



HONORABLE MENTION

Project Title

A Satellite Automobile Production Facility

Student Name

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Level

Course

Advisor/Instructor

Principal Investigator

Department/School

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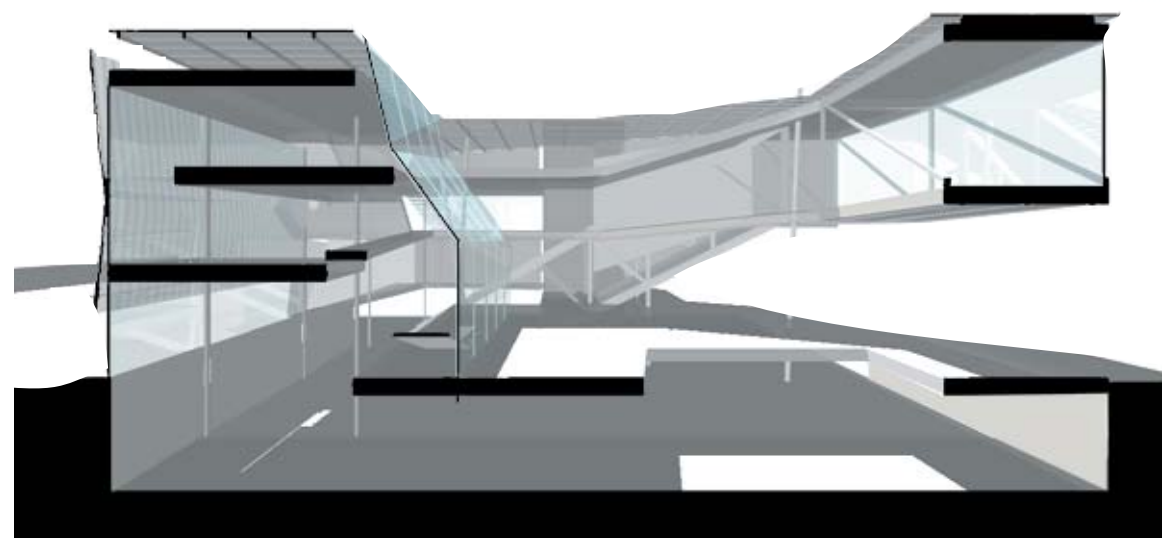
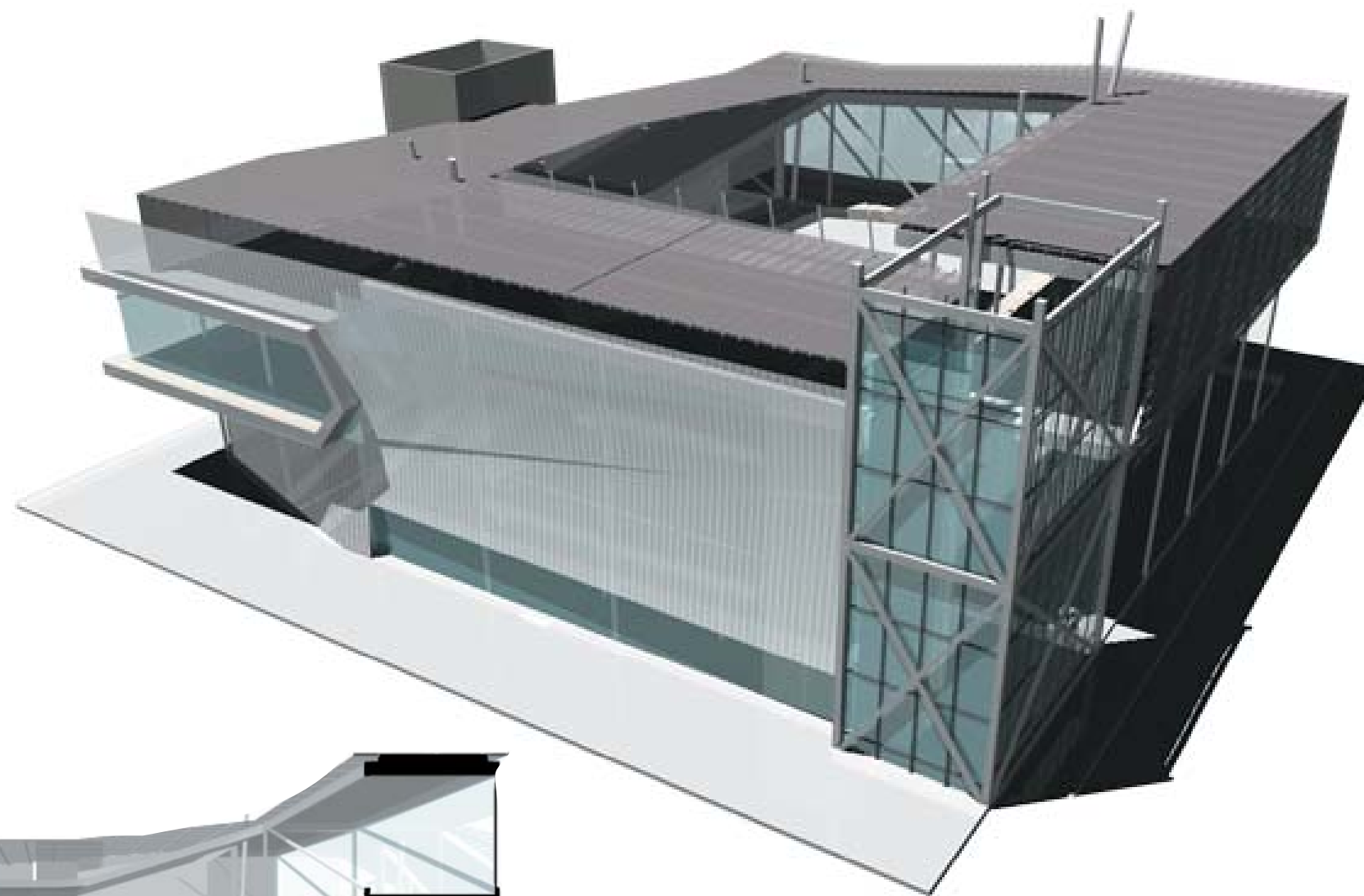
Summary description of project:

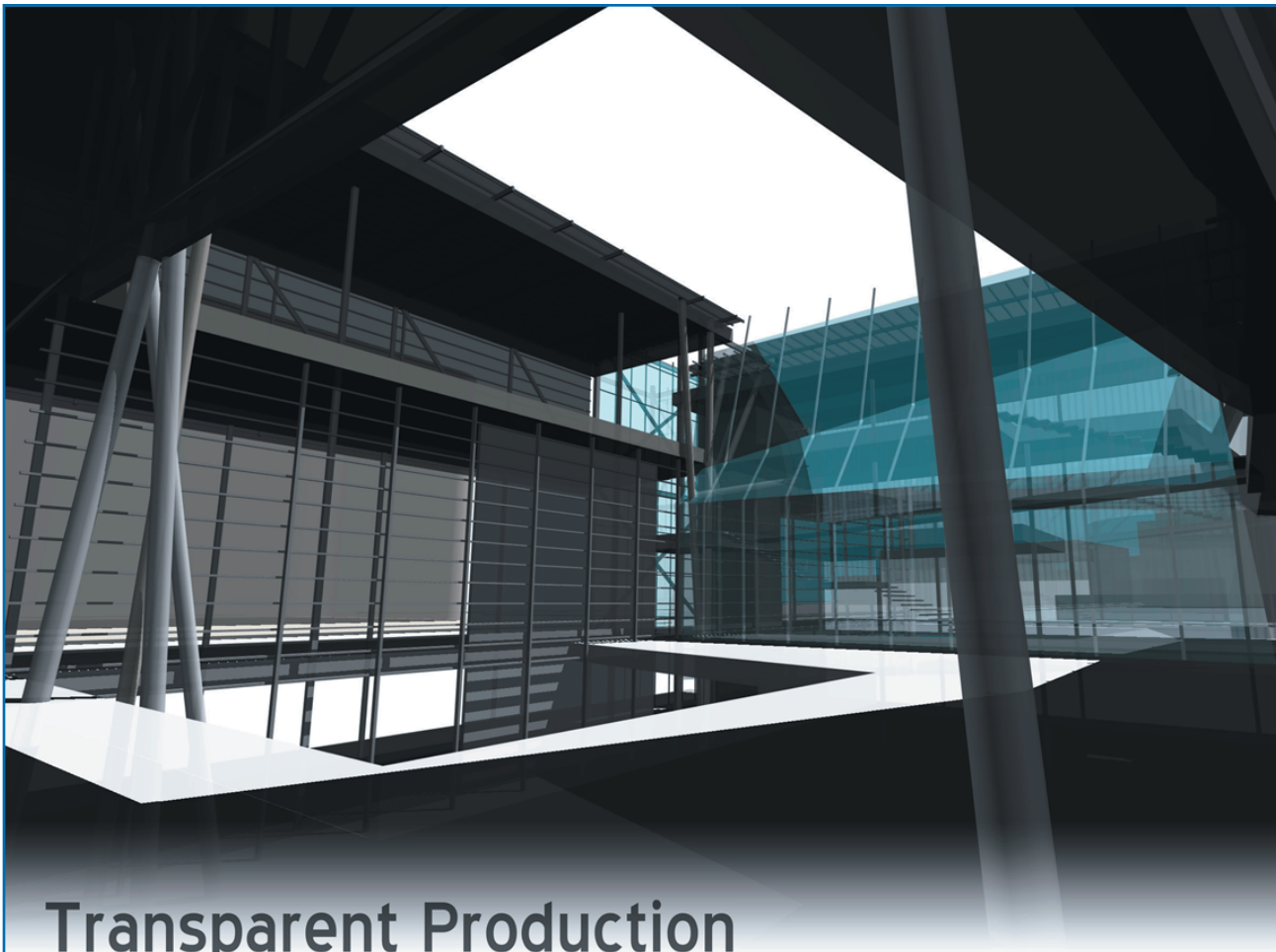
Transparent Production

The satellite auto facility was designed to showcase and expose the production process of a twenty first century car. By focusing an audience on these transformations, it will help them quantify the volume of resources that go into the fabrication of a car. The formal vocabulary of the project evolved from an honest expression of programmatic requirements for car production, site considerations, and how to best express this in the structure and skin of building.

Reasons for the nomination:

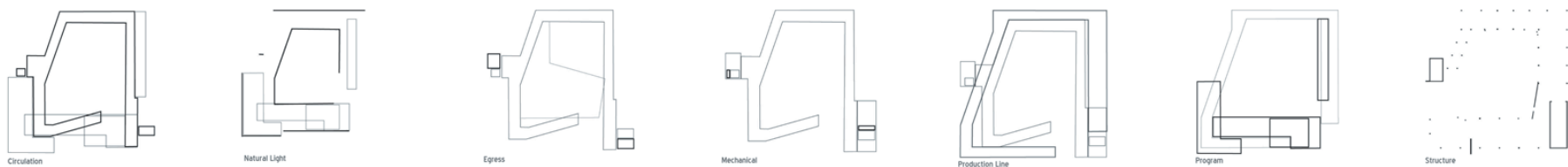
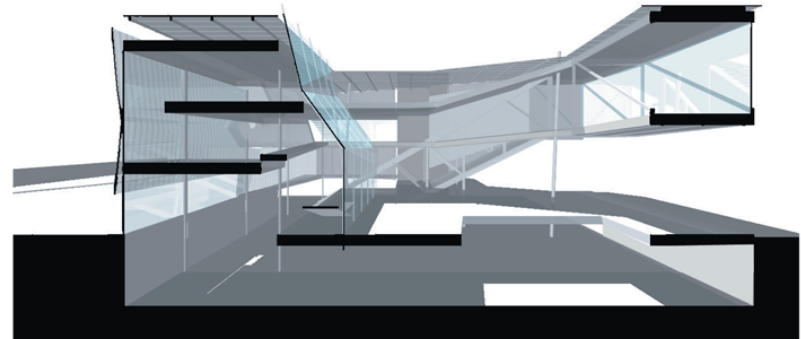
Even though this student's use of **form•Z** was from two years ago, he did an excellent job using the software to provide spatial insights into his project that would have not been possible if he would have worked only with physical models. What I believe is most impressive about his project in the convincing qualities to the immersive views of space and the believability regarding the functional aspects of project along with the seamless integration of building into the context of the surrounding industrial environment of the site.





Transparent Production

A facility to showcase and expose the production process of a twenty-first century car.



Regional Connection

The satellite facility is located in Pasadena, a city situated at the foot of the San Gabriel mountains and at the terminus of highway 10, the first freeway in the United States. Built specifically to frame picturesque views of the San Gabriels for its drivers as they drove to the suburbs, the Pasadena freeway signaled the triumph of the car as the public's primary means of transportation. Today, Pasadena is defined by long orthogonal boulevards and freeways which provide orientation and access to its wide suburban footprint. However, the San Gabriel mountains still preside over the grid of streets, giving the sprawling city a sense of place.

The satellite car production facility fills the buildable envelope of the site, responding to the program requirements and the orthogonal grid of the street system. A second grid modulates the interior space of the facility and references the San Gabriel mountains visible in the distance. (above right) The facility's massing and program also engage the tectonic shift occurring in Daly Genie's art center, both in plan and elevation.

To reinforce its connection to the art center's campus, the satellite facility's entrance is located on its north side. The north elevation seeks to further engage the art center in a dialogue across the parking lot by playing a game of 'show and tell'. The glass cased production line cantilevers over the entry, framing the process of car assembly in a hand like gesture. The bold south facade seeks to equal the daunting presence of a high security water treatment across the street while grabbing the attention of drivers exiting the adjacent Pasadena freeway.

A Focus on Ecology

According to Keith Armstrong, a self titled 'ecosophical artist', "The responsibility of the Ecophical artist is to make technological work accessible to a broad public, developing interfaces that allow satisfying access to content and its means of generation."



The assembly line depends on the continuous and efficient flow of materials from their various sources into a final product. While most people are familiar with the car as an object, few are aware of the processes and materials employed in one's construction. Focusing an audience on these transformations may help them better quantify the volume of resources that go into the fabrication of a car.

A Shifting Container

The satellite facility still retains the spacial and structural connection of the original vocabulary studies. As adjacent planes shift, the holes and gaps that occur at their edges allow vertical space to slip between them, revealing deeper layers of space. A network of linear structure opportunistically threads through these gaps, sometimes avoiding the planes and sometimes running through them. (Show slanted columns)



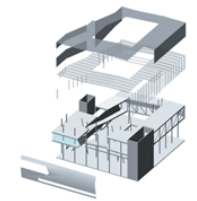
Another element persisting in the developing vocabulary of the project is the rectangular tube as a container. Visible in early vocabulary studies, the tube has become a container for vertical circulation as well as the main assembly line of the facility. The building's skin also takes the cue, wrapping itself around the northern elevation of the facility and framing the car production occurring inside.

Program and Circulation

The program is centered around the concept of showcasing the robotic production line to the occupants and spectators of the facility. This is accomplished by wrapping services and public facilities with the production facility, immersing these spaces in the process of production. Car fabrication takes place in the building's skin, beginning below ground level at the southeast corner of the site and gradually rising to the top of the envelope after traversing the boundaries of envelope. Finished cars are then lowered onto trucks by the same gantry crane that unloads raw materials at the beginning of the process.

Wrapped Surface

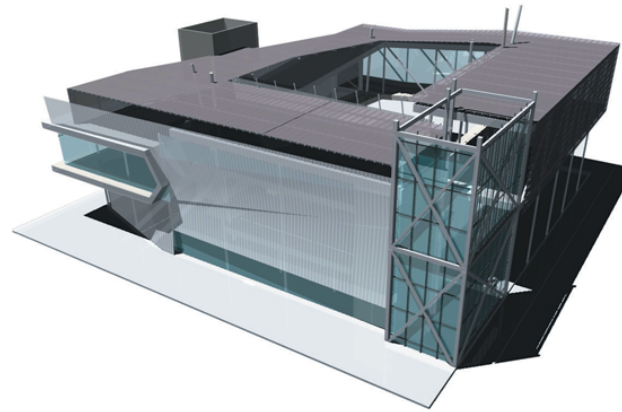
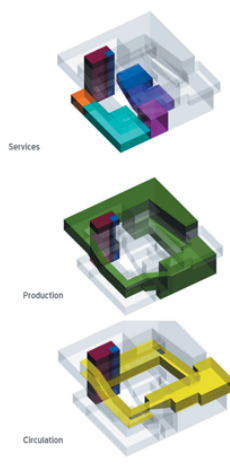
Closely adjacent to the southeast corner of the facility is the terminus of the Pasadena freeway, interstate 10. This freeway, California's first, responded to the increasing popularity of the automobile and its use as the primary mode of transportation between the city and the suburbs. Today, it continues to carry a high volume of daily traffic, making the south facade of the facility highly visible to Pasadena drivers.

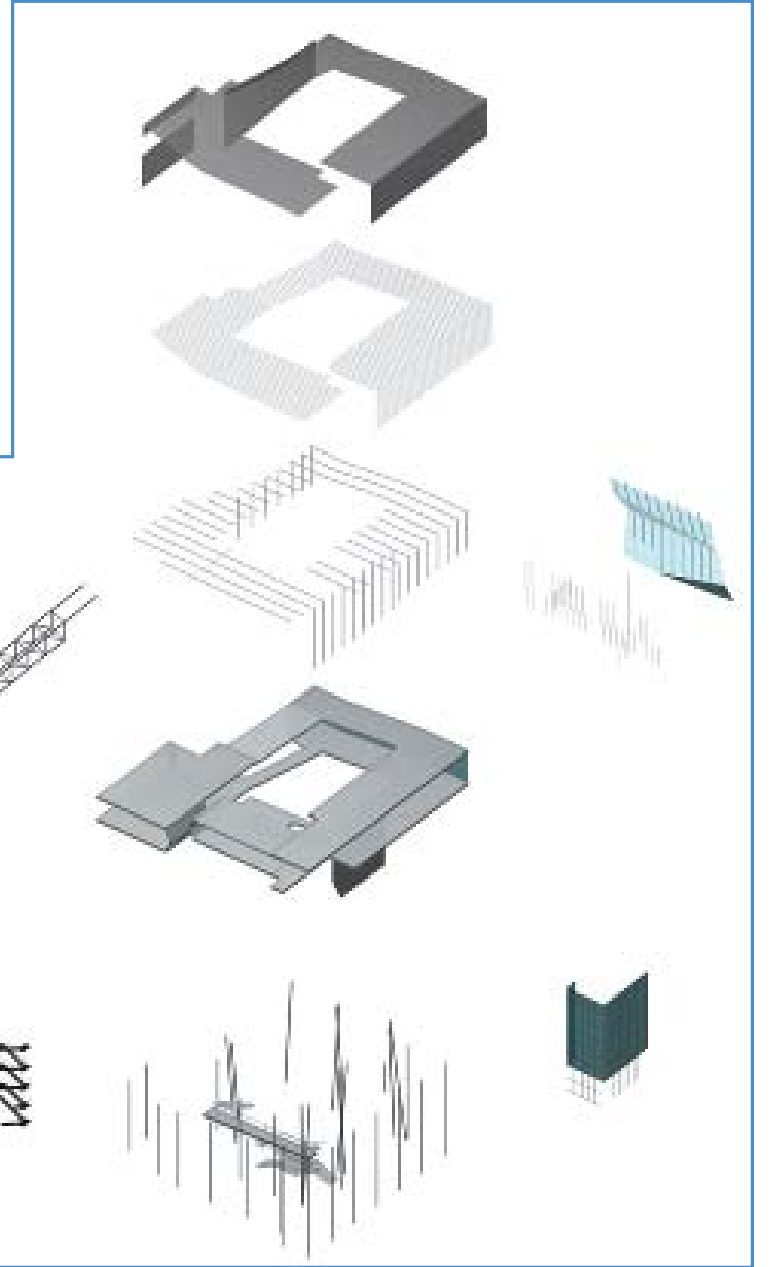
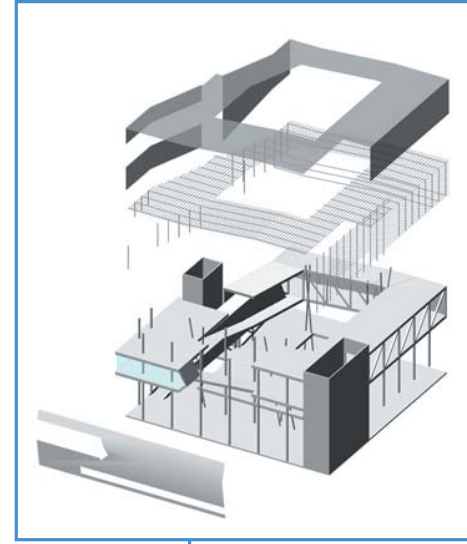
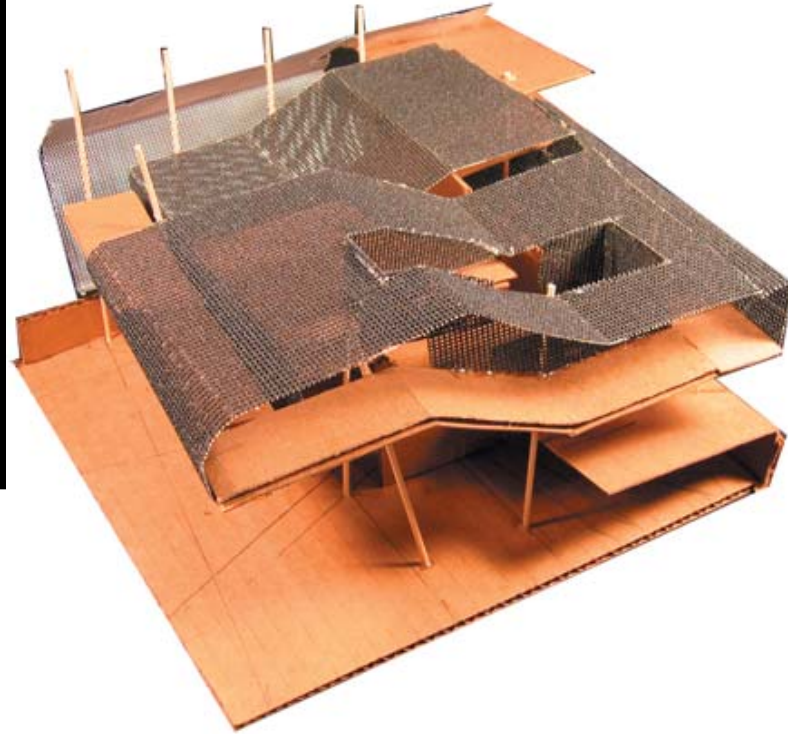
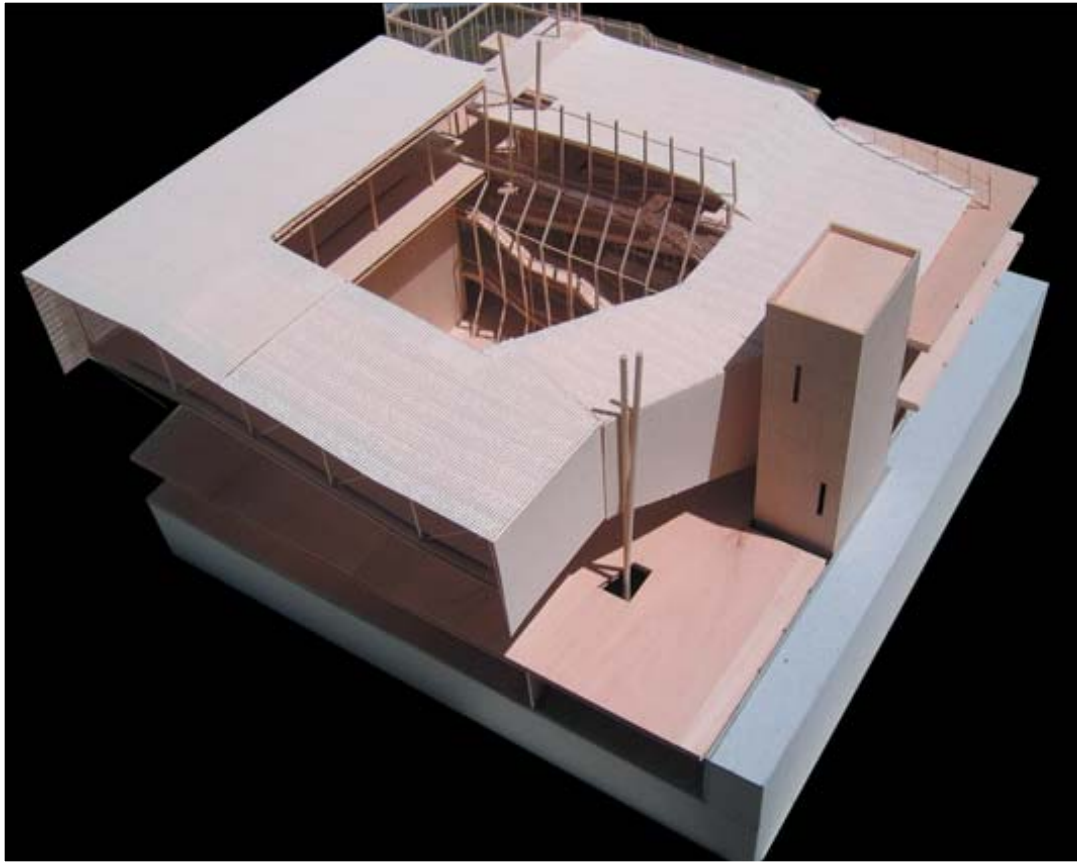


The south skin serves as a billboard showcasing the production occurring within. Its translucent channel glass assembly glows and flashes blue as robots weld, and the line of cars itself can be seen through a low gap in the facade. The cladding in the east-west direction of the facility wraps from wall to roof and then back to wall, conforming to programmatic requirements underneath. Its thin sectional width allows for variable transparency through perforation, while alluding to the thin outer shell of a car.

The north face of the facility is completely transparent, framing the final stages of car production for onlookers from the Art Institute. The box frame inside the cantilevered wing is located behind mullion-free glass and is painted a visually recessive color, rendering it invisible during the day and silhouetted by night.

Inside, steel columns protrude through and around floor plates at skewed angles, pervading the facility and unifying the spaces within, as they reach roof level, smaller members branch from them to provide the roof canopy with support.





Jury comments:

The notion of transparency has been explored in this project in an intriguing fashion. Transparency in this project goes beyond the merely visual and embraces the conceptual, the procedural, and the programmatic aspects. Deep layering, spatial interlocking, and a commitment to restrained architectural dialectic make this project a compelling proposition. The project is driven primarily by a combination of programmatic concerns that aim to expose the process of production of the automobile “in the skin.” **form•Z** seems to have been utilized quite effectively. The animation drives the designer’s point home by revealing the inner spatial and programmatic complexity. **—Mahesh Senagala**

