

# Restoration and Conversion of a Historic Building into a New Learning Park

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Samard Buddee has over 30 years of experience and expertise in retrofitting buildings. Buddee specializes in a wide range of strengthening techniques such as steel jacketing, FRP composites, etc.



## 1 Abstract

In 2013, a local government official in Nakhon Ratchasima Province, Thailand undertook a project to restore a two-story building in a historic zone. The 976-square-meter building was converted into a learning park for the general public. Architects and engineers collaborated on the project following precise procedures, ensuring most of the original features and significant structures were preserved. The main steps involved a survey and safety evaluation in assessing the choice of design criteria and construction techniques. The building design was analyzed, and significant modifications to the structures were deemed necessary. The structural engineer decided that new steel structures were required both above and below the existing structures to support the new precast concrete slabs which were to be covered by new wooden floors. The new and existing structures were able to maintain their independence because there were sufficient gaps to provide separation between them; this also necessitated the construction of new separate footings as independent support for all the new loads. The new learning park opened in 2017.

**Keywords:** restoration; independent support.

## 2 Introduction

In 2013, a local government official in Nakhon Ratchasima Province, Thailand undertook a project to restore a two-story building in a historic zone (Figures 1-3) for conversion into a new learning

park for the general public. Original features and significant structures of the historic building were retained and rehabilitated to promote learning and attract tourism. Architects and engineers collaborated on the project. A precise procedure was followed involving a survey and safety



*Figure 1. Historic zone*



*Figure 2. The New Learning park: bird's-eye view*

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