

# Various ideas to preserve and utilize historical townscapes

(Research period: FY 2016-2020)

TAKEYA Shuichi(Ph.D.), Head Urban Disaster Mitigation Division, Urban Planning Department

MIZUKAMI Tensei(Ph.D.), Senior Researcher Fire Standards Division, Building Department

*Keywords: Historical townscape, historical building, alternative measure*

## 1. Introduction

Activities to leave favorable townscapes for future generations by preserving and utilizing historical buildings and using them as the center of tourism promotion have been expanding. Yet, historical buildings were built before the enactment of the Building Standards Act and are often not in compliance with current laws and regulations. Therefore, it is sometimes difficult to leave the historical atmosphere when the Building Standards Act becomes applicable upon renovation or switching their uses. Specifically, fire safety regulations have great effects because they affect the materials and designs of the exterior walls of buildings.

Therefore, the NILIM is examining smooth and rational operation of fire safety regulations to preserve and use historical buildings and townscapes. This article introduces representative ideas from the local governments to comply with fire safety regulations and preserve and use historical buildings at the same time.

## 2. Ideas for buildings located along narrow roads

According to the Building Standards Act, buildings must be connected to a road with a width of four meters or more. Yet, buildings in historical town areas are often connected only to narrow roads. Therefore, buildings need to be set back by two meters or more from the centerline of a road upon a major renovation. This sometimes degrades landscapes, such as the inability to preserve the design of exterior walls and by creating irregular alignments of wall surfaces. Thus, the Nioza area in Usuki City, Oita Prefecture, permits major renovations along roads narrower than four meters by designating the area as a category 3 road under the Building Standards Act and by taking into account the low risk of a spreading fire due to height differences in properties, as well as initial fire extinguishing measures and fire spread prevention measures realized by installing fire hydrants around the area (Photos 1 and 2).



Photo 1 Designation of category 3 road



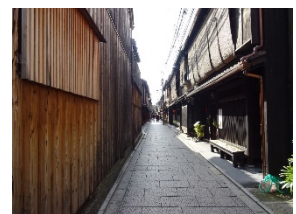
Photo 2 Fire hydrants around the town

## 3. Ideas related to fire safety regulations on urban planning

When fire safety zones and quasi-fire safety zones are designated under urban planning, buildings need to have fire safety performance depending on floor areas and number of floors. Thus, even historical buildings within quasi-fire safety zones are required to have fire safety structures for the exterior walls and windows. This means that buildings cannot use wood surfaces as the exterior walls and wooden window sashes. Kyoto City, Kashima City, Usuki City, and other areas are therefore cancelling the designation of quasi-fire safety zones to avoid the application of these fire safety regulations. Instead, they are securing minimum levels of safety by establishing different ordinances to require alternative measures (Photo 3).



(a) Usuki City



(b) Kyoto City

Photo 3 Historical townscape where quasi-fire safety zone designation was canceled

## 4. Ideas prevent the onset of fire and fire from spreading

Other ideas are also being used. For the early detection of fire, Kashima City is requiring the installation of fire alarms interconnected to three adjacent houses. Many areas, such as Usuki City and Kyoto City, are installing fire hydrants and standpipes around town for initial fire extinguishing. Kashima City is preventing the spread of fire by installing water sprinkling systems.

## 5. Summary

To preserve and utilize historical buildings and townscapes, the NILIM is going to prepare guidelines to evaluate various alternative measures and their effectiveness and release them while ensuring minimum level of fire safety.