

LIST OF FIGURES & TABLES

Figure 2.1: Rusunami Locations Around Jakarta	6
Figure 2.2: Building Dilatation Regulations	8
Figure 2.3: Floor Plan of a Prototype High-Rise Public Housing	10
Figure 2.4: Unit Layout of a Prototype High-Rise Public Housing.....	10
Figure 2.5: Section of a Prototype High-Rise Public Housing	11
Figure 2.6: Example of Public Housing Apartments in Jakarta.....	12
Figure 2.7: Example of Public Housing in Depok	12
Figure 2.8: “Half of a Good House”	13
Figure 2.9: Solid-Void of Villa Verde Housing.....	14
Figure 2.10: Solid-Void of Monterrey Housing	14
Table 2.1: Greenship New Building Criteria	17
Table 2.2: Standard and Maximum Dimensions of Module.....	18
Table 2.3: Maximum Building Height base on Module Material.....	18
Figure 2.11: Example of Prefabricated Bathroom Unit	19
Figure 2.12: Habitat 67 by Moshe Safdie	20
Figure 2.13: Construction of Habitat 67	21
Figure 2.14: Module System and Connections of Habitat 67	22
Figure 2.15: Different Stacking Configuration of Habitat 67.....	22
Figure 2.16: Quinta Monroy Housing by ELEMENTAL.....	23
Figure 2.18: Second Floor Interior.....	23
Figure 2.17: First Floor Interior	24
Figure 2.18: Second Floor Interior.....	24
Figure 2.19: Quinta Monroy housing site plan	24
Figure 2.20: Quinta Monroy Housing Section.....	25
Figure 2.21: Quinta Monroy housing first floor plan	25
Figure 2.22: Quinta Monroy housing second floor plan.....	26
Figure 2.23: Quinta Monroy housing third floor plan	26
Figure 2.24: Carmel Place by nARCHITECT	27
Figure 2.25: Prefabrication factory of Carmel Place	28
Figure 2.26: Unit module of Carmel Place	28
Figure 2.27: Building amenities of Carmel Place	29
Figure 2.28: Typical floor plan of Carmel Place	29

Table 2.4: Variable of Comparison Based on Research Theories	30
Table 4.1: Comparison Table from Public Housing Variables.....	35
Table 4.2: Comparison from Growing Architecture Variables	36
Table 4.3: Comparison from Modular Architecture Variables.....	37
Figure 4.1: The Two Largest Slums in Central Jakarta	39
Figure 4.2: Site Location and Surroundings	40
Table 4.4: Site Regulation.....	40
Figure 4.3: Land use zoning in Menteng Tenggulun	40
Table 4.5: Site Regulation in Relation to Housing Plot Area	41
Figure 4.4: Figure Ground of Menteng Tenggulun	42
Figure 4.5: Roads and Railroads in Menteng Tenggulun	43
Figure 4.6: Greenery in Menteng Tenggulun	44
Figure 4.7: Site setbacks	45
Figure 4.8: Manggarai Bus Terminal.....	46
Figure 4.10: Sidewalks at Jl. Sultan Agung.....	46
Figure 4.9: Sidewalks at Jl. Sultan Agung.....	46
Figure 4.11: Jl. Sultan Agung	46
Figure 4.12: Pedestrian Bridge Connecting Jl. Sultan Agung with Jl. Menteng Tenggulun	47
Figure 4.13: Streets of Jl. Menteng Tenggulun.....	48
Figure 4.14: Streets of Jl. Menteng Tenggulun.....	48
Figure 4.15: Alleys Around Menteng Tenggulun Slum	49
Figure 5.1: Base Volume of the Building	52
Figure 5.2: Function Ratios in Comparison to GFA.....	53
Figure 5.3: Building Programmatic Configuration with Standard Calculations	53
Table 5.1: Standard Building Program Ratios	54
Figure 5.4: Building Programmatic Configuration with Optimized Calculations	54
Table 5.2 Optimized Building Program Ratios.....	55
Figure 5.5: Communal Space Pattern	55
Figure 5.6: MEP Zoning in Basement 2	56
Figure 5.7: Corridors in every Second Floor and Communal Spaces.....	57

Figure 5.8: Conceptual Building Zoning	58
Figure 5.9: Site Vehicular Connections	58
Figure 5.10: Existing Alley Network.....	59
Figure 5.11: Proposed Pedestrian Circulation	59
Figure 5.12 Conceptual Site Pedestrian Pathways.....	59
Figure 5.13: Ground Floor Podium Zoning	60
Figure 5.14: Rehouse Slum Residents to the Site	61
Figure 5.15: Place Basic Building in a North – South Orientation.....	61
Figure 5.16: Shopping Center Blocks Views of South Facing Units	61
Figure 5.17: Shift and Grade Building Mass to Redirect Views	62
Figure 5.18: Push and Pull Mass to Create Gathering Spaces and Ease of Circulation.....	62
Figure 5.19: Insert Communal Space Based on Experiment Pattern.....	63
Figure 5.20: Unit Module Design	64
Figure 5.21: Communal Space Module Design	65
Figure 5.22: Core Module Design	66
Figure 5.23: Module ‘Beam’ System.....	67
Figure 5.24: Module Floor Connection Detail.....	67
Figure 1.25: Module Façade Connection Detail	68
Figure 5.26: Example of Unit Growth	70
Figure 5.27: Example of Unit Growth	71
Figure 5.28: Site Vehicular Circulation	72
Figure 5.29: Site Pedestrian Circulation	73
Figure 5.30: Site Plan.....	74
Figure 5.31: Solar Study, January.....	75
Figure 5.32: Solar Study, April.....	75
Figure 5.33: Solar Study, August.....	76
Figure 5.34: Cross Ventilation in Communal Spaces and Corridors.....	76
Figure 5.35: Building Water System	78
Table 5.3: Greenship Rating Tool Score.....	79
Figure 5.36: Emergency Exit Placement and Radius on Typical Floor.....	80
Figure 5.37: Emergency Gathering Zones	80
Figure 5.38: Fire Truck Jack Zone and Radius.....	81