C1	C2	A4	A13	A14	A15
Additional units		345,474	1,025,474	399,000	247,000	228,000	522,500
Employment							
Direct	jobs	1,225	3,637	424	262	242	555
In other industries	jobs	1,605	4,765	602	376	344	788
Gross State Product	(\$m)	155.6	461.9	63.8	39.5	36.5	83.6
Income	(\$m)	94.2	279.6	39.0	24.1	22.3	51.0
Federal taxes	(\$m)	19.9	59.0	7.9	4.9	4.5	10.4
State taxes	(\$m)	6.3	18.7	2.5	1.6	1.4	3.3
Local taxes	(\$m)	9.2	27.2	3.8	2.3	2.1	4.9
Rank		12	5	2	4	5	1

Table 3.13
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
5	C2	Port Newark South	1,025	151
7	C1	Port Newark South	345	157

Table 3.9
Ref: Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Financial ranking of general terminal options				
Rank (from 3 options)	Project		Additional capacity (tons)	Breakeven price per unit
1	G4	Port Newark South	1,990,000	22
2	G1 + G3	Brooklyn	623,000	104
3	G2	North Brooklyn	623,000	167

Table 3.11
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
1	A13	Port Newark South	247,000	35
2	A4	Port Newark South	399,000	36
3	A15	Port Newark South	522,000	46
4	A14	Port Newark South	228,000	49

Table 3.10
Ref: Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Financial ranking of liquid bulk terminal options				
Rank (from 4 options)	Project		Additional capacity (units)	Breakeven price per unit
1	L4	Port Newark South	-1,050,000	-1
2	L2	Port Newark North	3,640,000	8
3	L1	Port Newark North	2,280,000	9
4	L3	Port Newark South	2,850,000	10

Table 3.12
Ref: Chapter 11, Volume 1, CPIP.
Costs are quoted at 2003 constant US dollars.

Overall ranking of container & auto terminal Options			
Terminal Option	Additional capacity (000 TEU)	Financial rank	Economic rank
Container Terminals			
C2 Port Newark South	1,025	5	5
C1 Port Newark South	345	7	12
Automobile Terminals	Units		
A15 Port Newark South	522,500	3	1
A4 Port Newark South	399,000	2	2
A13 Port Newark South	247,000	1	4
A14 Port Newark South	228,000	4	5

Table 3.14
Ref: Chapter 11, Volume 1, CPIP.

No wetland usage has been identified in the proposed Options for Port Newark South.



Fig 3.8 – CPIP Federal Wetlands

Source: CPIP-EIS Consultant (ESEC)

Note: The wetlands shown at Port Newark South are no longer present based on the results of a site visit.