“It is not that the architecture is there at the beginning; on the contrary, it is the human act of getting together that exists first. It is only afterwards that architecture comes into being to envelope this action. It may be said that the architecture here is evoked by something extremely transient; like a piece of film wrapping the human body.” — Toyo Ito
Toyo Ito was born in Seoul, South Korea in 1941 to Japanese parents while South Korea was still under Japanese control. In 1965, he graduated from Tokyo University and worked for Kiyonori Kikutake Architects + Associates until 1969. In 1971, Ito started his own firm Urban Robot, or Urbot, and in 1979, changed the name to Toyo Ito + Associates. Much of his early career was spent developing private homes that expressed urban life in Japan. But soon after, Ito began forming his concept for architecture as it relates to the city. Ito suggests that his buildings are in search of a narrative between the physical and the virtual world. This narrative developed into architecture as light and transparent, a sort of media clothing, and culminated with the design and construction of Sendai Mediatheque, a multi-purpose public cultural center in Sendai Japan, in 2000. Sendai Mediatheque was the perfect manifestation of light and transparent architecture that Ito had been searching for, an elegant and delicate structure whose visitors, as well as the technology it houses itself, seamlessly integrate with the city and propel technological life into and through the 21st century. Toyo Ito refers to his career in two stages: pre-Sendai and post-Sendai.
Sendai Mediatheque

“Modern man is a sort of Tarzan who lives in the world of media, within a very developed technology. Architecture should be a sort of media-clothing, which is necessary in order for man to have a relationship with and integrate himself into the environment.” — Toyo Ito
Considering Sendai, Japan’s cold, snowy climate and heavy seismic activity, Sendai Mediatheque has an extremely unique structure. It is composed of six 15 3/4” floor slabs held in place by thirteen shafts made up of latticed tube steel columns that rise from the ground through the roof, Tarzan’s media forest. The four columns at the corners are cantilevered to resist not only vertical loads, but also horizontal loads introduced by wind and earthquakes. But these shafts are more than structural. Each shaft varies in size and house Sendai Mediatheque’s utilities, technological systems and vertical circulation including both elevators and stairs. Each of the thirteen shafts are independent of the facade and allow for its free form plan while simultaneously showing how light and transparent the structure really is.
The Five Conditions

01_How a corner is made
02_How it meets the sky
03_How it meets the ground
04_How a wall is made
05_How an opening is made
The five conditions were studied through drawing and one condition through a 1 1/2” = 1’-0” model in order to further understand the design of Sendai Mediatheque.

Sendai Mediatheque’s corner condition creates a clean thin line that stretches from the ground to the sky. The mostly glass corners heighten one’s awareness of the thin line and strengthens Ito’s concept “wrapping the human body.”

And like the corner condition, the way that Sendai Mediatheque meets the sky is nothing more than the continuation of the corner lines, as well as the glazed glass wall system, to create the same seamless transition with the sky that the glass wall creates with the interior and exterior spaces.
Sendai Mediatheque seems to barely rest on the ground. This illusion is enhanced by the use of a single glazed structural glass wall that wraps itself around the first floor. In turn, this glass dissolves the exterior space into the interior space and makes the structure appear to hover over the ground rather than physically coming in contact with it.

The ‘wall’ on the front façade, or in Sendai’s case, the boundary between interior and exterior, is constructed of a glazed, double-glass skin. This is in keeping with Ito’s concept for a city of buildings conducive to creating a world of movement, continuous change and flowing transitions.

Likewise, Sendai’s ‘opening’, or front entry is, is a fluid penetration of the exterior into the interior. The double glazed glass only exists on the second to the seventh floor. On the first floor, the single-glazed glass is punctured by a rectangular protrusion of glass, which is inversely mirrored above in the awning.
How Sendai Mediatheque Meets the Ground

Sendai is a heavily documented work of architecture with many publications of images and interpretations on the meaning of the building and its structural system. However, Sendai is not studied for its ground condition, but rather, its seemingly impossible structural design. For this reason, very little information exists on how the building meets the ground. But it does meet the ground, and it does it ever so elegantly. As mentioned above, Sendai appears to almost hover over it, but to make this illusion work, their needs to be a lot going on below street level that the eye can’t see.
Being that Sendai is in an earthquake zone, there was a simple energy absorbing dampening system introduced in the structures basement.

Air ducts provide the movement of air from the floor up along the structural glass wall as a means of keeping the glass properly conditioned.

Sendai’s thick concrete foundation almost floats underground. The rest of the structure sits within this foundation almost as if the foundation were a boat. This is done as a means of cushioning Sendai from seismic activity. When the ground moves, the whole building elegantly moves with it.

Trench drains run the entire perimeter in order to collect water that is diverted away from the glass boundary between interior and exterior. Grade is slightly sloped in order to carry this water to the trench drain system. There is a foundation cavity below grade directly under the exterior portion of the glass that allows air to be constantly moved through it in order to melt snow that collects during the winter months.
“Architecture does not confront, but assimilates nature completely.” — Toyo Ito