

INDA

DESIGN RESEARCH ENGINEERING ART MATH SCIENCE

ACADEMY



EXISTING



Confronted with the prohibitive cost and availability of land for constructing a traditional, ground-up campus, Santa Ana Unified School District (SAUSD) acquired a 1.03-acre site within the Irvine Business Complex occupied by a 2-story, 17,635 sf office building with the goal of creating an inclusive 21st Century neighborhood school with an innovative “DREAMS” curriculum (Design, Research, Engineering, Arts, Math, and Science). The property was encumbered with an access easement for the neighboring property that needed to be maintained, while nearly all available open space was devoted to surface parking.

SAUSD acquired a 1.03-acre site within the Irvine Business Complex occupied by a 2-story, 17,635 sf office building.

Transitioning from office to school use allowed for a significant reduction in surface parking which allowed for the creation of dedicated bus and student drop-off areas, separate secured play yards for PreK/K and Primary students, and the addition of a new terrace that leverages the gifts of the local climate to support inside/outside educational opportunities. Although, the building and site presented numerous challenges as a school conversion, our team saw this as a chance to breathe new life into a old building while giving it a brand new, resilient identity. We immediately went to work studying the incredible opportunities for its adaptation and re-purpose.

EXECUTIVE SUMMARY





The existing office building, constructed over 40 years ago, presented numerous challenges as a school conversion:

- The existing structure did not meet current seismic code requirements
- Interior spaces were non-sprinklered
- The building lacked an elevator for 2nd floor accessibility
- The exterior envelope consisted of poor-performing single-glazed vision and spandrel glass with deteriorating seals

In the process of gathering data and analyzing building systems, major considerations were undertaken to address the existing steel with moment connections that were weak, and an absence of a sustainable mechanical and electrical infrastructure.



Focusing on engineering, art, math and science processes to inform the experience, we arrived at a solution to strengthen the existing structure which required full replacement of the existing window wall system, with a combination of perimeter wood shear walls, paired with new, low-e, insulated operable windows and a lightweight corrugated metal skin.

The district's proposed budget for this remodel was established to be \$11 million.

SCOPE OF WORK & BUDGET

LEVEL ONE



LEVEL TWO



KEY

- CLASSROOMS
- PRE-K + K CLASSROOMS
- FLEXIBLE MAKER SPACES + MULTIPURPOSE
- ANCILLARY SPACE
- CIRCULATION
- TERRACE
- SUPPORT SPACES
- 1 PRE-K CLASSROOM
- 2 GRADES 1-6 CLASSROOM
- 3 COLLABORATION ZONES
- 4 NUTRITION
- 5 RESTROOMS
- 6 STAFF SPACES
- 7 STORAGE
- 8 WELLNESS/COMMUNITY

A new elevator was located at the terrace addition, while an underutilized outdoor area at the southeast corner of the building was enclosed to create a double-height multipurpose space featuring stepped-stadium seating to support a variety of group instruction, assembly activities and promote social interaction. A glazed retractable wall connects this double-height space with the California Room at the ground floor, which features flexible furnishings, secured storage, tackable wall surfaces, magnetic sliding whiteboards, and sinks for both small and large group project-based learning.

Classrooms feature controlled lighting and mechanical systems, recycled finish materials and flexible technology access and Audio/Visual equipment throughout, allowing for enhancement or the ability to repurpose components in other areas of the facility as needed.

SCOPE OF WORK & BUDGET



DESCRIBE THE COMMUNITY

INDA Academy will be a 17,635 square foot, 225-student, 9-classroom, PreK-6 public school located in Irvine, CA for the Santa Ana Unified School District (SAUSD). This area of SAUSD’s attendance boundary has recently seen a significant growth in high-density residential development resulting in a projected demographic increase of students best supported by a new school. This area of Irvine (aka the Irvine Business Complex), has traditionally been all commercial and industrial and not a residential area with a student population. With housing demands and zoning changes introducing high-density multifamily to the area, the demographics changed. Being within the City of Irvine, new residents also tended to assume they were moving into the boundaries of Irvine USD, a school district with very different demographics, when in fact they were within the District boundaries of Santa Ana USD. The project site is also proximate to UC Irvine, further elevating academic expectations of the community within the project service area. SAUSD already had existing programs with UC Irvine and explored leveraging those relationships as part of the INDA Academy curriculum. Another complication of the site is that it falls within the auspices of the Airport Land Use Commission to review use compatibility and risk factors related to John Wayne Airport’s flight patterns.

IDENTIFY STAKEHOLDER

Santa Ana Unified School District

NAME CHALLENGES

The Santa Ana Unified School District had a goal of creating an inclusive 21st Century neighborhood school with an innovative “DREAMS” curriculum (Design, Research, Engineering, Arts, Math, and Science). As this school serves the portion of the District’s attendees beyond Santa Ana and unincorporated Orange County, the District wished to recognize and celebrate this with the “Irvine-Newport Development Area” abbreviation, INDA. Thus the INDA DREAMS Academy was born!

SCHOOL & COMMUNITY ENGAGEMENT



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DESCRIBE AVAILABLE ASSETS

Focusing on its goal of creating an inclusive 21st Century neighborhood school with an innovative “DREAMS” curriculum (Design, Research, Engineering, Arts, Math, and Science), the Santa Ana Unified School District set out to acquire a vacant lot on which to build a new facility to support the significant growth they had projected. Their search was burdened by the rising costs and availability of land. Finding a rare opportunity, the District acquired a site within the Irvine Business Complex, on which sat a vacant, 2-story, 17,635 square foot office building. The team understood that the building and site presented numerous challenges as a school conversion.

DESCRIBE VALUE OF PROCESS AND PROJECT TO COMMUNITY AT LARGE

Focusing on the community impact, transitioning to school use allowed for a significant reduction in surface parking, providing for the creation of dedicated bus and student drop-off areas, separately secured play yards and a new terrace, enhancing the indoor/outdoor activity connection.



EXPLAIN THE EDUCATIONAL VISION AND GOALS OF THE SCHOOL

What we saw beyond these challenges was the potential of restoration and renewal; hope in the eyes of the client team that this undertaking could realize a one-of-a-kind facility which embodies the focus of the DREAMS curriculum concept as its own story. The new school, INDA Academy, would illustrate the successful result of an adaptive reuse strategy, fueled by program inspiration. Residential population growth in a previously non-residential geographic area within SAUSD enrollment boundaries projected a long-term potential FTE (abbreviation for "Full-Time Equivalent") student population of over 1300, which is the enrollment equivalent of two standard SAUSD K-5 elementary schools or one standard 6-8 middle school. What land that was available for development in the attendance area was both too small for a typical SAUSD elementary school and also prohibitively expensive to acquire, which led to the Adaptive-Reuse approach to begin addressing the projected growth in students. SAUSD is a district of nearly 50,000 students with a demographic that is 96% Hispanic. The geographic attendance area for INDA, being in Irvine, aligned more with Irvine USD with 1/3 fewer students, and demographics that are 76% Asian and White. To address the aforementioned challenges, SAUSD sought to create a school that emulated highly selective private schools through small class size and small total enrollment. Additionally, the educational vision was focused on a very progressive and aspirational "DREAMS" curriculum, with components that potentially leveraged existing SAUSD program relationships with UC Irvine in Arts and Engineering.

DESCRIBE/ILLUSTRATE HOW ENVIRONMENT SUPPORTS CURRICULUM

We were inspired to deliver a unique environment that would facilitate progressive, hands-on learning for 225 students a year, from PreK to 6th grade, in 9 classrooms, plus flexible space, and to understand how our solution would impact the community, leveraging the gifts of the local climate to support indoor/outdoor educational opportunities.



EDUCATIONAL ENVIRONMENT

EDUCATIONAL ENVIRONMENT

DESCRIBE AND ILLUSTRATE HOW THE ENVIRONMENT SUPPORTS A VARIETY OF LEARNING & TEACHING STYLES

This state of the art environment fosters hands-on learning and immersive experiences. The “maker space” allows for creative minds to flourish, within a wide variety of stimulating areas. Designed for flexibility, all of the shared rooms offer mobility, layered lighting and communication tools for intuitive work and play.

Large windows on all elevations from low-e storefront glazing systems wash the work and play spaces with natural daylight. In addition to the ground floor retractable wall, the second floor has a wide and deep balcony to expand the student space for outdoor learning activities in nature.

Sensory spaces for visual, tactile, auditory, reading and writing education are built into the architecture throughout the facility.





DESCRIBE AND ILLUSTRATE HOW THE ENVIRONMENT IS ADAPTABLE AND FLEXIBLE

Enclosing an underutilized outdoor corner to maximize interior space provided for a double-height multipurpose space featuring stepped-stadium seating to support a variety of group instruction, assembly activities and promote social interaction. A glazed retractable wall connects this double-height space with the Multipurpose ground floor room, for both group and project-based learning. Flexible, activity-based spaces continue through to the 2nd floor, overlooking the lobby.

EDUCATIONAL ENVIRONMENT



DESCRIBE AND ILLUSTRATE THE PHYSICAL ATTRIBUTES OF THE ENVIRONMENT

To maximize functional interior space, a new elevator was located at the terrace addition, while an underutilized outdoor area at the southeast corner of the building was enclosed to create a double-height multipurpose space featuring stepped- stadium seating to support a variety of group instruction, assembly activities and promote social interaction. A glazed retractable wall connects this double-height space with the California Room at the ground floor, which features flexible furnishings, secured storage, tackable wall surfaces, magnetic sliding whiteboards, and sinks for both small and large group project-based learning. Shared study areas with a variety of seating and tables are carried throughout the open circulation of the 2nd floor overlooking the lobby and into the Flex Lab and Wellness Space.

DESCRIBE AND ILLUSTRATE HOW THE FACILITY FITS WITHIN THE LARGER CONTEXT OF THE COMMUNITY

The building's welcoming, geometric façade complements surrounding adjacent commercial structures while offering a playful primary-hued aesthetic that reflects the excitement and intuitive learning environment within.

DESCRIBE AND ILLUSTRATE HOW THE PROJECT INSPIRES AND MOTIVATES

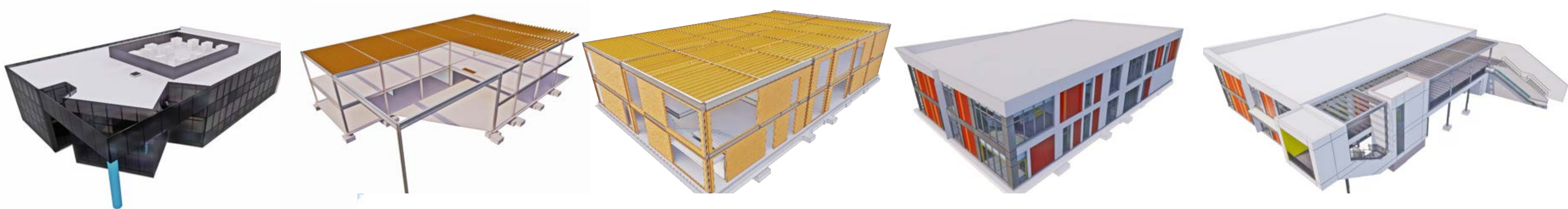
The DREAMS Academy is a new concept, deriving from "STEM" education, expanding the curriculum to include additional opportunities and concepts, adjoining Design, Research and Art curriculum to the STEM "technical" programs.

PHYSICAL ENVIRONMENT

PHYSICAL ENVIRONMENT

DESCRIBE AND DEMONSTRATE THE ROLE OF HIGH PERFORMANCE/SUSTAINABILITY IN THE PLANNING AND DESIGN OF THE PROJECT AND THE METRICS USED

This cost-effective combination allowed for the reuse of existing foundations while creating a new 25,000 square foot envelope, exceeding Title-24 performance requirements by 30%. We arrived at the solution to retain and strengthen the existing structure, replacing the existing window wall system with wood shear walls and low-e, insulated, operable windows with a lightweight metal skin.



EXISTING OFFICE BUILDING, CONSTRUCTED OVER 40 YEARS AGO, PRESENTED NUMEROUS CHALLENGES AS A SCHOOL CONVERSION

1 | EXISTING

REMOVE EXISTING WINDOW WALL SYSTEM TO REHABILITATE STRUCTURE

2 | REHABILITATION

ADD PERIMETER WOOD SHEAR WALLS AND EXTEND ROOF STRUCTURE TO ENCLOSE SOUTHEAST CORNER

3 | REHABILITATION

ADD NEW LOW-E INSULATED OPERABLE WINDOWS AND LIGHTWEIGHT METAL SKIN

4 | REVITALIZATION

ADD NEW ELEVATOR AND TERRACE; STEPPED STADIUM SEATING AND RETRACTABLE WALLS FOR MAXIMIZING ACTIVITY SPACE OUTDOORS

5 | ADDITION

6 | SUSTAINABLE STRATEGY

Strengthening the existing structure required full replacement of the existing window wall system with a combination of perimeter wood shear walls paired with new, low-e, insulated operable windows and a lightweight metal skin. This cost-effective combination allowed for the reuse of existing foundations while creating a new envelope that contributed to the project exceeding Title-24 performance requirements by 30%. Other sustainability improvements included a new SEER 15 HVAC system that doubled efficiency over existing units and offered the ability to provide 100% outside air for healthier indoor air quality, while the use of digital vacancy and daylight sensing controls for multilevel LED lighting throughout the project reduced lighting power density to 0.49 w/sf.





Our responsibility as architects is to both dream and to build responsibly. We followed this path, and the result is a metamorphosis of a mute, unremarkable office building into a vibrant, new school that will engage the surrounding community and reflect a forward-thinking curriculum, as a transformational environment for many decades of emerging technology and learning experiences.

EXPLAIN HOW THE PROJECT ACHIEVES EDUCATIONAL GOALS AND OBJECTIVES

INDA DREAMS Academy is an original concept for a neighborhood school facility, whose design reflects the progressive learning styles found within its innovative DREAMS curriculum. Reimagining the elementary experience using these spaces with myriad function and flexibility opens up many paths for excellence and future growth.

EXPLAIN HOW THE PROJECT ACHIEVES SCHOOL DISTRICT GOALS

The SAUSD with resourcefulness, resilience and sustainability in mind, now has an adaptive reuse of this building that meets it's budgetary goals and proposed enrollment size. When completed, this Academy will serve an area currently without any similar facility in the District.



RESULTS OF THE PROCESS & PROJECT



EXPLAIN HOW THE PROJECT ACHIEVES SCHOOL COMMUNITY GOALS

Standing as a beacon to the future of education and immersive learning, this Academy looks every bit as exciting as the programs it houses within. A delightful and needed refresh to an existing structure, the facility will draw and unite local families, as well as creating and welcoming community engagement for student and planned neighborhood activities with it's flexible façade and exciting site amenities.

EXPLAIN ANY UNINTENDED RESULTS AND ACHIEVEMENTS OF THE PROCESS AND PROJECT

Meetings with Community stakeholders resulted in an increased focus on Early Education curriculum and an in total number of Pre-K and K classrooms. When the District acquired the commercial property, the transaction was completed with the expectation that a change in use could be achieved as a simple Tenant Improvement. As a project that would be approved by the DSA, a higher standard of engineering needed to be met, which resulted in a creative design and engineering process that maximized the existing components of the building that could be retained, while meeting the needs of SAUSD's program.

RESULTS OF THE PROCESS & PROJECT