

# New York & New Jersey Harbor Deepening Project S-AK-3 Contract Noise and Blast Monitoring and Compliance Program

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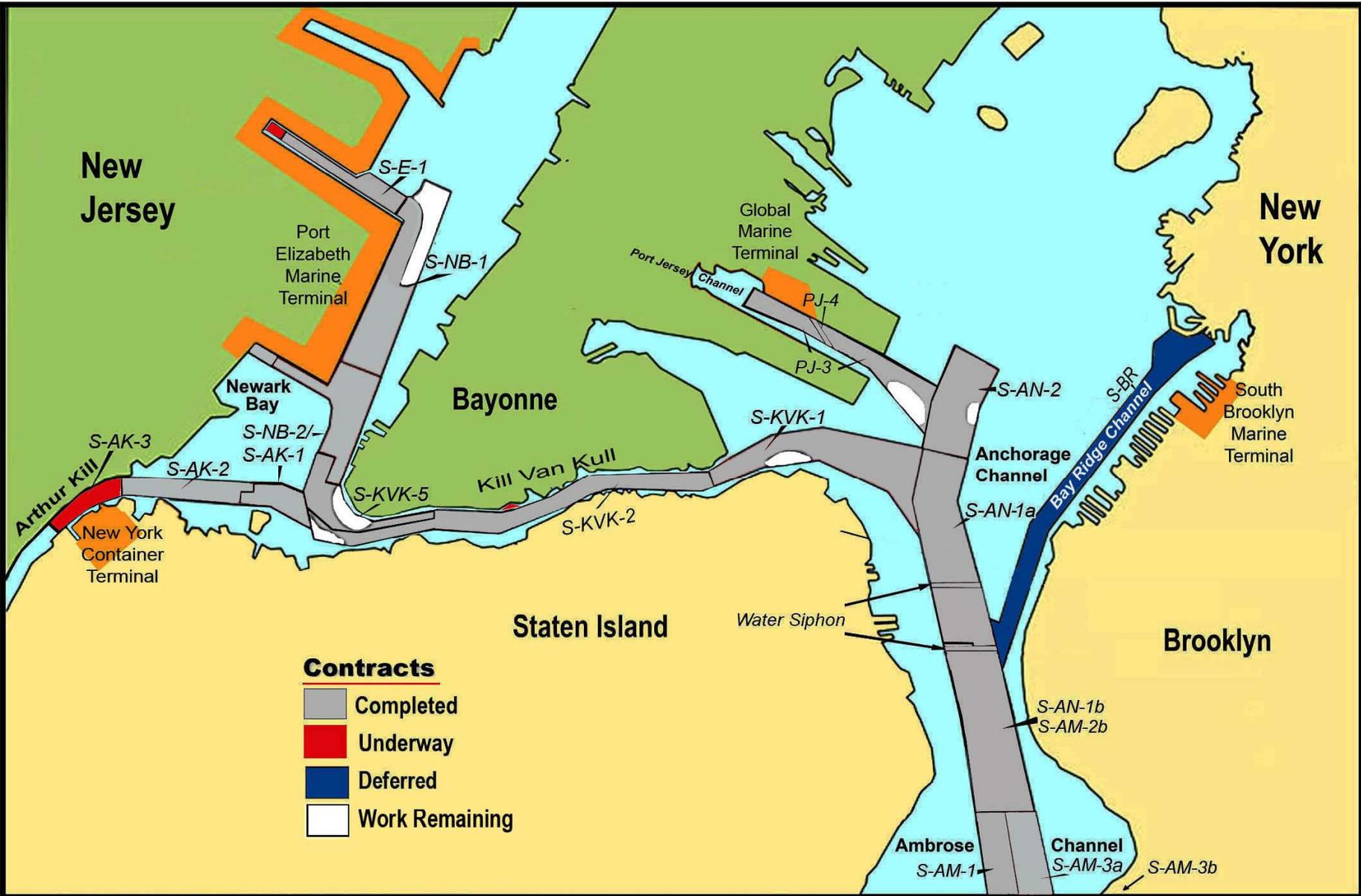
**April 29, 2013**



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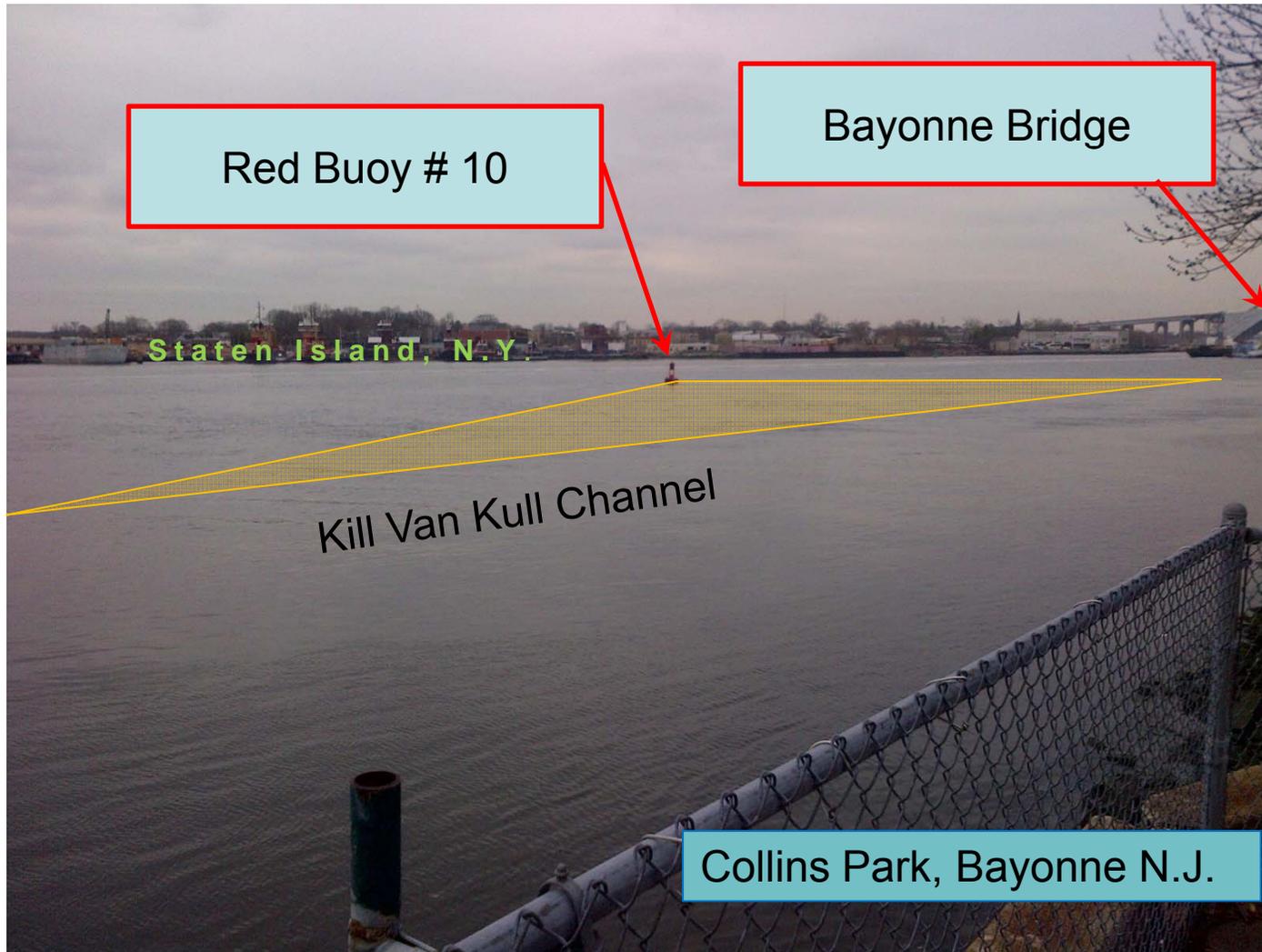
# General Map of NY & NJ Harbor Deepening Contract Areas (50 ft)



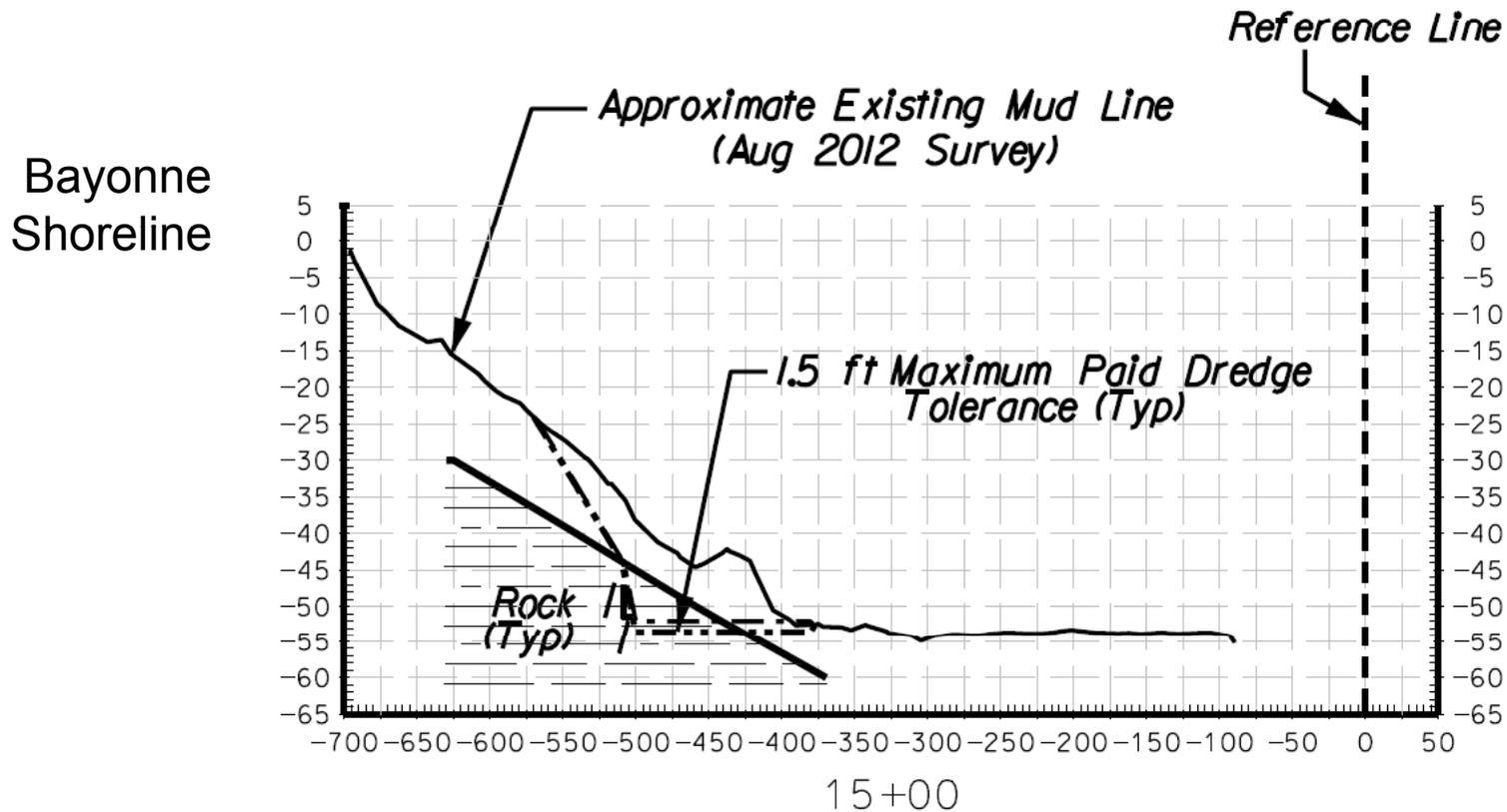
# Precautionary Zone (1,500 ft.) Perimeter around Blasting Area



# Approximate Area That Requires Blasting



# Kill Van Kull Buoy # 10 Cross Section (looking east, vertically exaggerated)



# S-AK-3 Construction Schedule

Contract Award to Great Lakes

Dredge & Dock Company..... January 31, 2013

Dredging Starts in Port Elizabeth Channel..... March 21, 2013

Dredging Planned to Start

Near Buoy #10 in Kill Van Kull Channel ..... End of May 2013

Blasting Starts near Buoy #10 ..... Mid June 2013

Dredging near Buoy # 10 Ends ..... Late June 2013



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# Regulatory Limits on Blasting

- Corps follows US Bureau of Mines Guidelines
- Vibration from Blasting may not exceed these limits

For type of Structure within  
1,500 ft. of blast area:

Peak Particle Velocity  
May not Exceed:

- |                                      |                            |
|--------------------------------------|----------------------------|
| ▶ Historically Designated Structures | 0.5 in/sec (Standard Used) |
| ▶ Residential Structures             | 1.0 in/sec                 |
| ▶ All Other Structures               | 2.0 in/sec                 |

- Typical Vibrations encountered daily:

- |                    |             |
|--------------------|-------------|
| ▶ Human threshold  | 0.02 in/sec |
| ▶ Phone calls      | 0.3 in/sec  |
| ▶ Normal Door Slam | 0.5 in/sec  |



# Public Notice, House Inspection Program, and Damage Claims

- The construction contractor is required to:
  - ▶ Conduct a pre-blast public information meeting at least 2 weeks prior to blasting operations
  - ▶ Survey all structures who request it
  
  - ▶ For blasting complaints:
    - perform an inspection within five calendar days,
    - issue an acknowledgement letter within seven days of the inspection, and
    - provide a final determination letter honoring or denying the claim within 90 days after cessation of all blasting on the contract
  
  - ▶ For noise complaints: investigate cause of excessive noise and if warranted, take actions to reduce or mitigate the noise.

**The Corps strongly recommends all residents within the  
Precautionary Area request to have their home and  
structures be surveyed and documented!**



# Limits on Noise

## Bayonne, NJ (Hudson County)

- Day Time (7am to 10pm): 65 dBA
- Night Time (10pm to 7am): 50 dBA
- Individual octave frequency band limits for daytime and nighttime hours also apply

## Staten Island, NY (NYC)

- Day Time (7am to 10pm): Operations must not exceed 10 dB over normal background noise (average 65 dB)
- Night time (10pm to 7am): Operations cannot exceed 7 dB over normal background noise (average 55 dB).

## Examples

- ▶ 140 dB = firearms, air raid siren, jet engine
- ▶ 130 dB = jackhammer
- ▶ 100 dB = chain saw, pneumatic drill
- ▶ 80 dB = alarm clock, busy street
- ▶ 60 dB = conversation, dishwasher
- ▶ 40 dB = quiet room
- ▶ 30 dB = whisper, quiet library



# Noise and Vibration Monitoring Program

- The Corps has independent consultants to:
  - ▶ Establish existing baseline conditions
  - ▶ Independently monitor the noise and blasting vibration during construction
  - ▶ Verify noise or blast levels during a complaint
  - ▶ Recommend solutions to lower noise levels
  
- Dredging Contractor will also provide additional vibration monitors.



# Getting In Touch During the Dredging & Blasting Operations



**Hotline (Complaints or Concerns)**

**201-339-6470**

**Great Lakes Dredge & Dock Company (Contractor) Office**

718-981-2700



**Army Corps Construction Project Office**

201-433-9232

**Army Corps Project Manager**

917-790-8307

**Army Corps Public Affairs Office**

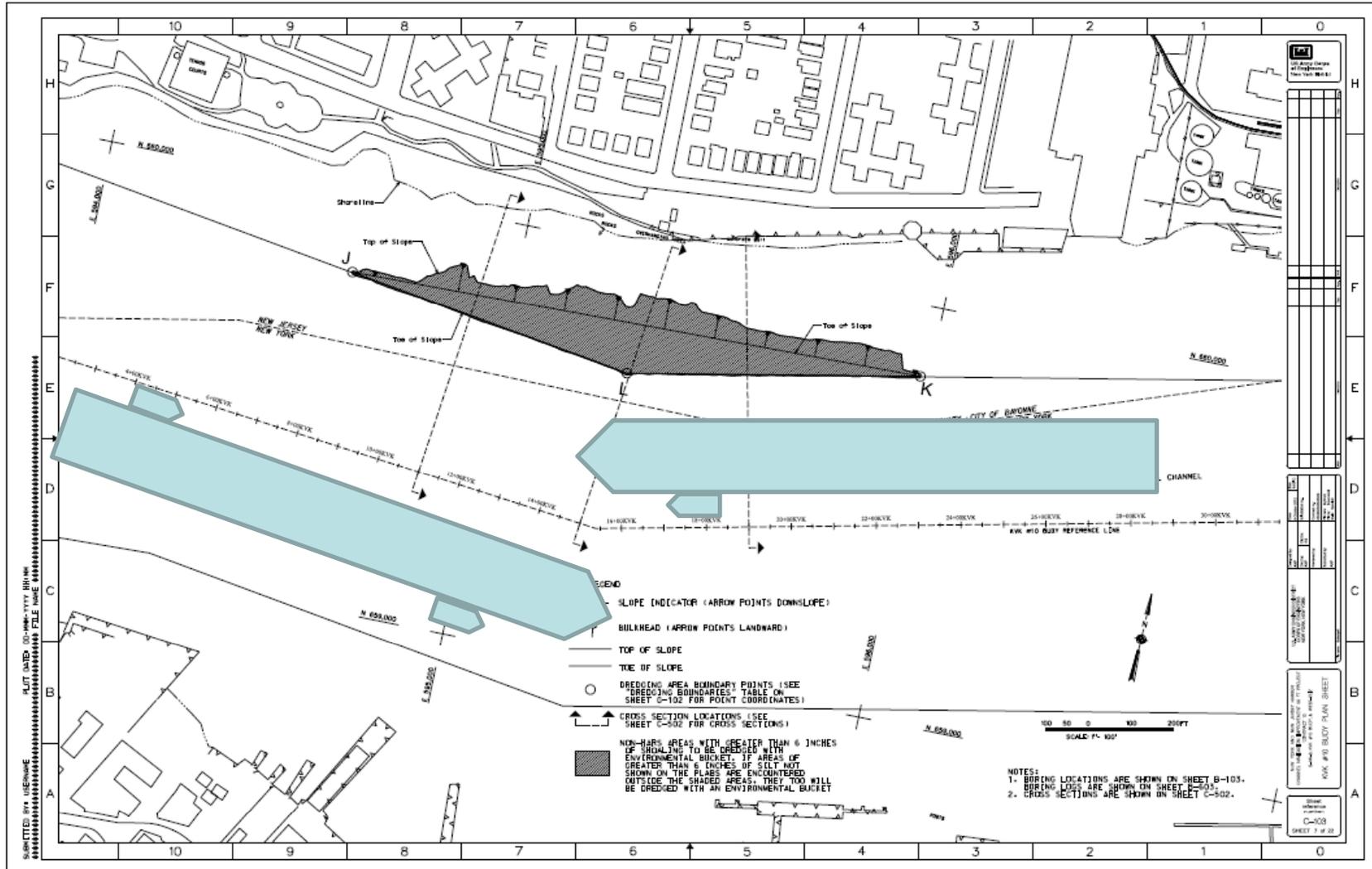
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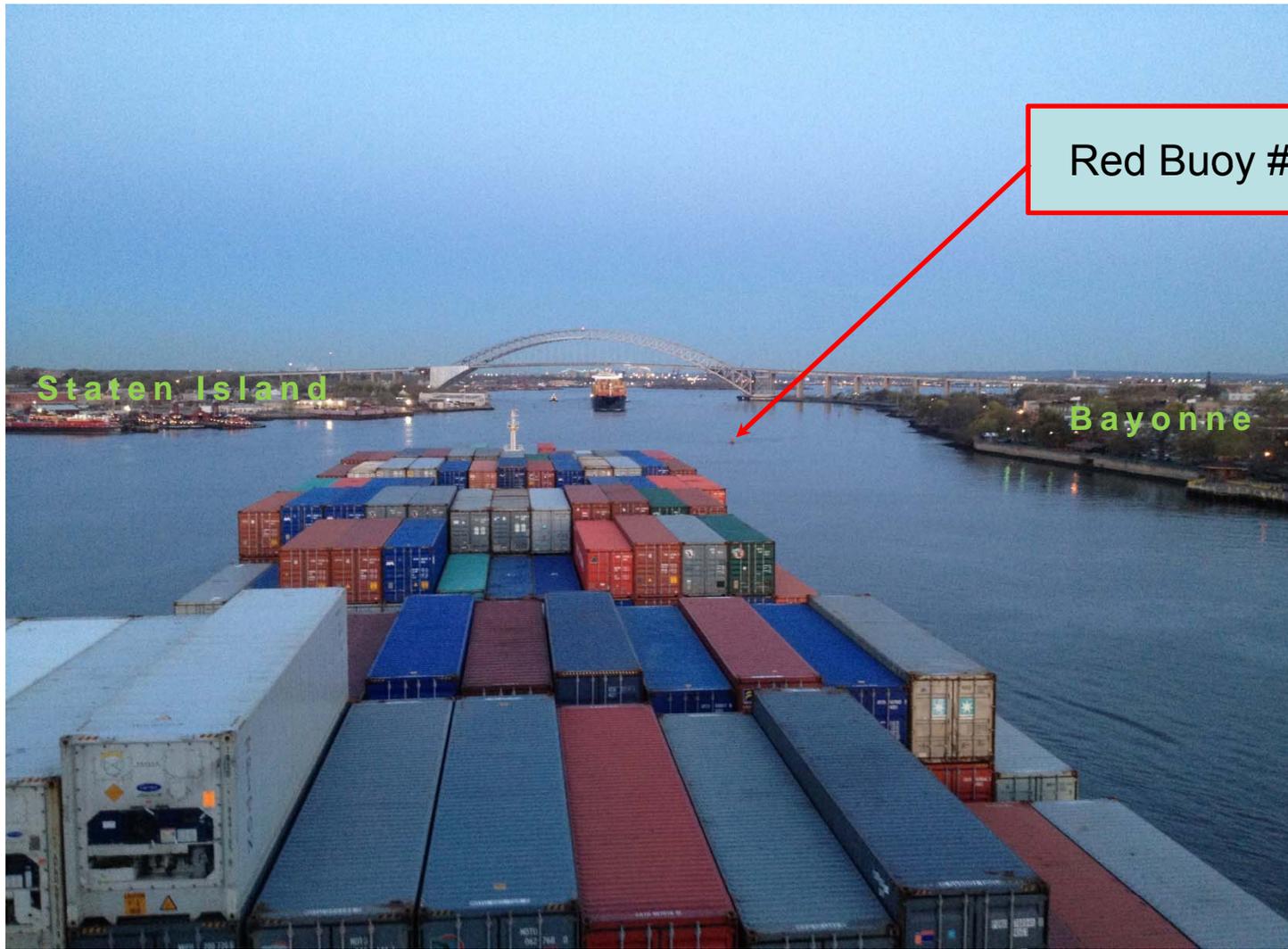
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# Navigating the Kill Van Kull Channel



# View from Container Ship



*Photo courtesy of S. Zorovich, McAllister Pilots*



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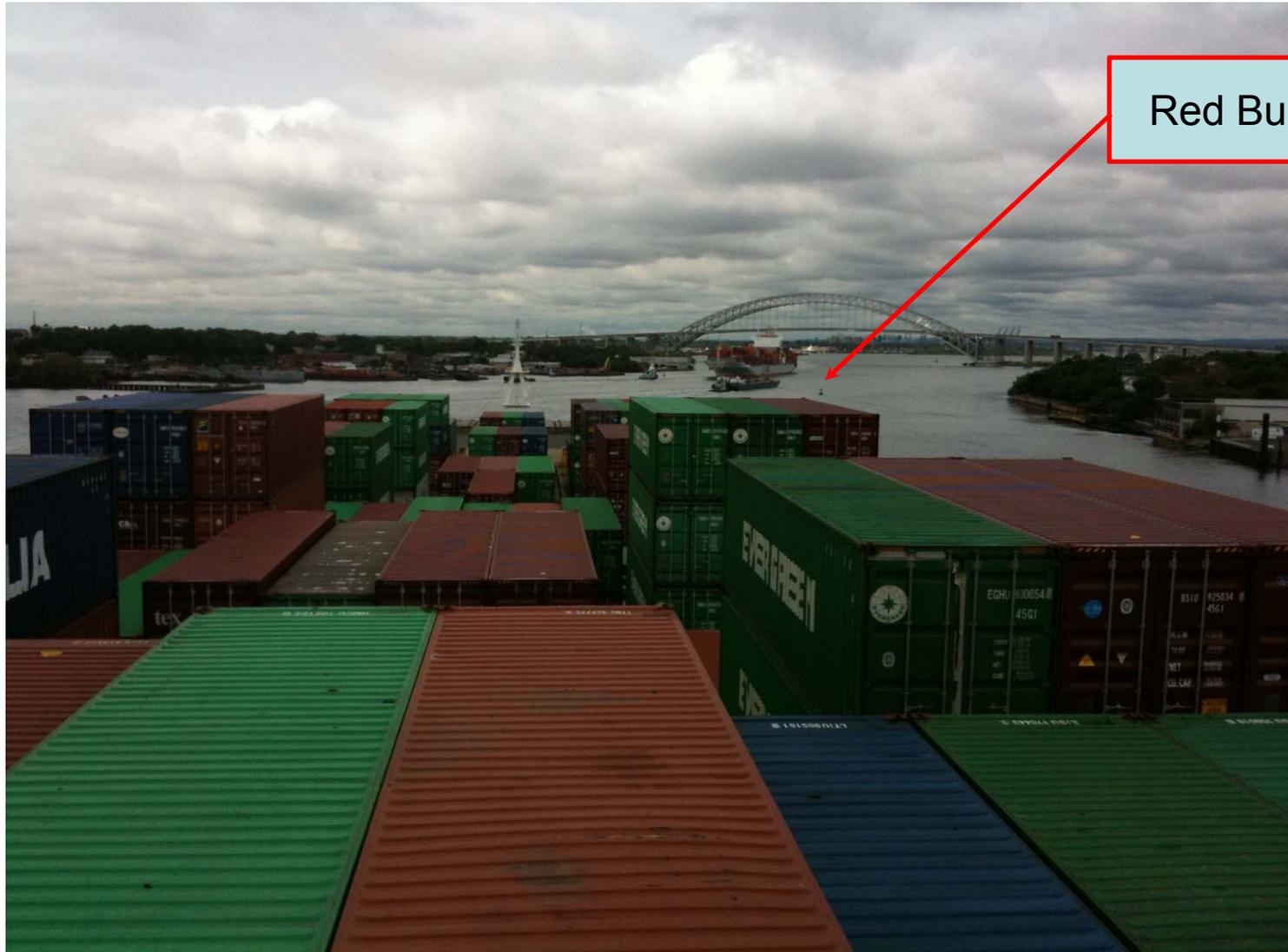
# As the Ships Approach Buoy #10



Panamax MOL Express Container Ship, 965' long by 106' wide



# View from Another Container Ship



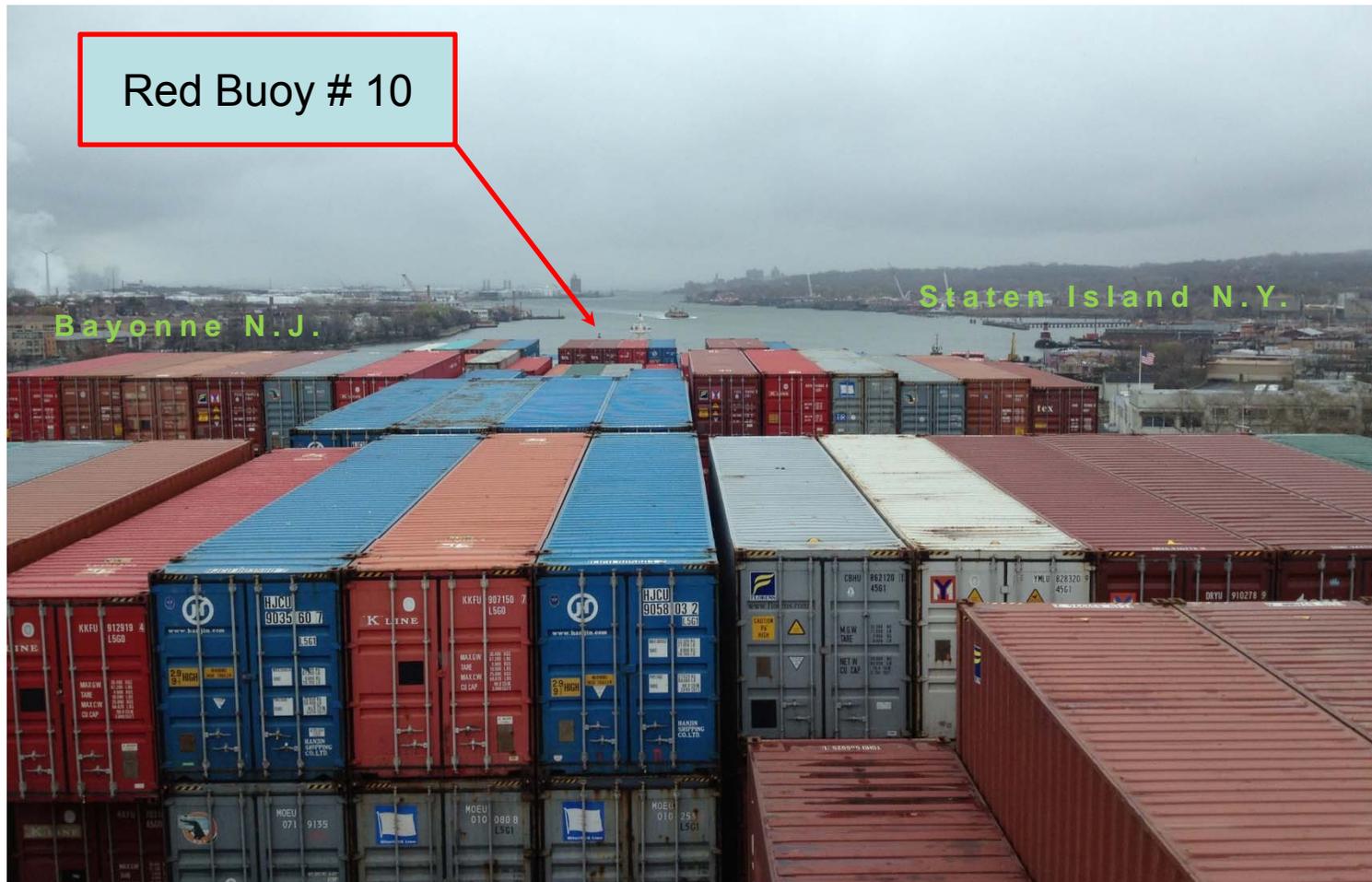
Red Buoy # 10



*Photo courtesy of S. Zorovich, McAllister Pilots*

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# View from Another Container Ship (looking eastward)



Post-Panamax “Golden Gate Bridge” Container Ship, 934’ long by 131’ wide,  
*smaller* than the HDP design ship





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