Phnom Penh’s garment factory expansion and city’s rapid urbanization brings limited access to the adequate housing, services and infrastructure.

Designed Master Plan aims to improve quality of livelihood, better mental security & productivity and sustainability. In fact, vast majority (80%) of the workforce inside Phnom Penh Special Economic Zone is female.

In order to solve the issues, we specifically analysed the daily life routine of factory female worker and designed the city to improve every aspect of it.

The design proposal focuses on basic housing conditions, future family growth but also on social interactions, fills the missing public functions with crucial urban amenities and more importantly safety for women.

The architecture was proposed to meet the density requirements, budget constraints, construction materials accessibility, locally skilled labour, land location and climate conditions.

3006 units with an option for further increase by app.500

58% of the plot allocated for greenery and communication

28,672m² total bldg. plot coverage

$150/m² estimated construction cost for structural and architectural works

90/1400 car parking /public motorbike lots

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PEDESTRIAN PRIORITIZED
Master plan prioritizes pedestrians, bicyclists and communal transportation. Cars except emergency and fire fighting services to be parked outside of the development. Proposed future location of the river-tram.

PROGRAMME
Residential programme proposes three similar types of units located in first, second or third floor. Tallest -four- story units were proposed along main roads. Communal services as: school, daycare, medical centre, kids playground and market were proposed.

MASTER PLAN SHAPE
Main communication system takes into consideration connection and further development of PPSEZ. South-North building blocks allocation provides natural compound ventilation by a local air-breeze. Units were aligned to reduce the sun penetration and heat gains. Street plan maximizes the access to the river front.

**Go to work**
Widened sidewalks in the city give priority to pedestrians and therefore encourage women to have a pleasant morning walk to work every day. There are also separated bicycle paths to cycle to work comfortably.

**Meeting friends on the way**
The city was designed to provide interactions in public space.

**Grocery shopping on the way**
Small local food shops are just on the way. While returning from work, it's easy to do quick shopping for dinner.

**At work**
The bus stops are affordable in walking distance.

**Kids pick up from school**
All the necessary services like school or medical centre are located in walking distance.

**Meeting friends on the way**

**Taking bus**
The bus stops are affordable in walking distance.

**Finishing work**
Factory workers usually bring their lunch from home or buy it in front of the factory.

**Lunch time**
Factory workers usually bring their lunch from home or buy it in front of the factory.

**Go to work**
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### SAFETY & SECURITY
- Architecture designed to stimulate social interactions and community bonds creation.
- Each building rooftop allocated for social area, gardening, laundry and cooking area.
- Layouts planned to improve compound safety and encourage neighbour kids watch.
- Colour accents as a location indication system.
- Street lighting system, well-lit sidewalks, ramps and number of urban amenities proposed.
- Internal traffic congestion is minimized, still allowing the emergency services to access.
- Street scape to reduce speed and improve safety.
- Each housing unit has an access to two independent fire routes.

### POLLUTION FREE
- Cars parking located outside of the compound.
- Greenery specified to shade and air-purify.
- Urban gardening.

### AFFORDABLE AND EASY TO MAINTAIN
- Affordable locally supplied construction materials: concrete, brick, render, steel elements, bamboo.
- Local craftsmen and inhabitants to take part in the construction and fitting out process.
- Number of prefabricated elements proposed designed on a 4m by 4m modular grid of precast concrete elements with brick infill.

### ADAPTED TO LOCAL WEATHER CONDITIONS
- Ventilated roofs and architectural elements designed as an openwork to maximize free air-flow.
- Units designed for improved natural ventilation and lighting.
- Greenery specified to absorb rain water and support drain system, shade and air-purify.

### DESIGN PROVIDES SECURITY IN THE COMMUNITY DURING DAY AND AT A NIGHT TIME
- The flats are designed to enable multitasking: laundry, drying clothes or cooking at the same time while watching kids playing outside.

### SOCIAL INTERACTIONS
- Each building rooftop is allocated for communal gatherings. Putting the laundry or cooking are perfect moments for social interactions.

### NATURAL VENTILATION AND SHADING
- Spends time with friends.
- Internal traffic congestion is minimized, still allowing the emergency services to access.
Typical Housing Unit

Flat layouts

- 12.7% units located on the G3 (27m²)
- 27.9% units located on the G2 (37.5m²)
- 29.7% units located on the G1 (37.5m²)
- 29.7% units located on the G0 (40m²)

Ground Floor

First Floor

Second Floor

Third Floor

Typical Housing Unit

Get good night’s sleep

Bedrooms are provided on mezzanines above living areas.

8:00pm
Chill time, chats with friends outside

9:00pm
Well-deserved rest at home

Central space in each flat is an open living room.

Each housing unit provides green semi-public spaces with benches to spend time outside with neighbours.

Typical Housing Unit

10:00pm

NATURAL VENTILATION AND SHADING

- Get good night’s sleep
- Bedrooms are provided on mezzanines above living areas.