

TA 158 HORTICULTURE RESEARCH AND DEVELOPMENT CENTER IN SEMARANG REGENCY

BACKGROUND

Indonesia, with its tropical climate and abundant natural resources, is known as an agrarian country. The agricultural sector plays a crucial role in fulfilling basic needs and advancing the social, economic, and trade sectors. In Semarang Regency, the agricultural sector contributed 20.71% to the total GDP in 2021. The horticultural sub-sector, both perennial and seasonal, has significant potential for development, contributing 5.61% and 2.68%, respectively. This is supported by the favorable climate and land conditions for horticultural cultivation, including highland vegetables such as cabbage, mustard greens, beans, and scallions.

Development in the horticultural sector, particularly vegetable crops, aims to produce competitive vegetables, create jobs, increase farmers' income, strengthen the regional economy, and support national income growth. However, Semarang lacks adequate facilities and infrastructure, such as an integrated research and development center, to support this.

Integrated infrastructure development is essential for economic growth in Semarang Regency. It is hoped that a horticultural research and development center will help address agricultural issues such as seed quality, agricultural technology, and pests. This center must consider natural conditions to ensure user comfort and meet plant needs, following the principles of ecological architecture, which emphasizes harmony between humans and the natural environment.

LOCATION



Semarang regency is in between of Semarang city and Boyolali regency



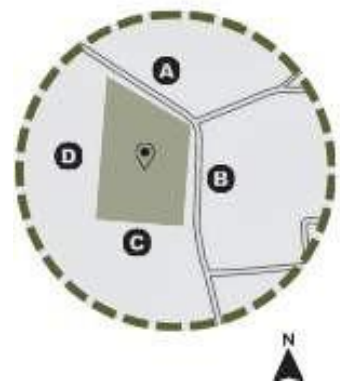
Site is at the south of Bawen, a district in Semarang regency



The site is an undeveloped land at Jl. Lintas Tuntang-Ambarawa

SITE CHARACTERISTICS

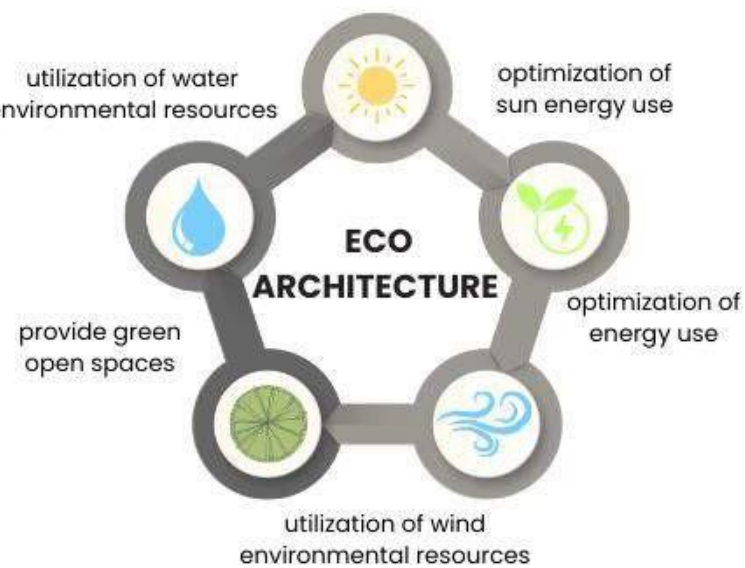
Descriptions
Land Area: 20.000 m²
Building Area: 12.544 m²
Number of Floors: 2 Floors
Building Mass: Quadruple Building



Site Boundaries
Northern Boundary: Vacant Land
Eastern Boundary: Vacant Land
Southern Boundary: Housing Area
Western Boundary: Agriculturals Land

ECOLOGICAL CONCEPT

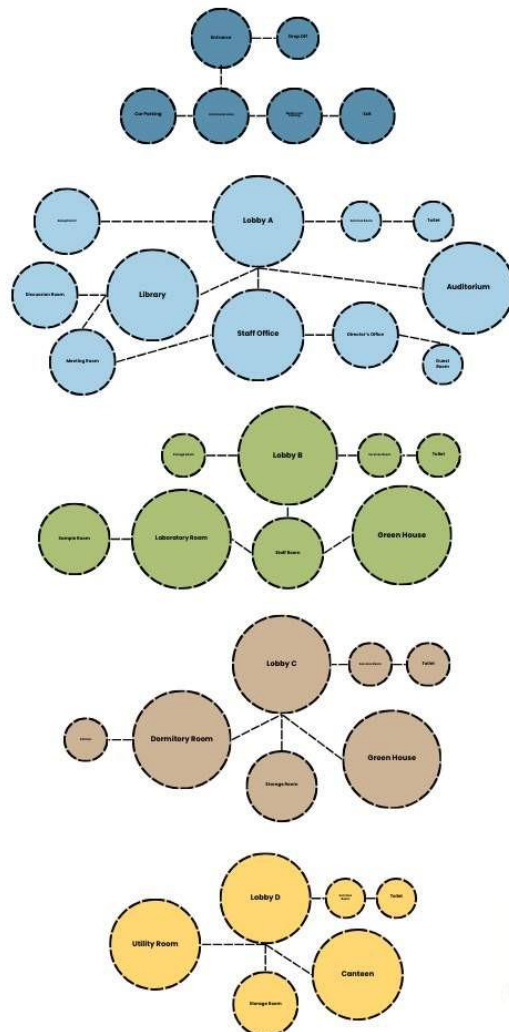
Ecological architecture is a design concept that considers environmental balance aspects, aiming to maintain environmental sustainability. Design solutions using ecological architecture methods strive to create a harmonious relationship between humans and the design of built objects within the natural environment



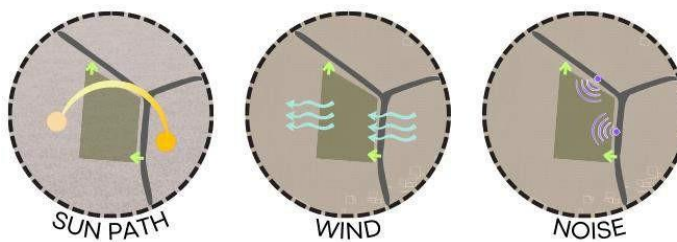
TARGET USERS



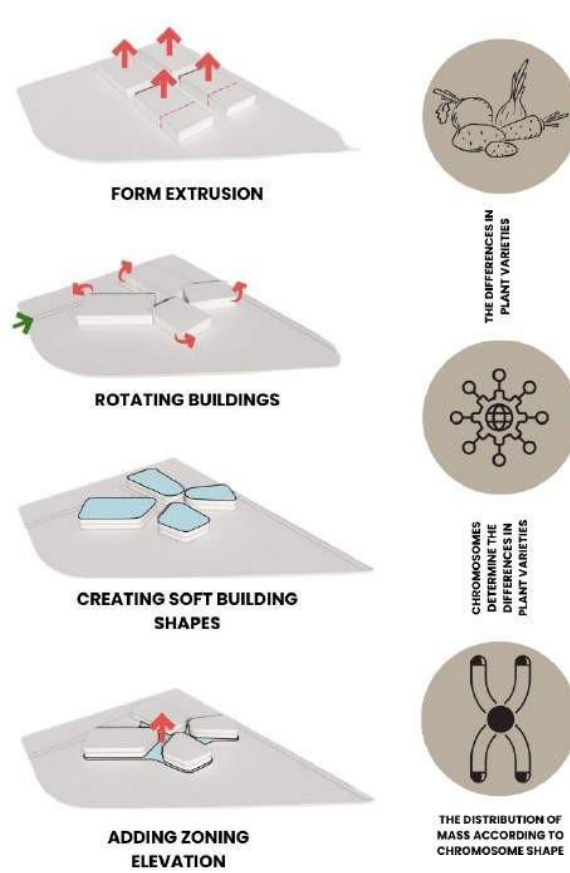
BUBBLE DIAGRAMS



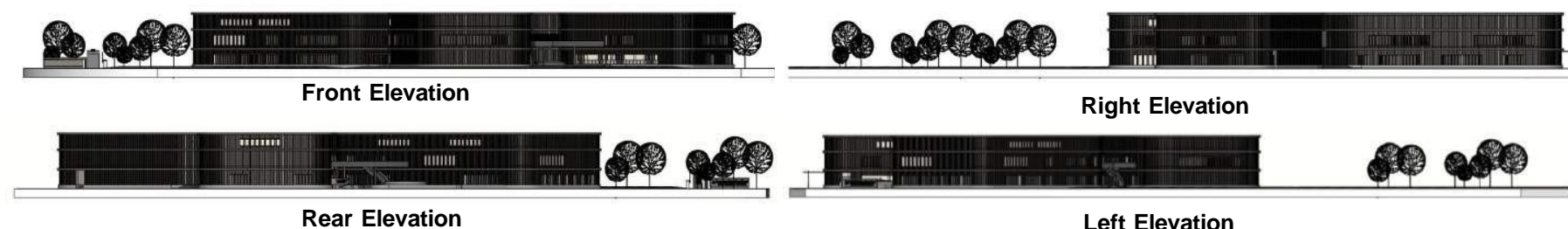
SITE ANALYSIS



FORM DEVELOPMENT



ELEVATIONS



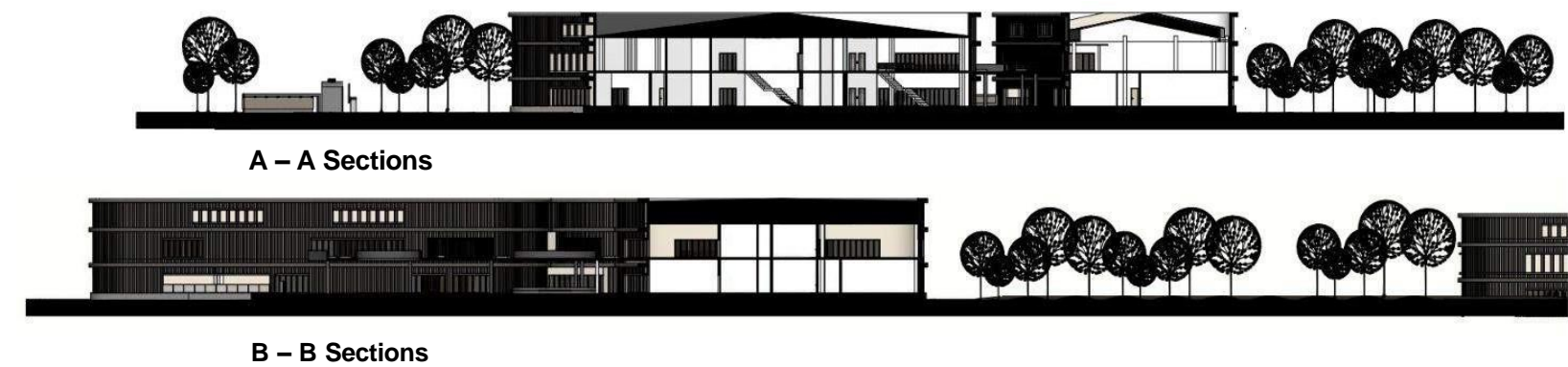
SITE PLAN



FLOORS PLAN



SECTIONS



EXTERIOR PERSPECTIVES



INTERIOR PERSPECTIVES

