Teotitlán del Valle Cultural Center – Teotitlán del Valle, Oaxaca, Mexico

Essay by Lily Cmerek

The Teotitlán del Valle Cultural Center, located in Teotitlán del Valle, a village in the state of Oaxaca, Mexico, was designed by the architecture firm Productora. Completed in 2017, it functions as a center that honors the culture of the community, which is largely defined by textiles and certain archeological treasures[1]. Firstly, it does this with a three-story museum located in the first main building that presents Teotitlán history through various collections and events. Secondly, it does this with a two-story public library that is located in the second main building[2]. These two buildings make up only eighteen percent of the 1,700 square meter, or about 18,300 square feet, total site area; the rest of the space is occupied by public outdoor space. This setup contributes to increasing the ease of flow of pedestrians, especially since the new outdoor areas involved in the project are integrated into the existing main public spaces[1].

One of the most obvious qualities of the cultural center is its orange-toned earthy façades that match the surrounding natural and architectural environment. In fact, this effect was accomplished because all of the materials were sourced locally. The walls are thirty centimeters, or approximately twelve inches, thick and made up of pigmented concrete that is imprinted with wooden boards in a uniform pattern. There is nowhere in the buildings where this concrete is covered up with another material or even slightly altered; it is visible from both the interior and exterior sides of all of the walls. Regarding why concrete made to look like wood was used instead of actual wood, concrete is stronger and more durable and has more desirable thermal properties. Also, throughout the structure, timber is used for window frames and handrails. Lastly, there is a large staircase that is composed of bricks. It links a smaller outdoor space to a vast outdoor space and is located between two sections of the museum[2].

“Along with aesthetic aims, the design aids natural air flow in the building,” providing thermal comfort in the midst of the country’s warm climate[2]. This is done through the concrete walls, double-slab sloping roofs, and controlled window and door openings. All of these elements allow for a passive system; there are actually no installed air conditioning systems present in the cultural center, which lowers utility costs greatly[1].With the higher density of concrete, heat travels slower through the walls. So, the building can stay cool in the summer months and warm in the winter months. Also, air leaks are less frequent, which increases the energy efficiency[3]. Sloped roofs have multiple benefits, but relating to thermal efficiency, there is natural ventilation that occurs between the two layers of slab. Cold air is removed from the space during the winter, and warm air is removed from the space during the summer[4]. Finally, the location and size of certain openings contribute to light and heat transfer into the building. While there are light fixtures located in some spaces, natural lighting is the primarily used.

Cited Sources:

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3 https://www.cement.org/cement-concrete/paving/buildings-structures/concrete-homes/features-benefits-of-today's-concrete-homes/energy-efficient

4 https://www.a1everlast.com/benefits-of-sloped-roofs/