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Abstract: Since the founding of the city of St. Petersburg in 1703, the low-lying areas of the city have suffered from flooding caused by storm surges travelling up the Baltic Sea. These occur about once each year, due to high winds and low barometric pressure causing surges in sea level. To protect the city, a barrier over 25km long across the estuary of the Neva River has recently been completed. It was opened by the Prime Minister of the Russian Federation in August 2011. This paper describes the planning, design, construction and operation of the project, which has cost about \$3 billion. The barrier includes the following main components: - embankment dams - 6 sluice complexes to accommodate river flow - a 200m wide main navigation channel, closed with two very large sector gates - a secondary navigation channel 110m wide, closed with a vertical gate - navigation channels for shipping to approach the two navigation openings - a highway forming the western section of the outer ring road around the city - a road tunnel under the main navigation channel - a viaduct with a lift bridge above the secondary navigation channel.

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