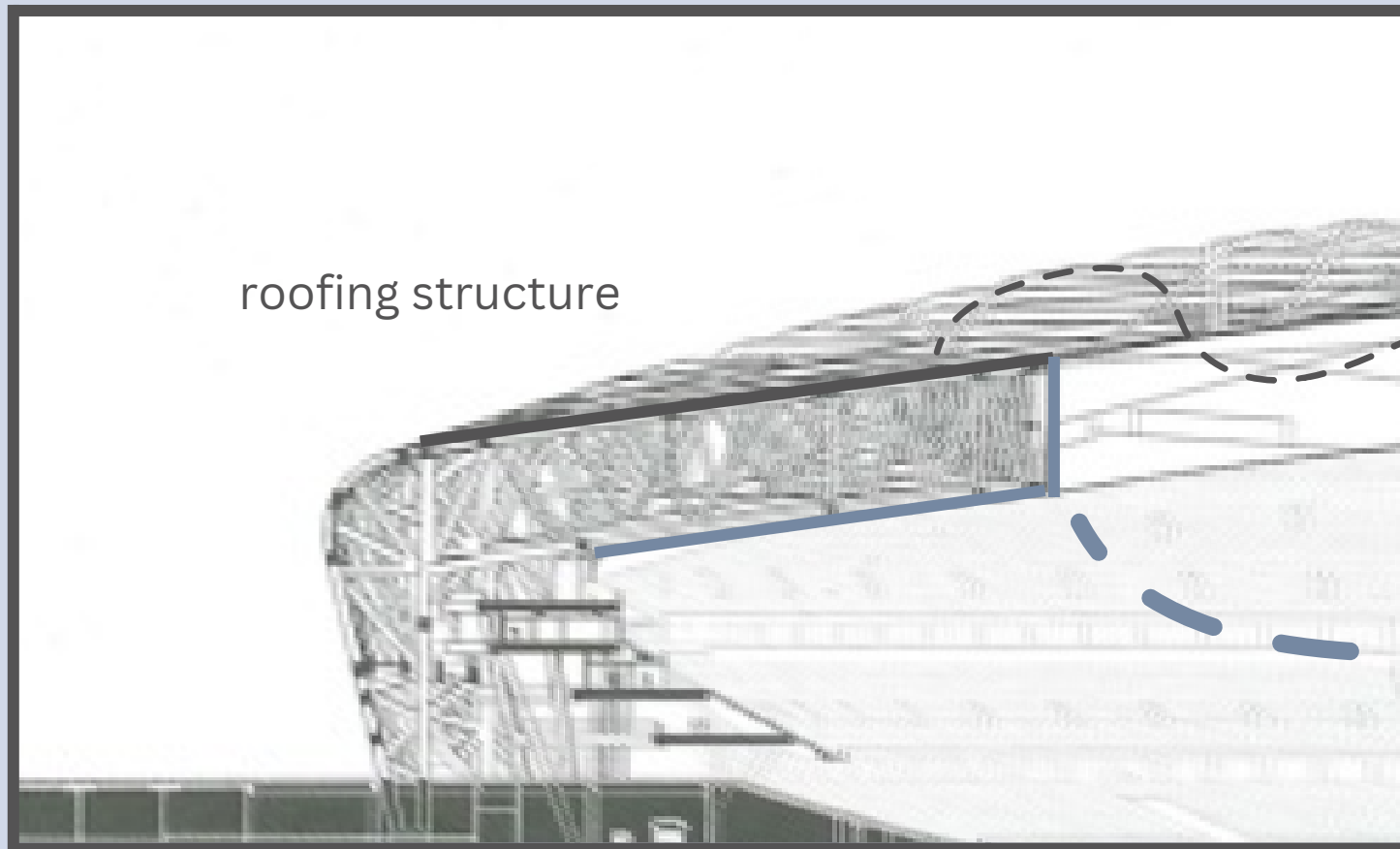


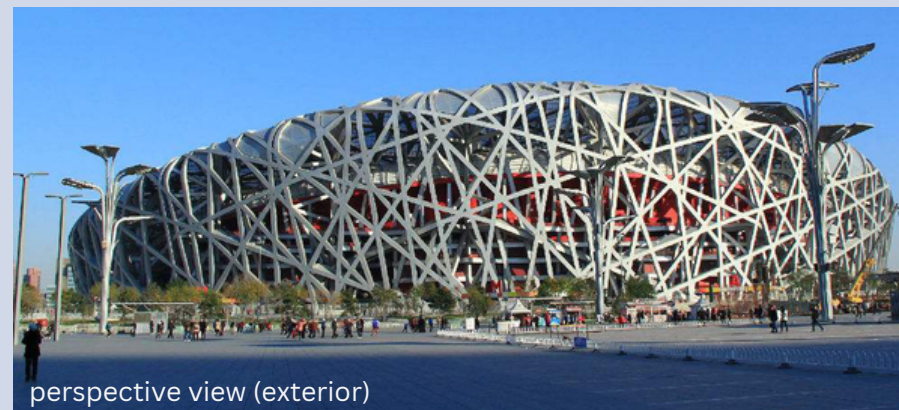
# BEIJING NATIONAL STADIUM: THE BIRD'S NEST

## USE OF PLASTICS IN CONSTRUCTION

The roof is covered with a double-layer membrane structure, with a transparent ETFE (ethylene tetrafluoroethylene) membrane fixed on the upper part of the roofing structure and a translucent PTFE (polytetrafluoroethylene) membrane fixed on its lower part. A PTFE acoustic ceiling is also attached to the side walls of the inner ring.



north-south cross section elevation



perspective view (exterior)



perspective view (interior)

### ETFE (Tefzel)



ETFE example



ETFE on site

### Properties

- suitable for applications that require weldability and the ability to conform to curved metal.

### Function

- to reduce the sunlight from passing through the structure using a matrix of silver-gray dots printed on a single-ply ETFE-film

### PTFE (Teflon)



PTFE example



PTFE on site

### Properties

- creates resistance from chemicals, heat or low temperatures, light or UV light and weathering.

### Function

- hides the roof structure from view
- improves the look of the acoustic roof