

TABLE OF CONTENTS

RATIFICATION	ii
DECLARATION	iii
ACKNOWLEDGEMENT	iv
PREFACE	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xii
INTISARI	xiii
CHAPTER 1 INTRODUCTION	1
1.1 Background	1
1.2 Problem Statement	2
1.3 Purpose	2
1.4 Benefits.....	2
1.5 Limitations.....	3
CHAPTER 2 LITERATURE REVIEWS	4
2.1 Automated People Mover System (APMS)	4
2.1.1 General description	4
2.1.2 APMS categories	5
2.1.3 APMS components	6
2.2 Skytrain Route Line & Track Guidelines	6
2.2.1 APMS configurations	6
2.2.2 Vehicles	8
2.2.3 Tire.....	8
2.2.4 Guideway	9

2.3	APMS Design Criteria, Operation, Safety and Servicability Standard and Regulation in Indonesia.....	9
CHAPTER 3 THEORETICAL BASIS		10
3.1	APMS Route Line Design	10
3.2	Technical Data For The Rolling Stock	11
3.3	Geometrical Standard for Skytrain Route Line and Track	11
3.3.1	Design criteria for the route line	11
3.3.2	Design criteria for the track	17
3.3.3	Installation criteria for the turnout	18
3.3.4	Installation criteria for the turnout	19
3.3.5	Rear end of a turnout	20
3.4	Transit Cooperative Research Program Report 155 : Track Design Handbook for Light Rail Transit (Transit Cooperative Research Program, 2012).....	22
3.4.1	Minimum tangent length between curves	22
3.4.2	Speed criteria: vehicle and passenger	22
3.4.3	Circular curve	23
3.4.4	Superelevation theory	26
3.4.5	LRT track vertical alignment.....	27
3.5	Indicative Cost Estimation	31
3.5.1	Indices	31
3.5.2	Construction Costliness Indices.....	31
3.5.3	Construction Index.....	31
CHAPTER 4 DESIGN METHOD		33
4.1	Design Process	33
4.2	Design Procedure	33
4.3	Location and Period.....	34
4.4	Data Collection.....	35
4.5	Data Analysis and Discussion	35

CHAPTER 5 DATA ANALYSIS AND DISCUSSION.....	40
5.1 Existing Data	40
5.2 Route Line Design.....	44
5.3 Track Design	58
5.4 Drawing	58
5.5 Structural Work Volume Estimation.....	59
5.6 Indicative Cost Estimation	59
CHAPTER 6 CONCLUSIONS AND SUGGESTIONS.....	63
6.1 Conclusions	63
6.2 Suggestions.....	65
REFERENCES.....	67
APPENDIX	69
A.Vertical Alignment Calculation	70
B.APMS Indicative Cost Estimation.....	79
C.APMS Horizontal Alignment Engineering Drawing	83
D.APMS Structural Component Engineering Drawing.....	91
E.Geometric Design for Conventional Rail Road Route Line and Track based on Regulation of The Minister of Transportation No: PM.60 Year 2012	94