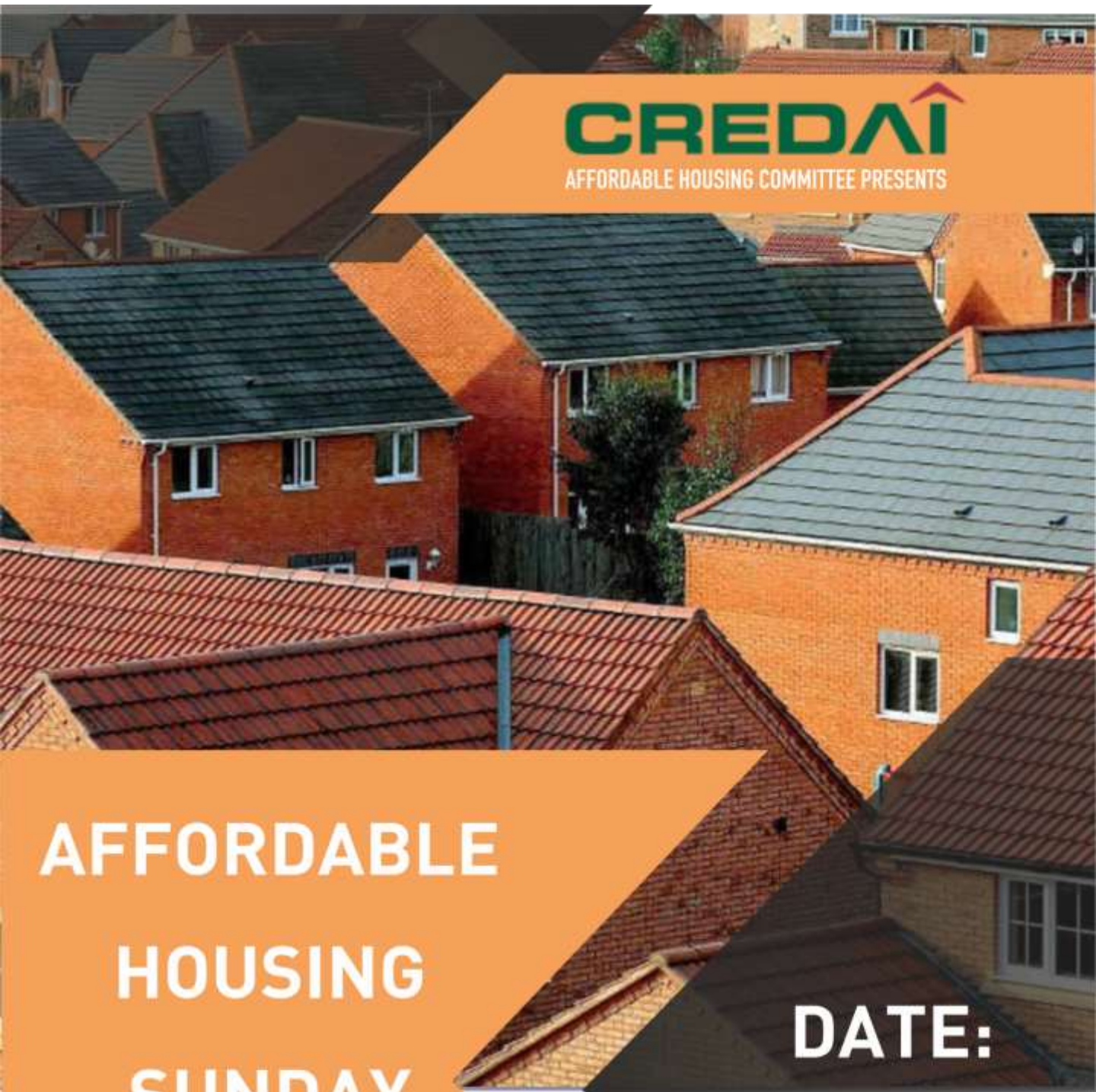

CREDAI

AFFORDABLE HOUSING COMMITTEE PRESENTS

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AFFORDABLE HOUSING PROJECT

Affordable housing has been a buzzword for more than a decade now, with successive governments looking to tap affordable housing as a medium to bridge the housing shortage gap in India – most of which is in the mid income and low-income categories. The development of affordable housing comes with many variables that could impact costs, both in terms of per unit costs and total spending on projects. Other than the volatility of the economy and housing markets, factors such as project size (how many units are being built and in terms of sq. ft.), financing, and developers play a prominent role in dictating costs. These variables working together is what produces the cost trends we observe in affordable housing development. Following are some major factors contributing to an Affordable Housing Project :

LOCATION OF THE PROJECT

This cost plays a major role in the pricing and affordability of residential units. Smart Cities leverage available government-owned land parcels within the specified areas for development for housing for the urban poor and the informal sector. Utilising such land parcels at a subsidised rate will drastically reduce the pricing of the resultant housing units.

With high prices of land within the city, low-income housing projects are being developed at 'leapfrogged locations', which offer land parcels at suitable price points for such developments. Leapfrogging is a real estate phenomenon, in which high prices of intermediate land parcels lead to development of far-flung areas before immediate periphery is developed. Whilst leapfrogging leads to cost-effective developments, they might lack development of adequate physical and social infrastructure.

Reduction of cost begins with the selection of the site. For housing to be affordable, careful site selection is essential.

1.Be under the category of ‘residential’ as per the local master plan (otherwise a lot of energy, money and time is lost in initiating the development and construction process, leading to unnecessary cost overruns)

2. Not be within an eco-sensitive zone

3. Not be a low lying area, which is likely to be affected by floods

4. Not have a regular geometric shape (It is always better to have a larger frontage, which faces the approach road. This frontage should be free of encroachment

5. Be well connected with transportation hubs, such as railway station, bus terminus, airport, as well as educational institutions and hospitals.

6. Be close to basic physical infrastructure including potable water, electricity, sewage and drainage disposal points.

7. Have soil with good bearing capacity

8. Have soil free of organic waste, saltpeter and other harmful chemicals

9. Be located away from restrictive archaeological areas and the airport funnel zone

10.There should be provision for all the basic social infrastructures, like schools, hospitals and community centres, within the residential areas. This will save people the effort and trouble of commuting long distances and spending on transport and fuel)

11. Not be in the vicinity of any polluting and hazardous industry (Even air polluting industries located at a distance, which fall in the windward direction, may make a housing scheme non-liveable and unpopular)

12. Be bereft of obstructions, such as HT lines, water channels, underground gas pipe lines and abadies or slums

SHAPE, STRATA & CONTOUR OF PLOT

- Care should be taken to retain the natural topography and contours (Unnecessary levelling of a site leads to extra cost, & in most cases disturbs the site drainage).

- Effort should be made to conserve the site's existing flora and fauna.

- Strata/ soil with good bearing capacity

- The most functional and economical ratio of width to length is considered to be 1:2.

- Properties that are large, should ideally face trunk and arterial roads.

DESIGN & PLANNING

One of the major factors affecting the affordable housing is the architecture design of the project because it directly affects the cost and criteria of the affordable project. It is extremely important for an architect to follow all the basic principles of design. The layout plan of any residential area plays a decisive role in checking the overall cost of the housing plot or the built unit. As a matter of fact, an efficient layout plan can reduce the cost of the housing unit by as much a 10–15 per cent. Therefore, it becomes a challenge for the architect as well as the town planner, who are required to improvise, strategize and focus more on creativity while preparing the layout plan of the residential area. It is pertinent to mention here that the infrastructural pattern of the project is greatly dependent on the layout plan and determines its cost and efficiency.

LAYOUT PLAN

Even though, it is a common practice to arrange housing units around open spaces for better social cohesion amongst the residents, this results in a marginal increase in the length of service pipes. This causes costs to go up. Therefore, the planner should try and come up with a balanced approach.

The sources of water supply should be located at the highest points, while the sewage and drainage disposal points should be located at lower levels. This results in better efficiency in terms of energy and savings in terms of running costs of these services.

Decentralisation of physical and social infrastructural facilities helps in initial as well as perpetual costs.

The Coverage area should be optimized by:

- Following the basic principles of geometry
- Economising on road areas and lengths
- Avoiding wasteful odd shaped open spaces.

BUILDING DESIGN

1. Reduce the length of the wall as much as possible. The ratio of the perimeter to the plinth should be low.
2. Go for a simplistic design with lesser offsets.
3. Optimise on the number of doors and sizes of windows.
4. The wet yet core areas, such as toilets and kitchen should be clubbed together.
5. Reduce or eliminate altogether the circulation areas.
6. Construct common walls between two housing units.
7. Optimise room sizes and heights.
8. Create multipurpose spaces.
9. Use vertical spaces for storage purpose.
10. Encourage semi-finished type of construction and core housing system. This ensures that the house owners do not end up redoing the finishing items, such as flooring and internal wall plastering. This also ensures that there is no wastage of scarce building materials.

Cost of the development depends on the design and the floors of the building and units per floor , the low rise buildings cost less as compared to the development cost of high rise building or project .

TYPICAL AFFORDABLE HOUSING PROJECT

- **LOW CONSTRUCTION COST**

➢ Tier II & III Cities : Structure to be typically low rise with G+3 kind of set up with conventional method for civil structure

➢ Metros/Tier I Cities : Structure to be typically G+7 upto 12 storied with use of modern technology of construction

- **SHORTER PERIOD OF CONSTRUCTION**

An affordable project should be finished with in 15-24 months unlike other residential projects where no such time constraints are implied

- **MASS PRODUCTION**:

Another key in affordable housing is mass production and duplication of designs and minimum wastage . Many technologies have been introduced to encourage mass production and minimal wastage, like AluForm & Precast technology and multiply the design of AH Project.

- **BASIC AMENITIES**

While most definitions dwell on minimum area and cost considerations, the provision of basic amenities such as sanitation, water supply and power to the dwelling unit are must haves. In addition, the provision of community spaces and amenities such as parks, schools and health care facilities, either within the project or in the neighbourhood, are desirable.

'To be continued…'

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