EXECUTIVE SUMMARY

Can it be hip to stay in school? Can the place to be also be the place to explore? It is not all reading, writing and ‘rithmatic. It can be Robotics, Media Arts, High-Tech Shop, and Collaboration. This is where the future of a high school education now resides.

When the former Industrial Arts Building caught fire and was partially destroyed, (thankfully on a weekend when no one was on campus), to repair or replace it in-kind was questionable. The architect began with a repair in-place or replacement assessment related to a new build elsewhere on campus. The old location was identified in the Master Plan as a prime spot for a new gymnasium. The campus academic core was at the opposite end of campus, occupied by relocatable classrooms to fulfill a short-term Charter contract. Moving a new home for Robotics, Media Arts and Shop to this academic portion of campus was an opportunity to re-brand and to re-think what could be. It was an opportunity to infuse project-based learning as a strategy to evolve traditional high school educational curriculum delivery. The Board supported the move unanimously.

Who could be a better client than those who inspire and teach? In addition to working closely with District facilities design staff, the popular Robotics, Media and Shop instructors, along with a visionary Principal, became the primary client representatives. This was an opportunity to design new District educational specifications for unique programs to serve students and campuses district-wide. Think of STEAM and CTE co-mingled.

Three site and floor plan options were considered, with the favored plan reflecting the “finger plan” layout of the existing classroom buildings, but with a twist. The common goal has been to attract students to a new “place to be” on campus, drawn to a fresh new look that respects District standards while redefining a specialized classroom building. And with appreciation for the evolution of standards to include sustainable strategies such as interior and exterior LED lighting, new forced air system technologies, dual glazing, acoustics, innovative materials, and rain gardens, the long-established CHPS certification program reached new heights of achievement.

The individual programs of Robotics, Media Arts, Shop, and Collaboration are complimentary but have very unique criteria. All programs benefit from high ceilings, specialized lighting and air. But acoustic isolation of the Media recording function from the other programs required two utility cores to separate this room acoustically, to split the forced air system to reduce volume and noise, buried in the center of the building with the highest ceiling to achieve a windowless black box for video, sound, and lighting. The Robotics Lab to one side, the Shop to the other, and the Collaboration Room as a central feature, are keenly separated with circulation, restrooms, and utilities.

So what is happening now? The Robotics Team are National Champions. Media students are working in Hollywood. Shop students are redefining CTE. Creative Arts is home to student-run start-ups. This Distinguished School is now the place to be.
**SCOPE OF WORK AND BUDGET**

The scope of work includes the building replacement of the old fire-damaged Industrial Arts Building on a new north campus location, the demolition of the old building on south campus, and the conversion of the old footprint to added parking, including accessible parking and a new campus path of travel. The new building accommodates:

- Robotics Lab with indoor and outdoor competition/work spaces connected with a roll-up door, a modeling equipment vestibule, instructor’s/start-up office, and six project team work rooms;
- Media Production Studio with a white green screen wall with a 16 foot high unobstructed view angle, a large equipment and material storage room, editing workstations, tunable acoustics with drapes and microphones, acoustic isolation, a smooth white floor for camera and lighting stand movement, and a full overhead lighting grid;
- Shop with high-tech and digitally controlled shop equipment with localized dust control, moveable work benches, storage with racks, paint spray booth, and large roll-up door for materials delivery;
- Collaboration Room for all three functions to share and to collaborate, with availability to local business for town and gown mentoring and internship opportunities, and for general campus access and use for interdisciplinary study.

This STEAM/CTE program center establishes a new District Educational Specification for Robotics, Media Arts and Shop, and is a focal point for curriculum innovation. A new 18,000 GSF building is located on a relatively flat acre of land that was formerly home to relocatable classrooms leased to a Charter School with an expiring contract. The total construction cost, including the site preparation and specialized program new construction, demolition of the old building, conversion of the old footprint to parking, and new accessible path of travel onto campus from the south, totaled $12.8 million. A separate budget for FF&E, including Shop equipment, was managed by the District and totaled another $1.2 million.
SCHOOL AND COMMUNITY ENGAGEMENT

• **Describe the community**
  This high school campus is located in a suburban neighborhood of primarily single-family homes and small-scale commercial services. It is just one block away from the freeway, and on the edge of an evident split between moderate income and low income housing and services defined by the freeway. Just one mile away is a California State University campus.

• **Identify stakeholders**
  The stakeholders include the School District and representative staff, the campus Principal, Staff and Instructors, and most importantly the students and their families. Stakeholder engagement is a significant focus of this District, and District staff is dedicated to community outreach, stakeholder engagement, and events planning.

**Name challenges**
The initial challenge had been to properly assess the previous building fire damage and strategic campus location at odds with the new Master Plan. The decision-making process to abandon the old building, and to support new construction with unanticipated funding needs, required extensive evaluation and deliberation prior to authorizing the commitment to a new building. Since the fire damage left most of the old building uninhabitable, interim accommodations had to be identified and provided, impacting space availability on campus to avoid adding interim housing that would further impact the budget. Once under construction, the discovery of transite pipe and its necessary controlled removal impacted the construction schedule almost immediately. Ultimately, the extended schedule was partially caught up and still successfully delivered the new building at the beginning of the academic year.

• **Describe available assets**
The most valuable assets for the programming, design and construction of this project has been the intense participation and dedication of our specialized faculty members in Robotics, Media Arts and Shop. These talented, specialized and passionate individuals all see the value in project-based learning and alternative styles of curriculum delivery. District staff have matched that dedication in the solicitation of faculty involvement and in their support in attending every meeting, having review and comment authority, and impacting the resulting new District Educational Specifications related to their respective disciplines. It just does not get any better than that, and the students and families are the direct beneficiaries.

• **Describe value of process and project to community at large**
The programming and design process has been inclusive with the campus community and the community at large. Public meetings have happened at regular intervals to actively engage community members in envisioning the future for this campus and this community of families and students. This project represents the first new building on campus in many years, and signifies the District’s commitment to evolutionary curriculum delivery with an emphasis on STEAM and CTE opportunities within this campus and community. Business partnerships that promote and encourage mentorships and internships are an outreach goal that is coming to fruition with this project.
EDUCATIONAL ENVIRONMENT

- **Explain the educational vision and goals of the school**
  This high school campus strives to be a focus of student life, offering an educational experience focused upon preparing for the future. With an emphasis on encouraging students to stay in school, the Creative Arts SEAM and CTE curriculum offer unique project-based learning opportunities, enhancing this Distinguished School with the newest District Standard in educational delivery.

- **Describe & illustrate how the environment supports the curriculum**
  The Creative Arts environment creates a unique method of supporting a curriculum of innovation, housed within the Robotics Lab, the Media Arts Production Studio, and the new High-Tech Shop. The Collaboration Room is an addition that has evolved from the collaborative faculty and community design process, taking curriculum support to the next level with a unique focus for interdisciplinary collaboration on campus.

- **Describe & illustrate how the environment supports a variety of learning and teaching styles**
  This design is inherently flexible, with power and technology located throughout every teaching station to encourage self-determination for faculty and students. Within this first year, each program layout continues to evolve, creating both innovative and traditional teaching configurations with the relocation of fixtures and furniture. The Shop, with fixed equipment, also has a zone for traditional classroom seating. The Media Arts Production Studio has a fixed film and sound stage, complimented by flexible space in the back of the classroom for editing, testing, and a more traditional classroom setting.

- **Describe & illustrate how the environment is adaptable and flexible**
  It has been interesting to visit the campus and to see how the educational environment has adapted and evolved just within the first year of occupancy. Dubbed MCA (Monroe Creative Arts), the Associated Student Body has taken over a faculty office and three of the Robotics project rooms to begin campus start-up businesses of their own creation, with logos, websites, social media, product development, and events to support a renewed campus culture. These students are simply amazing. They groan that they have to leave when the bell rings. This outcome is resiliency at its best.
PHYSICAL ENVIRONMENT

- **Describe & Illustrate the physical attributes of the environment**
  This relatively flat, single-story suburban high school campus is located on a mega-block on a secondary arterial, surrounded by small single-family residential neighbors. The campus was built in the 1950’s and 1960’s as a conventional finger plan school indicative of its time. The site for this new building has been chosen for its proximity to other classroom wings to integrate into the academic core. The previous building was a tilt-up industrial structure located to the south along the parking lot and bus drop-off, considered to be the “on campus” entry to the school, with the food service, MPR and Gym located in this area. The new site is considered to be more appropriate for academics, verified by the recently prepared campus master plan.

- **Describe & illustrate how the facility fits within the larger context of the community**
  The nearly 70-year-old campus is deeply entrenched within its neighborhood, having educated generations of local well-established families. It’s location on a secondary arterial street within a block of a freeway overpass gives it easy access and a presence, with a new joint-use healthcare clinic located at the street intersection marking the campus location, and down the street from the public, staff and student vehicular entrance. The school, being the same age as much of the surrounding residential structures, not only fits within its context, but has established its context. The new Creative Arts building is located deep within the campus, visible to residential neighbors to the north. It is intended to be a “destination”, drawing students into the academic core as the new “place to be” on campus, infusing new energy into academics.

- **Describe & Illustrate how the project inspires and motivates**
  Monroe Creative Arts is the first of its kind within the District, and this campus is proud to be the recipient of this new direction in high school curriculum delivery. It is presently being featured on local television “back to school” coverage, and high school students are pouring in rather than dropping out. The District Superintendent refers to MCA as the new “Gold Standard” for high school education. The opportunity and its setting, and the passionate leadership of our specialty faculty, have inspired and motivated these students to be creative and innovation and thrive on this new project-based and integrative program. Students drop in after school, on weekends, and during holiday breaks by choice. Of course the Robotics instructor does too!

- **Describe & illustrate the role of high performance/sustainability in the planning and design of the project and the metrics used**
  This District subscribes to the CHPS metrics for high performance and sustainability standards, engaging a third-party commissioner starting with the design process, and following the project into construction verification and enhanced commissioning. Once construction was complete, criteria was submitted and the project is now CHPS verified. It has also been granted the gas and electric utility Savings by Design Incentive Grant, which provides an ingoing operational rate benefit. A focus upon the quality of the built environment on cognition and learning, and on health and wellness has been a deliberate focus, pushing the District comfort zone related to natural light and visual access to the exterior. These strategies have enhanced oversight and safety, and are a welcome alternative to traditional classroom settings. To meet the requirements for film and audio production, an emphasis has been placed on acoustics and acoustic isolation for this unique requirement. Acoustic strategies related to HVAC air distribution noise, which can be picked up by a microphone, has dictated even the structural solution to accommodate multiple duct penetrations. The design process has enlisted District M&O and Environmental Health and Safety to carefully respond to District standards with creative strategies for high-performance long term maintenance and operations.
RESULTS OF THE PROCESS AND PROJECT

• Explain how the project achieves educational goals and objectives
  The goal of this project has been to establish new standards for high school STEAM and CTE programs within the District. Please respect the District request for the programming, reporting and Educational Specifications to remain proprietary in this early stage of development and implementation. This initial and prominent goal remains extremely successful, exceeding expectations for inspiration, motivation, and academic performance. Attendance and test scores are on the rise, and this campus is a California Distinguished School. The project provides the new home for Robotics, Media Production, Shop and Collaboration. Stylistically, is it designed to be a beacon for creativity and a magnet for innovation? It could not stand alone without the leadership of faculty and campus administration. The specialized Creative Arts faculty and site Principal are outspoken leaders and collaborators supported with a significant and pro-active student voice. We refer to our Robotics Instructor as the “Pied Piper” as his enthusiastic students will follow him anywhere. The special relationship that the Architect has shared with this campus has directed the success of this project that ultimately exceeds our collective goals and objectives.

• Explain how the project achieves school district goals
  This large school district has taken the opportunity to explore newer and higher standards of learning and of educational delivery through the opportune timing of this replacement project. District leadership, in its wisdom, has taken a leap of faith in empowering this project team to work with them to achieve a new standard of excellence. Transcending the current STEAM and CTE trends that influence high school curriculum delivery while taking advantage of the “opening” for a transformative project opportunity has provided the platform to achieve these District goals. Attention has been paid to District-provided FF&E to build inherent flexibility into the design solution within this highly prescriptive but resilient space. The intent is to move forward on other District High School campuses to apply the same principals District-wide.

• Explain how the project achieves community goals
  Each community values the quality of education as represented within their local schools. In a large district, some efforts and situations are more successful than others. Quality education within the community provides greater support for students and families, and infuses the culture of a neighborhood with values related to student success. There is no question that the rating of a local school positively or negatively impacts property values, and contributes to the pride of place and obvious care demonstrated by home owners to maintain and improve their own property and quality of life. This residential community imbeds every success within the high school into their related success as a neighborhood. Increased parent involvement and the engagement of local business into educational partnerships for mentoring and internship opportunities has increased with the realization of this project. It sets an example for what others can achieve throughout the District.

• Explain unintended results and achievements of the process & project
  The unintended results and achievements of this project primarily rest upon the evolutionary strategies that have been implemented by the faculty and students in this first year. These can be briefly described as follows:

  o **Robotics:** First and foremost, this Robotics Team has achieved National Championship status. This highly motivated collective of high school students work nights and weekends with a drive rarely seen in high school. The flexibility and resiliency within the design now supports activities that we never imagined. That Pied Piper Robotics instructor has willingly given up his private office space to house the Student Body “MCA” office. This office is home to student-run on-campus cultural and business activities, including the creation of campus and event signage and graphics, logo wear, and the pursuit of competitions and grant opportunities. These activities also now occupy three of the six
enclosed and dedicated team work rooms. The facilities accommodate these changes beautifully, but we honestly could not have predicted this most creative outcome.

- **Media Production**: The Media Arts faculty has called upon his friends and constituents in the Southern California television and movie industries to visit the facility with recommendations to achieve a professional standard within a high school facility, far beyond the respected District standards that governed the design. Once again, the District has agreed to accommodate these recommendations, and has reached out to the architect to add an enhanced overhead lighting grid to offer an expanded option for stage lighting point of origin. The instructor is also procuring additional specialized cameras and recording equipment with achieved grant financial support to create greater opportunities for student CTE experience.

- **Shop**: The shop instructor has managed to procure additional equipment that somehow fits into an already fully-equipped facility. The technology backbone has been provided with the flexibility to support systems and equipment that most businesses would envy, including large format laser cutters, 3D printers, and electronically-controlled cutters and lathes linked to specialized software programs with computer imaging workstations within the Shop. This new Shop is provided at a time when access to vocational skills training is declining. The perfect fit with other project-based learning programs connects the Shop materials design and production capabilities with Media props and Robotics parts. Vocational skills prepare these students to enter the workforce as a career path or to help fund higher education with job-related work. There is no question as to the value of this commitment to CTE, and its contribution to the Creative Arts environment.

- **Collaboration Room**: This addition to the project program arose from discussions with faculty and staff leadership, as well as community input, with support from the District. The original goal was to create a place where the three disciplines and community partners could meet to support collaboration and relationship-building. Like any other campus meeting venue, this room is now predictably booked all of the time. The Creative Arts programs and their partners have first priority. Next is the now regular meeting location for Student Government, Teams and Clubs. With the adjacent outdoor pre-function courtyard, the Collaboration Room is now also host to District-wide conferences and events, supported by campus food service and community relations. Happily, all of the opportunities that we envisioned together have been achieved and exceeded with the simple addition of this greatly needed and appreciated resource.
It has been a privilege to have been given the opportunity to push the envelope related to the design and collaboration evidenced in the Monroe Creative Arts building. When retained to evaluate the condition of the former fire-damaged building, we could not have imaged the journey we were about to embrace and the successful outcome that we share with this District and this community. Together we pushed the boundaries of District Standards related to program and budget, to sustainable strategies and achievements, and to the Educational Specifications related to STEAM and CTE facilities design. Working with highly motivated faculty, students, community members and District representatives, we can only hope that this process as well as this outcome becomes an example to be perpetuated within school design and construction processes.
NEW CREATIVE ARTS BUILDING
Replaces the existing, fire damaged, Industrial Arts Building.

Specific Site Program Area: 2 Acres
17,997 GSF
**LEADERSHIP, EDUCATION & INNOVATION**
- School as a Learning Tool
- Educational Displays & Demonstrations

**ENERGY**
- 1. Interior Ambient Light Sensors
- 2. High Efficiency Forced Air Systems
- 3. Daylight with Solatubes to Reduce Demand

**SUSTAINABLE SITES**
- 1. Rain Gardens
- 2. California Native Planting
- 3. Permeable paving
- 4. Cold roof

**MATERIAL AND WASTE MANAGEMENT**
- 1. High recycle content
- 2. Rapidly renewable materials
- 3. Local suppliers (within 500 miles)

**WATER**
- 1. Water efficient plumbing fixtures
- 2. Drip irrigation

**INDOOR ENVIRONMENTAL QUALITY**
- 1. Soundproofing Isolation at Media Production Studio
- 2. Storefront with Screening for Daylight and Views

**SUSTAINABLE CERTIFICATIONS:** CHPS Certified and Savings by Design Award