

EMAAR SQUARE Istanbul (Turkey)

NEW BUILDING

Client: Emaar Turkey, Istanbul (Turkey)

Architects: Forster + Partner, London (UK)
2Design, Istanbul (Turkey)
Arquitectonica, Miami (USA)
KTGY Group, Irvine (USA)

Our services: Consulting Services and review
in the following planning phases:
Preliminary design and conceptual study
Final design
Approval documentation, including
coordination with the authorities
Preparatory execution planning
Verification of static calculations
for extreme earthquake loads

Brief description: New build of an intra-urban city centre
with seven high-rises, a five-star hotel,
residential and business buildings,
a shopping mall, a Turkish bazaar,
discovery centre and aquarium, an
amusement park, an ice rink, a cinema
complex (2,400 seats), 80 restaurants,
cafés and a 6-level underground car park

- 66,000 m² plot area
- 840,000 m² gross floor area
- building heights of 60 m to 240 m,
up to 11 subfloors
- extent of building pit: 450 m x 210 m,
depth of 40 m to 60 m
- hitherto deepest building pit in Istanbul
- temporary sheeting by back-anchored
reinforced concrete bored pile walls
- open water management
- raft foundation, thicknesses of 1.25 m
to 3.25 m on weathered, highly fissured rock
- extreme earth pressure on the 11
subfloors with one-sided effect due
to required "seismic joints"
- earthquake resistant, ductile reinforced
concrete structure with reinforced
concrete cores combined with a
reinforced concrete frame consisting of
supports and beams; spans up to 9 m
- concrete quality in North Tower of up
to C 80
- limitation of wind-driven oscillations
of high-rise buildings for high user comfort

North Tower:

50 upper floors, 11 subfloors

South East 1:

34 upper floors, 10 subfloors

South East 2:

31 upper floors, 10 subfloors

South West 1:

13 upper floors, 10 subfloors

South West 2:

13 upper floors, 10 subfloors

South West 3:

14 upper floors, 10 subfloors

South End:

14 upper floors, 7 subfloors

Completion: 2017



Pictures / Illustrations: ProfessorPfeiferandPartner PartGmbB, Emaar Turkey