



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

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قسم

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THE DEVELOPMENT OF TRAIN STATIONS' DESIGN

A thesis submitted in a partial fulfilment of the requirement
of the MSc. in architectural engineering

By

Hossam Amir Mohammad Tork
B.Sc. in Architecture, June 2010

Supervised by

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Approval Stamp The research was approved on

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STATEMENT

This thesis is submitted as partial fulfilment of MSc. Degree in architectural engineering, Faculty of Engineering, Ain Shams University.

The author carried out by the work included in this thesis, and no part of it has been submitted for a degree or qualification at any other scientific entity.

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ABSTRACT

The research reviews the development of train station design theory; since the building type's inception in the late 19th Century to this current age.

The researcher depended on the determined research problem: which is the interference and overlapping of different design elements for the process of designing a train station from **different engineering departments**; making it hard to determine the project's components separately, leading to the difficult task of selecting the **priorities** in a required design programme that serves the designated station, and according to its specifications.

The researcher assumed that there are **four design parameters** that govern the interrelationship between all various engineering works: *technical, urban, spatial, and style*. The researcher conducted a typical analysis of the [*train station*] building type's design elements, which are function, and form. As the design elements of the station are basically the station components, they were studied in their relationship to the aforementioned station parameters. The researcher found that each parameter -regarding its effect- is variable according to the design conditions that govern the function and the form for each station, and that each parameter faced elevations and depressions during the past decades; affected by economic, social, and political changes.

After dividing the timeline of train station history -since the inception of the definition of "train stations"- into 3 eras, there was the determining of the pattern changes in each parameter in each era, and as a result: the activity of each parameter in function and form, the research was able to conduct a comparative analysis between assorted examples of train stations that vary in age, size, and local cultural environment; leading to the forming of diagrams that explain the changes and interrelationships between all parameters, and formulating a design programme that considers the constraints and condition of each station, and should fit each case of train stations; whether the process of redevelopment or the new

construction, that fits the changes in the conditions of city economy, society, and culture, and the necessities for achieving their goals.

Keywords: Train, Railway, Station, Intermodality, Renaissance.

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DEDICATION

To my parents, family, and friends...

May you be proud of this work; for with your support, you are contributors to this work.

To who may be interested in the fields of knowledge and practice...

May this work shall guide you in your path in life, and to your desired destination.