MARANA UNIFIED SCHOOL DISTRICT

Tangerine Farms K8 School

Marana, Arizona

1. Executive Summary

Educational Vision and Goals of the School
Tangerine Farms Tangerine Farms K–8 is a 93,000-square-foot campus designed to support literacy, developmental growth, and social connection for 800 students in one of Arizona's fastest-growing communities. As Marana Unified School District's first K–8 campus, the project responds directly to the District's evolving educational vision, lessons learned from recent schools, and commitment to preparing students for collaboration, critical thinking, and self-direction.

The campus is organized to balance supervision, flexibility, and age-appropriate identity while reinforcing the District's Gradual Release of Responsibility instructional model. Classrooms are grouped by grade level around breakout spaces specifically tailored to different developmental needs, ranging from intimate areas for focused instruction and testing to collaborative commons that support group learning and social interaction. Reading literacy — identified nationally as a growing educational challenge — became a central planning driver. Every classroom includes a dedicated reading nook designed to encourage voluntary reading, personalization, and independent learning. Teachers report increased student engagement and ownership resulting from these spaces.

The physical environment extends learning beyond the classroom. A central Social Stair functions as an informal gathering and collaboration space, while learning corridors support flexible instruction, visibility, and movement throughout the school day. Public functions, including the gymnasium, cafeteria, and playfields, are organized to support secure after-hours community use, reinforcing the campus as a civic resource.

The design responds directly to the Sonoran Desert climate. Buildings are oriented to maximize north and south daylight while minimizing east-west heat gain. A photovoltaic canopy supplies approximately 80% of the school's operational energy while simultaneously creating shaded outdoor recreation and learning areas. Sunken playfields and micro-basins manage stormwater as part of the student landscape experience, integrating environmental stewardship into daily campus life.

Architecturally, the campus draws inspiration from Marana's agricultural heritage through durable materials, shed roof forms, and a contemporary interpretation of regional farm structures. Murals, graphics, and environmental branding celebrate local identity and reinforce a sense of belonging across grade levels.

Tangerine Farms demonstrates how educational vision, climate-responsive planning, literacy-focused environments, and disciplined stewardship can work together to create a future-ready public school deeply connected to its community and landscape.

2. Scope of Work & Budget

OWNER	SITE AREA	BUILDING AREA	GRADES SERVED	STUDENT CAPACITY	SQUARE FEET PER PUPIL	CONSTRUCTION COST	CONSTRUCTION COST / SF	CONSTRUCTION DELIVERY	OCCUPANCY DATE
Marana Unified School District	15.5 Acres	93,000 SF over 2 levels	PreK - 8	800	116 SF	$37,174,193	$400	Design-Build	July, 2025

The view from the Media Center showcases Marana's natural beauty.

3. School & Community Research and Engagement

CONTEXT

The Community

Founded on ranching, farming and mining, the Town of Marana, Arizona is now one of only a few growing communities in the Tucson area. The Town is quickly expanding north toward Casa Grande and Phoenix where technology and manufacturing companies are emerging, attracting families, and generating the need for a highly skilled and educated workforce.

The Stakeholders

This new school is important to parents and families moving to Marana for better opportunities and a better life, teachers and staff who want to feel valued and heard, local businesses who want productive employees and innovative thinkers, faith organizations who care about the whole student, the Town of Marana who views MUSD as critical in attracting and retaining residents, and first responders trying to keep citizens safe.

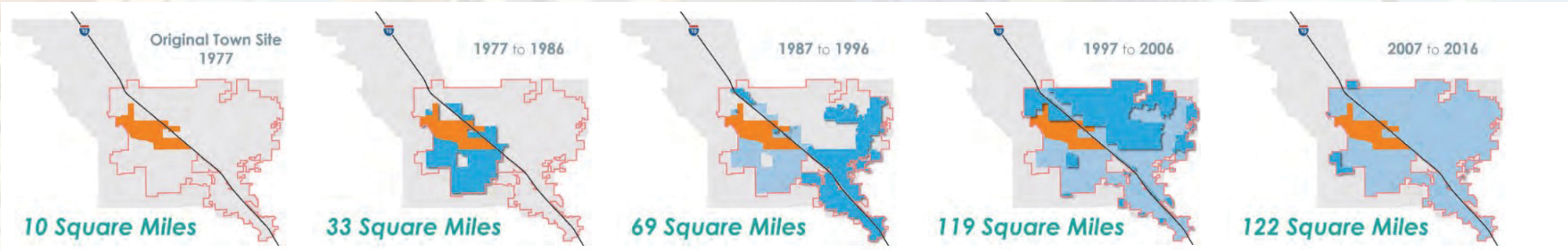
The Challenges

The Marana Unified School District (MUSD), geographically one of the largest school districts in Arizona at 550 square miles and serving over 13,000 students with 20 schools. MUSD ranks in the top 1% of Arizona school districts for academic growth in math and reading, according to the Education Recovery Scorecard, a national report by Harvard and Stanford Universities (2025). As MUSD transforms itself in response to the community's needs and to servicing such a large area, it recognizes the challenges ahead: continued rapid growth, aging facilities, and an evolving educational landscape shaped by funding uncertainty, school choice, open enrollment, and vouchers.

Available Assets

The community has always been very supportive of MUSD, consistently voting in favor of capital improvement bonds and override measures. The District ranks high, statewide, in academic excellence and achievement and is embarking on a transformational journey to become a "national model of educational excellence - one that not only achieves its goals, but redefines what a public school can be." Over the last two years, MUSD has worked collaboratively to define a clear vision of education in Marana. Working with teachers, staff, students, families, and community partners, the District has identified the knowledge, skills, and attributes their students will need to thrive beyond graduation. This vision includes the MUSD "Portrait of a Graduate" in which every MUSD student will demonstrate: Content Mastery, Creative & Critical Thinking, Civic & Global Engagement, Collaboration, Self-Direction, and Effective Communication.

Marana was founded on cotton farming, ranching, and mining.



Marana's population is projected to increase 46.8% by 2040

There has been a rapid influx of technology and manufacturing companies in the area.

3. School & Community Research and Engagement

PROCESS

Visioning

Community meetings were held during the visioning, programming, and options review phases of the design process. MUSD also formed a design committee that included the Superintendent, Assistant Superintendents of Educational Services and Operations, the Facilities Director, the Chief Financial Officer, and the Principals from the district's two newest schools, to provide lessons learned and other important insight. The design process was interactive and collaborative, recognizing that a good idea could come from anybody and ensuring everyone's voice was heard. Input was provided and feedback given at the right times so that the team was always moving forward.

Stakeholders provide input and feedback at each of the five steps.

Value to the Community

The Visioning Process began with all stakeholders answering the following questions:

- Who are we doing this for?
- What do we aspire to accomplish?
- Where can we make the most impact?
- Why is this important to us?

From this, a set of goals emerged to guide the team and serve as a yardstick to measure our success along the way. Some of the goals included:

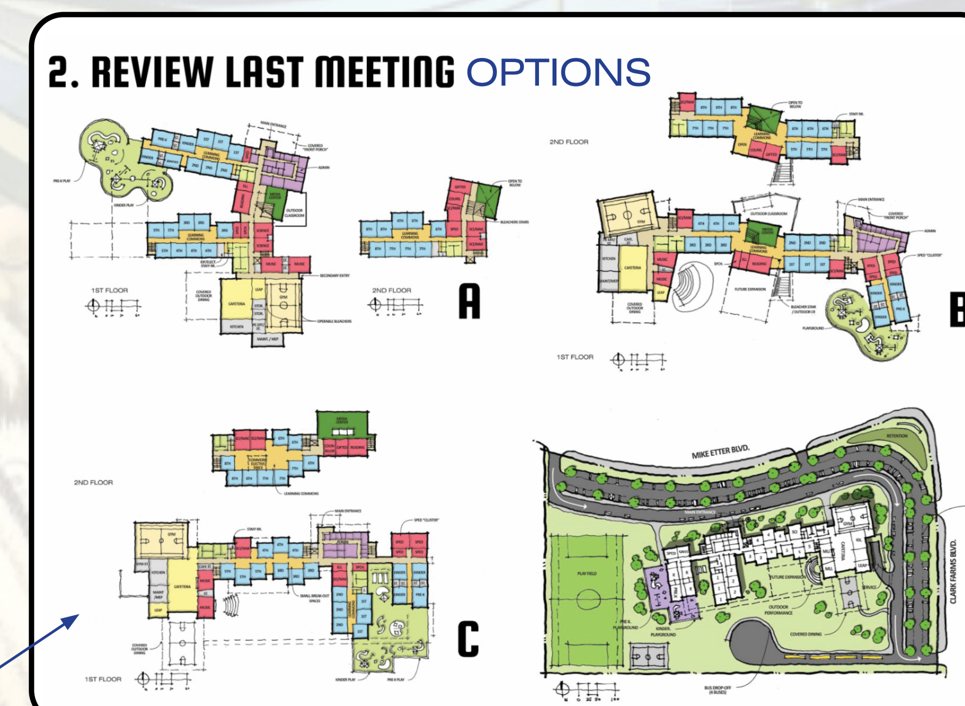
- Balance Safety with an Open / Welcoming Environment
- Provide the Feeling of "One Building"
- Group Grade Levels Together
- Make Facility Operationally Efficient & Easy to Maintain
- Offer Flexibility
- Encourage Collaboration
- Reinforce Sense of Community
- Create a Unique Identity
- Embrace the Diversity of the Community
- Address Mental Health and Wellbeing
- Provide After-School Care
- Make Drop-Off / Pick-Up Safe and Efficient
- Apply Lessons Learned from Existing Schools

Recognizing that a good idea could come from anywhere or anybody, the voices of the community were prioritized in the project's development.

Based upon information gathered, three planning options were developed and evaluated with all stakeholder groups

Fostering Diversity, Equity, and Inclusion

Including the community in the process helped create a strong sense of ownership and made stakeholders feel valued. Some of the ideas to embed DEI principles into the school design included: encouraging special ed and gen ed students to collaborate and learn together rather than separately; providing spaces and opportunities for older and younger kids to interact and bond to reduce the intimidation factor; simulate middle school experiences for younger students and high school experiences for 6th, 7th and 8th-graders; help students find their passions by providing space for electives like art, music, and orchestra; and providing a wide variety of teaching and learning spaces to accommodate different styles and modalities.



Project Timeline

2022

NOVEMBER 8, 2022
SCHOOL IMPROVEMENT BOND PASSES

2023

JULY 14, 2023
PROJECT KICK-OFF

AUGUST 17, 2023
COMMUNITY MTG 1, GOALS

OCTOBER 16, 2023
COMMUNITY MTG 2, OPTIONS REVIEW

NOVEMBER 14, 2023
COMMUNITY MTG 3, RECOMMENDED CONCEPT

NOVEMBER 17, 2023
SCHEMATIC DESIGN APPROVED

2024

JANUARY 9, 2024
POLICE & FIRE SAFETY REVIEWS

FEBRUARY 6, 2024
DESIGN DEVELOPMENT APPROVED

MARCH 26, 2024
50% CONSTRUCTION DOCUMENTS APPROVED

APRIL 1, 2024
EARLY SITE PACKAGE, PERMIT

APRIL 12, 2024
BEGIN CONSTRUCTION

MAY 14, 2024
BUILDING PERMIT

2025

JULY 18, 2025
CERTIFICATE OF OCCUPANCY

AUGUST 4, 2025
FIRST DAY OF SCHOOL

4. Physical Environment

CONTEXT

Physical Attributes
Surrounded by beautiful mountain ranges, the 15.5 acre flat site is located in a large housing subdivision emerging in an area once used for growing cotton. The site is highly visible from Interstate 10 and adjacent to an extremely large distribution warehouse.

Fitting into the Community
The school is truly a neighborhood amenity, with many students riding their bikes, walking, or being transported by parents. Very few ride buses. The gym, cafeteria, performance areas, play fields, play equipment, and courts are all available to the community during evenings and off-hours.

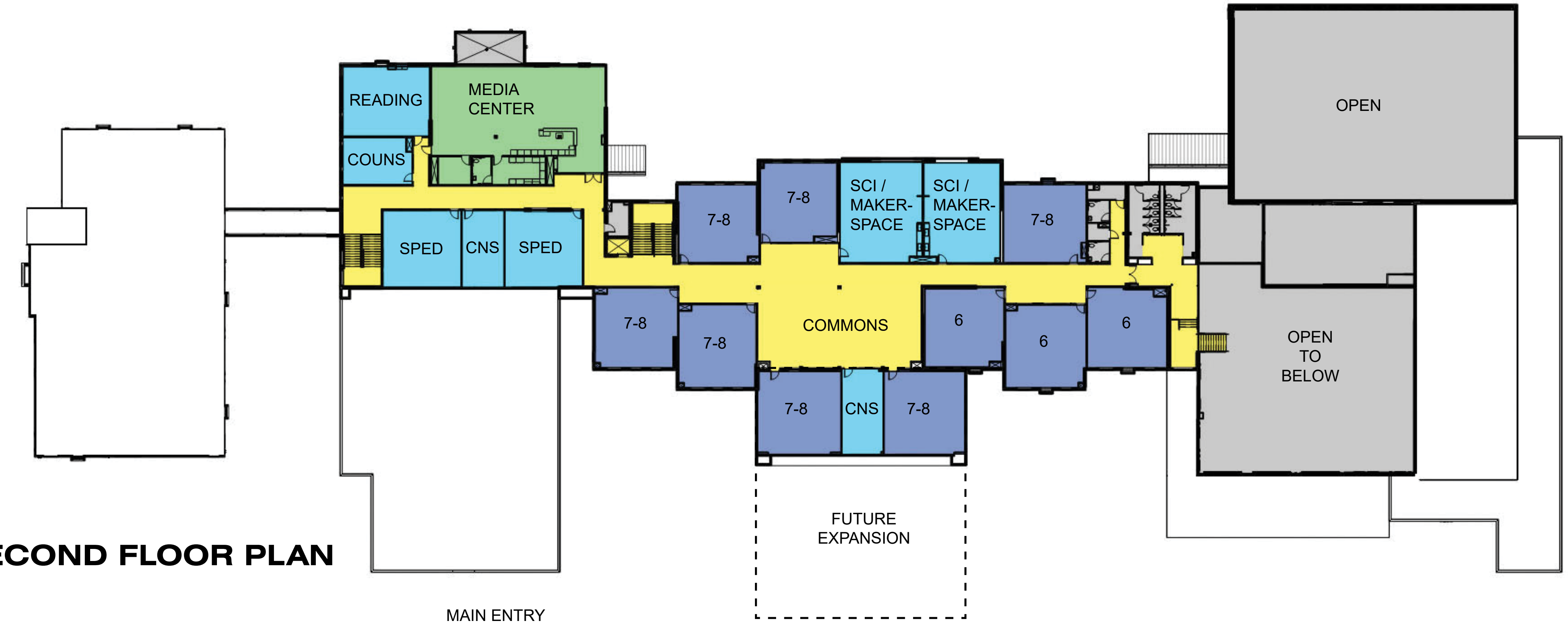
Site Plan

The new school enjoys long north and south exposures, protected from the harsh desert sun and taking advantage of beautiful mountain views. The playfields on the west and south sides create a buffer to the adjacent neighborhood.

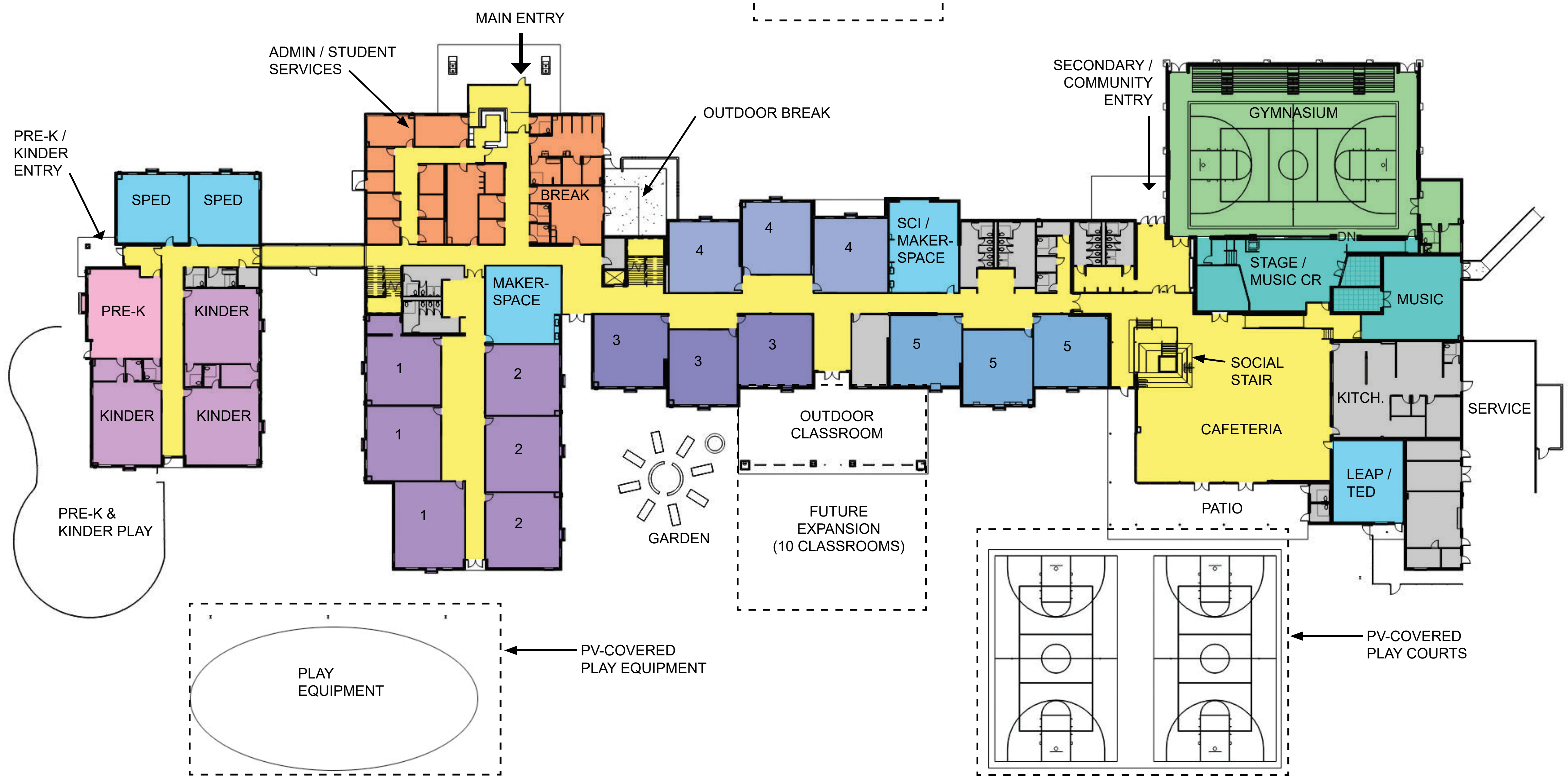
4. Physical Environment
RESPONSE

Organization

The organization of Tangerine Farms K–8 School was intentionally developed to support Marana Unified School District's Gradual Release of Responsibility instructional model while responding to the developmental needs of students from Pre-K through 8th grade. Younger students are grouped within separate Pre-K/Kindergarten and 1st/2nd grade wings that provide appropriately scaled learning environments focused on security and belonging, while daily circulation through the grades 3–5 areas exposes them to older peers and more advanced learning settings, reinforcing aspiration and academic progression. Shared breakout spaces and learning corridors support collaboration, flexible instruction, and informal learning beyond the classroom. Grades 6–8 are located on the second floor around a central Commons area that encourages independence, social interaction, and collaboration while simulating aspects of the high school experience. Together, the campus organization uses spatial progression, visibility, and movement to support student growth, confidence, and readiness for future learning.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

4. Physical Environment

RESPONSE

Inspires & Motivates

EXTERIOR AESTHETICS AND IDENTITY: The architectural language draws from Marana's agricultural heritage. Shed roof forms reference working farm structures, while painted CMU and rust-toned metal panels create a durable, contemporary expression. Subtle shadow lines articulate massing and moderate scale in response to climate and context. The material palette emphasizes durability and long-term value. The campus reflects its agricultural roots while projecting confidence in its future.

BUILDING MASSING: Some of the school's key spaces have higher ceilings which are articulated on the exterior – the gym, science rooms, media center and kinder / pre-K entry. The school's lower level consists of painted CMU, a simple, cost-effective, and durable system. Translucent glazing illuminates the gym and even the fencing that separates the parking and parent-drop-off lanes recalls the ranching heritage of Marana.

4. Physical Environment

RESPONSE

BRANDING AND GRAPHICS: Murals and environmental graphics depict fun interpretations of Marana's farms, ranches, railroads, desert terrain, and hot air balloons. Mascots and logos represent both elementary and middle school students in academic and athletic contexts. Graphics support wayfinding, celebrate local heritage, and foster pride.

Innovations

Innovation at Tangerine Farms K–8 is driven by the integration of social, environmental, and operational systems. The Social Stair anchors daily interaction and informal learning, while a photovoltaic canopy supplies approximately 80% of campus energy and creates shaded outdoor spaces. Breakout areas vary by age group to support developmental needs and diverse teaching styles. The campus is future-ready, with capacity for ten additional classrooms, and civic zoning allows the gym, cafeteria, restrooms, and playfields to operate independently for after-hours community use. All are delivered at a disciplined cost under $400 per square foot, demonstrating innovation through performance and stewardship.

The Social Stair - "the best seat in the house, always fills up fast". - 6th grade teacher

4. Physical Environment

PV arrays produce 80% of the school's power and provide shade, which is critical in the Sonoran Desert

RESPONSE

Diversity, Equity & Inclusion

With community input,Tangerine Farms K–8 is designed to provide all students with equitable access to high-quality, developmentally responsive learning environments including integrated special education, makerspace, science, counseling, music and reading rooms. Spaces are scaled and organized by age group, ensuring younger and older students experience environments appropriate to their needs but are also encouraged to explore and circulate through other grade levels. Clear, intuitive wayfinding and well-defined circulation paths promote safety, independence, and ease of navigation for all users, supporting an inclusive and welcoming school experience.

Sustainability & Wellness

Sustainability and wellness are integrated into the daily experience of the school through both active and passive strategies. A photovoltaic canopy generates approximately 80% of the school's energy while providing shaded outdoor spaces. Building orientation and shading reduce heat gain and enhance comfort, while playfields double as retention basins to manage stormwater. Abundant daylight, access to fresh air, and thermally comfortable environments support student health, well-being, and academic performance.

5. Educational Environment CONTEXT

The design responds to the District's "Lessons Learned" from recently completed school projects, supports its push to address the nationwide regression in reading literacy, recognizes that individual learning and teaching approaches are varied, and embodies the District's adopted educational model, the Gradual Release of Responsibility (GRR).

READING LITERACY

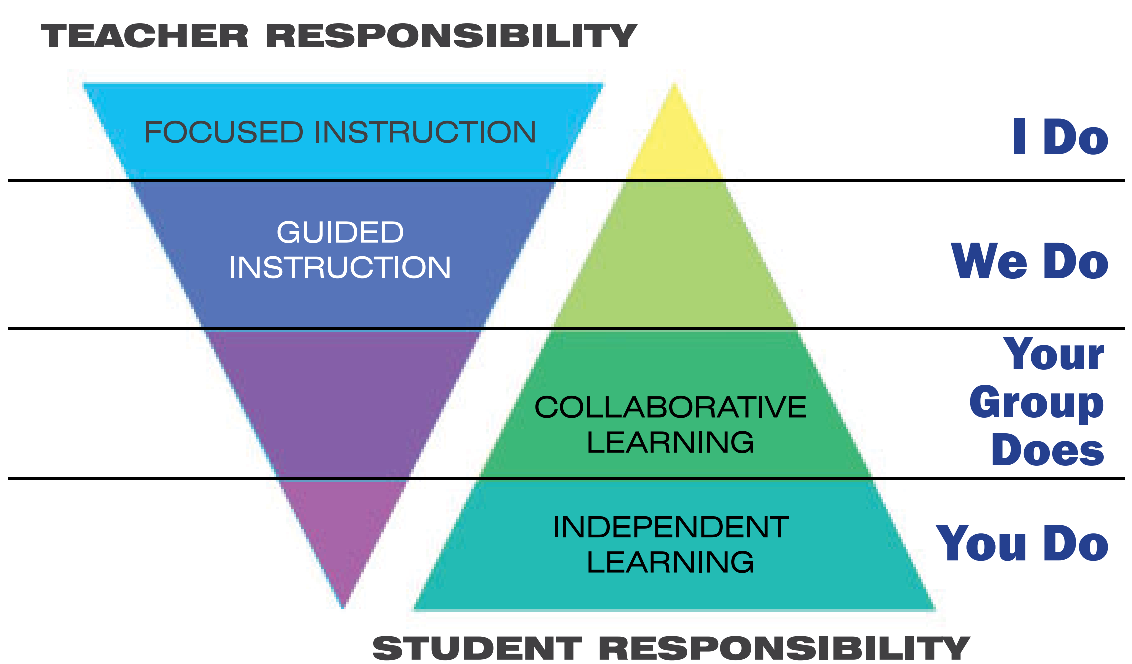
Uneven Progress: Math scores showed modest recovery, but reading recovery stalled or worsened in some areas between 2022 and 2024

"The rescue phase is over. The federal relief dollars are gone. It is time to pivot from short-term recovery to longer term challenges such as reducing absenteeism and addressing the slide in literacy."

- CEPR Faculty Director Dr. Thomas Kane, co-author of the research, February 2025, Education Recovery Scorecard 2025, HarvardCEPR

GRADUAL RELEASE OF RESPONSIBILITY (GRR)

MODEL OF INSTRUCTION USED BY MARANA USD



ONE SIZE DOES NOT FIT ALL

"The break-out areas should not be the same for each grade level. Some grades will need spaces for one on one work and testing, while others will need space for group work. The older students, grades 6 thru 8, will benefit from a setting that simulates high school in some ways."

- MUSD Superintendent

Lessons Learned: The principals from the District's two most recently completed school projects expressed concern about the operable glass walls, open learning corridors, and past exterior circulation concepts. They proposed a hybrid solution that provided more teaching wall space, still a high degree of transparency from the corridors, and larger classrooms.

Rattlesnake Ridge Elementary (2006)

Gladden Farms Elementary (2016)

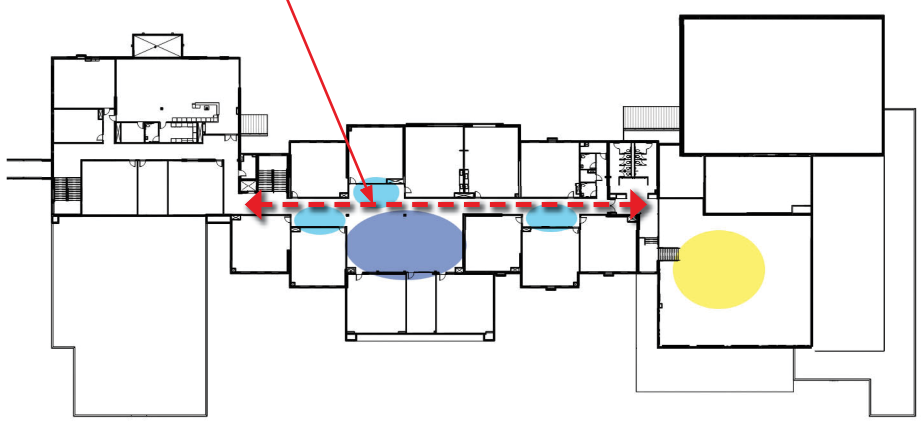
Dove Mountain CSTEM (2020)

A Spatial Approach to Reading Literacy

Dedicated reading nooks in every classroom create intimate environments that promote voluntary reading and teacher personalization, reinforcing literacy as a daily practice. Teachers report increased student engagement due to the reading nooks. See above for some of the teachers' amazing ideas!

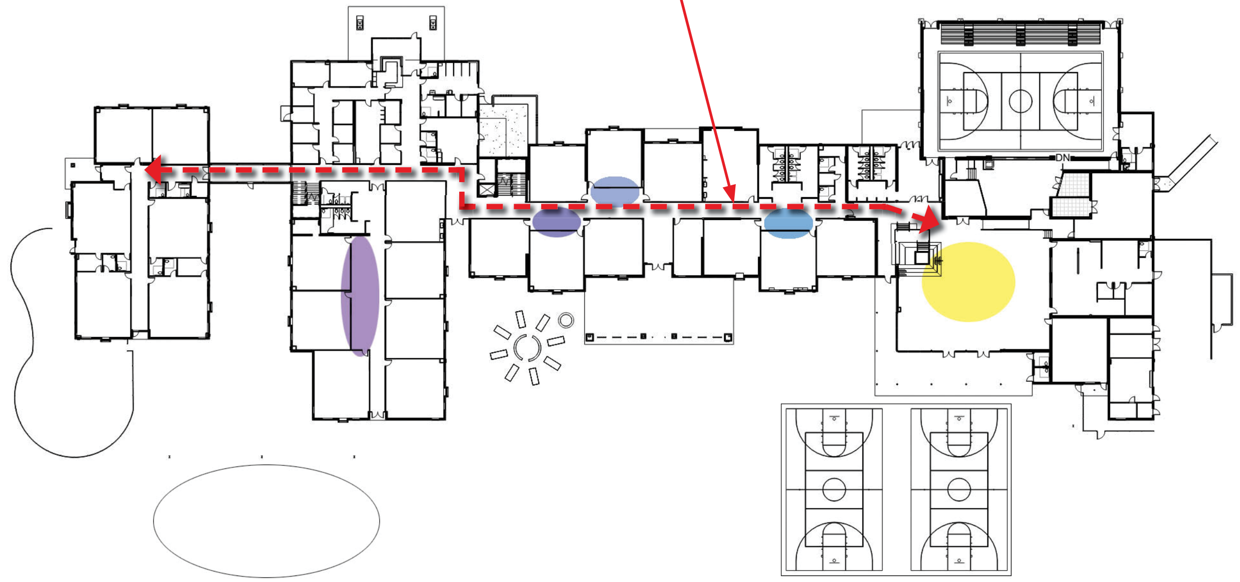
5. Educational Environment RESPONSE

Older students transition between classes and collaborate



2nd Floor Break-Out Spaces

Younger students flow through the spaces of their older peers



1st Floor Break-Out Spaces

Support for a Variety of Teaching & Learning Styles
Break-out spaces are sized and positioned to accommodate the learning that happens outside of the classroom at various ages. Furnishings allow for movement. Younger students circulate through spaces where older students are learning and can see and hear what is happening.

Teacher training in the Commons

Break-out work - 1st & 2nd Grades

Reading Classroom

2nd Floor Commons Area

Adaptable & Flexible Environments

Classrooms are organized by grades into groups of three to facilitate team teaching. Each group is adjacent to an appropriately sized beak-out area. On the second floor, there is a large commons area that is used for student socialization between class, group activities and projects, assembly, teacher training, or as a classroom.

Graphics inspire throughout the school

Logos for younger & older Students

Pride of Place

The design team developed two school logos, one for the young students and another, more “fearsome” athletics-oriented logo for the older students. The team also created murals that highlight the special attributes of the Marana community and located them throughout the school.

Class visit to the Media Center

Media Center Anchored in Place

The second-floor media center frames expansive views of the Catalina Mountains and Picacho Peak, connecting academic life to the surrounding Sonoran landscape. The space is also used for teacher professional development.

The Gym can accommodate the entire school for assemblies.

Platform can be closed and used as a Music Classroom

Community Resource

A daylight-filled gym with high school–sized courts supports athletics, assemblies, and after-hours community use through a secure, independently accessible lobby. The platform facing the gym serves as a music / band room when not being used for performances.

Solar Power, Shade & Rainwater Collection
A solar array supplies approximately 80% of the school's operational energy while shading high-use courts. Sunken playfields double as rainwater retention basins, integrating energy and water stewardship into daily student life.

Developmentally Responsive Outdoor Learning

Age-specific play areas, shaded outdoor classrooms, and multi-use fields support physical development and informal learning in a climate-adapted environment. Tangerine Farms K8 has a separate kinder / pre-k entry for off-hours pick-up and drop-off.

Maximizing Site Area

At 15.5 acres, the school site is very small for an 800-student K8. This is possible because competition athletic fields are shared with the nearby middle school. Shaded outdoor classroom space, retaining areas that double as adventurous, “risky” play areas, play courts and playgrounds shaded by PV canopies, and a multi-use / soccer field that serves the community and school are some of the school’s outdoor features.

PV canopies shade multiple play areas

Stormwater retention areas provide alternative play and social opportunities

Outdoor classroom

Safety, Security, & Site Circulation

Separating vehicular, bus, pedestrian, and bicycle circulation was complex due the need for extensive on-site queuing for parent pick-up and drop-off. Tangerine Farms has five entry points: kindergarten/preschool, main administration, gym/cafeteria, buses on the playfield side, and the LEAP/TED before- and after-school programs. The office has a 180-degree view of the front of the school and lower, exposed windows are treated with a film that obscures visibility into the building.

Bus drop-off is along the south side of the school

Secure main entry

6. Results

Tangerine Farms delivers a climate-responsive, future-ready campus that supports reading literacy, social connection, and civic engagement. Students learn in daylight-filled classrooms supported by flexible learning zones. Teachers report increased voluntary reading engagement due to the intimacy and personalization of the reading nooks. The Social Stair and cafeteria foster daily interaction. The gymnasium, LEAP / TED spaces, media center, Learning Commons, and kinder / pre-k "wing" extend the school's presence beyond the academic day. The photovoltaic canopy supplies approximately 80% of operational energy, while playfields and micro-basins integrate stormwater retention into recreational, landscaped, and garden space. These strategies reduce long-term costs and reinforce environmental responsibility. Tangerine Farms demonstrates how literacy-centered planning, climate-responsive design, and developmentally responsive learning environments can create a resilient public school deeply connected to its students, community, and desert landscape.

Educational Outcomes
increased voluntary reading engagement
improved student collaboration
teacher flexibility
informal social learning

Operational Outcomes
reduced energy demand
successful after-hours community use
safe circulation efficiency

Social Outcomes
student ownership
campus pride
inter-grade interaction