

SÖDRA LÄNKEN (THE SOUTHERN LINK), STOCKHOLM, SWEDEN

OVERVIEW

LOCATION: STOCKHOLM, SWEDEN
SCOPE: INTRA-URBAN
TRANSPORT MODE: ROAD
PRINCIPAL CONSTRUCTION: TUNNEL
NEW LINK: YES

PRINCIPAL OBJECTIVES

LOCAL TRANSPORT LINK
CONGESTION RELIEF
SAFETY REDUCTION
SUSTAINABILITY

PRINCIPAL STAKEHOLDERS

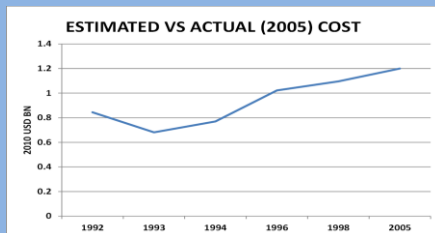
MAIN FUNDER:
NATIONAL GOVERNMENT
PROJECT MANAGER:
STOCKHOLMSLEDER AB (SLAB)/SWEDISH
ROAD ADMINISTRATION
PRINCIPAL CONSULTANT:
SÖDRA LÄNKEN KONSULTERNA

PLANNING AND IMPLEMENTATION

PLANNING START DATE: 12/1989
CONSTRUCTION START DATE: 11/1997
OPERATION START DATE: 10/2004
MONTHS IN PLANNING: 95
MONTHS IN CONSTRUCTION: 83
PROJECT COMPLETED: 72 MONTHS
BEHIND SCHEDULE

COSTS (IN 2010 USD)

PREDICTED COST: 0.98BN
ACTUAL COST: 1.33BN
PROJECT COMPLETED:
36% OVER PREDICTION
FUNDING: 100% PUBLIC

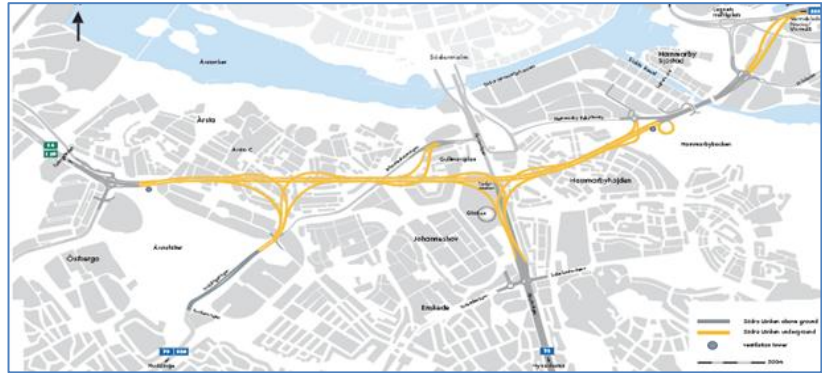


INFRASTRUCTURE QUANTITIES:

LENGTH: 17KM (TOTAL)
DISTANCE IN TUNNEL: 4.5KM
COST PER KM (USD 2010): 0.08BN

PATRONAGE

FORECAST TRAFFIC (2005)
70,000-90,000 VPD
ACTUAL TRAFFIC (2005)
86,000 VPD



INTRODUCTION

Södra Länken (the Southern Link) is an urban motorway tunnel linking major roads in the south of Stockholm. It is associated with the nearby *Hammarby Sjöstad* waterfront regeneration area and *Årsta fältet* development (the latter on the site of a section of road made redundant by the Link).

BACKGROUND

The main objective of the project was to link Stockholm's major roads, relieving traffic congestion in the south of the city and consequently reducing air pollution and traffic accidents. The concept of a southern ring road was first discussed in the 1930s and included in the 1952 Stockholm plan and 1960 traffic plan. In the 1970s and 1980s, increasing environmental awareness and low rates of economic growth led to a hiatus in road construction, despite an increase in road traffic and concerns about congestion constraining economic development. The ring road concept developed as part of a wider vision of improving the transport network.

The idea of building part of the ring road as a toll-financed tunnel emerged during the mid 1980s and was formally proposed in 1989. This solution would avoid the complex process of gaining permission to build a motorway through a densely populated area and would limit the impact of increasing traffic volumes.

To resolve the lack of consensus between stakeholder groups, Bengt Dennis was appointed as state negotiator and an agreement on a package of transport infrastructure investment was signed in 1991. A revised version was negotiated in 1992, resolving outstanding differences preserved in the original agreement.

The agreement remained controversial during the following years. Although Environmental Impact Assessments and cost-benefit analyses were conducted, public opposition and the lack of approved designs for toll stations delayed progress.

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TIMELINE

CONTEXT: 1952: STOCKHOLM GENERAL PLAN

CONTEXT: 1960: STOCKHOLM TRAFFIC PLAN

CONCEPTION: 1989: SOUTHERN LINK TUNNEL PROPOSED

INCEPTION: 1990: BENGT DENNIS APPOINTED AS NEGOTIATOR

INCEPTION: 1991: DENNIS AGREEMENT SIGNED BY THREE MAIN POLITICAL PARTIES

INCEPTION: 1991: SLAB SET UP (STATE-OWNED ROAD CONSTRUCTION COMPANY)

DELAY: 1991-92: CONTINUING DISAGREEMENT BETWEEN POLITICIANS

INCEPTION: 1992: SECOND DENNIS AGREEMENT SIGNED

INCEPTION: 1993: FIRST ENVIRONMENTAL IMPACT ASSESSMENT PUBLISHED

CONTROVERSY: 1993: PUBLIC DEMONSTRATION AGAINST PROPOSALS

INCEPTION: 1994: CITY APPROVES DETAILED PLANS

DELAY: 1994: TACIT OPPOSITION FROM LOCAL AUTHORITIES DELAYS PLANNING PERMISSION

DELAY: 1995 (JUN) – 1996 (MAY): PROJECT HALTED DUE TO LACK OF APPROVAL FOR NORTHERN LINK AND TOLL STATIONS

INCEPTION: 1996: GOVERNMENT PROPOSES ADDITIONAL FUNDING, TENDER INVITATIONS SENT OUT

INCEPTION: 1997: INES DEAL ANNOUNCED, REPLACING DENNIS AGREEMENT, NEW FINANCIAL AGREEMENT

CONSTRUCTION: 1997: CONSTRUCTION STARTS

INCEPTION: 1998: FINANCIAL DEAL APPROVED BY PARLIAMENT

CONSTRUCTION: 2001: TUNNELS COMPLETED, WORK ON INSTALLATIONS STARTS

DELIVERY: 2004: LINK INAUGURATED

CHARACTERISTICS

The cost was estimated at SEK 4.77bn in 1992 (USD 0.98bn in 2010 prices)ⁱ. The scope of the project was reduced in 1993, reducing the estimated cost, but cost estimates increased subsequently, perhaps partly due to rising wages in the construction industry in the late 1990s. However, the final project cost in 2005, SEK 8.2bn (USD 1.33bn in 2010 prices), was close to that envisaged in the financing structure agreed in 1998.

Stockholmsleder AB (SLAB) was set up in 1991 to be responsible for financing, implementation and operation of road projects in the Dennis Agreement, but was absorbed into the Swedish Road Administration in 1993. The main design contract, for tunnels and connections to the existing road network, was let to a consortium, *Södra länken konsulterna*. There were five smaller design contracts, three for construction management, twelve for construction and ten for installation and fixtures.

TIMELINE ISSUES

The project timeline was affected by initial public and political opposition to the Dennis Agreement. Tacit opposition from local authorities led to delays in planning permissions, and all the projects in the Agreement were frozen for a year due to the lack of approved plans for the Northern Link and road toll stations.

Opposition to the project culminated in a successful appeal to the Supreme Administrative Court and ultimately to the government's abolition of the Agreement and proposal of the less controversial 'Ines deal' in 1997. In this deal, the more controversial road schemes and plans for road tolls were dropped.

FUNDING

Funding came mostly (87.5%) from the national government, with the remainder from the city government; the 1997 agreement stipulated that any cost overruns should be shared between the two in a 3:1 ratio. Land acquisition costs were not included in the agreement but were estimated to add another 15% to the total cost. The project was financed by commercial loans organised through SLAB. The debt is being repaid by the Swedish Road Administration, using grants from the national government, and is expected to be repaid in full by 2025. The city government used the proceeds from the sale of its municipal energy company to fund its share.

ⁱ Costs have been converted to USD at 2010 prices, using historic inflation rates and current exchange rates, to allow comparison between projects.