

# VINGE CENTRUM (Frederikssund, Denmark)



Vinge Centrum is the heart of the new urban development Vinge. It is one of the first areas to be built. The center of the area is the new S-train station. The place is, in addition to a natural future node traffic traffic, also particularly at the link between town and landscape, which in the Landscape Bridge is interpreted.

The central structure of Vinge Centrum, The Bowl, is made of cast concrete. The desire to embrace many purposes and functions in one and the same physical structure requires a high constructive quality and attention to detail, both in planning and especially in the execution phase.

The bridge constructions is over the S-train track, the "walkway bridges" and the shell construction "The Bowl" which is built in connection with the new Vinge station.

The bridges are divided into an eastern and western part, both of which are designed according to the

same basic constructive principles. The primary difference between the eastern and western part is that the former in a zone around the bus route is affected by traffic load corresponding to bridge group II.

The bridges are constructed as concrete bridges in a combination of concrete elements and concrete concrete. Both prestressed and slack-reinforced elements are used to solve the geometry, dependent on the surface of the landing bridge and the station's ceiling.

Beams are supported by space-cast walls that span parallel to the track in a varying course. Walls and beams are molded together, whereby torque-rigid frame corners are established in the construction.

The method with pre-stressed elements is a solution consisting of straight concrete elements resting on insulated cast walls. The principle design is of a biased straight member and is corresponding to a conventional OT element.

## **EKJ Bulgaria's secrives:**

### *During design:*

EKJ Bulgaria is a subcontractor in the preparation of project development of the phase design, which consists of several elements:

- A station with sideways platforms
- A green and urban landscape bridge that runs across and over the railway
- The Green Heart
- As well as several urban spaces in connection with both landscape bridge and platforms.

**Client:** Rail Net Denmark (Banedanmark)

**Contractor:** MT Højgaard

**Subcontractor:** EKJ Bulgaria

**Period:** 2016-2017

**Contract type:** Design

**Design phase:** Preliminary and Detaild design



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