Primary roof structure

Secondary roof structure

First floor

Secondary roof structure

Facade

Post-tensioned shear walls

Gravity force frame

Folded plate structure allows for a more slender and lighter roof structure

Stiff but light timber concrete composite floor slabs

Light and flexible timber sandwich panel cladding

ETFE facade (plastic cushions)
  - light weight
  - flexible

Energy dissipation by means of sacrificial steel elements

3D exploded view

Seismic design principles

Resisting elements at the perimeter

Build with light materials

Build with ductile materials

Adequate connections and stiff floors

Regular plan and elevation

Locate CoM and CoR at the same place

Prevent re-entrant corners

Dissipation of seismic energy by dampers

3D exploded structural details

Portal section

Coupled shear walls