

PROJECT DESCRIPTION

GREAT City is a new 5.77 square kilometer (1450 acre) development outside of Chengdu, China. The project successfully resolves the relationship between high-density urban living and sustainable development. It will be a prototype development that will be replicated throughout China.

The City is designed as a completely self-sustaining entity, providing all basic services to its residents through a sustainable infrastructure that supports education, commerce, culture and an improved quality of life. It demonstrates how China can reduce its ecological footprint while creating economic conditions that are affordable for the majority of citizens *and* address contemporary social concerns.

The City conserves farmland, with over 75% of the site area preserved as agriculture and open space despite a population of 100,000 people, or 30,000 families. The 1.30 square kilometer (325 acre) "Urbanized Area" will be placed within the larger site, resulting in the creation of a Conservation Area surrounding the city of approximately 4.47 square kilometers (1125 acres) in area. This buffer landscape is intrinsically engaged with the topography of the site, and will be devoted to recreation, wildlife habitat and agriculture. Within the urbanized area, 20% of the land will be devoted to parks and landscaped space, while 60% will be parcelized for construction. The remaining 20% will be devoted to infrastructure, roads and pedestrian streets.

The City will benefit from vertical connectivity and short, walkable distances between districts. The development program within the City will include commercial, residential, office, light manufacturing and a medical campus which will provide health services to residents, as well as a larger regional and perhaps national constituency. The GREAT City master plan proposes to preserve the most productive agricultural areas and build primarily on the two major ridge lines that bisect the site. In addition to the conservation of farmland and the surrounding buffer landscape, the natural valleys adjacent to the urbanized area will also be preserved.

Organized around a regional transit hub located at the intersection of the ridges, a clear city edge is defined by a 10-minute walking radius. A network of pedestrian streets and roadways define seventy discrete development parcels. The infrastructure and public-realm networks include electric shuttles, plazas, parks and links to the recreation system. As a primarily pedestrian city, only half of the road area is allocated to motorized vehicles, and all residential units will be within a 2-minute walk of a public park. An extended recreation system connects the pedestrian network to trails that run through the green buffer and surrounding farmland, making it convenient for residents to enjoy the forest landscape.

The sustainability framework for GREAT City, custom-designed based on the principles of LEED-ND and BREEAM, follows an integrated approach toward meeting the overall objectives of environmental, economic and social sustainability. GREAT City will incorporate innovative technologies and infrastructure systems to achieve 48% energy savings of a conventional urban development. In addition to improved efficiencies within buildings, the city will utilize seasonal energy storage to use waste summer heat to provide winter heating, and a power generation plant will utilize the latest co-generation technology to provide both electricity and hot water. An Eco-Park located on the northwest edge of the city will integrate waste water treatment, solid waste treatment and power generation.

The key urban design concepts include 1) the development of prototypes for ease of construction and economy; 2) A completely walkable City; 3) Innovative architectural forms that support good urbanism; 4) The creation of a vertical city, defined by interconnected spaces and use of the natural topography to separate land uses and emphasize verticality.

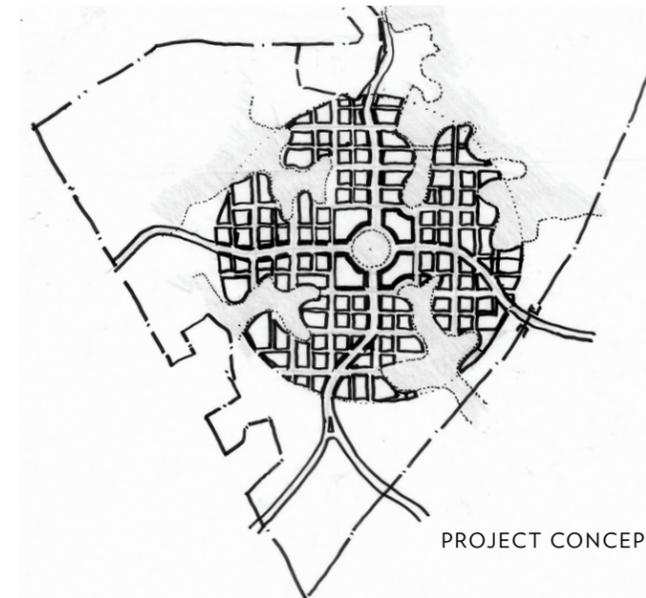
Compared to a conventional development of similar population, GREAT City achieves the following remarkable sustainable benchmarks:

- It will use 1/7 as much land
- It will use 48% less energy
- It will generate 94% less waste to landfill
- It will produce 69% less CO₂
- It will use 64% less water

LESSONS LEARNED

GREAT City represents a new prototype for sustainable urbanism in China. No project of this type and density has yet been proposed or completed within China, nation of over 1.3 billion people. Further, for the first time in China's history, more people live in cities rather than rural areas, providing further need for examples of dense, mixed-use sustainable urbanism. Some of the lessons learned on this project include:

1. In the fastest-urbanizing country in the world, it is possible to provide alternatives to sprawl.
2. Mixed-use development is a viable development prototype for the overseas market.
3. Many principles of good urbanism are universal and apply across cultural and national boundaries.
4. The incorporation of local culture and historic precedents can inform the design of pedestrian environments.
5. Chinese planning officials are understanding of the costs of automobile-dependent design and are open to better alternatives to urban sprawl.
6. Typical American urban models and building types may not translate directly to overseas markets.
7. Agricultural, water and habitat conservation is an important priority in China.
8. Dense, vertically-integrated mixed-use buildings have an important role in sustainable urbanism.



PROJECT CONCEPT SKETCH