EDUCATION
DESIGN PROCESS

“revealing of truth through **artistic making** (of place)”

We are makers + problem solvers dedicated to designing environments unique to each client. We apply creativity and strategic analysis to invent places that are dynamic and foster a culture of collaboration + innovation. Making a place meaningful requires good listening extensive planning and responsive design. Making a place requires that the ideals and goals of our clients are reflected in the constructed environment; and that the constructed environment has integrity. Environments made for our clients have many common characteristics; the site and building are in harmony, the chosen means and methods of construction are well thought out and detailed, and the interiors have a rational identity, a reassuring character, and are experienced in meaningful ways.

THE DESIGN PROCESS:

We believe in a process. Wonderful and usable buildings cannot be made without the clear vision and guidance of the client working in critical unison with the architect. We employ collective rather than singular intelligence in this making. Our process is holistic involving many layers of information and participants at one time. We believe the core acts of the architect are the creative selection, organization, integration and articulation of systems about the ideas, ideals and daily use of the inhabitant. Our art is the discovery of external and internal logics derived from this exploration. It is the needs of the inhabitant, in the context of site circumstance, that lead to a masterful articulation and expression of landscape, light, materials and systems. The result is a vision that is unique and

project approach|process

innovative educational planning

We plan and design school facilities for today and tomorrow with one primary goal in mind — to improve learning. Not only are we architects, but we are change agents for creative learning communities. We approach every project with innovative strategies and 21st century learning principles that are backed by research.

The world into which students will enter is a technologically-driven global playing field and it is highly competitive. Students need to be prepared to be agile and lifelong learners so they are capable of adapting their skills to new and emerging career pathways. We are dedicated to designing educational spaces that enable such goals to succeed.

We sincerely believe that students have unique learning styles and their needs and interests vary. The factory model of the 20th century cannot effectively facilitate student-centric learning. Twenty first century learning environments must be varied and adaptable to meet the student's needs.

"We now have abundant evidence from the frontiers of brain-based research that learning is not linear, but holistic, and that it is not uni-dimensional but multifaceted.

As we move into the post-knowledge economy, we should be looking beyond the "knowledge worker" who in now a global commodity. Our most valuable export as a country will be creativity and innovation and these skills are not developed in the cells and-bells model of school."
- Fielding Nair International The Language of School Design

innovative educational planning

twelve 21st century learning drivers

Global Network, or World as School

Learning is no longer confined to the classroom or school facility. Through technology, the World is brought to the student at any place and at any time. Rather than serve as passive consumers of information, students are thinkers, seekers or understanding, and producers of creative content. Clay Shirky, in his book 'Cognitive Surplus,' notes that for the first time in the last 50 years, young people are spending more time creating content and sharing it through the internet than they are in passively consuming media through television. The world now has a surplus of creative thinkers and content providers available to it to solve the problems of our globe.

Community as School

The school can share community resources in many venues, including libraries, museums and sports facilities. Students can connect with local businesses through internships and work-study programs. Communities can share school assets like performing spaces and campus parks, creating activity and safe places for all. At many schools, senior citizens gather in the central gathering spaces on a weekly basis to mentor students in reading.

Shared Asset Campus

Students can effectively share a campus, including athletic, performance, and food service facilities. 21st century learning principles support the value of multi-age groupings. The idea that students should all be segregated by age is arbitrary, and akin to the industrial age idea that students of the same age should be siloed in a classroom. We all learn differently and at different paces. Multi-age groupings and campuses allow students to learn at their own pace, and serve as mentors to younger children.

Learning Teams/Shared Spaces

The model of one teacher to 25-30 students shifts to four or six teachers to 100 to 150 students in a small learning community. Teachers, organized into Professional Learning Communities, work together as a team to nurture a group of up to 150 students. Teachers have shared work spaces and meet regularly to facilitate the use of a varied suite of spaces for lecture and presentation, small group rooms, wet and messy space and gathering space. Flexible space and movable furnishings allow for more varied and customized use of the learning communities.

Self-directed Learning

Sugata Mitra, Professor of Educational Technology at Newcastle University (UK) has proven through replicated research that students can teach themselves. His paradigm shifting "Hole–in the Wall" studies show that students need each other to learn, but do not require a school facility or even teachers. The key to success is engagement and collaboration with peers, and access to information through technology. He demonstrated remarkable results in learning language and even biochemistry through self-directed programs in informal learning settings outside of school building. Surprisingly, educational outcomes decreased when the same programs were implemented inside tradition school buildings.

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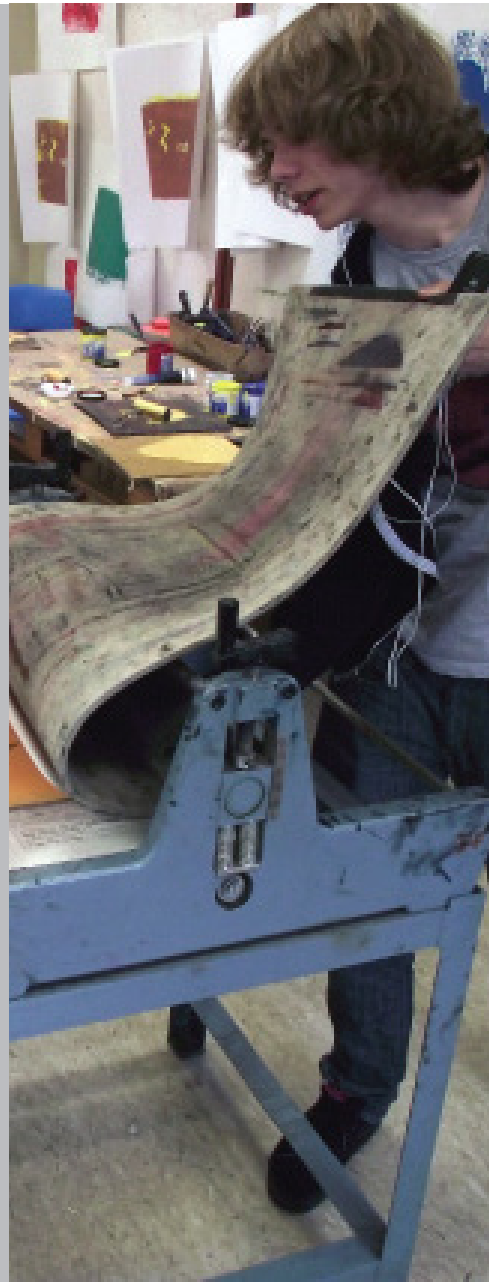

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Nature as School

Engaged students love to be out in nature. A popular saying in cold weather communities is that "there is no such thing as bad weather, only bad clothing." Through thoughtful curriculum planning and the right clothing, students can learn outdoors in any weather. Effective outdoor learning spaces with shade, storage, and seating can typically be constructed for 25% of the cost of enclosed, heated space. Simple measure like the construction of mudrooms, boot rooms and storage space for equipment for outdoors activities can extend the breadth of learning facilities dramatically at minimal cost.

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Data-driven

Global, National and Provincial metrics in science, math, language arts, social studies and history are all important in a globally connected society. International Baccalaureate, Advance Placement, national and state standards are all part of the mix. The application of these various standards to the individual learner is both a challenge and an opportunity. By using software with algorithms that track each student's progress, tests, homework, independent projects, collaborative projects, lecture attendance, peer and tech adult tutoring, scheduling and space utilization can be maximized. In the School of One program in NYC, each student's daily progress is tracked through software based on business intelligence, to show their progress in meeting both their personal learning goals and state standards.

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Interdisciplinary

Innovation in science, business and culture often come through the blurring of boundaries between established fields. Today's global citizens require skills in multiple areas of study in order to solve complex social and technical problems and innovate new ideas and services. Curriculum and spaces must support this exploration with flexibility and customized design. Science, Technology, Engineering and Math (STEM) centers are in development around the world as response to this trend towards interdisciplinary studies. FNI's Davinci Studios have been developed to serve the needs of Science, art and Invention in an integrated indoor-outdoor space, where various kinds of wet and messy projects can be staged and rapidly re-configured.

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Personalized

The idea of a child-centered versus teacher or curriculum-centered approach to education is widely accepted around the globe. We all learn differently and at different times. Personalized or differentiated learning is an inclusive approach that allows all learners to be successful. Harvard Professor Howard Gardner identified nine different kinds of intelligence, all of which are equally important to society. The typical 20th century "factory model" of school only supported two of these types effectively, verbal and mathematical. Many students are more engaged though a kinesthetic, musical, or collaborative intelligence. Varied learning environments that provide spaces for all nine intelligences can afford significant savings in space, since many types of space outside a conventional classroom can be used effectively—small spaces between other spaces, circulation spaces, outdoor spaces and nooks are all equally effective in a personalized learning environment.

Inquiry and Project-based

We all learn faster and with better retention when we are personally engaged; the significance of this concept has been documented through the empirical research of psychologist Mihaly Csikszentmihali and shared widely in his book called "Flow." When we pursue a question or project that engages us personally, rather than follow direction from a prescribed work sheet or lecture, we function at a higher level, as our mind, body and emotions are all working together in a flow state. World As School, Community as School, Nature as School and learning spaces of varied size and quality support individual inquiry and projects more effectively than classrooms that are designed for lectures and 25 students. The use of varied spaces and environments outside the school building not only increases student engagement, it also means less reliance on traditional school facilities.

Culture of Excellence

Research has shown that hard work trumps native talent in successful educational outcomes. Ron Berger, in his book An Ethic of Excellence, illustrates this by creating a culture of excellence, wherein students critique each other's work, and will often go through 22 drafts of a project to get it right. Academic outcomes from Ron's programs have demonstrated that success is based on a passion, hard work and accountability, not excessive equipment or facilities. Many of the projects that Ron's students engage in are outside the school facility, relying on local community resources instead. A culture of excellence begins with adult leadership, and then is taken up by the students through peer mentoring, which takes place before, during and after school, efficiently leveraging student homes and community facilities.

Safe and Secure

During the last five decades, anthropologists have shown that we can only feel truly connected to a group of 150 or less. Breaking down the scale of schools into small learning community of 80 to 150 allows students to get to know other students and a small group of teachers while reducing isolation and bullying. The small learning community model is an efficient spatial organization, where corridors that might be used to connect larger groups can be used for leaning and interaction. The learning community model facilitates learning teams, collaboration and shared space, which can function effectively in 20% less space than a traditional cells and bells classroom / corridor plan. The concept of "eyes on the street," where all learning spaces are visible to adults, though transparent, permeable edges, means that all spaces can be fully utilized.

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master planning

-engaging your community to create a unfied vision

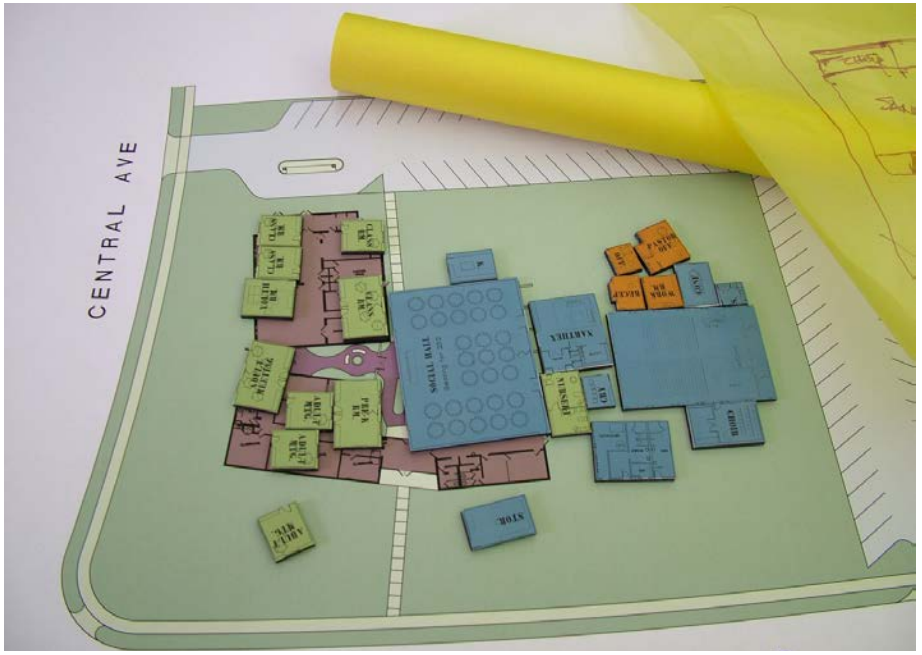
studioTECHNE|architects emphasizes a collaborative community based process for evaluation and design involving Administration, Staff, Board Members, Community Leaders, and Stakeholders to gain input and consensus.

A successful project requires input from as diverse group as possible so that planning and design issues are constructed from a number of different points of view allowing our Clients unique insights from a diverse point of view. The first step in working with a client is Assessment and Programming.

Assessment and Programming is a research and decision making-process that provides the client and architect with a clear definition of the scope of the project and the criteria for a successful solution. The building program evolves from discussions, questionnaires, and workshops that establish the Owner's goals, facility standards and guidelines, construction standards and budget requirements. We lead our clients through a series of questionnaires and workshops whose purpose is to build consensus and develop the project's requirements. During this time, the project team collects the information required to develop a detailed statement of need and establish goals. This review allows the community to gain a detailed understanding of their requirements and goals for the project, and includes:

- → Review of the current facilities to understand their opportunities for meeting program need.
- → Conduct interviews to understand the requirements for meeting the client's needs.
- → Develop a series of questionnaire for each need that will:
  - > Define Human Requirements, Social Movement + Proximity Patterns
  - > Define Strategic Priorities
  - > Identify Special Purpose Facility Requirements
  - > Identify Facility Amenities
  - > Define Support Spaces + Storage Requirements
  - > Data + Telephone system requirements
  - > Establish + Define Equipment Standards
- → The above evaluation will allow us to develop a summary of spatial and operational requirements for the review and acceptance by the client.

Critical to this process is a **Design Charrette.**



A **CHARRETTE** is a planning exercise designed to facilitate an open discussion between all of the concerned persons of a given building or planning project. A charrette is usually a short process, which results in a clear, detailed, realistic vision for a project's development or utilization. There are three main parts to a charrette:

→ **Exploration and Issue Identification:** Stakeholders and the design professionals meet to explore the property (e.g., building, site, and neighborhood) and discuss the various issues that are important to the development of the project. Items discussed will include but not be limited to the following:

>Priorities and Goals for the Project.
>Relationship and Interaction with the Neighborhood.
>Site Utilization and Site as Learning Environment.
>Parking and Accessibility to and between Buildings.
>Affect of Growth on the Facilities and movement of Individuals through the Facility.
>Maintenance Issues of Buildings and Grounds.
>Accessibility Issues within the Buildings.

→ **Design:** Charrette members and design professionals sketch and discuss different schematic images to represent numerous design solutions that take into consideration the issues discussed in step one: building typology, design elements, green spaces, landscaping, parking, recreation, traffic, safety, sustainable development and water management, to name just a few.

→ **Implementation Plan:** The design professionals prepare documents summarizing the vision and present it for adoption as a guide for present and future development.

This is a participation-based process and includes numerous options for Charrette Members to offer their input and comments and express how the proposed designs address their particular development issues. The major benefit of a charrette is the interaction that the design team has with the members of the community, and the opportunity for the community to come together and arrive at a shared goal. A charrette quickly identifies individual and group concerns, allows debate on these issues, and formulates these ideas and concerns into a coherent vision for the Project.

feasibility options

The results of the charrette are categorized into separate groups or families that have similar characteristics. Typically, these families of solutions fall into the three categories, renovation and addition, partial demolition and addition, and new building designs. Distinctions among each design in a family are noted, including compatibility with the program and likely costs. The Client assists in ranking the solutions in order of potential and success in resolving the key facility issues.

selected approach

After discussion and comparison, a preferred design approach emerges as the most suitable. This design undergoes further development and evaluation. We work with the Stakeholders to determine suitable building systems and materials that are appropriate to the building program and develop the Project Budget, which includes construction costs (labor and material), as well as the project costs (moving costs, temporary facility costs, site acquisition cost, costs for testing and permitting).

conclusion

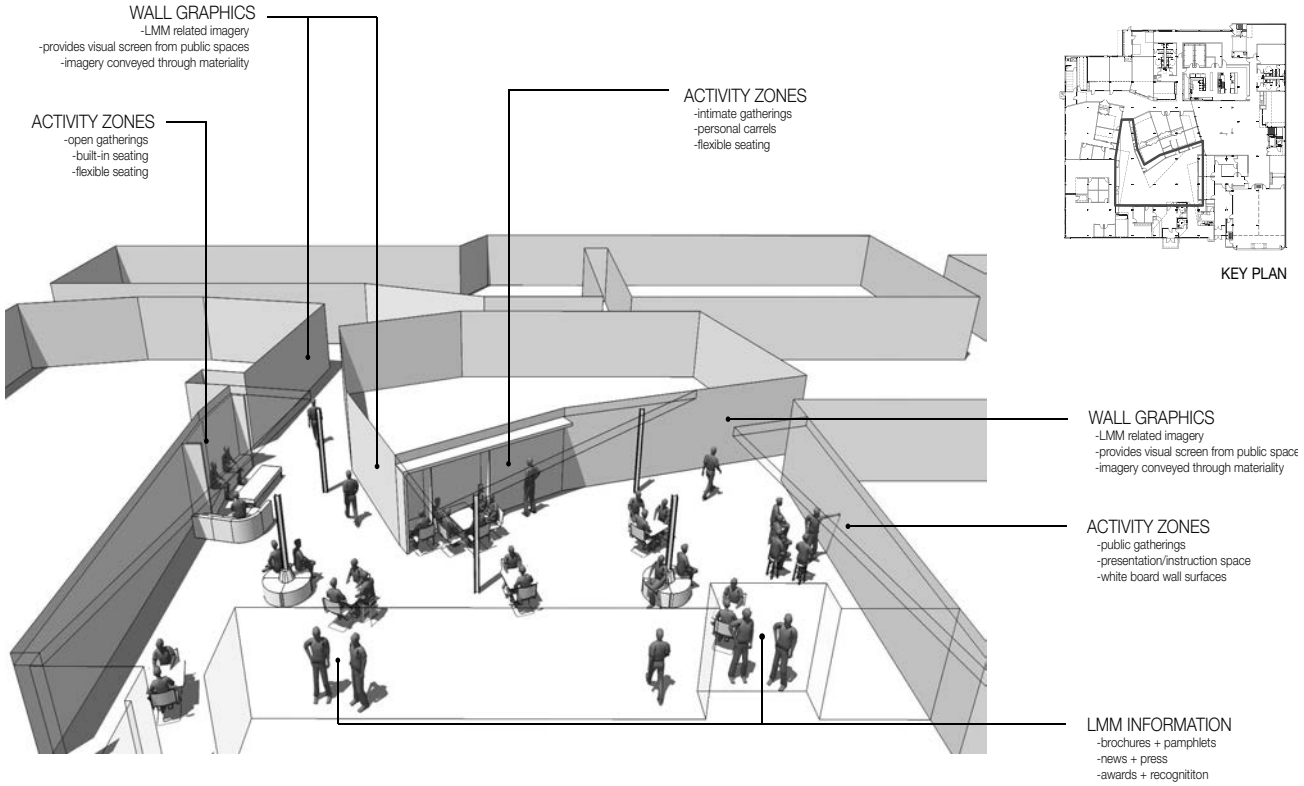
Our methods of engaging a community in a public process with a clear recording of issues and concise documentation of evaluations provide persuasive evidence of the due diligence and sound background of the decision making process that are critical for boards as they build consensus and make decisions for a project. Ultimately, this project will rely on the generosity of others for funding, and these carefully recorded documents provide a comfortable basis for decision-makers (funders) in their review.

processes to maintain creative engagement

In addition to direct involvement in our Project Management Program and Project Website, studioTECHNE has always found creative ways to continually engage our clients throughout the project. We have worked with client groups as large as 100 in community design charettes, small group project tours with stakeholders and project donors, to one on one meetings where drawings and decisions are reviewed in great detail. In addition, we continue to stay involved with our clients long after the projects are complete. studioTECHNE works with physics students at Shaker Heights High every spring on tower and bridge projects, and provides a yearly lecture and workshop to the students at the Cleveland Institute of Art. This process begins with an initial meeting with the client where we will review opportunities and determine the frequency and type of events necessary and design a process specific to the project and inclusive of as many people as possible.

Discussions surrounding building use typically involve scale models of the space, furniture blocks, visualizations, and activities where departments are able to use blocks and diagrams to design their own areas. These tools provide unique ways to "see" other possibilities in a building environment and allows students to become engaged in the process of design.

Another of the recent tools we have added is the use of a web cam during construction. Its use allows our clients and their staff to watch the daily progress of the project and created a lot of excitement surrounding the construction of their new offices.



ARIAL VIEW OF COMMON AREA

KEY PLAN

process

Our approach begins with a rigorous and data-driven engagement process. All stakeholders are given meaningful opportunities to directly participate in the process of visioning and planning the district-wide master plan. A variety of tools are used to solicit their input from best practice workshops to focus groups and online surveys.

Developing a district-wide master plan requires extensive public engagement. This process seeks not only to gain input, but it also helps to gain public support. In this day and age, it's difficult to get people out for seeking community input. An "active" public engagement process is needed. This will require multiple meetings and sessions throughout the community in an effort to make it convenient to the public.

The Project Team emphasizes a collaborative community based process for evaluation and design involving Administration, Staff, Board Members, Community Leaders, and Stakeholders to gain input and consensus. In addition, we will employ online surveys and project blogs to provide many avenues for seeking community input.

To make sense of all the data and input that is gained through the public engagement process, we will have regularly scheduled meetings with the decision-makers to give updates on the pulse of the community. A final Discovery Report will memorialize the results of all the workshops, focus groups, surveys and will provide a clear blueprint for moving forward. The Report will be clearly written and backed by supporting data, giving the decision makers the necessary information for making decisions which will positively affect the community for generations to come.

The focus of the Programming Assessment will be on improving the user experience and maximizing the efficiency of the delivery of service.

initial meeting

- ◊ Introduction of Design Team and School Participants
- ◊ Design Team and Hershey Montessori discuss their respective roles in the project.
- ◊ Design Team provides a Project Overview and discussion of the process
- ◊ Client identifies "givens" and specific needs including, required operational efficiencies and savings, difficulties, dreams and goals.
- ◊ Communication protocols including possible team, staff, and community electronic methods e.g. wikis, blogs, surveys, etc.
- ◊ Provide meeting Minutes and a Timeline

acquiring + assessing data

- ◊ Acquire relevant information during the initial meeting
- ◊ Review Hershey Montessori's past strategic planning information and data germane to facilities planning
- ◊ Perform a physical inventory of the front and back of house areas of the school
- ◊ Meet with Administrators, Staff and Parents to identify goals, obstacles and opportunities.
- ◊ Onsite Observation of drop-off and pick up activities, classroom and building function and use, study use of outdoor education areas

forums + discussions

- ◊ The process will require a number of forums and discussions for vetting collected information. We will prepare agendas and meeting invitations.
- ◊ Facilitate Community Conversations and Surveys and School Administration and Staff conversations and Surveys
- ◊ Facilitate Parent Forums to identify needs and expectations regarding services and facilities
- ◊ Facilitate Teacher Forums to identify needs and expectations regarding services and facilities
- ◊ Review outcomes with Administration and compare with pedogogy, programmatic planning and direction, reaching agreement on core functions basic to the facility
- ◊ Prepare a review of the current facility demonstrating how it supports or inhibits the delivery of service and education experience, and the buildings opportunities or liabilities to be renovated and expanded to meet need.
- ◊ Develop meeting graphics and diagrams including maps, floor plans, cue cards, user experience surveys, and compile into a report.

facility size

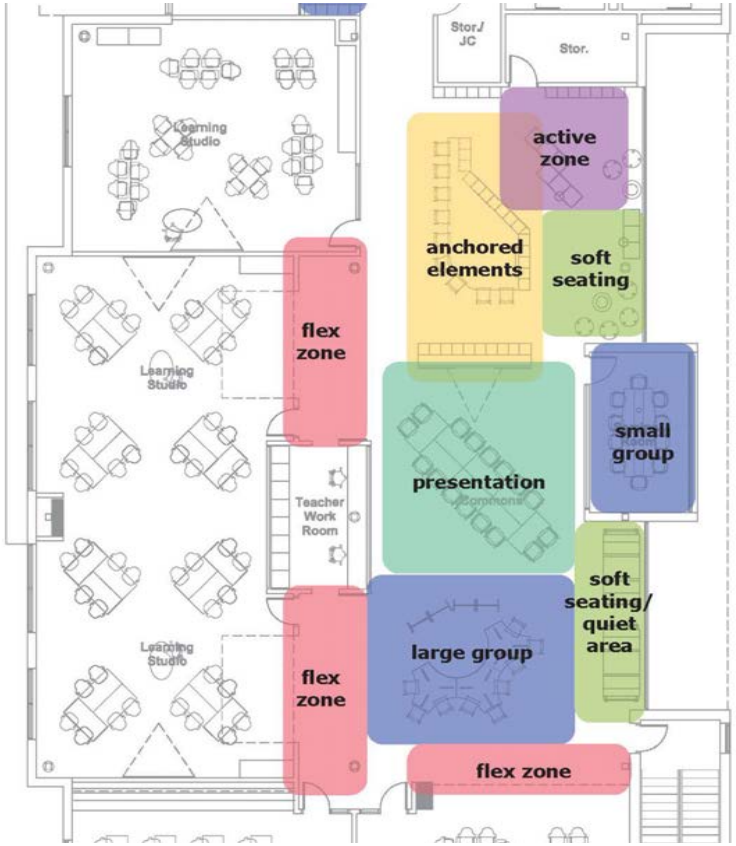
- ◊ Based on Pedogological, Operational and Community Criteria we will determine the proper size of renovated or new facilities and their ability to meet the service model.
- ◊ Identify core building functions/spaces
- ◊ Prepare space needs spreadsheet for each required activity
- ◊ Project growth needs based on student enrollment and programmatic

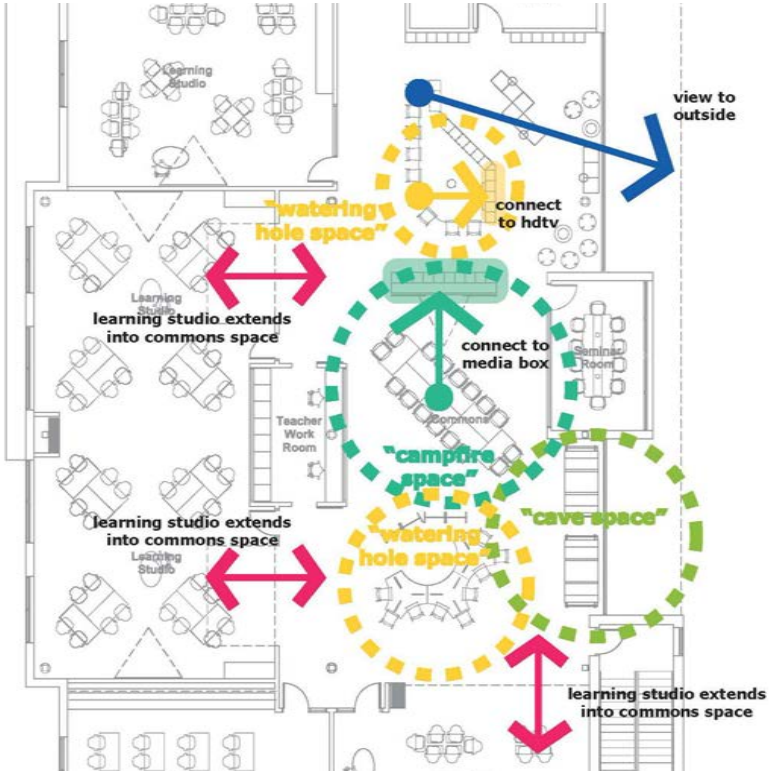
elements

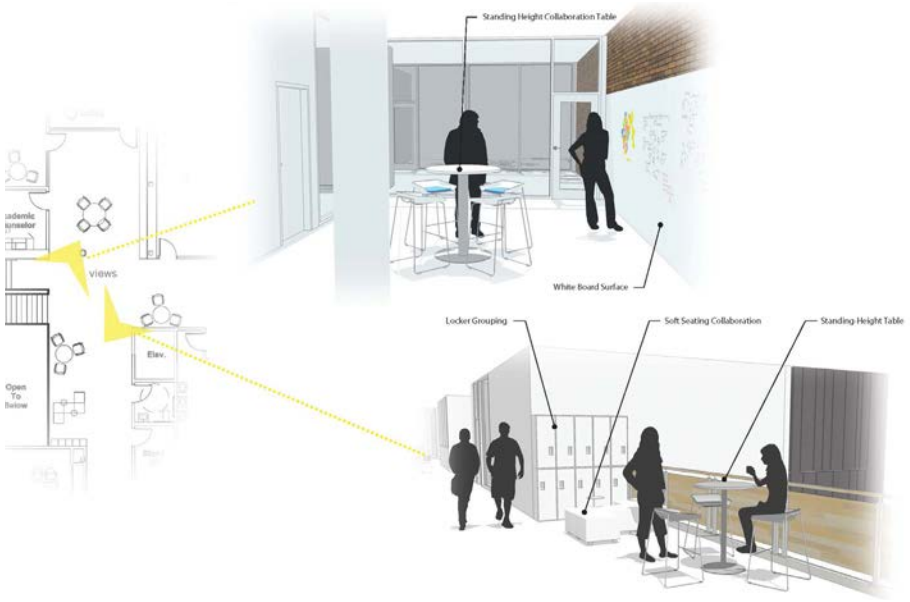
- ◊ Provide graphic diagrams of required spaces along with furniture, fixtures, equipment and IT needs.
- ◊ Provide floor plans and other diagrams that describe the function and flow of spaces and their relationships.

budgeting and opinion of cost

- ◊ Develop construction budgets, including escalation rates, for each development opportunity determined be included in the Assessment + Feasibility Study
- ◊ Develop operational costs and energy usage analysis for each design
- ◊ Develop cost estimates for Furniture, Fixtures and Equipment (FF&E) for each design.
- ◊ Provide budget spreadsheets.
- ◊ Meet with the executive committee and board to discuss and refine the options.

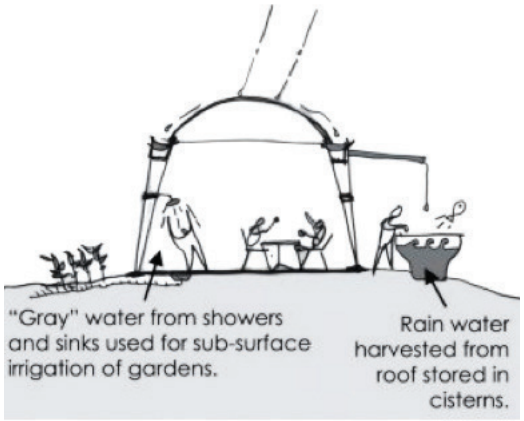






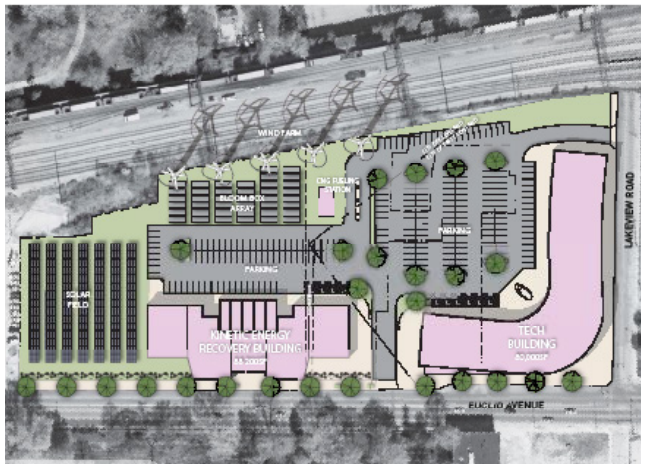
sustainable design

high performance building design



It is our responsibility as human beings to take care of the environment and to leave it in as good or better shape for future generations. For the first time in history, this young generation faces a world that is no longer sustainable. Students must learn a respect for the earth, and sustainability must be the foundation of any curriculum. As educators and facility planners, we are obligated to set the example, and provide a learning environment that is responsible.

We approach every project with a sustainability focus believing it is our responsibility to plan and design buildings that provide healthy environments, reduce waste, and have a low-impact on the environment. Schools are particularly important for sustainability. The buildings themselves can serve as hands-on teaching tools. The Beaumont Environmental Center a consortium of the Boy Scouts, NASA and The Natural History Museum exhibits how easily sustainable elements can be integrated into curriculum and how an building systems and site can be educational tools.

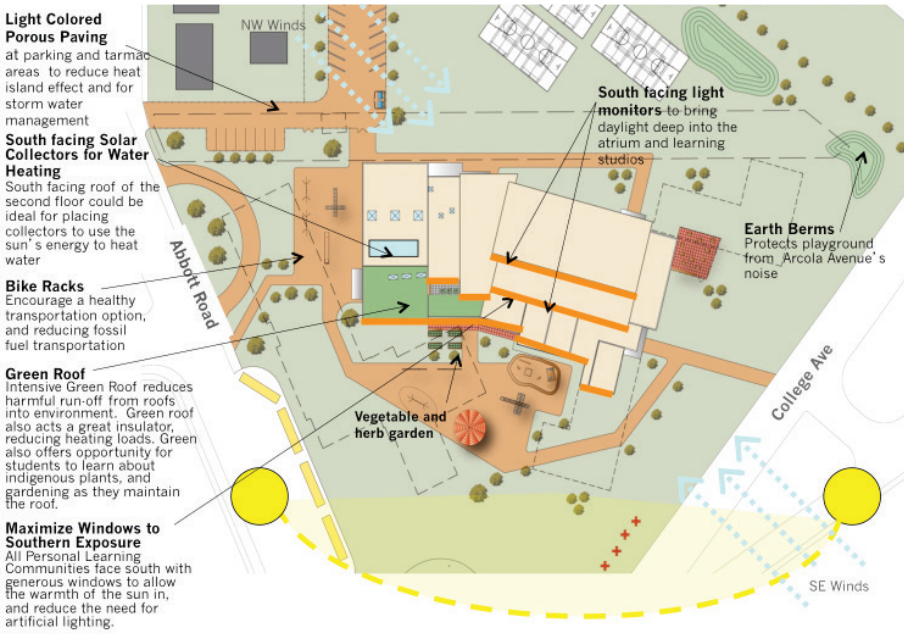


Right: Sustainable Structured Parking? CSU's South Garage is a LEED Silver Parking Structure that generates all the power it needs and provides charging stations for electric cars and racks for bicycles.

Left: Master Plan for the Kinetic Energy Recovery Building and Energy Research Center for Case Western Reserve University. The facility relies on a number of energy generation techniques, including solar, wind as the most visible, and kinetic recovery of energy from the movements of fluids.

studioTECHNE is currently working on a team to design an innovative new power plant for Case Western Reserve University as part of the university's commitment to cleaner sustainable sources of energy. The foundation of this system will be a building and site dedicated to Kinetic Energy Recovery, utilizing the motion of fluids (water, gas, air) vehicles, and people to develop a facility capable of generating 60 megawatts of power without burning fossil fuels. The facility relies on recovered energy from the movement and compression of fluids to spin turbines and generate electricity. The university will also occupy research space in the facility allowing continued opportunities for advancement and innovation.

We work within our clients sustainable strategies. For SMART Hotels this means understanding your comprehensive environmental policy, strategic goal of sustainability and commitment to carbon neutrality. studioTECHNE also reaches out to the wider community and provides a connection between our clients and regional and national activities. We work with our clients to develop and leveraging existing community partners to develop partnerships and internships for students that will provide resources for improving the overall energy efficiency and potentially power generation by the school facilities. For instance, at a recent sustainability workshop that we conducted at Magnificat High School in Rocky River, students identified the Old School Architectural Salvage located in Cleveland for salvaging parts from demolition, diverting the material going to landfills.



Above: Sustainable strategies for a cold climate - south facing windows solar collectors for hot water and green roof for insulation

Above: Beaumont Environmental Education Center in Ashtabula naturalized vegetation and wildlife habitats provide learning opportunities for students.

Above: Community Assessment + Treatment Services, uses carefully placed windows for day-lighting and building orientation for solar water heating

Above: Power generation and water heating from the roof provide over 80% of the energy requirements for Beaumont Environmental Education Center

schematic design

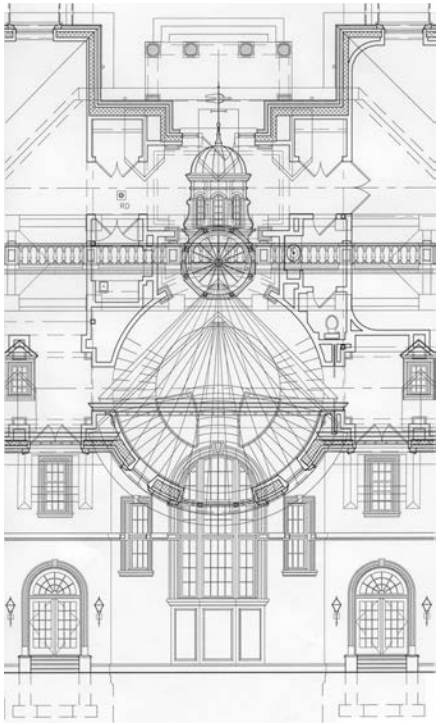
Schematic Design will build on the information collected during Project Evaluation, and will develop the tangible expressions of the physical building options. The project team will develop the design approaches beginning with conceptual sketches, diagrams, and models of building massing and planning, and culminating with presentation-quality drawings and three-dimensional models. The design process continues the involvement of the school community with a second design charrette. Stakeholders participate in a one-day design seminar, where the conceptual ideas form and are challenged. This charrette provides an additional platform for members of the congregation to become involved in the design process and take "ownership" of the project. Allowing the design dialogue to continue in an open forum is a very valuable process for communities who need to develop consensus and then rely on fund-raising efforts for construction dollars.

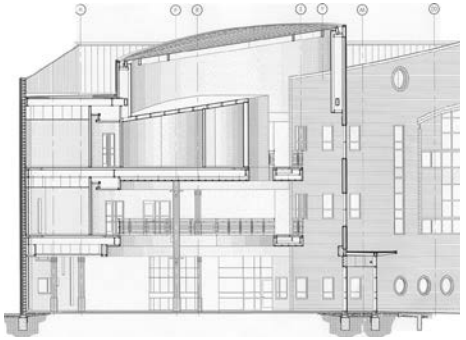
- Design Charrette with the School Community;
- Construction of Study Models and 3-D Computer Graphics to convey Design Concepts;
- Preparation of Schematic Floor Plans, Elevations, and Building Sections;
- Preparation of Schematic Interior Design Drawings, Color and Material Selections;
- Review Sustainability Goals, and begin LEED Documentation;
- Review of the Schematic Work with Authorities having Jurisdiction (Zoning, Planning, and Architectural Review Boards);
- Development of Conceptual Structural, Mechanical, Electrical Designs and Systems;
- Update the Opinion of Probable Construction Cost to ensure decisions follow Established Budget Guidelines;
- Final Fund-raising Drawings and Models; and
- Periodic Presentations and Reviews with the School Community.

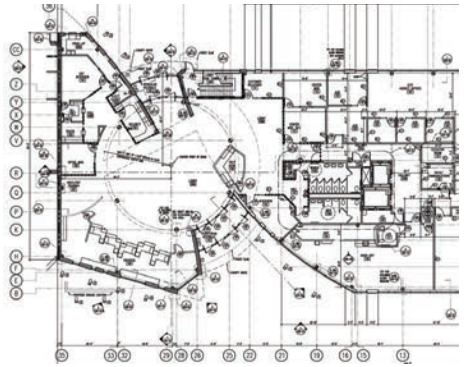
design development

Design Development begins the transition from Design to Construction. The documents prepared during schematic design continue to develop, construction means and methods are explored and added to the documents, building structural, mechanical and electrical systems are refined and coordinated into the project, specifications are written that describe the quality standards required for the construction of the building, and exterior and interior material selection are finalized. The work of this phase will fix and describe the project pertaining to all architectural and engineering components, materials, colors, and other elements as may be appropriate to the work.

- Develop Final Floor Plans, Elevations, and Sections of the Work;
- Develop the Specifications Detailing Performance and Quality Standards;
- Update Sustainability Goals, and continue LEED Documentation;
- Develop for Approval, Final Palette of Materials and Color Selections;
- Develop Final Interior Design Drawings, Color and Material Selections;
- Develop Final Selections of all Fixtures, Furniture and Equipment;
- Develop Final Structural, Mechanical, Electrical Systems, Designs and Plans;
- Regular Review Meetings with the Owner; and
- Actively Review and Evaluate the Opinion of Probable Construction Cost, and Inform the Owner of Decisions affecting the Project Budget.







construction documents

Upon approval of the Design Development Documents, and the Opinion of the Probable Cost of Construction, the production of Construction Documents begins. Utilizing the work developed previously, we will prepare the drawings and specifications detailing the project's requirements for construction. These documents are used by regulating agencies to permit the project, and by the Contractor to bid, and construct the project. Ultimately, the building marketplace determines the final cost of the construction project. The documents will have been carefully prepared with various alternates, which provide value engineering and the flexibility to consider added features, while ensuring the project is delivered on budget.

- Prepare Final Construction Drawing Plans, Elevations, Sections, Details and Specifications;
- Prepare Final Interior Design Drawings and Document the Selection of all Fixtures, Furniture and Equipment;
- Owner Review at 50% Complete, 90% Complete, and 100%;
- Update Sustainability Goals, and Finalize LEED Documentation;
- Finalize Site Utility Tie-ins and impact on Adjacent Properties;
- Finalize and Coordinate Structural, Mechanical, and Electrical Systems, Designs + Plans; and
- Provide Value Engineering Analysis, and Alternates for Bidding.

project delivery

project delivery

We have had the great opportunity to work with many of the local contractors and subcontractors in northeast Ohio. We are pleased that many of the contractors who have worked on our projects continually solicit us for work, and many have requested we partner with them on design|build work, or on the design of their offices. This is the direct result of our commitment to provide accurate thorough construction documents on our projects, and the respectful way we manage ourselves during the construction process. We work on project teams that best suit our clients and their projects, and our clients benefit from our experience working with general contractors, construction managers, construction estimators union or non-union. Our goal in project delivery is ensuring the construction team has the most complete information so that construction proceeds smoothly with few conflicts or questions.

phasing

Renovation and expansion inevitably involve the planning for construction phasing and possible temporary relocation for the period of construction. Depending on site conditions and the capacity of the existing building, the phasing can be as simple as completing an addition, relocate into the addition; renovate the existing structure and a final move to complete occupancy. If the site is severely restricted or the expansion space is small, phasing may have to occur in a series of moves, effectively requiring the client to maintain operations while construction is carried out around it and enduring several moves at the end of each sub-phase to complete occupancy. The latter scenario is inevitably more costly than the new building alternative and there usually must be compelling financial reasons. studioTECHNE has the tools and resources to analyze the costs associated with phased construction and advise our owners on the best solution.

For example, the Cleveland Heights University Heights Public Library found that relocating their entire main library during construction to a vacant school building would cost them $250,000 for the 18 months their facility was under construction, the analysis provided by studioTECHNE showed they would save $1.2 million dollars in construction costs through efficiency gained by not having to phase the renovation of their facility.

contract administration

construction admin + project closeout

Construction Administration follows the consideration of construction methodology, coordination of construction schedules, and logistics for site operations. studioTECHNE works closely with the client and contractor in the administration of the construction contracts. Through WEEKLY on-site observation and attendance at all construction meetings, we will review the progress and the quality of the work and its conformity with the quality standards established by the construction documents and the construction contract.

Jim Duber and Marc Ciccarelli both worked as carpenters during college, gaining extensive experience on construction sites. We have developed methods of controlling construction costs and schedules through hands-on, non-adversarial involvement with the contractors. The client is best served when a partnership between architect and contractor is developed, a partnership that promotes a respectful dialogue and allows the contractor to become a partner in the project working towards the Owner's goals. Good communication between all parties is critical to the success of the project, and to ensure the client's goals continue to be represented; the person most familiar with the project – the project manager, handles construction administration duties. The events that occur during this phase include:

- → Shop Drawing and Submittal Review
- → Weekly On-Site Construction Observation and documentation of Meeting Minutes
- → Provide technical assistance to the Owner and Contractors
- → Review Contractor's application for payment
- → Prepare Substantial Completion Forms
- → Final Walk-through and prepare and issue a Punch List
- → Warranty review
- → Start-up assistance
- → Post-construction evaluation

on-site observation

studioTECHNE provides WEEKLY on-site observation and attendance at all construction meetings, we will review the progress and the quality of the work and its conformity with the quality standards established by the construction documents and the construction contract. Construction Administration meetings are attended by the Project Manager, who also manages the construction administration activities. We believe this is critical to maintaining project continuity and ensuring decisions made on day one are represented through the construction process.

Complex projects demand consistency. studioTECHNE establishes a design team that is maintained throughout the project with direct involvement of a principal throughout. We understand that the unique characteristics of this project are best pursued in a manner that promotes the interaction of ideas and facilitates the quick transfer of information. Our studio approach allows for rational decisions about design and effective decisions relating to budget and schedule. Key to all phases of this project will be the cooperative interaction between the Client and the architectural/engineering team.

PERSONNEL:

We are very excited about this opportunity and have assembled a talented and well qualified team that has world class experience and a thorough understanding of your community. Our combined team has extensive knowledge and experience in 21st century learning best practices throughout the world, understands the local ethos and can leverage local educational partnerships, and has the technical and engineering experience specific to educational facilities. We have clearly identified our roles so that we can seamlessly work together in providing you a sustainable solution that will last for generations The project team is as follows:

key personnel|lead team members

marco ciccarelli, architect
principal

professional history and experience:

Mr. Ciccarelli serves as a principal partner for the firm, responsible for project and firm management, planning, design, project research and client development. He works directly with our clients during Programming and Design, providing innovative solutions in a collaborative approach to preserve the unique characteristics of each client. The best design solutions arrive from an interactive dialog of ideas and information which allows for rational design solutions and effective decisions relating to budget and schedule. The firm's dedication toward design comes from knowing the decisions made during the design process directly effect our client's success. Because of this, and the impact of design and planning decisions on our environment and the quality of life, Mr. Ciccarelli leads the office research efforts on education as well as "green" developments, as they relate to our clients and the improvement of the built environment. His membership in The Collaborative for High Performance Schools as well as work with the Knowledgeworks Foundation ensure the firm is on the cutting edge of advances in education theory and application.

key projects:

cleveland sight center > outdoor classroom + nature interpretation center, highbrook lodge, chardon OH

ginn academy > master planning and design, senior high school, cleveland OH

greater cleveland council bsa, natural history museum + nasa > environmental education center, beaumont ERC, ashtabula OH

lutheran west high school > classroom + gymnasium addition and renovations, rocky river OH

st. paul lutheran church + school > pre-k and k-8 addition and renovations, westlake OH

hawken school > middle school master plan, additions and renovations, lyndhurst OH

j.r. coleman family services, inc > early childhood education + family support center, canton OH

education:

pratt institute > master of architecture, 1990
kent state university > bachelor of architecture, 1989

awards + honors:

cleveland aia > design competition
the next age of discovery > u.s. pavilion for expo 02
the new england holocaust memorial > design competition

registration:

ncarb certi☒ed > registered architect #10238, ohio
ncarb certi☒ed > registered architect #41449, michigan
leed AP

community + professional activities:

> american institute of architects
> aia committee on architecture for education
> collaborative for high performance schools
> aia committee for the environment
> ncarb
> national association for the education of young children
> cleveland initiative for education
> u.s. green building council
> entrepanuers for sustainability
> cleveland tomorrow
> the sculpture center board
> congress for new urbanism

jim duber, architect
principal

professional history and experience:

Mr. Duber is a vice president of studioTECHNE and as a principal partner for the firm, he is responsible for all facets of office and project management. Through providing professional service for projects in seven States and The District of Columbia, Mr. Duber brings a sophisticated level of knowledge to the design and construction process. His special areas of concentration include Project Design and Delivery, Code Compliance (including the ADA), Construction Document Production, Contract Administration, and Construction Management. A certified plans examiner, Mr. Duber has spent extensive time attending code compliance seminars and writing code interpretations for over $400 million dollars worth of construction projects. His managerial skills serve to balance the firm's dedication to quality design, consistent documentation, and sound business practices.

key projects:

case western reserve university > staley house + sae house renovations, cleveland OH

notre dame college > new south + infill dorm buildings, south euclid OH

hawken school > middle school master plan, additions and renovations, lyndhurst OH

lutheran west high school > classroom + gymnasium addition and renovations, rocky river OH

st. paul lutheran church + school > pre-k and k-8 addition and renovations, westlake OH

ohio department of natural resources, CCC campus > educational and training facility, kirtland park, cleveland OH

columbiana county board of mr/dd > new board offices, east liverpool OH

cuyahoga county commissioners > broadway neighborhood and family services, new facility for welfare reform services, cleveland OH

heights library - lee road> complete renovation and addition to existing library, cleveland heights OH

education:

virginia polytechnic institute and state university, washington-alexandria center > master of architecture, 1992
miami university of ohio, school of architecture > bachelor of environmental design, 1988

awards + honors:

the building museum, washington DC > 1992-95, group exhibition of architectural design,
university of cincinnati, college of design, art, architecture & planning > first place in "the search for shelter" design competition, 1988
solar '87: 12th passive solar conference > "daylighting design guidelines: roof monitor with adjacent reflector wall" paper accepted and published
2007 golden trowel award > Hawken Middle School
northern ohio live, Award of Achievement > Heights Library

registration:

registered architect #11104, ohio

certifications:

international code council > combination plans examiner
board of building standards > master plans examiner

professional membership:

> international code council
> b.o.c.o.n.e.o.

kelly stinson, architect

senior associate

professional history and experience:

Mrs. Stinson's experience on projects with diverse backgrounds provides Ms. Stinson, a strong understanding of client need and spatial experience. Her work has evolved to include a variety of project types, with a focus on master planning and design for educational facilities including medical education, environmental education as well as spaces for religious education. In her recent work on the Beaumont Environmental Resource Center she demonstrated great sensitivity to meeting the unique demands of students engaged in environmental research and education. This project, and projects like it become essential in the development of young minds, and in allowing students to take the necessary steps toward understanding their own impact and involvement in the environment. Additionally, her focus on the quality of construction and budget has been indispensable for our clients in grasping project economics and its impact on design. It is this ability to incorporate social, financial and aesthetic components in our projects which makes her approach to architectural inquiry unique.

key projects:

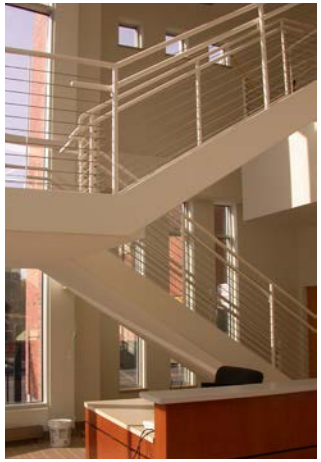
st. martin de porres > innovative 21st century learning center for high school students cleveland ohio

case western reserve university > staley house + sae house renovations, cleveland OH

mt. sinai clinical skills + simulation center > surgical simulation center and medical education facility for CWRU school of medicine + the cleveland VA, cleveland OH

ch-uh city school district> pilot classroom, roxboro middle school + oxford elementary, cleveland heights OH

hawken school > early childhood center addition and renovations, lyndhurst OH



education:
kent state university> bachelor of architecture, 2003
kent state university> bachelor of science in architecture, 2002

registration:
leed ap bd+c

community + professional activities:
> adjunct professor, college of architecture and environmental design, kent state university
> u.s. green building council
> entrepreneurs for sustainability

jessica powell, architect

associate

professional history and experience:

Ms. Powell began her architectural career in Boston designing and documenting the construction of large passenger ocean liners. Highly detailed work focused on providing the highest quality of personal experience for people traveling aboard these ships. Jess brings this same attention to detail and understanding of spatial experience to all our projects. Her work with Lake House Condominiums a 10 story 20 unit high rise building on the shores of Lake Erie focused on solving 60 years of deferred maintenance and repairs. She set in place a comprehensive plan that will restore the building and correct numerous flaws in the original construction all while being sensitive to the needs of the residents. For Hawken School, Jess worked extensively with the client to preserve and restore the best characteristics of a 1917 building and construct a state of the art community to support early childhood education on the west side of Cleveland. Jess's ability to understand the dynamics of the land marked building were critical to the success of the project.

education:
university of cincinnati > bachelor of architecture, 1999

registration:
ncarb certified
registered architect: ohio 1817213
leed ap bd+c

key projects:

lake house condominiums> $12.2 million 15 year maintenance and repair master plan + implementation program lakewood ohio

hawken school> planning + design for an extensive locker room and athletic facility restoration and renovation gates mills ohio

hawken school> planning + design for the dining hall restoration and renovation lyndhurst ohio

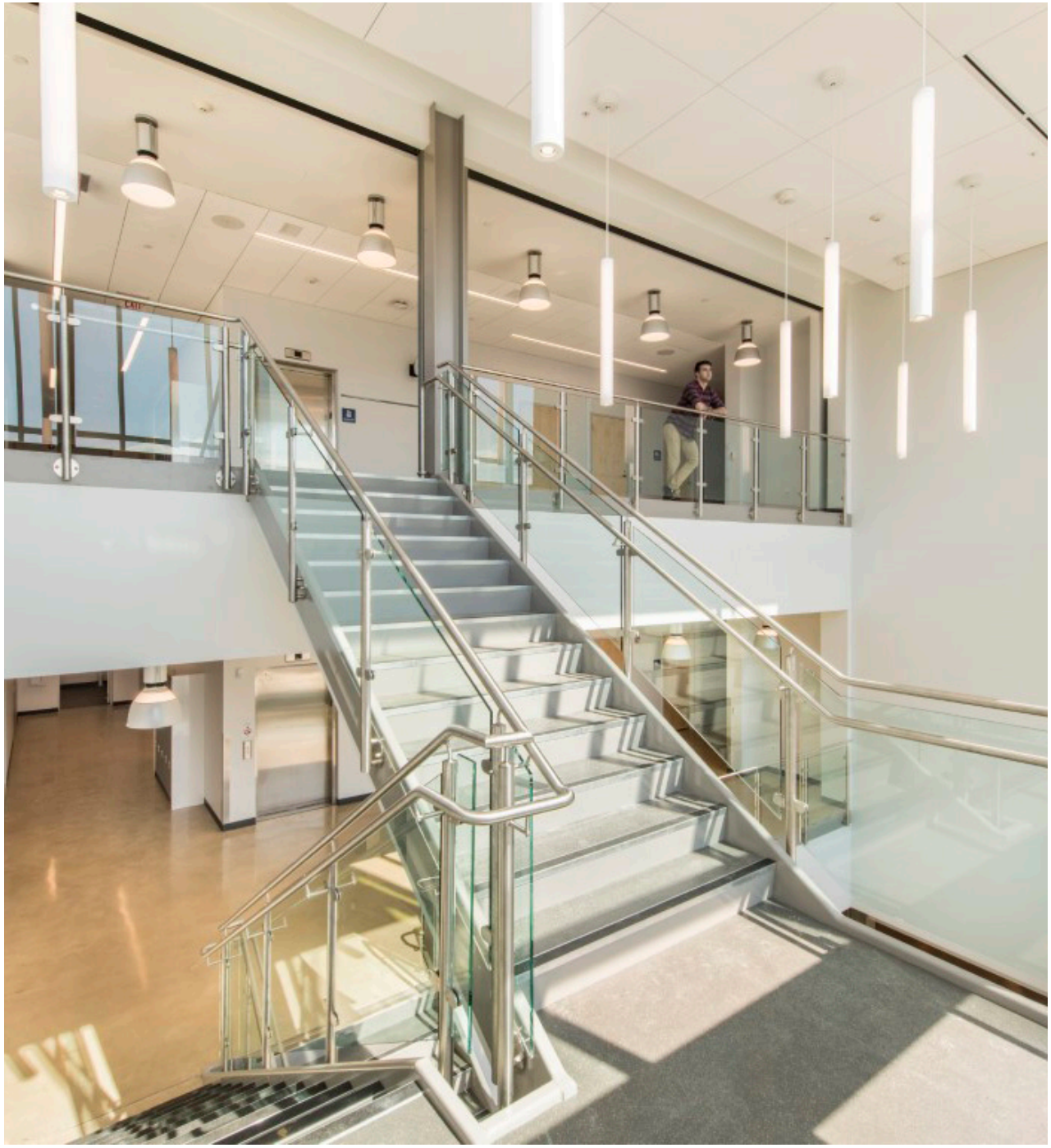
hawken school> planning + design for the restoration and repair of an historic building into an early childhood education center cleveland ohio

st. john's lutheran> planning + design for the restoration and repair and sanctuary addition ashtabula ohio

available services

studioTECHNE and its staff, have been an integral part of design projects recognized at the national, state, and local levels for design excellence. In addition to the design services available, we also offer the following services through our own experience and that of our consultants:

Strategic Planning & Programming
Facility Needs Assessment
Code Compliance Analysis
Master Planning
Zoning and Site Analysis
Soils Analysis and Testing
Site Design
Building Design
Structural and Civil Engineering
Electrical Engineering
Lighting, including Theater Lighting
Heating and Air Conditioning
Plumbing and Fire Protection
Cost Estimating
Project Scheduling
Bid Administration
Construction Drawings
Construction Specifications
Construction Progress Monitoring
Construction Observation
Historic Preservation
Restoration Technologies
Acoustics and Noise Abatement
Landscape Design
Site Furniture Selection
Food Service and Kitchen Planning
Existing Facility Analysis
Field Verification
Space Planning
Building Analysis
Interior Finish Selection
Furniture, Fixtures & Equipment Selection
Furniture Design
Graphics and Signage
Art Coordination & Selection



people

Our people are the essential reason clients hire studioTECHNE. The success of our projects is founded on the authentic relationships we develop with our clients. We provide the inspiration, creativity and vision to develop a building designed specifically to support your mission and project goals.

The firm operates as a true studio with the principals, project managers and staff working collaboratively on each project. Projects are assigned a principal, project architect and project team who remain with the project through completion. Daily progress is undertaken by professionals who have the technical expertise to convey information and provide real solutions. The Firm and its Principals provide extensive experience in new construction, renovation and restoration for many project types. studioTECHNE's Principals Marco Ciccarelli and Jim Duber are trained carpenters and have extensive construction experience, bringing to all of our work the technical knowledge required for success.

Members of the firm participate in civic organizations, and community service groups, enjoy membership in the American Institute of Architects and other professional organizations as well. studioTECHNE is currently licensed to practice architecture in the States of Ohio, Michigan, Indiana, Pennsylvania and Georgia.

collaboration

Collaboration with our clients is the crucial first step for our projects. ***Visioning sessions ensure the goals and requirements guiding the project are firmly established.***

firm history

location

studioTECHNE was established in 1994. Offices are located in University Circle at 12210 Euclid Avenue. We are a full service architecture and planning firm founded on the idea that *place* matters and well designed places have a direct effect on positively behavior and interactions.

focus

We are makers + problem solvers dedicated to designing environments unique to each client. We apply creativity and strategic analysis to invent places that are dynamic and foster a culture of collaboration + innovation. Making a place meaningful requires good listening extensive planning and responsive design. Making a place requires that the ideals and goals of our clients are reflected in the constructed environment; and that the constructed environment has integrity. Environments made for our clients have many common characteristics; the site and building are in harmony, the chosen means and methods of construction are well thought out and detailed, and the interiors have a rational identity, a reassuring character, and are experienced in meaningful ways.

Our Projects connect and support people, and include: Ecclesiastic Buildings, Schools, Libraries, Civic Buildings. The value of our Construction Projects has consistently increased. Recently, the firm has completed construction projects ranging in value from $100k to $50mil.

technology

studioTECHNE Project Team Members utilize Computer Aided Design and Visualization Software to ensure instantaneous sharing of work progress that results in greater Design Integrity and Document Coordination. Through developed partnerships, Clients are able to view progress via the internet. This connectivity allows for greater checks and balances of the Client's Vision as the project moves through the phases of the architectural design process.

affirmative action

studioTECHNE is an equal opportunity employer. Staff and consultants are recruited, hired, and promoted for all positions without regard to race, color, religion, sex, national origin, age, marital or veteran status, the presence of a non-job-related medical condition, or handicap.

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