بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / مني مغربي أحمد

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات: لا يوجد

AIN SHAMS UNIVERSITY
FACULTY OF ENGINEERING
Urban Planning

Landscape Architecture as a catalyst of Walkability Towards Healthy Urban Corridors in Cairo

A Thesis submitted in partial fulfillment of the requirements of the degree of
Master of Science in Architectural Engineering
(Urban Planning)

by
Menna Tallah Tarek Hosny
Bachelor of Science in Architectural Engineering
(Urban Planning)
Faculty of Engineering, Ain Shams University, 2017

Supervised By:

Professor Dr. Ghada Farouk Hassan Saad
Professor Dr. Abeer Mohamed Reda Elshater
Associate Professor Dr. Mohamed Abdoh Hamed Elfayoumi

Cairo - (2022)

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Examiners' Committee

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Date:23 April 2022

Statement

This thesis is submitted as a partial fulfillment of Master of Science in Architectural Engineering Engineering, Faculty of Engineering, Ain shams University.

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

Menna Tallah Tarek Hosny

Signature

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Date:23 April 2022

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Thesis Summary

Over the last 20 years, several studies have been conducted to identify and quantify elements that influence the walkability of metropolitan streets. The ability to walk around a city is a critical component in determining whether it is green or sustainable. By analyzing constructed environmental characteristics that impact walkability, this research develops a complete walkability index. The findings of an online poll and a walkability evaluation model constructed using multi-criteria decision analysis techniques were used in this study on mixed land use streets in Cairo, Egypt.

The findings were based on a three-pillar method that included a theoretical basis to design the walkability indicator, numerical assessment utilizing a multi-criteria decision-making (MCDM) technique across the Egyptian context, and a qualitative user opinion survey. The findings show that determining how walkable Cairo's streets are is critical to improving pedestrian perceptions of the environment through landscape architectural elements. Furthermore, the findings demonstrated the critical aspects that influence the indicators of the built environment.

The study was the product of a two-year investigation that saw many twists and turns, as well as several alterations to the intended research methods, conclusions, sequencing, and even research methodologies. A vast issue like the link between two huge fields, urban design and public health cannot be explored in such a little amount of time. The research, on the other hand, aims to shed light on a topic that may be of interest to multiple disciplines, and it will primarily be discussed in breadth to cover several aspects and relationships of both disciplines, and what is discussed in breath cannot possibly be studied in depth simultaneously within a time and data constrained research.

Key words:

Urban Corridors; Local Walkability Index; Urban Design; Built Environment; Pedestrian walking behavior; Physical Activity; Public Health.

Acronyms

Chapter 2

BE: Built Environment
PA: Physical Activity
PAQ: Physical Activity Questionnaire
IPAQ: International Physical Activity Questionnaire
MARC: Mid-America Regional Council
NOUH: National Organization of Urban Harmony
TLF: Transport for London
ASSHTO: American Association of State Highways and Transportation Officials
GARBLT: General Authority for Roads, Bridges and Land Transport
MOT: Ministry of Transport
Mints: Misr International Transport Study
HBRC: Housing and Building National Research Centre
MHUUC: The Ministry of Housing, Utilities and Urban Communities
WHO: The World Health Organization

Chapter 3

BEIM: the Built Environment Indicators Model.
LWI: Local Walkability Index.
AHP: The Analytical Hierarchy Process
WLC: Weighted Linear Combination
LRI: Level of Required Improvements
PAI: Physical Activity Index
ICC: Intra-class Correlation Coefficients

Chapter 4

VOB: Video-Based Observation

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