

The Construction Development at the National Diet Library

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<<Steel braces installed as a part of the seismic retrofitting of the Tokyo Main Library.
They connect and stabilize the central stacks and surrounding building>>

In 2011 the Main Building of the Tokyo Main Library of the National Diet Library (NDL) marked its 50th anniversary of the first-phase construction. We would like to take this opportunity to introduce the buildings of the NDL. We hope this may be of interest to you.

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1 Before the Construction of the Tokyo Main Library – Prehistory

1.1 The origin of the NDL

The NDL has two origins: one is the Libraries belonging to the Imperial Diet which, under the former Constitution, consisted of the House of Peers and the House of Representatives. The other is the Imperial Library (though it was renamed several times) that belonged to the Ministry of Education.

The history of the Diet Library began when the secretariats of both houses started to keep a collection of books in 1890. Reading rooms and stacks were set up in the temporary Diet building in November of that year but were lost in the fire in January the next year. When the reconstruction of the Diet building began, there were some advocates of the establishment of the Diet Library; one such was Kentaro Kaneko, then Secretary General of the House of Peers, who proposed that a library serving both houses be established in the Diet. The proposal did not materialize and both houses settled for by having their own Libraries in the central area of the 4th floor in the Diet building which was finally completed in 1936.

The Imperial Library originated in the Shojaku-kan (lit. book house) established by the Ministry of Education in 1872. It was opened in the Taiseiden of Yushima Seido (major academic center of

Confucian teachings and bureaucratic training during the Edo era) by taking over the collection of the Tokugawa Shogunate. By 1885 when it was moved to the new building in Ueno, it was popularly known as the Library of Yushima or the Library of Seido. After several changes of governing agencies and legal status, the Imperial Library was established under the Imperial Library Order in 1897. In 1899, the Library started the construction of the new building in the premises of a nearby music school, Tokyo Music School (the predecessor of Tokyo University of the Arts), intending it to become the largest library in Asia. But the financial difficulty of the time forced a massive cut in the budget and the building completed in 1906 was only one-fourth the size of the planned one; it now remains as the International Library of Children's Literature (ILCL). The Library was given a long-desired expansion in 1929 but only at a third of the originally planned scale. So the Imperial Library remained always incomplete in terms of construction.

The building sustained little damage during the Great Kanto Earthquake, but, due to its use as a shelter for refugees, the closure lasted a month. During WWII, the Imperial Library evacuated its collection to the Nagano Prefectural Library. Fortunately, the Library and its vicinity were spared from the calamity of war and the facilities remain intact to this day; it is now the ILCL of the NDL and designated as a historical building of Metropolitan Tokyo.

1.2 The establishment of the NDL – temporary housing

The Diet Law enacted under the post-war constitution ordained that the Diet Library be established. Subsequently the National Diet Library Law was enacted and with the appointment of the Librarian on February 25, 1948, the NDL was formally set up in the Diet building. At first, the NDL lacked its own building and was opened on June 5 of the year temporarily renting a part of the Akasaka Palace. It soon became apparent that the temporary dwelling was too small for the NDL; so the Research and Legislative Reference Bureau moved into the Committee Room of the House of Councillors on the 3rd floor of the Diet building in March 1949 and later relocated to the temporary housing at the former Imperial Japanese Army General Staff Office at Miyake-zaka until it moved to the present Main Building in March 1962.



<< Reading room in the Akasaka Palace (Kacho no Ma)>>

<< Miyake-zaka annex (now the site of the Parliamentary Museum belonging to the House of Representatives)>>



2 Construction plan of the NDL

2.1 Deliberation of the National Diet Library Building Commission

The National Diet Library Building Commission Law was enacted simultaneously with the NDL Law in February 1948. The Commission consisted of five members tasked to make recommendations to the Diet regarding the construction of the NDL; they were the Librarian of the NDL as chair, the Chairs of both Houses' Steering Committees, the President of the National Architectural Office (now Minister of Land, Infrastructure, Transportation and Tourism) and an architecture specialist. After a series of debates on location, planning, preparation and appropriation, the Commission submitted to the Diet in December 1952 a recommendation of the Main Building construction plan, of 148,500 square meters in total and 49,500 square meters for the first phase.

2.2 Architectural design competition

The design of the Main Building was put out to a competition and out of 122 designs submitted, nine designs won prizes with the first going to 20 staff of the Maekawa Institute of Design.



<<The first prize winner of the architectural design competition>>

3 Tokyo Main Library (Main Building)

3.1 First phase construction

The first phase of the construction of the new building of the NDL (now the Main Building of the Tokyo Main Library) was carried out between 1953 and 1961. Exterior fence building and removal of air-raid shelters were carried out in 1953, excavation and groundwork in 1954, and the building was near completion in July 1961. Overall functions were relocated to the new building in August, about two million collections transferred from the Akasaka Palace, Miyake-zaka, the Diet building, Ueno and Okura-yama¹, the new building finally opened in November that year.

With the completion of the first phase, slightly over half of the total planned floor area, 26,000 square meters, became serviceable. Ten out of 17 floors of the central stacks had been built but the surrounding building was yet to be completed; the north side did not exist, and the west and east sides were only up to the 3rd floor.

3.2 Second phase construction – completion of the Main Building

Even as the first phase of the construction was completed, there was a concern that the building would become unable to cope with the rapidly increasing visitors and collections in a few years' time, so in July 1961 the NDL Building Commission submitted a recommendation to launch the second phase.

In 1965, the basic construction cost was finally earmarked. The construction was carried out between 1966 and 1968. In June 1968, the stacks came into full use and in August the same year, additional office rooms were added to the surrounding building. After the relocation of reading rooms and makeovers, all the construction work was over by December that year; the final result was the Main Building, a steel-reinforced concrete structure with 6 stories above ground and 1 below (12 floors above ground and 5 below for the central stacks) and a total floor area of 73,674 square meters.

3.3 Seismic retrofitting

In FY2006, a seismic diagnosis was carried out in the Tokyo Main Library (Main Building), which was designed based on earthquake resistance standards before the current Building Standards Act had been enacted. The assessment showed that the building did not have a sufficient seismic capacity as a national facility, so a seismic retrofitting was planned.

¹ Okura Institute of Cultural Studies, now Okura Institute for the Study of Spiritual Culture, was a branch library of the NDL between 1951 and 1960 and thus hosted some of its collections.

It was planned in FY2007-08, considering –to say nothing of safety – building design and the effect on library service. The retrofitting started in FY2009 and is scheduled to be completed in late July of FY2013.



<<(From the left) The Tokyo Main Library at the completion of the first phase construction (south and north-west view) and of the second-phase construction (south view)>>

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Office rooms in the Main Buildings are equipped with elongated steel plates partially embedded in the ceiling. They are intended to fix and stabilize bookshelves in case they need to be located in office rooms.



4 Tokyo Main Library (Annex)

In 1978, marking the 30th anniversary of the opening of the NDL, a plan came up to build an annex almost the same size as the Main Building, to the north. The four aboveground floors and four basement levels were completed in May 1986, and the remaining basement down to the eighth level was finished in 1993. It has a relatively-low, L-shaped steel reinforced concrete structure, with four floors above ground and eight levels underground (total floor area: 72,942 square meters). Its height and size were designed to balance with the neighboring landscape: the NDL Main Building and Diet building on the south side, and the Supreme Court on the north side.

The stacks are located in the basement from the first to the eighth level.² This is because the building is extremely heavy with huge library holdings, so the architect thought it should be founded on the firm

² For the stacks of the Annex, please refer to an article in the NDL Newsletter No. 168 at http://www.ndl.go.jp/en/publication/ndl_newsletter/168/681.html

ground called the Tokyo gravel layer, more than 25 meters under the surface; and also because the landscape preservation was taken into account. First of all, one-meter-thick ferroconcrete walls called diaphragm walls were erected down below the underground base; and they dug down after constructing the first underground level, which produced 210-thousand cubic meters of soil excavated. Great attention was paid to waterproofing in construction. Underground space is generally said to be less affected by an earthquake. In effect, few library materials fell off the shelves in the underground stacks in the Great East Japan Earthquake of March 11, 2011.



<<Annex (northwest view)>>



<< Underground stacks (Double wall for waterproofing)>>

5 Kansai-kan

The Kansai-kan was established mainly to secure storage space for library materials, to respond to the need for information in the advanced information society. Its design is by Mr. Fumio Toki (Present Position Principal, Fumio Toki Associates), who won the first prize in the Kansai-kan of the National Diet Library International Architectural Competition. Construction started in 1998 and was completed in August 2002, and the library finally opened in October 2002, with four basement levels of steel reinforced concrete, four aboveground floors of steel construction, and a total floor area of 58,768 square meters.

The Kansai-kan is situated in the Kansai Science City – part of the area called the Keihanna Hills, where rich nature still remains; nature-conscious design appears throughout its architecture. The Skylight Roof in front of the building in the image below of the Kansai-kan has lawns on the north side, while the south side of the roof is covered with special glass that diffuses the natural light as it enters the reading rooms below. The underground stacks partly contain automatic stacks, which can accommodate about 1.4 million volumes.³

³ For the stacks of the Kansai-kan, please refer to an article in the NDL Newsletter No. 170 at http://www.ndl.go.jp/en/publication/ndl_newsletter/170/704.html



<<Kansai-kan appearance (northwest view)>>



<<Kansai-kan courtyard>>

6 International Library of Children's Literature

The ILCL building in Ueno Park was originally used as the Imperial Library (See 1.1 of this article), and a seismic retrofitting was necessary for its opening. Extension and refurbishment work using the quake-absorbing method was carried out from FY1998 to FY2001, with the idea of maximally preserving the design and structure of a valuable architectural heritage. Its design was by Tadao Ando Architect & Associates, and Nikken Sekkei Ltd. With the architecture combined from the Meiji, Showa, and Heisei eras, it has three floors above ground and one basement level made of bricks and stone reinforced by steel frames, ferroconcrete, and steel reinforced concrete (total floor area: 6,671 square meters).⁴

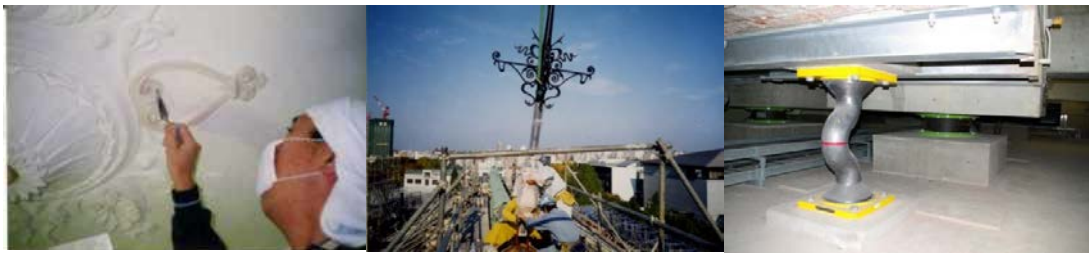


<<ILCL frontage (east view)>>



<<Staircase from the Meiji period>>

⁴ For the stacks of the ILCL, please refer to an article in the NDL Newsletter No. 170 at http://www.ndl.go.jp/en/publication/ndl_newsletter/170/704.html



<<(left)Restoration of a ceiling decoration; (center)Installing a lightning rod restored to its original form; (right)Seismic isolator>>

7 Toward the future

7.1 Enlarging the ILCL

The ILCL has a plan to build an Annex on its north site, responding to the Report of the Board of Inquiry on Expansion of the Library Services of the International Library of Children's Literature, submitted in March 2005. The Annex is planned to have three floors above ground and two basement levels with an approximate total floor area of 6,200 square meters. It will be a steel reinforced concrete structure (partly steel construction) and is scheduled to be erected from the end of FY 2011 to FY2015.⁵

7.2 Second phase construction of the Kansai-kan

Recommendations submitted by the NDL Building Commission when the Kansai-kan was still in the planning phase suggested that the facility have a site area of 82,500 square meters and a total floor area of 165,000 square meters as a final goal, and be constructed in stages. In a trial calculation, the total storage capacity of the Tokyo Main Library and the Kansai-kan is expected to approach the limit around the end of FY2017, thus the second phase of the facility's organization is now under consideration.

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At the planned construction site for the ILCL Annex, a survey of the buried cultural assets has been conducted since July 2011. A water pipe from the Meiji era was excavated in October 2011. Although it is still unclear when it was buried or where its supply destination was, a stamp of 1900 indicates it is dates from the days of the Imperial Library. The first modern water supply piping was laid in Tokyo in 1898, which shows that the excavated pipe belongs to the earliest time. The distinctive feature of the stamp proves it was produced by an iron water pipe company in Liege, Belgium.



5 <http://www.kodomo.go.jp/english/about/future.html>