

**Cairo University**  
**Faculty of Urban and Regional Planning**

**Post Graduate Studies**  
**Urban Design Department**



## **“GREEN TRANSIT CORRIDORS AS AN APPROACH FOR SUSTAINABLE URBAN FORM”**

Thesis Submitted in partial Fulfillment of the Requirements for the Doctor of  
Philosophy Degree in Urban and Regional Planning

**Urban Design Department**  
**Specialization Urban Design**

**Submitted by:**

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Main supervisor: Prof. Dr. **Soad Yusef Bashandy**

Co-supervisor: Ass Prof. Dr. **Hossam Fathy Ahmed**

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## Acceptance and Approval

### “GREEN TRANSIT CORRIDORS AS AN APPROACH FOR SUSTAINABLE URBAN FORM”

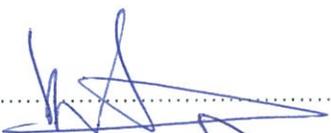
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## **Summary**

Transport planning is one of the most important fields that have been mainly associated with urban planning, which has also affected the quality of urban cities and the consistency of their components. Recently, there have been several attempts to maximize the role of transportation as an approach for sustainable urban form that contributes mainly to achieving sustainability goals related to the social, economic and environmental aspects of urban areas.

Despite the importance of public transport and urban development integration at different levels, most of planning processes may take place in isolation, especially in most Egyptian urban areas. Consequently gaps between transport planning processes and urban planning processes been emerged, creating inaccessible urban areas for public transit , resulting in different types of gaps whether were spatial or structural gaps giving spaces for informal transit to emerge.

On another hand green transit corridors are one of the approaches that combine the integration of Public transport, walking and car restriction policies with urban planning and urban design processes and products.

In order to reach to an applied frame work to implement the concept of green transit corridors in Egyptian districts the research divided to 4 stages, The first stage is to understand the integration of sustainable transport strategies with sustainable urban form, which is based largely on the concept of green transport corridors, while the second stage is to select one of the domains of integrated green transport corridors and correlated elements with urban form elements and affected by different areas of specialization, including urban planners, transport planners or road engineers. This led to the theoretical framework for the integration of the green transport corridors with street network, while the third stage is the evaluation of the evolution, planning and design processes of different neighbourhoods and developments in the city of Cairo, and to identify the impact of public transportation corridors and its link to the urban structure through the use of comparative analysis method. Finally, the fourth stage is to develop the proposed framework to an practical framework to assess the network of streets and the characteristics of the urban layout and urban blocks that contribute significantly to achieve the ideas of green transport corridors.

The development of the applied framework used for assessing the suitability of the street network (in its spatial concept) for street transit. As it was adopted trough evaluating the relationship between one of the spatial characteristics of transit corridors (degree of placeness) and the degree of urban dependence for accessing transit corridor, This relation are mainly depended on the transit routes and the streets structure. Through these measurements, strategies were developed for optimizing access to transport corridors by supporting pedestrians or restricting vehicles or developing the operational characteristics of the transport corridors.



## **Thesis abstract**

Transport planning is one of the most important fields that have been mainly associated with urban planning, most of planning processes may take place in isolation, especially in most Egyptian urban areas, green transit corridors are one of the approaches that combines the integration of Public transport, walking and car restriction policies with urban planning and urban design processes and products. The development of the applied framework used for assessing the suitability of the street network (in its spatial concept) for street transit. As it was adopted through evaluating the relationship between one of the spatial characteristics of transit corridors (degree of placeness) and the degree of urban dependence for accessing transit corridor, through these measurements, strategies are developed for optimizing access to public transport corridors.

### **Key Words:**

Sustainable urban form– Urban morphology – Public transport corridors–  
Sustainable transport – Green transit corridors – Streets configuration – Urban  
blocks– Street network – degree of placeness – Degree of dependence –

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