

**1. Name of proposed school:**

Sacramento School of Engineering and Science

**School district where proposed school will be located:**

Alamogordo, NM

**Grade levels to be offered and enrollment projections:**

Grade levels to be offered	Projected Total Enrollment
9th-12th	156 (10% of AHS enrollment of 1562)  Data Source: <a href="https://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&amp;DistrictID=3500030&amp;ID=350003000001">https://nces.ed.gov/ccd/schoolsearch/school_detail.asp?Search=1&amp;DistrictID=3500030&amp;ID=350003000001</a>

**Primary Point of Contact:**

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**2. Names, roles, and current employment of all persons on the applicant team, and qualifications of the team members to establish a high-quality charter school:**

Name	Role on the team	Qualifications, Education, Employment and Experience
Cynthia Stong	Founder	BSME Seattle University, 30 years The Boeing Company Program Manager, MBA City University
James Klump	Principle	BS Biology, DDS, 39 career in Dentistry

<b>Lorrie Black</b>	<b>Principle</b>	30 year business owner, Executive Director of the Flickinger Center for performing arts, previous chair of Center of Commerce
<b>Craig Danekas</b>	<b>Principle</b>	BSBA Production and Operations Management, owner of Casa y Tierra Abstract and Title, 20 years in Informations Systems
<b>Vickie Marquardt</b>	<b>Principle</b>	40 years in business management, Chair of Otero County Commission
<b>Michelle Perry</b>	<b>Program Design Consultant</b>	Operator/Owner Learn NM, LLC, Former Director of Educational Services Alamogordo Public Schools <a href="#">Click Here for Resume</a>
<b>Jerrett Perry</b>	<b>Education Consultant</b>	Retired Superintendent, Athletic Director, K-12 Principal, High School Teacher and currently the Alamogordo Chamber of Commerce Executive Director

**3. Model/focus of the proposed school:**

The Sacramento School of Engineering and Science will support high school students between the grades of 9-12 with a STEM oriented curriculum. Specifically, the curriculum will be based on the [NM instructional content standards](#) and thematically anchored in Engineering and Science. Engineering and Science curriculum may support the following concentrations among others:

- Robotics
- Computer Science/Engineering
- Computer Software and Hardware Engineering
- Aeronautical/Aerospace Engineering
- Industrial Engineering
- Biomedical Engineering

The [NM High School Science Integrated Course Map](#) (see attached) will be integrated with Engineering and Science concentrations to ensure students are prepared for [Assessment of Science Readiness \(ASR\)](#) in the 11th grade. In addition, all core course curriculum in English Language Arts and Math will be addressed through thematic crosswalking of the NM Instructional Content Standards and Engineering & Science

concentrations so students will achieve highly on the [The College Board SAT](#) (to be administered in the 11th grade per NM Regulatory Guidance).

See number 9 for more information regarding the Crosswalk.

4. **No, the school does not expect to contract with another entity for either management or substantial oversight or direction in the school's operation.**
5. **No, the applicant team or any members of the team do not currently operate any other schools.**

6. **Vision/Mission Statement:**

At Sacramento School of Engineering and Science, our mission is to cultivate a dynamic learning environment where students immerse themselves in a comprehensive curriculum centered around science and engineering. We are dedicated to equipping our students with the knowledge, skills, and innovative mindset necessary to excel in the local workforce while contributing meaningfully to the advancement of science and engineering within our state.

7. **Student Population and geographical setting of the school:**

Alamogordo, NM is located in Southern New Mexico and is bordered on the East by the beautiful Sacramento Mountains. Alamogordo was founded in 1898 as a terminal for the railroad. The community's activities promoted the growth of logging, tourism and health related enterprises. A national survey rated Alamogordo as one of the 50 healthiest places to live in the U.S. The basic beginnings are still in place. Many of the early buildings are still occupied by businesses. Tourism related activity and light manufacturing contribute to the economy. White Sands National Monument is a major attraction as are the New Mexico Museum of Space History and the Lincoln National Forest. Holloman Air Force Base, the area's largest employer, is located near Alamogordo, and is the home of the F-16 ,MQ-9 Reaper UAV, and the High Speed Test Track. The U.S. Army installation near Alamogordo is the second largest overland testing range in the world. As the birthplace of the U.S. rocket program in the 1940s, today White Sands Missile Range is the testing site for the reusable rocket and numerous Department of Defense research and evaluation programs. The City of Alamogordo is closely linked to both Holloman and White Sands, both of whom represent a combined impact of military civilian annual payroll of more than \$200 million and an economic impact of more than \$450 million to the local economy.

The population of Alamogordo, NM is 45,843. 31% of the Alamogordo population is Hispanic, 58% is White and 4% is Black. 24% of Alamogordians are eligible for SNAP benefits. 21% of Alamogordo families live below the poverty line. Due to the proximity to Military installations, Alamogordo has a large veteran population.

Data Source: <https://nces.ed.gov/Programs/Edge/ACSDashboard/3500030>

Regarding the targeted student population: 44% of AHS students are Hispanic and 43% are Caucasian. 17% of AHS students are identified as receiving special education. More

than 95% are eligible for Title 1 services. 34% are identified as economically disadvantaged. 13% are military affiliated. Less than 5% are identified as “gifted,” and less than 5% are homeless. Less than 5% are English Language Learners.

Data Source: <https://webnew.ped.state.nm.us/bureaus/information-technology/stars/>

Students who are expected to attend the Sacramento School of Engineering and Science are most likely being educated at Alamogordo High School currently. Some students may be better served at Sacramento School of Engineering and Science due to the targeted nature of the curriculum scope and sequence. Students can choose to have their education provided through the thematic and contextual anchors related to careers in engineering and science. Technology and math will be integrated into the instructional crosswalk to provide an integrated and unique approach to learning. Currently, students at AHS must take individual core courses that are traditional in nature and do not align thematically with engineering and science.

After the Pandemic years, AHS suffered a decline in student population. We suspect many students in our community are being homeschooled or are enrolled in a private school. For the 2023-24 school year, there are 3 private schools serving 321 students in Alamogordo, NM (there are 12 public schools, serving 4,731 public students). 6% of all K-12 students in Alamogordo, NM are educated in private schools (compared to the NM state average of 7%). Nationally, on average, 3-4% of students in a community are homeschooled. Anecdotally, it is probably that the rate of homeschooled students is higher due to the military affiliated students.

According to the [Attenuated Proficiency Data](#) from 2023, 44% of AHS students were proficient in ELA, 55% of AHS students were proficient in Science, and 16% of AHS students were proficient in math.

Currently, specific sub-populations of students at AHS are not performing well according to the latest proficiency data. According to the [2023 Attenuated Proficiency Data](#), 19% of Students with Disabilities at AHS are proficient in science and 5% are proficient in math. In addition, 45% of AHS Hispanic students are proficient in Science, and 10% are proficient in math. 37% of AHS students who qualify for Free/Reduced Lunch (a poverty indicator) are proficient in Science, and 10% are proficient in math.

Obviously students who wish to perform better in math may be interested in selecting a new school which provides targeted instruction regarding math and technology, as these are elemental to the engineering and science concentrations. Specifically, students who are demographically performing poorly may be better served within a smaller school setting, where more interaction between students and teachers will provide scaffolded support and equip students with targeted skills to close achievement gaps.

**8. Evidence that the team has assessed the community need for the type of school proposed.**

The Alamogordo Center of Commerce and an organization called Maingate United hosted by the Center, began developing a vision for a charter school in Alamogordo during multiple meetings in 2023. This group researched past charter applications, community needs, potential school emphasis, potential locations, and other data points to inform our plan.

A meeting was held on December 7, 2023 at a local meeting space in Alamogordo. Specific community stakeholders were invited to learn about charter school guidelines by Matt Pahl with Public Charter Schools of New Mexico.

A majority of the elected APS school board members have expressed support for a Charter School. In addition, local news coverage has also received positive feedback when highlighting our efforts. A concerted effort will be made to gain as much community input as possible, such as a survey, news releases, public forums, and presentations.

**9. Identify significant innovative features that the school will implement to help realize the school’s vision/mission**

The primary significant innovative feature will be around the targeted concentration of engineering and science concentrations. While preparing students for careers in these fields, we will also be preparing them for high achievement levels by crosswalking the NM PED instructional content standards in ELA, Math, Science and Social Studies with hands-on, project-based learning targets involving engineering and science. Here is an small example of the crosswalk:

Engineering Cluster	ELA Writing Standard	Science Standard	Demonstration of Master of Standard
9th grade ELA/Science	Conduct short, as well as more sustained research projects, to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; <b>synthesize multiple sources on the subject, demonstrating</b>	<b>HS-PS1-1</b> Matter and its Interactions: Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.  Use the periodic	Choose an element from the periodic table and write a technical description of its key properties based on its position. Start by identifying the element's atomic number, group, and period. Then, using the patterns and trends we discussed earlier, you can predict and describe

	<p><b>understanding of the subject under investigation.</b></p>	<p>table as a model to predict                  Developing and Using Models.                  Modeling in 9–12 builds on K–8 and progresses to using, synthesizing, and developing models to predict and show relationships among variables between systems and their components in the natural and designed worlds.</p>	<p>its atomic radius, electronegativity, and reactivity. Be sure to support your predictions with scientific evidence and explain the reasoning behind your conclusions.</p> <p>Extension:                  Write a summary describing another type of a model which predicts the relationships between systems or between components of a system. (e.g. ecosystems, climate, economic models)</p>
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Through an integrated approach to education, we will foster a passion for discovery, critical thinking, and problem-solving. Our commitment extends beyond traditional classroom boundaries, embracing hands-on experiences, research opportunities, and collaborative projects that prepare students to address real-world challenges.

By nurturing a culture of inquiry, creativity, and technological proficiency, we will empower our students to become the architects of tomorrow's scientific and engineering landscape. Our goal is to inspire leaders who not only excel in their careers but also actively contribute to the growth and innovation of our local communities and the broader field of science and engineering.

At Sacramento School of Engineering, we champion a future where our graduates emerge as trailblazers, equipped not only with academic excellence but also with a deep sense of responsibility, ethics, and dedication to shaping a brighter, more innovative world through their contributions in science and engineering.

**10. Describe how the schools will be more effective in terms of academic achievement than the schools currently serving the targeted student population. Provide any data you have to support this assumption.**

The Sacramento School of Engineering and Science will offer a more tailored and focused approach compared to Alamogordo High School (AHS). Here's how it can potentially be more effective in terms of academic achievement:

- **Targeted Curriculum:** The curriculum at the Sacramento School of Engineering and Science is designed specifically around themes of engineering and science, integrating math and technology into the instructional framework. This targeted approach aligns with the interests of students pursuing these fields, potentially leading to higher engagement and better academic performance.
- **Thematic and Contextual Anchors:** Allowing students to engage with thematic and contextual anchors related to their career interests in engineering and science can enhance their learning experiences. This kind of immersive approach often aids in deeper understanding and application of concepts.
- **Integrated Learning:** By integrating technology and math into the curriculum, the Sacramento School offers an integrated approach to learning that may better prepare students for careers in STEM fields. This approach contrasts with AHS's traditional course structure, potentially offering a more relevant and applied learning experience.
- **Smaller School Setting:** Smaller schools often allow for more personalized attention and interaction between teachers and students. This can facilitate better support for struggling students, particularly those identified as performing poorly in specific subjects or sub-populations like Students with Disabilities, Hispanic students, or those on Free/Reduced Lunch.

To support the assumption of potential academic improvement:

**Comparative Proficiency Data:** The proficiency rates in ELA, Science, and Math at AHS are lower compared to what the Sacramento School of Engineering and Science aims to offer. For instance, only 16% of AHS students were proficient in math, whereas a curriculum centered on math and technology might attract students seeking improvement in this subject.

**Subpopulation Performance:** AHS's data highlights disparities among subpopulations, with significantly lower proficiency rates among Students with Disabilities, Hispanic students, and those on Free/Reduced Lunch. The targeted support, smaller class sizes, and thematic focus of the Sacramento School might better address the needs of these specific groups, potentially leading to improved proficiency rates.

By emphasizing a curriculum aligned with students' career interests, integrating subjects, and providing targeted support for specific populations, the Sacramento School of

Engineering and Science aims to address the shortcomings observed in the current academic performance data at Alamogordo High School. US News states that out of the top 20 public high schools in New Mexico, almost half are charter schools (9 out of 20). Our goal for Alamogordo is to offer a charter high school choice for the community.  
<https://www.usnews.com/education/best-high-schools/search?state-urlname=new-mexico&charter=true>

***Cynthia Stong***

Cynthia Stong, Founder