Study on Good Stock Formation
Through Database Construction of Various Cases of Renovated Apartment Houses

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[Synopsis]

In recent years, building life has been extended, and diversification of residents' images, evolution of equipment technology, and changes in the speed of renovation are occurring. For this reason, the useful life of a building is longer than the span of a single set of residents and their needs. This trend is similar for multifamily houses. Since these occupy much of the total stock of our country, it follows that we need a supply of houses that can last long past their first lives as apartment houses. Past studies have examined individual housing cases and renovation concepts and have lacked sufficient focus, due to reasons such as including buildings relating to mixed private- and public-led initiatives and agencies. The overall picture of renovation of apartment complexes has not been well organized, and information about basic materials that could contribute to the use and formation of future stocks have not been prepared. This research study aims to organize ideas and considerations that have been carried out for the long-term use of apartment houses by making a database of rental housing and rental apartment houses, including housing complexes. The authors believe that these findings will contribute to the planning and supply of apartment houses by creating a database of available stock for the renovation of existing apartment houses.

There are two parts to the study. In Part I, we created a case database of renovated apartment houses through a literature survey and an interview survey of renovation designers. Using this database, we analyzed characteristics according to the focus of the changes in space composition and the plumbing layout (spaces of using water). The results showed the following: the number of bedrooms is decreasing, and the LDK space is expanding. In addition, especially in sale condominiums, there are many cases of modification with added value space such as walk-in closets, dirt, and storage. In the case of rental houses, properties that are not standard are not preferred from the viewpoint of ensuring the distribution of properties. Furthermore, we analyzed the plans before and after refurbishment, focusing on the water-using spaces (e.g., toilet, bath, undressing, washing, laundry). The results pointed out that the number of accesses to each space around the water is increasing, and that these changes have longevity.

In Part II, we focused on the possibility of long-term residence in public housing and conducted a questionnaire survey on residents of public housing. The survey increased our awareness of dwelling remodeling projects as a change in the needs of the living environment, gaining insights into the residents' attributes and the background factors (e.g., family size, age, mobility, etc.) and relationship that affected the resident' needs over time. We found that the overall trend is toward a high need for refurbishing the water- using spaces and obsolete facilities, as well as repairs to floor, walls, and windows due to deterioration over time of the building. Further, the obligation to restore the building to its original state was an obstacle to improving asset value and quality of life by voluntary renovation. Finally, we noted that the differences in the residents' needs for renovations depended on the type of shared space of the family and the number of years of residence.