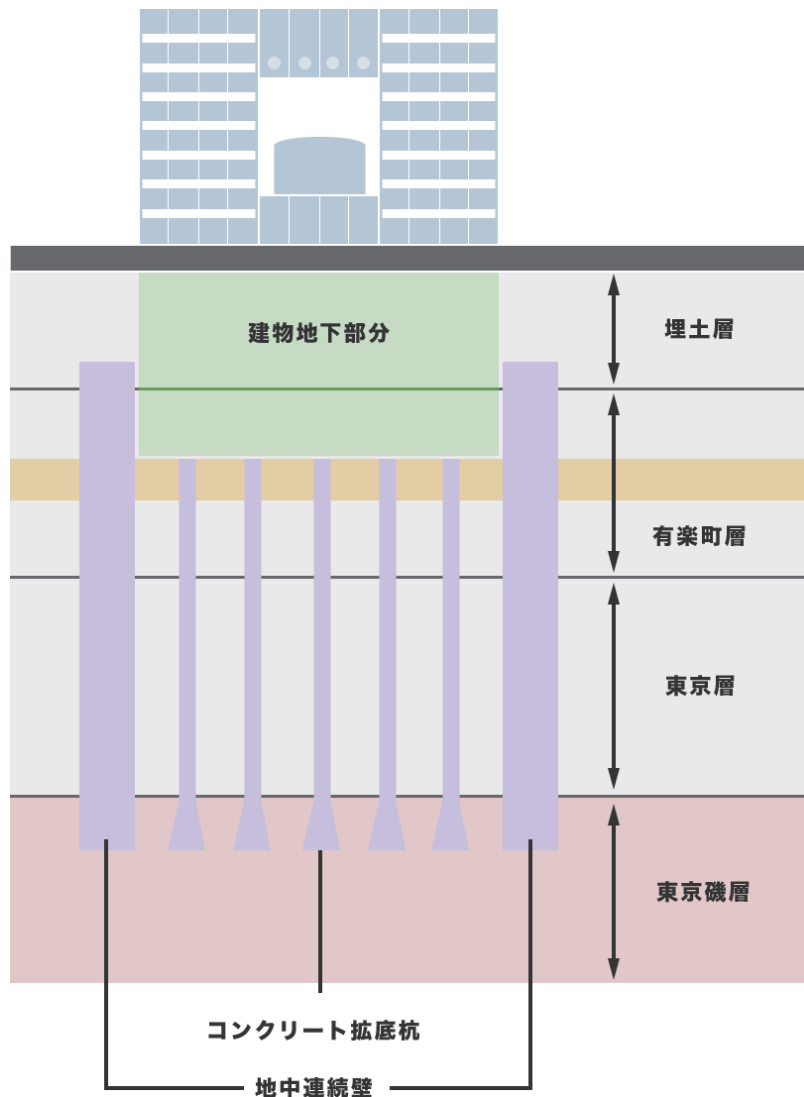


テレコムセンターは、建築基準法の規定に従いバランスのよい骨組み構造としています。建物を安定した支持地盤に達する基礎杭等で支えるなど適切な構造設計を行い、十分な耐震力と安全性が確認されています。

Tlecom Center Building is constructed with a balanced framework in accordance with the provisions of the Building Standards Act. The building's foundation, built using a plan appropriate to the structure as a whole, makes a firm, supportive base which has been proven to be safe and highly earthquake proof.



液状化の可能性のある層

構造の特徴 Special Features of the Construction

テレコムセンターは、21階建の高層棟2棟を、1階～5階部分ではアトリウムで接続、19階～21階部分ではブリッジで接続し、お互いを剛接合して構造的には一体としています。シンプルな形態の建物は、上下・水平方向のバランスを保ち、震災時の揺れで起こる力が、特定部分に集中することを防ぎます。

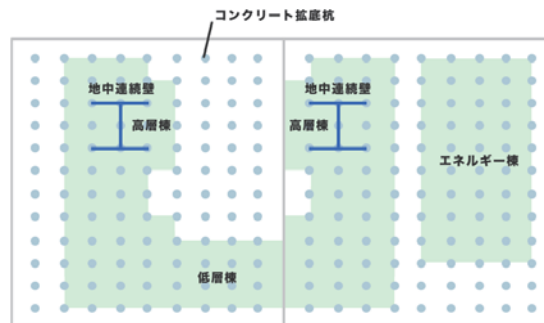
Tlecom Center Building is comprised of two 21 story skyscrapers. Floors 1-5 are connected to the atrium, and there is a bridge connecting the two buildings on floors 19-21. The two buildings were designed together as a single unit, and in this way, they are well connected. The buildings were designed with a simplicity of form, and maintain balance between high and low, and in the horizontal plane. This prevents the forces which arise during strong earthquakes from concentrating in any specific area.

●構造設計に関して〔建築基準法〕で定められている事項：

In the Building Standards Act, the following construction regulations are established:

「用途、規模、土地の形状等に応じて、建物全体がこれに作用する自重、風圧、地震等に対して構造耐力上安全であるようにすること」と定められています。さらに、高さが60mを超える建築物については、構造安全に関して建設大臣の認可が必要です。

"Buildings, with respect to their uses, scope, and the shape of the land they occupy, must be constructed with consideration for resistance to forces produced by factors such as their weight, the wind, and earthquakes, in order to ensure safety." In addition, for buildings taller than 60 meters, special approval of their structural integrity must be obtained from the Ministry of Construction.



地中連続壁及びコンクリート拡底杭 平面図

■ 地中連続壁 Anbhsjmjkfuhdbwmqogt ● コンクリート拡底杭 Anbhsjmjkfuhdbwmqogt

液状化対策 Liquefaction Countermeasures

テレコムセンターの立地する地質は上から、

- ◆埋土層
- ◆有楽町層
- ◆東京層
- ◆東京礫層

となっています。

このうち、有楽町層の一部が液状化の可能性があるとされています。

液状化対策としては、地表面から深さ約40mのところにある東京礫層まで達する地中連続壁（鉄筋コンクリート造、壁厚1,500mm）を建物外周部、中央部、高層部直下に設けています。この地中連続壁により地盤の変形や水圧の上昇をふせぎ、液状化の発生を抑えています。

仮に液状化が発生しても、建物は地中連続壁とコンクリート拡底杭に支持されているので、沈下することはありません。

また、地震で発生するさまざまな力の合力に対しても、建物が浮き上がらないことが確認されています。

Tlecom Center Building is location has the following geological layers, starting from the top:refilled soil layer, Yurakucho layer, Tokyo layer, and Tokyo pebble layer. Among these layers, it has been found that some parts of the Yurakucho layer are susceptible to liquefaction. As a countermeasure to this possible liquefaction, about 40 meters below the surface, in the Tokyo pebble layer, we have constructed a continuous underground wall (of 1.5 meters thick reinforced concrete) which falls directly underneath the outer circumference of the building, the central portions, and the high-rise portions. This underground wall prevents deformation of the building's base structure, as well as increases in water pressure and any outbreaks of liquefaction. Even if liquefaction somehow did occur, the building would still be supported by both the continuous underground wall and the concrete bell pile base, so it would not sink. Also, it has been proven that the building will not rise up out of the group as a result of the various forces produced by an earthquake.