

Elevated Learning

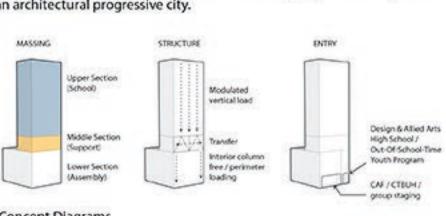
Center for Architecture, Design and Education

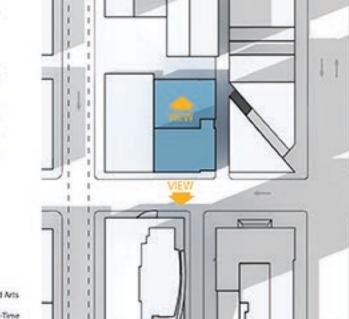
Programmatic spaces are distributed into (3) sections of the building with the primary learning spaces, Design & Allied Arts High School / Out-of-School-Time Youth Program, elevated above the CAF / CTBUH & shared spaces. This strategy enhances the quality of natural light & views to the educational spaces and creates opportunity to learn from the building structure as it adjusts to accommodate the program requirements. The (3) sections of the building concept are summarized below:

- Lower section includes the large assembly spaces such as the auditorium and gymnasium along with CAF retail spaces and CAF / CTBUH exhibit spaces. These spaces are predominantly public and/or shared, have a high turn-over rate and are close in proximity to the street.
- Middle section supports the administration needs of all user groups, the school dining hall and a cafe adjacent to the lower roof deck. The structure & its expression corresponds with the program by supporting the vertical load above and transferring it into the exterior walls - leaving the gym space below column free.
- Upper section is the youth program & high school learning spaces with a shared observatory / rooftop garden. The concrete jointed timber frame structure contributes to a warm interior environment and reduces the carbon footprint (as compared to a reinforced concrete or steel structure) up to 75%.

Separate entries for CAF / CTBUH and Design & Allied Arts High School / Out-Of-School-Time Youth Program provide necessary security measures between these functions. Vertical circulation connects the shared spaces within the (3) sections of the building (primarily the gymnasium, auditorium and outdoor areas). The classroom spaces are adaptable for various programs / subject matters with operable white boards, mobile furniture and break-out zones. Views are extended throughout interior spaces to encourage a spirit of collaboration. With both the high school and youth program located in the upper section, further optimization can take place as the relationship evolves over time.

The high-rise portion of the center will be introducing two new elements to the architectural character of the city. The design will be the first timber and high school high-rise in Chicago. The center pays homage to the height and orientation of the typical high-rise in Chicago while adding new layers with structure and the blending of programmatic elements. The building will standout as a progressive design in an architectural progressive city.





High School

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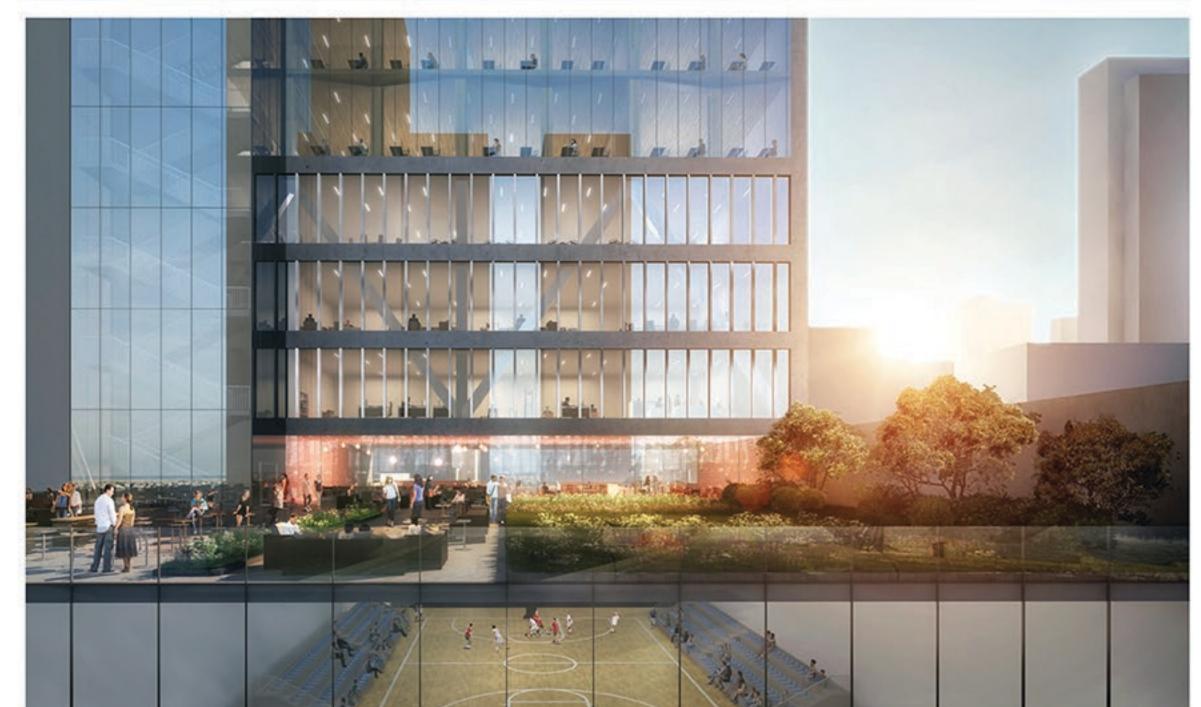
Youth Program

Youth Program

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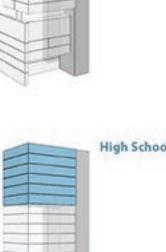
Youth Program



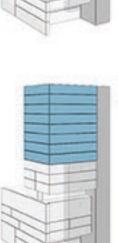




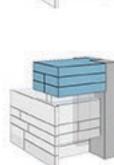
Youth Program Urban Garden CAF Roof Deck & Observatory



High School Learning Spaces (24)



Youth Program Learning Spaces (30) Youth Program Culinary Department



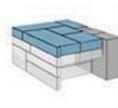
CTBUH Administration CAF Administration **High School Administration** High School Dining Youth Program Administration

vent Space (Indoor/Outdoor)





High School Locker Rooms



CAF & CTBUH Exhibit Space CAF Temporary Exhibit & Support **CAF Learning Spaces** CTBUH Library & Lounge







Natural Light & Views

Building orientation maximizes southern exposure and views to south & north. Narrow floor plates & floor to ceiling glass on unobstructed elevations allow natural light to fill interior space.

Energy Efficiency & Fresh Air

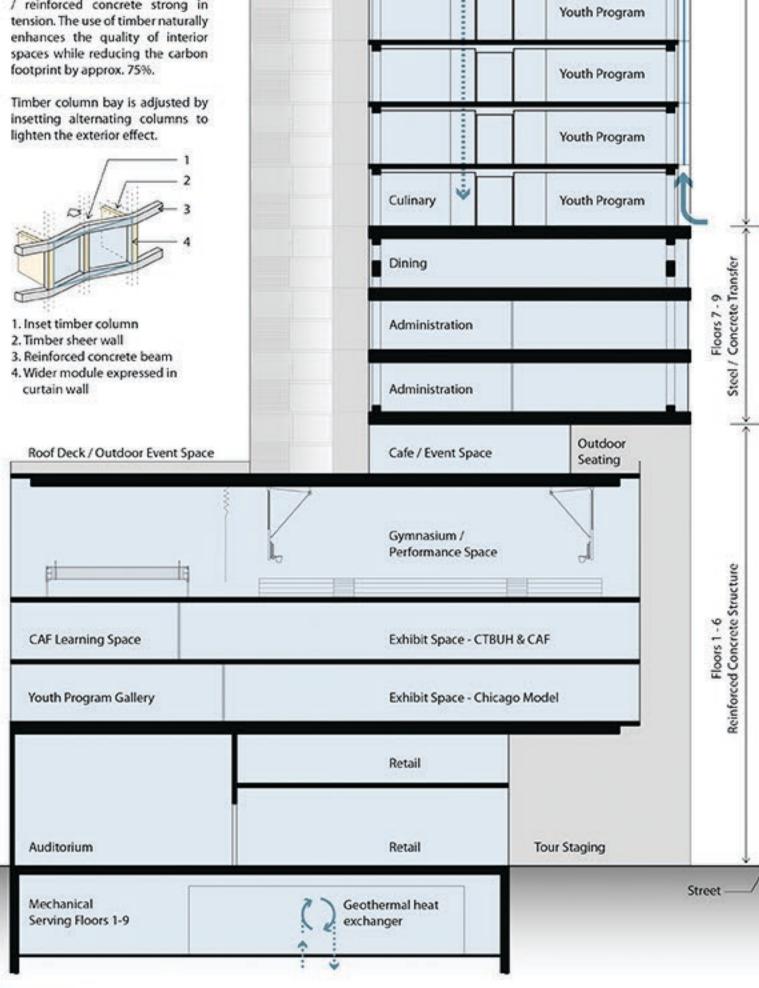
South facing double-wall system, at floors 10-24, serves as a buffer to seasonal conditions and allows tempered fresh air into the mechanical system during winter months for increased energy efficiency. Dampers release hot air during summer months and bring in cooler air through the roof stack. The cooler air is created by the micro climate conditions directly above the vegetated garden (which is preserved by the high parapet walls).

A vertical closed loop geothermal system economizes the heating / cooling loads for floors 1-9.

Structure

The selection of structural systems is closely linked to the programmatic function of each section. The lower section requires long span column free spaces and the middle section transfers the loading to accommodates this requirement.

Concrete jointed timber framing in the upper educational levels provide learning opportunities concerning material properties: wood being strong in compression / reinforced concrete strong in



Alley