## A Study on the Appropriate Level of Development Density on Large-Scale Urban Development in Seoul, Korea

- Focusing on the Development of Railway Stations and Surrounding Areas -

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The railway stations in the nodal point of the urban space play an important role and attracting residential, commercial and business activities. Moreover, in the scope of urban structure, railway station cannot be considered as a single transportation facility; thus, integrating with station buildings it will have a great impact on surrounding areas socio-economic changes and real estate businesses.

In case of Korea, integrated development planning was created based on the concept of development of station and surrounding area in order to keep a sustainable development of railway stations and surrounding areas. Therefore, the implementation process is being considered positively and the concept has been becoming one of the main methods of urban redevelopment throughout the country.

In Seoul, a larger-scale private funded development has started from Seoul station, followed by Shindorin station, Changdong station, and Noryangjin station. The activation of old-aged station buildings is expected based on the evaluation of size, complexion, and functionalization of station buildings. Moreover, it can be also observed that increase in price of land and spread in span of business region will change the land use principle due to the development of station building and surrounding area and can be beneficial from the economic side.

On the other hand, on establishment of the integrated plan in the railway station and surrounding area, it is to influx of the commercial and the business facilities in surrounding area to railroad station building by locating the larger-scale railroad station building with disregard to the local situation. There is a movement that is going to protect it as well. In contrast, it is a fact that is not enough for an empirical legal basis. In addition, it has been pointed out continuously which are the problems that enforce the larger-scale development rather than the suitable development reflected the local situation and for the consideration of the local influence and the problems on the legal basis about the standard of the development density at a plan establishment step.

Therefore, there is a need of the development of the suitable scale for each area, and investigation of an appropriate level of development density by characteristic of urban area and type on programming phase on project.

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This study focuses on railway station and surrounding area, and objectives are 1) to arrange a characteristics of the each railway station and surrounding area, and classify types, 2) to examine a development density of each project, 3) to calculate development density of programming phase for each type on the railway station facility and surrounding area, and to simulate to apply on project, 4) to gain suggestions about appropriate level of development density on railway station and surrounding area in Seoul.

Range of a study is areas where have been necessary to control of development density on railway station and surrounding area. Mixed use areas particularly has characteristics, which are having been located in node of public transportation, case of construction of a new railway or case of area formed similar regional commercial area over a period of time was changed of purpose of the objective formed similar regional commercial area over a period of time. This study proceed with these areas centrally. In addition, this study has narrowed down limiting the up zoning area where the station was to be built before and after of these areas.

The research consists of following four steps, 1) to refer to collect data through urban spatial planning and development density management of Seoul and conditions of mixed use areas in each railway station and surrounding area in Seoul, 2) to study current and existing projects related to mixed use areas near the station and surrounding area and to analyze development density and use of mixed, 3) to simulate in target area and to compare programming phase on project, 4) to suggest an appropriate level of development density in mixed use area.

From the above mentioned two-standpoints, which are facing development density on large-scale urban development in Seoul, it is specially focused on mixed use area near the station and surrounding area, also hereafter, to promote appropriate urban development, it requires applying to appropriate level of development density on each project.

As a result of study, it is possible to clean up as follows:

Maintenance standards in mixed use area, related laws and guidelines are not clear maintenance plan of Characteristics of each zoning, and it had been cleared problems which were recognition range even up to use zoning and maintenance standard toward contribution to public according to the up zoning.

Mixed use areas have had a characteristic which have been hard to institution of district normally as unit of families or blocks, it had been cleared a problem of calculation of mixed ratio of land use becoming the basis for setting the level of mixed use.

In addition, about up zoning, it had been cleared a problems that there can occur the risk of a real estate speculation and damage caused by up zoning even if it seems to be commercial characteristic by mixed use, there can cause trouble in the equity of connect area of the up zoning area.

Finally, in terms of living environment change, residential environment should consider by priority rather than commercial environment even though higher degree of mixed used in case of zoning is residential, but case of dominant commercial area, there are situations that residents

require commercial environment by priority than a residential environment, in this case it has been cleared that the difficulty of protecting the living environment of residents of the residential area.

For such reasons, it is necessary to improve the overall maintenance standard for mixed use area, it is needed to come to agreement with the local community in the planning.

## Keywords:

development density, large-scale urban development, railway station and surrounding area, up zoning area, mixed use areas

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