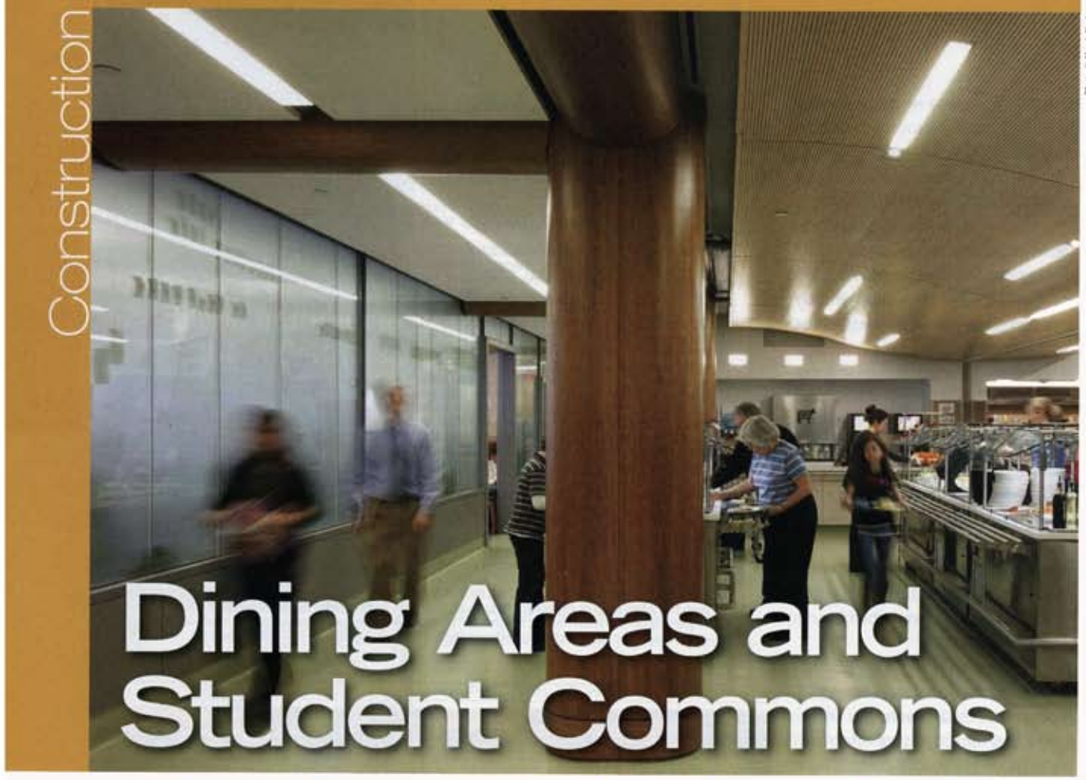

Photo © Chuck Choi

Dining Areas and Student Commons

An academic crossroads where nature meets culture.

Peter Matthews, AIA

The Dalton School, a noted, private K-12 school located on Manhattan's Upper east side, recently completed a complete renovation of its central dining and student commons. The Dalton Plan, a progressive teaching program put forward in the 1920's by the school's founder, Helen Parkhurst, called for a combining creative freedom with traditional disciplines, inspired a number of Dalton Plan schools in Europe and Great Britain. To better serve over 1,200 student and faculty lunches, the design needed to solve an acutely congested central corridor and provide more adequate space for circulation and dining. As a counter-point to the urban setting, nearby Central Park inspired a natural or outdoor space conception for the commons to update Dalton's founding progressive spirit.

Dalton Middle and High School students, grades 4-12, occupy this 12-story structure as a vertical, urban campus. The school congregates for morning assembly at the ground-level school theater, for lunch at third-floor dining and student commons, and academically at the tenth-floor library. Students circulate between classes, either by elevator or by one of the fire stairs located along the east and west sides of the building. Since the school day is spent largely in smaller, classroom-scaled spaces, the goal was to open up the commons floor for a relaxing sense of expansive space with natural light.

Opening the floor from the north to the south meant eliminating the central corridor. Meeting fire safety code requirements for a place of assembly required "area of refuge" vestibules — east and west — leading to the fire stairs. Glass fire doors, linked to the fire alarm system, close providing a fire separation for 200 people to exit the floor safely.

Before the renovation, corridor congestion was most acute where the food pick-up line formed — at the plate and silverware pick-up station. Further along the food pick-up route, more congestion was being caused by cross traffic to and from the dish-drop window, located in a far corner of the dining room. The new plan relieves congestion by reversing the direction of the food pick-up route, which relocates the plate/silverware pick-up

Photo © Chuck Choi

BEFORE

AFTER

To open the congested floor, the food pick-up line was reversed, relocating the forming line away from central corridor traffic.

station away from the corridor. Also, the pick-up and drop-off routes have been separated by relocating the dish-drop window so that it is convenient to students as they leave the floor. Space planning analysis revealed the need to relocate the dishwashing station, which triggered a full redesign of the kitchen. Though it was risky to disturb the kitchen's operational status quo, resolving it promised to make the floor safer by eliminating a door near the cook line in the kitchen that opened onto the egress corridor.

The kitchen redesign allows students to have a direct visual connection with the food and its preparation. The hot food servery area, at the entrance to the kitchen, is large enough to avoid congestion, yet the dining room opening is sized to limit kitchen noise. A big breakthrough came when it was determined that operationally, the separate front serving line and rear cooking-line kitchen areas could become a single open-galley kitchen. This solved the floor plan requirement option to park all food serving carts in the kitchen.

Architecturally, the visible center kitchen has been designed to look like an oven. For this effect, the kitchen floors and perimeter base are a durable quarry tile with warm earth tones that visually support oven-like, hand-made wall tiles set in a staggered pattern. Though narrowly framed, the kitchen's welcoming view from the dining room inspires regular use of the center kitchen for after-school cooking classes.

Through the entire process, the school and the design team endeavored to make the project as efficient and as environmentally sensible as possible. Mechanical, electrical, and plumbing systems were refined producing overall savings in water and energy. All new kitchen equipment is energy efficient. For example, an effective new sink disposal unit greatly reduces food waste, daily rubbish, and magically eliminated a kitchen dumpster. Pursuing a LEED rating was forgone when a phased construction schedule limited project credits.

Dalton requested that salad and other healthy food options be made prominent for students arriving for meals. The salad and sandwich bars, which had been served from a large fixed unit, evolved in the design process to become a number of rolling carts to be parked in the dining room. These manageable-sized units were custom designed with the capability to be parked in the kitchen serving area, giving the option to free the dining room of all food service equipment. Several sliding door systems, designed to pocket fully into the wall, provided flexibility to use the space for private meetings or general school events. Stacking chairs and flip-top rolling tables made the much needed flex space possible.

The new plan retained a table

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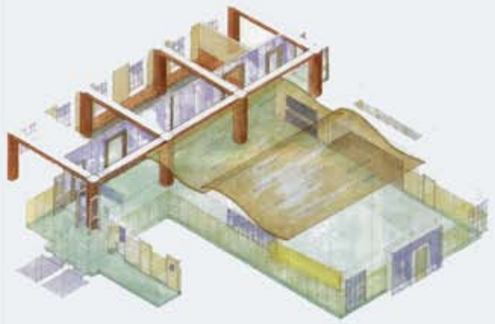
The oven-like kitchen welcomes views of food preparation, enlivening the lunchtime experience. Alternatively, the salad and sandwich carts may be parked in the kitchen, behind sliding doors that close the kitchen opening.



Watercolor illustration © Peter Matthews

This view shows the cherry-millwork Loggia Frame that reaches east to west, overlooking the street, where it meets the Wave Ceiling, playfully floating north to south over the central dining area.

layout and circulation routes similar the earlier dining room, registering a minimal increase in the total seating count. However, the new plan did increase the area per seat (including circulation area) from 9.5 sq. ft., to the industry standard of 15 sq. ft. per seat, which noticeably increased the use of every seat. Beyond actual measures of useable space, the design objective was to create a sense of expansive space. Optimizing that sense meant not just to open the space from north to south, but also to design an expansive gesture east to west as well.

For balanced educational setting, the design means to express basic concepts of "culture" and "nature" as shorthand for the school's traditional and progressive dual aspects. Elements of the building's structure that intrude on the renovated space have instead been made a virtue by incorporating them into the new architectural design. Several columns interrupting the space inspired the Loggia Frame, the east/west porch-like area overlooking the street reflecting the building's exterior classical façade. In a sense, it signifies "culture" and Dalton's traditional aspect with its cherry-wood millwork that wraps these columns and beams with warmth, durability, and classical character. By contrast, the north/south floating wave ceiling over the dining room provides acoustical absorption, hiding two oversized structural beams spanning the space. This natural undulating ceiling form represents "nature" and the school's progressive aspect, with its welcoming maple-wood undulations adding a playful atmosphere to the busy school day. Together, the crossing of these axes, define an academic crossroads where nature meets culture.

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