

## 포스트 코로나 시대의 생활권 공원녹지 개선 방안

Strategies for Improving Neighborhood Parks and Green Spaces  
for the post-COVID-19 Era

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Summary

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This study is designed to analyze changes in the way people use neighborhood parks and green spaces before and after the outbreak of the COVID-19 pandemic and suggest ways to improve neighborhood parks and green spaces. Major research findings are as follows;

First, we compared people's mobility around neighborhood parks and green spaces before and after the outbreak of the COVID-19 pandemic using signal data from telecommunication carriers, and found that people stayed longer at places within walking-distance, or 500m from their houses after the outbreak. Foot traffic to parks and green spaces also showed an overall increase amid COVID-19. An analysis of what factors affect people's mobility to neighborhood parks and green spaces revealed a proportional relationship between pedestrian accessibility to parks and foot traffic. Based on cluster analyses, five directions are proposed to improve neighborhood parks and green spaces for the post-COVID-19 era.

Second, after literature research, domestic/foreign cases analyses, and operation of experts' advisory group, we came up with factors to improve neighborhood parks and green spaces, broken down to the stages of planning, design, and management. For planning, three directions for improvement are suggested: "Reorganize the parks and

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green spaces planning system to reflect changes in the spatial scope of people's daily lives", "Reorganize the standard to supply parks and green spaces, as well as their types", and "Improve the quality of services in parks and green spaces", and also eight factor for improvement are proposed.

At the design stage, four directions and eight factors are proposed: "Expand access roads to parks and diversify pedestrian paths", "Manage traffic in parks", "Diversify functions of parks and green spaces", and "Analyze the users of parks". At the management stage, three directions and nine factors are derived for improvement: "Set up plans and guidelines for parks management", "Establish an infection control system for parks", and "Systematize the management of parks use and information provision".

Third, we surveyed experts to prioritize those 25 factors to improve neighborhood parks and green spaces in the post-COVID-19 era. In an analysis by AHP, factors relating to planning were given a higher priority; "Reorganize the parks and green spaces planning system to reflect changes in the spatial scope of people's daily lives (rated 1st)", "Expand the quantitative aspect of parks and green spaces with pedestrian accessibility (2nd)", "Improve the standard for supplying parks and green spaces (3rd)". An analysis by IPA pointed out substantial improvement is needed on "Reorganize the parks and green space planning system to reflect changes in the spatial scope of people's daily lives" and "Enhance service quality in small parks" among the factors at the planning stage.

At the design stage, "Add a function to prevent/respond to disasters, such as infectious diseases", "Disperse users by vitalizing idle spaces", and "Improve the quality of individual, small spaces" were chosen as key factors for improvement. Lastly at the management stage, four factors were chosen: "Improve the management of parks use (users, density, etc.)", "Establish guidelines and plans for parks and green spaces management for disaster response at the national level", "Set up a parks and green spaces management plan by the local government", and "Refurbish old parks considering demand and uses."

Fourth, improvement guidelines on parks and green spaces for the post-COVID-19 era were drawn up in the form of a design palette, and the results of pilot application were presented, broken down to the planning, design, and management stages. Among the improvement factors derived in Chapter 3, 18 factors which need improvement were put

into a design palette; three factors for planning, eight for design, and eight for management. Based on the improvement directions for five different types of neighborhoods derived from cluster analyses in Chapter 2, the improvement factors at the planning stage were applied on a trial basis. Also, improvement factors for design and management were applied to parks and green spaces in five neighborhoods with different legal status, type, shape, and size.

Fifth, we proposed ways to improve relevant laws and institutions for the improvement of neighborhood parks and green spaces for the post-COVID-19 era. At the planning stage, “Improve neighborhood planning in the basic plan for parks and green spaces”, “Revise standards for securing parks and green spaces”, and “Reorganize standards for demand analysis on parks and green spaces” were suggested. For the design stage, we proposed “Diversify pedestrian paths and improve guide signs for pedestrians”, “Reinforce the disaster prevention functions of parks and green spaces”, and “Diversify the functions of parks and green spaces, and promote flexible uses”. Finally for management, “Establish an integrated management system for neighborhood parks and green spaces to cope with disasters, such as infectious diseases” and “Flexible use of parks and green spaces amid disasters, such as prevention of the spread of infectious diseases”.

**Keywords :**

COVID-19, Neighborhood, Parks and Green Spaces, Mobility, Big data, Guidelines