

## **RAINWATER MANAGEMENT FACILITY CASES IN KOREAN APARTMENT COMPLEXES**

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From old times, the advanced countries recognized that it is the rainwater which is new water resources. We discharged the rainwater to the lower river by artificially rainwater management system. However, the advanced countries store the rainwater and it infiltrates into the ground and it secures groundwater resources. Moreover, for the effect of runoff reduction and the recover of water cycle in the urban basin, it promotes the development of estate and city which considers water control, water utilization, and disaster prevention.

In domestic, from latter of 1990's the environment concept which is the rainwater re-use appeared in plan. The application instance still is feeble. Recently, the issue of rainwater utilization is increasing, and the countermeasure for the application of rainwater management system is necessary.

The above of 50% of our house form is the apartment housing. And the rainwater infiltration, storage, design of utilizing technique, monitoring are necessary in apartment housing. The rainwater management system of existing must be valued, and the plan which applies the rainwater management facility with different facility must be prepared.

However, the foundation system construction for synthetic rainwater management and valuation of existing rainwater control facilities are insufficient from domestic. Therefore, the valuation regarding the rainwater control facility, the plan which uses rainwater management facility at facility of another use, the application characteristic valuation of element technique etc. are necessary in apartment housing. Construction and model development of foundation system for rainwater management in apartment housing must have the effect of the environment housing estate which has the water control and water utilization. The apartment housing is restricted by the construction location and character. But, the research which the natural rainwater management is possible must be advanced.

Therefore, the guideline of rainwater storage and infiltration system was provided. It selects the apartment housing where the underground storage tub, infiltration chamber, rubble storage tub were established, and the performance valuation and point were investigated. It converted the rainwater storage equipment with the sewage disposal equipment which is closed in apartment housing and it investigated the method which it uses. The rainwater storage and infiltration system which are possible in apartment housing were selected, and it draw up the draft of Yong-in S 1 estate, Yong-in J 4 estate, Bun-dang H 6 estate. And from application point, the test plan where the monitoring which analyzes the rainwater runoff discharge and quality was established.

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