

**DESIGN OF PEDESTRIAN FACILITIES IN
SRI LANKA**

MASTER OF ENGINEERING

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UNIVERSITY OF MORATUWA

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DESIGN OF PEDESTRIAN FACILITIES IN SRI LANKA

BY

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THIS THESIS WAS SUBMITTED TO THE DEPARTMENT OF CIVIL ENGINEERING OF THE UNIVERSITY OF MORATUWA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ENGINEERING IN HIGHWAY AND TRAFFIC ENGINEERING

SUPERVISED

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Declaration

The work included in this report in part or whole has not been submitted for any other academic qualification at any institution.



Signature of the Candidate

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Prof. J.M.S.J. Bandara

ABSTRACT

Pedestrian facilities can be defined as walkways, pedestrian crossings, under passes, over passes and guard fences etc. In Sri Lanka, designing of highways has been mostly confined to providing the facilities for vehicular traffic. However pedestrian facilities are often neglected even though the pedestrians use considerable amount of road space.

The qualitative and quantitative design for a pedestrian environment requires a basic understanding of related human characteristics and capabilities which are dependent on age, sex, physical and mental condition. However, factors such as the purpose of the trip, time of the day, weather and environmental conditions etc. will combine to determine the exact travel behavior of a pedestrian.

Some of the pedestrian characteristics and travel behavior have been identified in the form of relationships among parameters such as speed, density, flow and space of pedestrians by conducting pedestrian surveys such as flow and travel time etc.

The appropriate dimensions of a walkway are dependent on the location, purpose and anticipated flow or demand on the facility. It can be determined by parameters such as design speed, flow, space and density of pedestrians as these parameters can vary according to the above factors.

The concept of level of service (Pedestrian Service Standards) can be introduced in order to facilitate the design of a pedestrian walkway. Pedestrian service standards are based on the freedom to select normal travel speed, the ability to by pass slow moving pedestrians and the relative ease of cross and reverse flow movements at various pedestrian traffic concentrations. The level of service can be measured in terms of space (m^2/Ped), flow rate (Pedestrians/m/min), Speed (m/min) and pedestrian density (number of pedestrians/ m^2) and it can be divided into any number according to the requirements. Four levels of service such as H,M,L and P were introduced under this study since the variance of the pedestrian flow can be categorized and illustrated with these four levels of service conveniently.

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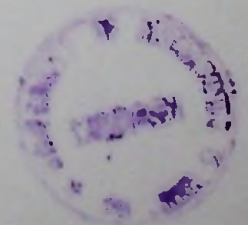
Contents

Abstract	I
Acknowledgement	II
Contents	III-V
List of Figures	VI - VII
List of Tables	VIII
1.0 INTRODUCTION	1 - 10
1.1 Background of Pedestrian facilities in Sri Lanka	1 - 6
1.2 Pedestrian Safety	6 - 9
1.3 The objective of this study	10
2.0 LITERATURE REVIEW	11 - 22
2.1 Pedestrian Speed – Density Relationship	11
2.2 Pedestrian Flow – Density Relationship	11 - 22
2.3 Pedestrian Speed – Flow Relationship	13
2.4 Pedestrian Speed – Space Relationship	14
2.5 Effective Walkway Width	15
2.6 Body Dimensions	16
2.7 Walking Speed	16 - 17
2.8 Walking Distance	17
2.9 Pedestrian Capacities	17 - 21
2.10 Pedestrian Considerations in Land Use Planning	22



3.0	METHODOLOGY	23 - 30
3.1	Appropriate Dimensions of Walkway	23 - 25
3.2	Field Survey Works	25 - 27
3.3	Analysis of Data	27 - 30
3.4	Determination of Limit for the level of service	30
4.0	COLLECTION OF DATA	31 - 33
5.0	ANALYSIS OF DATA	34 - 40
6.0	OBSERVATIONS	41 - 65
6.1	Pedestrian Survey at Maharagama Town	41 - 45
6.2	Pedestrian Survey at Bandaragama Town	46 - 50
6.3	Pedestrian Survey at Kottawa Town	51 - 55
6.4	Pedestrian Survey at Homagama Town	56 - 60
6.5	Pedestrian Survey at Nugegoda Town	61 - 65

7.0	CONCLUSIONS/RECOMMENDATIONS	66 - 78
7.1	Pedestrian Flow Rate Vs Speed Relationship	66 – 67
7.2	Pedestrian Density Vs Speed Relationship	68 – 69
7.3	Pedestrian Space Vs Flow Rate Relationship	70 – 71
7.4	Pedestrian Space Vs Speed Relationship	72 – 73
7.5	Pedestrian Opposing Flow Rate Vs Speed Relationship	74 – 75
7.6	Criteria for Walkway Level of Service	76 – 77
7.7	Further Research Works	78
8.0	REFERENCES	79
9.0	Appendix – A	80 - 84



List of Figures

Figure 1.1	Percentage of Fatal casualties by Casualty Type in year 2002	8
Figure 1.2	Age profile of pedestrians Accidents	8
Figure 2.1	Relationship between pedestrian speed and density	11
Figure 2.2	Relationship between pedestrian flow and space	12
Figure 2.3	Relationship between pedestrian speed and flow	13
Figure 2.4	Relationship between pedestrian speed and space	14
Figure 2.5	Preemption of walkway width	15
Figure 2.6	Body Ellipse	16
Figure 2.7	Illustration of walkway levels of service	18
Figure 3.1	The selected section of walkway	25
Figure 3.2	The selected pedestrian flows of the section of walkway	28
Figure 3.3	The Time Vs Pedestrian Flow	28
Figure 4.1	The Typical section of walkway	32
Figure 6.1	Pedestrian Suevey at Maharagama Town	42
Figure 6.2	Pedestrian Flow Rate Vs Speed Relationship at Maharagama Town	43
Figure 6.3	Pedestrian Speed Vs Density relationship at Maharagama Town	44
Figure 6.4	Pedestrian Flow Rate Vs space relationship at Maharagama Town	45
Figure 6.5	Pedestrian Survey at Bandaragama Town	47
Figure 6.6	Pedestrian Flow Rate Vs Speed Relationship at Bandaragama Town	48
Figure 6.7	Pedestrians Speed Vs Density Relationship at Bandaragama Town	49
Figure 6.8	Pedestrians Flow Rate Vs Space Relationship at Bandaragama Town	50
Figure 6.9	Pedestrians Survey at Kottawa Town	52
Figure 6.10	Pedestrians Flow Rate Vs Speed Relationship at Kottawa Town	53

Figure 6.11	Pedestrians Speed Vs Density Relationship at Kottawa Town	54
Figure 6.12	Pedestrians Flow Rate Vs Space Relationship at Kottawa Town	55
Figure 6.13	Pedestrians Survey at Homagama Town	57
Figure 6.14	Pedestrians Flow Rate Vs Speed Relationship at Homagama Town	58
Figure 6.15	Pedestrians Density Vs Speed Relationship at Homagama Town	59
Figure 6.16	Pedestrians Space Vs. Flow Rate Relationship at Homagama Town	60
Figure 6.17	Pedestrians Survey at Nugegoda Town	62
Figure 6.18	Pedestrians Flow Rate Vs. Speed Relationship at Nugegoda Town	63
Figure 6.19	Pedestrians Density Vs Speed Relationship at Nugegoda Town	64
Figure 6.20	Pedestrians Space Vs. Flow Rate Relationship at Nugegoda Town	65
Figure 7.1	Pedestrians Flow Rate Vs Speed Relationship	67
Figure 7.2	Pedestrians Density Vs Speed Relationship	69
Figure 7.3	Pedestrians Space Vs Flow Rate Relationship	71
Figure 7.4	Pedestrians Space Vs. Speed Relationship	73
Figure 7.5	Pedestrians Opposing flow Rate Vs. Speed Relationship	75

List of Tables

Table	1.1	Pedestrian Activities by Degree of Injury	6
Table	1.2	Distribution of Pedestrian Accidents occurred during year 2002	7
Table	2.1	The summary of the levels of service of pedestrian flow derived by Fruin(1971)	21
Table	4.1	Data Sheet for surveying of pedestrians	32
Table	5.1	Pedestrian Survey at Maharagama Town on Highlevel Road	36
Table	5.2	Pedestrian Survey at Bandaragama Town on Kesbewa Road	37
Table	5.3	Pedestrian Survey at Kottawa Town on Mattegoda Road	38
Table	5.4	Pedestrians Survey at Homagama Town on Highlevel Road	39
Table	5.5	Pedestrian Survey at Nugegoda Town on Highlevel Road	40
Table	7.1	Sri Lankan Pedestrian Level of Service	77