

Architectural Significance in Metal Buildings: An Educational Series

# KIPP TEXAS SOMOS CAMPUS

Including KIPP Somos Primary and KIPP Somos Collegiate  
San Antonio, TX

Created in coordination with Gensler, Linbeck Group, LLC  
and KIPP Texas Public Schools

Photo by JD Swiger





Photos by JD Swiger

“The folks in our communities love what we have done with metal building technology. The buildings look amazing, and they meet our objectives.”

— Eric Kot, Former Deputy Chief of Construction and Real Estate for KIPP Texas

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# PROJECT DETAILS

**Building:** KIPP Somos Campus

**Location:** San Antonio, Texas

**Client/Owner:** KIPP Texas Public Schools

**Size:** KIPP Somos Collegiate, 91,000 square feet; KIPP Somos Primary, 75,400 square feet; gymnasium building, 13,265 square feet

**Site:** 9.9 acres

**Construction Cost:** Approximately \$40 million, which includes approximately \$16.1 million for KIPP Somos Primary, \$19.6 million for KIPP Somos Collegiate, and \$3.7 million for the gymnasium building

**Completion:** August 2023

**Architectural Design:** Gensler

**General Contractor:** Linbeck Group, LLC

**Structural Engineer of Record:** Garza + McLain Structural Engineers, Inc.

**Mechanical Engineering:** DB Graves Mechanical (Mechanical/Plumbing)

**Civil Engineering:** Colliers Engineering

**Site/Landscape Design:** C3 Landscape Design

**Electrical Engineering:** DB CAPP Electric

**Metal Building, Manufacturing and Erection:** Red Dot Buildings

**Metal Roof and Wall Panels:** MBCI

**Windows and Doors:** YKK



Photo by JD Swiger



## PROJECT DESCRIPTION

In 1992, Mike Feinberg and Dave Levin were hired by Teach for America, a nonprofit organization that develops and supports equity-oriented leaders to transform education. (1) Upon completing their two-year commitment to Teach for America, Feinberg and Levin co-founded the “Knowledge is Power Program” (KIPP) charter school organization with 47 fifth



Photo by JD Swiger

graders in a public elementary school classroom in Houston, Texas. Their goal was to continue expanding educational opportunities for all children by providing a quality college-preparatory education to students in low-income neighborhoods. In 1995, Feinberg remained in Houston to establish KIPP Academy Middle School while

Levin returned to New York City where he founded KIPP Academy in the South Bronx.

By 2000, KIPP had caught the attention of Donald and Doris Fisher, cofounders of the retail chain, Gap, Inc. The Fishers supported public school reform organizations and they were impressed enough with the KIPP



Image courtesy of Gensler

model Feinberg and Levin had initiated that they invested \$15 million to establish the KIPP Foundation, which promotes leadership, innovation and the exchange of insights and ideas throughout KIPP Public Schools and with other organizations. (2) As longtime CEO of the Gap, Don Fisher also provided Feinberg and Levin with the guidance and mentorship needed to expand the KIPP model to a national level. (3)

KIPP is now the largest network of nonprofit charter schools in the United States, providing an exemplary education to approximately 120,000 Pre-K through Grade 12 students at 280 schools in 21 states and Washington D.C. This school system offers a free college preparatory education on an open-enrollment basis.

Demand for KIPP's programs remains particularly strong in its home state of Texas. KIPP Texas Public Schools (KIPP Texas) has a network of 57 schools that serve nearly 35,000 Pre-K through Grade 12 students in Austin, Dallas-

Fort Worth, Houston, San Antonio and surrounding areas. (4) From 2022 to 2024 alone, KIPP Texas has constructed more than 400,000 new square feet of space to open nine schools that serve an additional 3,500+ students. These new facilities are all metal buildings, including the primary and secondary schools, KIPP Somos Primary and KIPP Somos Collegiate, and the freestanding gymnasium building at the KIPP Texas Somos Campus. This folio focuses on the Somos campus and not the totality of KIPP Texas' buildings.

### Community Engagement and Impact

KIPP Texas is a locally run, nonprofit organization governed by a board of directors composed of private citizens who represent the communities where KIPP Texas schools are located. Board members are passionate about educational equity and contribute their expertise in business, education, law, finance, nonprofit management, human resources and real estate development toward achieving KIPP Texas'



mission of creating “joyful, academically excellent schools that prepare students with the skills and confidence to pursue the paths they choose—college, career and beyond—so they can lead fulfilling lives and build a more just world.” (4)

**Building Schools Where They are Most Needed**

According to Eric Kot, former Deputy Chief of Construction and Real Estate for KIPP Texas, leaders at this public charter school system strive to meet students and families where they are. “We aren’t private,” he said. “There is no tuition. We offer a public-school option and strategically build our schools in communities that need us the most.”

This need is especially high in economically underserved neighborhoods. In Houston, for example, nearly 90% of KIPP students come from economically disadvantaged households and 98% of these students identify as ethnic minorities. On average, about 10% of low-income

students in the county graduate from college, with the majority likely to work in low-wage jobs and live in poverty.

KIPP Texas has been flipping this script. In 2018, more than 500 students graduating from KIPP Texas’ schools in Houston earned over 3,000 acceptances to 81 colleges and universities. In total, they were offered more than \$21 million in grants and scholarships and 98% of them entered college that fall. (5)

“Schools generate activity and often serve as a community nexus, so it’s necessary to understand the role [a school] will play beyond a place of education.”

-Robert Bradford, AIA, LEED-AP, Senior Associate, Gensler



Images are representative of feedback from students. Courtesy of Linbeck Group, LLC

## Connecting with Community Resources

KIPP Texas' positive impact extends past the walls of its buildings through the network of community resources it has developed to connect students and their families with affordable housing, physical and mental health services, crisis-response and legal aid organizations, as well as language, digital literacy and adult education classes.

Robert Bradford, AIA, LEED AP, NCARB, Senior Associate and Registered Architect for Gensler, stressed the importance of considering access to these "wrap-around community services" during the due diligence phase of a project. Bradford has master planned over 20 KIPP campuses and designed 45 buildings for KIPP Texas. In an article titled "Three Considerations for Repurposing Stranded Assets for Education," Bradford addressed the positive, lasting effects school construction can have. He said, "Schools generate activity and often serve as a community nexus, so it's necessary to understand the role [a school] will play, beyond a place of education...A proposed property should be assessed to gauge if it has the ability to grow and evolve with the population and its needs." He concluded by describing how school construction projects can catalyze urban revitalization by prompting municipalities to invest in infrastructure improvements, such as roads, sidewalks and traffic lights. (6)

## Planning & Design Priorities

While independent school districts (ISDs) invest considerable time and money to win voters' approval to issue bonds that support facility construction, public charter school organizations face a more formidable challenge when they need to purchase property and build facilities.

According to Brian Whitley, vice president of communications for the Texas Public Charter Schools Association, charter schools in Texas don't receive any funding from local property taxes, which are the main source of capital investment funds for traditional school districts. "Instead," he says, "charter schools receive a relatively small amount of facilities funding from the state. During the 2022-2023 school year, for example, this amount was \$174 per student for charter schools while per-student facilities funding for traditional districts is often between \$1,000 and \$2,000."

Thus, charter schools not only must do more with less, but must also raise most of the money invested in facilities via philanthropy. In addition to the Doris and Donald Fisher Fund, major foundations that have supported KIPP Texas include the George W. Brackenridge Foundation, Gates Foundation, Walton Family Foundation and the J.W. Couch Foundation.



Photos by JD Swiger

The need to maximize the value of every dollar invested in schools and related facilities led the KIPP Texas real estate and construction team to develop its own purpose statement, Kot said, which is to “support KIPP Texas Public Schools’ growth by identifying, purchasing and constructing safe, equitable and affordable space conducive to great teaching and learning.” The majority of KIPP Texas’ new construction projects use metal building technology because metal buildings offer the cost effectiveness, speed of construction, flexibility and durability needed to achieve the goals defined in this purpose statement.

### Cost Effectiveness and Speed of Construction

“It’s very expensive to construct buildings, and we have to be super smart and disciplined to balance our program and space needs with our budget and schedule,” Kot said. “Metal buildings are designed and engineered to minimize materials waste, which helps to keep costs down. They are also quicker to construct, which enables us to achieve our occupancy goals. Typically, we set a July occupancy deadline for an August start-of-school date. We can’t let the schedule slip. We have to land these projects so schools can open on time.”

The metal building fabrication and installation process streamlines project delivery in several ways. Professional engineers and draftspeople who work for the metal building manufacturer can create shop drawings, order steel and begin fabrication concurrently with the permitting process. Metal building components are made offsite and shipped to a project’s location when needed. This means crews can begin rapidly erecting the steel structure the moment the site preparation work is complete. Since fewer trades are needed to assemble the metal building’s components and enclose the structure, labor costs are kept in check and less time is spent on project coordination.

“As soon as the building is enclosed, we can install the mechanical, electrical, lighting and specialty systems then finish out the interiors. Our average construction period from the time we get a notice-to-proceed is about 10 months, including site prep and building construction.”

—Allston Marble, Vice President for Linbeck Group, LLC

“We can quickly ‘dry in’ a metal building,” says Allston Marble, vice president for Linbeck Group, LLC, which has provided predesign analysis, cost estimating and construction services for approximately 40 of KIPP Texas’ building projects. “As soon as the building is enclosed, we can install the mechanical, electrical, lighting and specialty systems then finish out the interiors. Our average construction period from the time we get a notice-to-proceed is about 10 months, including site prep and building construction.”

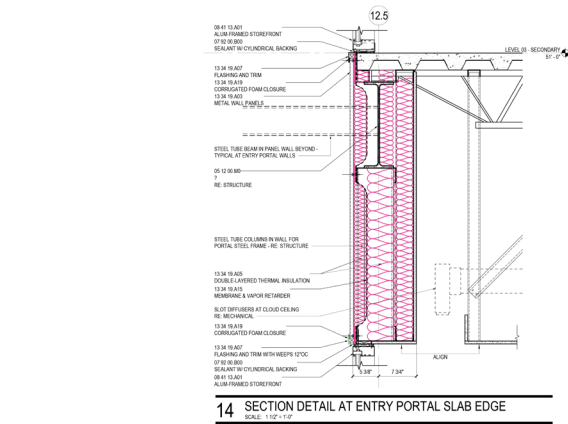
### Flexibility, Creativity and Option Analysis

“We’ve looked at a variety of materials, including concrete and wood,” Kot said. “However, we can accomplish more with metal buildings. Wood typically doesn’t last as long as steel and it usually costs more. Our architects have told us concrete tilt-up construction is less flexible and, in Texas, it is associated with big roadways and industrial facilities. The folks in our communities love what we have done with metal

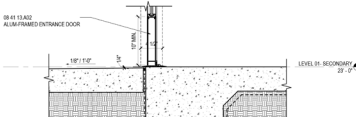
building technology. The buildings look amazing, and they meet our objectives.”

The new gymnasium building on the KIPP Somos Campus demonstrates how the flexibility of metal building systems can be used to creatively phase construction and to adapt the architectural design of core facilities over time. Initially, the physical education spaces on eight of KIPP Texas’ properties were designed and built as open-air, covered sports pavilions that could be transformed into fully enclosed metal buildings when funds became

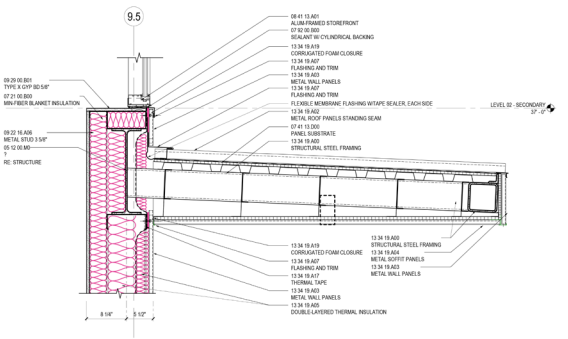
available. The design of the new gymnasium building on the KIPP Somos Campus was based on the original dimensions of these sports pavilions. The two-story gym is 105-feet x 105-feet square with a stage projecting outward from one of its walls and a one-story addition that houses locker rooms, concessions areas, a flex office, a utility room and a main entry.



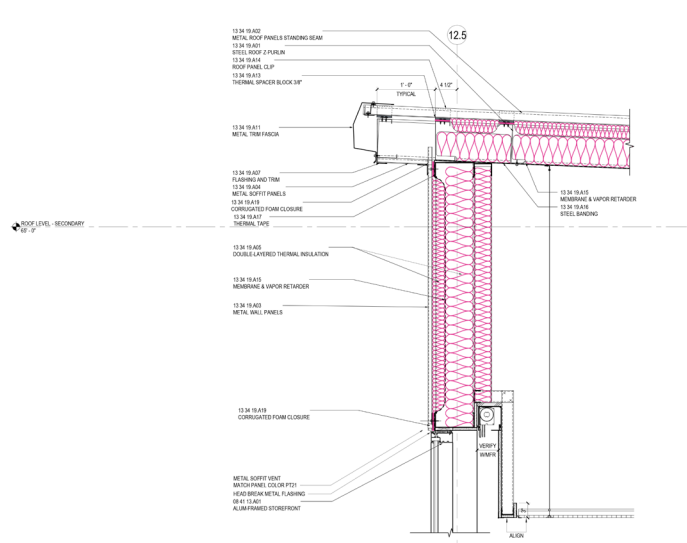
14 SECTION DETAIL AT ENTRY PORTAL SLAB EDGE  
SCALE: 1/16" = 1'-0"



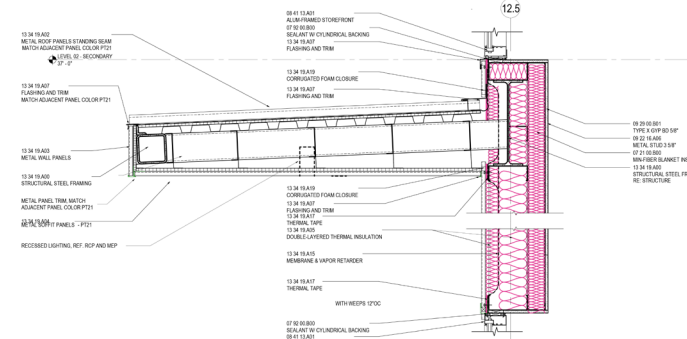
15 TYPICAL THRESHOLD DETAIL AT ATRIUM ENTRY DOOR  
SCALE: 1/16" = 1'-0"



20 SECTION DETAIL AT ATRIUM NORTH CANOPY  
SCALE: 1/16" = 1'-0"



11 SECTION DETAIL AT ENTRY PORTAL ROOF AND HIGH EAVE  
SCALE: 1/16" = 1'-0"



1 SECTION DETAIL AT ATRIUM ENTRY PORTAL SILL  
SCALE: 1/16" = 1'-0"

Image courtesy of Gensler

The wide, clear span spaces that can be achieved using metal building systems minimize the need for interior columns and, thus, allow unobstructed views of sports activities and theatrical performances in the gymnasium building. Reducing the number of columns needed to support the structure also increases the amount of space available for the general classrooms, science labs, teacher's workroom, administrative and support service space and kitchen and cafeteria housed within KIPP Somos Collegiate and KIPP Somos Primary.

**Durability and Resilience**

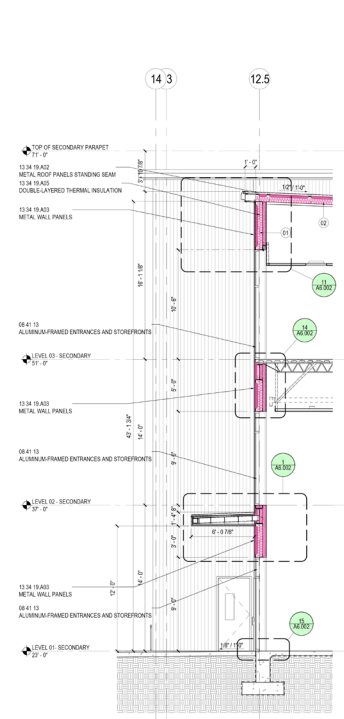
"We believe—and have seen—that metal buildings require less maintenance compared to replacing brick and grout or repairing the exteriors of schools constructed using other materials," Kot said. "Once we get our metal building up, it's pretty maintenance free."

Various research studies support what Kot and his team have experienced: metal buildings are durable and resilient. They can last for six or more decades; resist pest

infestations; don't support mold growth, rust or decay; and can be designed to withstand extreme weather conditions. (7) Metal doesn't contain cellulose or other plant materials that attract termites, woodboring beetles or carpenter bees. Larger pests, such as rodents, can eat a hole through wood, but are unlikely to try to chew through steel. The cold-formed, noncombustible steel used to fabricate custom-engineered metal building components reduces structure flammability. (8) Metal buildings can be designed to withstand earthquakes (9) and winds of up to 170 mph, (10) with research showing that metal roofs typically stand up to other weather conditions, such as hail, with little to no functional damage. (11)

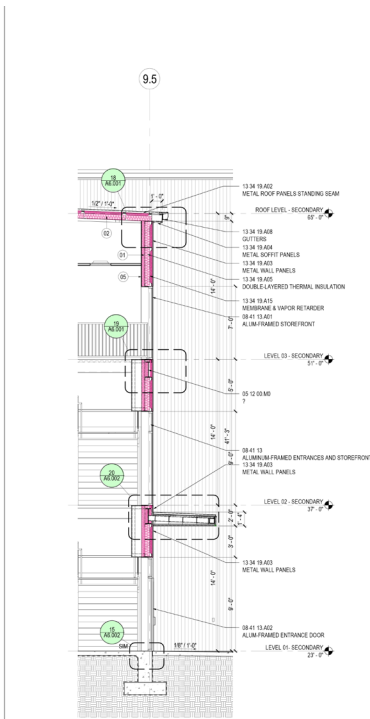
**Architect's Statement**

According to Bradford, the KIPP SOMOS campus "serves as a compelling testament to the importance of design flexibility and responsiveness to rapidly changing market conditions and client needs." The conceptual phase of this project was completed prior to the onset of the COVID-19



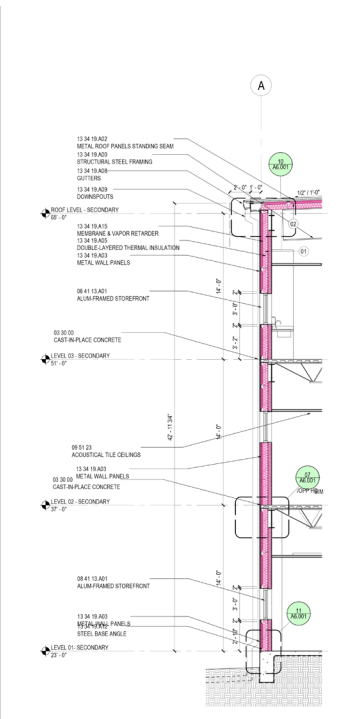
04 WALL SECTION AT SOUTH ATRIUM

SCALE: 1/8" = 1'-0"  
 01 TYPICAL PERM WALL INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R13 + R6.50 (REF. A1.02)  
 02 TYPICAL PERM ROOF INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R19 + R11.5 (REF. A1.03)  
 04 2" CONCRETE FOUNDATION OVER VAPOR RETARDER AND FULL HEIGHT AND WIDTH CURB  
 05 3/8" METAL STUD WITH BATT INSULATION AND SIF TYPE X GYPSUM BOARD, R 10 MIN. BY PERM INSTALLER



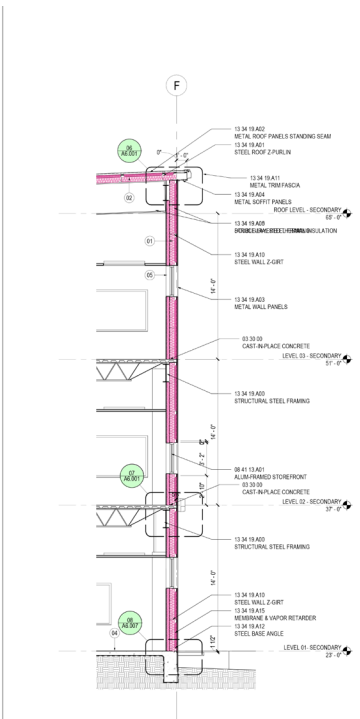
03 WALL SECTION AT NORTH ATRIUM

SCALE: 1/8" = 1'-0"  
 01 TYPICAL PERM WALL INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R13 + R6.50 (REF. A1.02)  
 02 TYPICAL PERM ROOF INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R19 + R11.5 (REF. A1.03)  
 04 2" CONCRETE FOUNDATION OVER VAPOR RETARDER AND FULL HEIGHT AND WIDTH CURB  
 05 3/8" METAL STUD WITH BATT INSULATION AND SIF TYPE X GYPSUM BOARD, R 10 MIN. BY PERM INSTALLER



02 TYPICAL LOW WALL SECTION AT SECONDARY NORTH

SCALE: 1/8" = 1'-0"  
 01 TYPICAL PERM WALL INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R13 + R6.50 (REF. A1.02)  
 02 TYPICAL PERM ROOF INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R19 + R11.5 (REF. A1.03)  
 04 2" CONCRETE FOUNDATION OVER VAPOR RETARDER AND FULL HEIGHT AND WIDTH CURB  
 05 3/8" METAL STUD WITH BATT INSULATION AND SIF TYPE X GYPSUM BOARD, R 10 MIN. BY PERM INSTALLER



01 TYPICAL HIGH WALL SECTION AT SECONDARY NORTH

SCALE: 1/8" = 1'-0"  
 01 TYPICAL PERM WALL INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R13 + R6.50 (REF. A1.02)  
 02 TYPICAL PERM ROOF INSULATION AND WEATHERTIGHTNESS ASSEMBLY - R19 + R11.5 (REF. A1.03)  
 04 2" CONCRETE FOUNDATION OVER VAPOR RETARDER AND FULL HEIGHT AND WIDTH CURB  
 05 3/8" METAL STUD WITH BATT INSULATION AND SIF TYPE X GYPSUM BOARD, R 10 MIN. BY PERM INSTALLER

Image courtesy of Gensler

pandemic. By late 2020, the price of steel skyrocketed due to shortages that arose when the factories were temporarily shut down, followed by a resurgence in demand (12) while supplies and inventories were still low. (13)

"This project faced major unforeseen challenges in material availability and pricing, unlike any we'd encountered before," Bradford continued. "Despite our attachment to the initial metal building design—which was marked by our belief in its superiority—the doubling cost of steel prompted the client to explore cost-effective alternatives. Through collaborative discussions with the general contractor and client, we devised an alternative plan that used cast onsite concrete construction instead of a metal building system. However, after thoroughly pricing and evaluating the concrete option, we ultimately determined that an engineered metal building remained the optimal choice from the standpoint

of both cost and schedule. The agility to pivot the design towards a different material, coupled with the inherent efficiency of the engineered metal building's accelerated construction timeline, empowered the client to swiftly make informed decisions and ensure that timely project completion aligned with their objectives."

Kot said the construction team had 14 months to construct almost 180,000 square feet of space within the 6.5-acre buildable area of the site. Videos taken by the general contractor show steel structure erection starting at the end of August 2022, immediately after the slab foundation had been laid. Five months later, by the end of January 2023, KIPP Primary and KIPP Collegiate were almost fully enclosed, and work began on the gymnasium building. All three buildings were completed by July 2023, with the final site paving and landscaping done in August 2023, just in time for the start of the school year.

# PROJECT CHALLENGES, GOALS & OBJECTIVES

## Conquering a Challenging Site

To meet its affordability and community-access objectives, KIPP Texas often purchases urban infill sites that are irregularly shaped or have other constraints that make achieving the programmatic requirements for school buildings especially challenging. The site for the KIPP Somos campus is unique in several ways: it is heavily wooded with a 30-foot drop across a 1,100-square-foot portion of the property. It is surrounded by residential neighborhoods and located across the street from the Jackson Ranch National Historic Landmark. The City of San Antonio also required that two historically significant buildings, which were part of the Sisters of the Presentation of the Blessed Virgin Mary convent, remain on this site.

Using metal buildings made it possible for KIPP Texas to limit the number of trees that needed to be removed and replaced and for the project team to work around the historic buildings and complete construction within the buildable area—all while minimizing disruption for the surrounding properties.

“The architects had to shoehorn the buildings into place,” said Ike Allen, client executive/consultant for Linbeck. “Gensler made the KIPP Somos Collegiate and KIPP Somos Primary schools two to three stories tall so these structures could fit on the site and still achieve KIPP’s program requirement of 80 square feet per student. Fortunately, metal buildings are pliable so construction crews could work around the obstacles this site presented. They used Skytrak Telehandlers (Skytrakers) to erect the buildings from the inside out and small hoist cranes—informally known as cherry pickers—to move the metal building components that were shipped on a just-in-time basis to the specific locations where they were installed.” This saved space, time and labor while lowering equipment expenses and enabling crews to work in three or four different spots simultaneously.



Photos by JD Swiger

Using other materials and methods, Allen added, would have taken longer and cost more because the general contractor would have needed to use heavy equipment and have more workers on site. A large crane and crane mat are needed for conventional steel and concrete tilt-up construction. These project delivery methods also require more tasks to be completed later in the construction process after the site has been graded and the concrete foundations have been poured and cured.

### Achieving KIPP Texas' Design Standards

KIPP Texas recently updated the design and construction standards for its facilities, using a broad and inclusive process with input from architects, engineers, contractors, teachers, safety teams, and administrative, finance, operations and maintenance staff. These standards define the basic programmatic requirements for KIPP Texas' facilities and describe design elements, such as cladding, staircases, and the use of graphics and color that are to be applied across KIPP Texas' campuses.

"To meet our mission, we try to do basic buildings that provide great spaces for teaching and learning," Kot said. "Using metal building technology allows us to achieve our quality standards as well as our branding, program and operational objectives. For example, one of our standards is to make sure every classroom has natural light. We use large rectangular windows on the exterior to accomplish this. For classrooms that don't have exterior walls, we typically add skylights in the hallways and borrow that light by installing interior windows on the walls between the classrooms and corridors.

New, freestanding KIPP school buildings, including KIPP Primary and KIPP Collegiate, have a slanted, standing seam metal roof and metal panel exterior—both with a silver Galvalume® finish. A giant KIPP logo is mounted in 6-to-12-foot-tall letters on the front façade near the main entry. KIPP Texas' standard school colors—navy, medium blue, light blue, white and light green—are used to accent specific design features, such as staircases, railings, some furnishings, and select walls and trusses.

### Precisely Coordinating Construction Tasks

Justin Flatt, regional sales manager for Red Dot Buildings, compared the construction of KIPP Primary, KIPP Collegiate and the new gym building to a carefully choreographed waltz.

"Due to the size and design of the buildings, the site conditions and the aggressive schedule, this project required daily coordination from inception through completion," Flatt said. "Typically, once the metal building components are produced at the factory, everybody from fabrication on up is no longer involved with the



Photo by JD Swiger



Photo by JD Swiger

project. However, our engineers and drafters participated in the entire process for the KIPP Somos Campus. Our construction manager worked with the erector on a daily basis to verify when all the steel on-site would be installed and notified our shippers when the next phase of steel should arrive. Linbeck then scheduled the trades to start their work as soon as our crews would be out of the way.”

To achieve such precise coordination, Red Dot’s team used TEKLA 3D modeling software to link their construction tasks to Linbeck’s shared scheduling model.

“We had to plan exactly when the metal building components would arrive to avoid completely blocking portions of the site,” said Ben Lampe, project manager for Linbeck. “In some areas we only had six to eight feet of space to work in beyond the exterior edge of the building.” Since two of the structures had up to three stories, Linbeck also had to make sure that other trades weren’t scheduled to work beneath the metal building crews when they were

installing the steel for the second and third floors. In addition, the project team used the 3D modeling software to collaboratively resolve issues during construction.

“We discovered how critical it is for our computer models to relate to the architect’s,” Flatt said. “Gensler was able to add our TEKLA model to its REVIT model, check for conflicts, and make sure that the metal building was matching the intent of their design. By adding our 3D model, we could see the exact size and location of all the metal building components, and we were able to solve problems in real time, in the field, through the use of virtual meetings, iPads and other digital devices.”

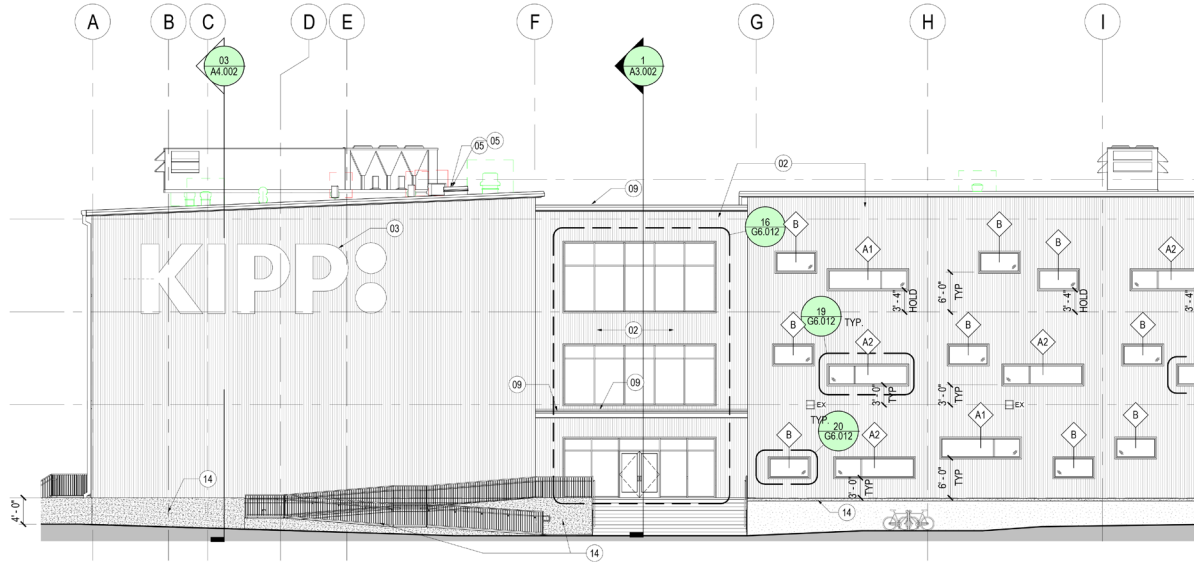




Photos by JD Swiger

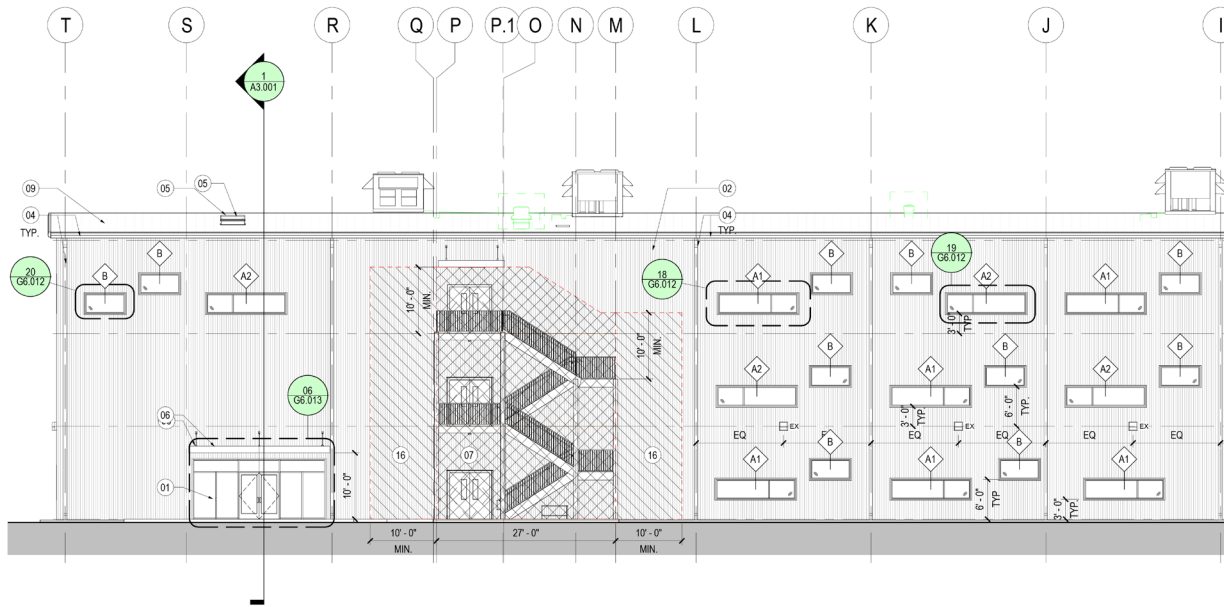
“Metal buildings are designed and engineered to minimize materials waste, which helps to keep costs down. They are also quicker to construct, which enables us to achieve our occupancy goals.”

-Eric Kot, Former Deputy Chief of Construction and Real Estate for KIPP Texas



**18 SECONDARY SOUTH ELEVATION**

SCALE: 3/32" = 1'-0"



**20 SECONDARY NORTH ELEVATION**

SCALE: 3/32" = 1'-0"

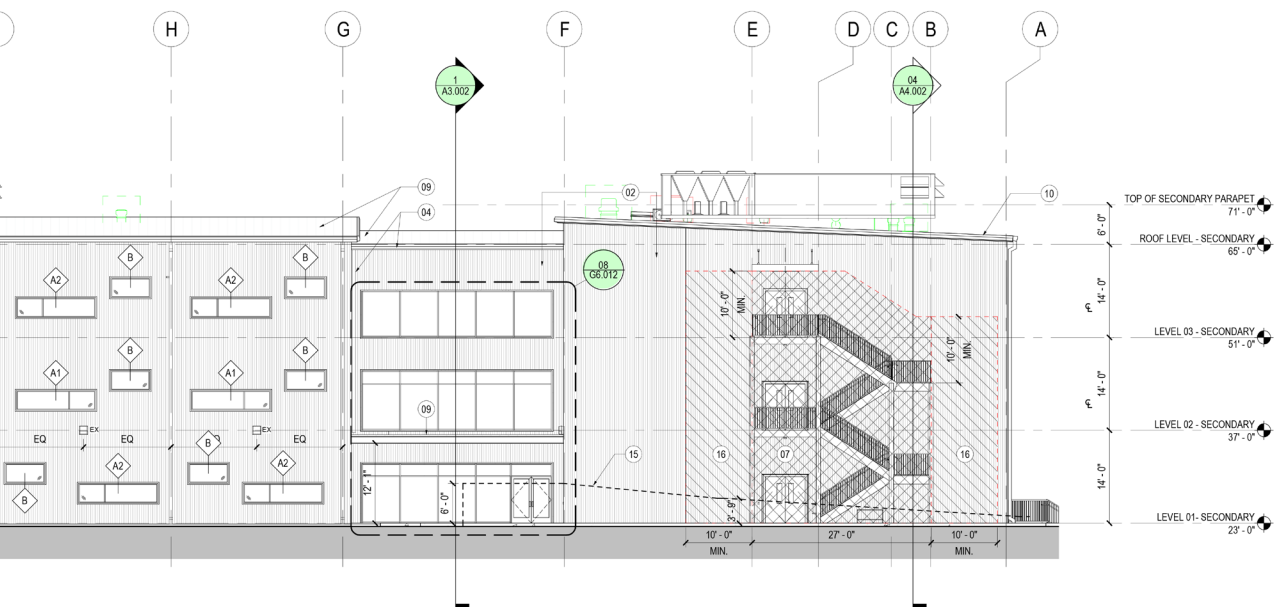
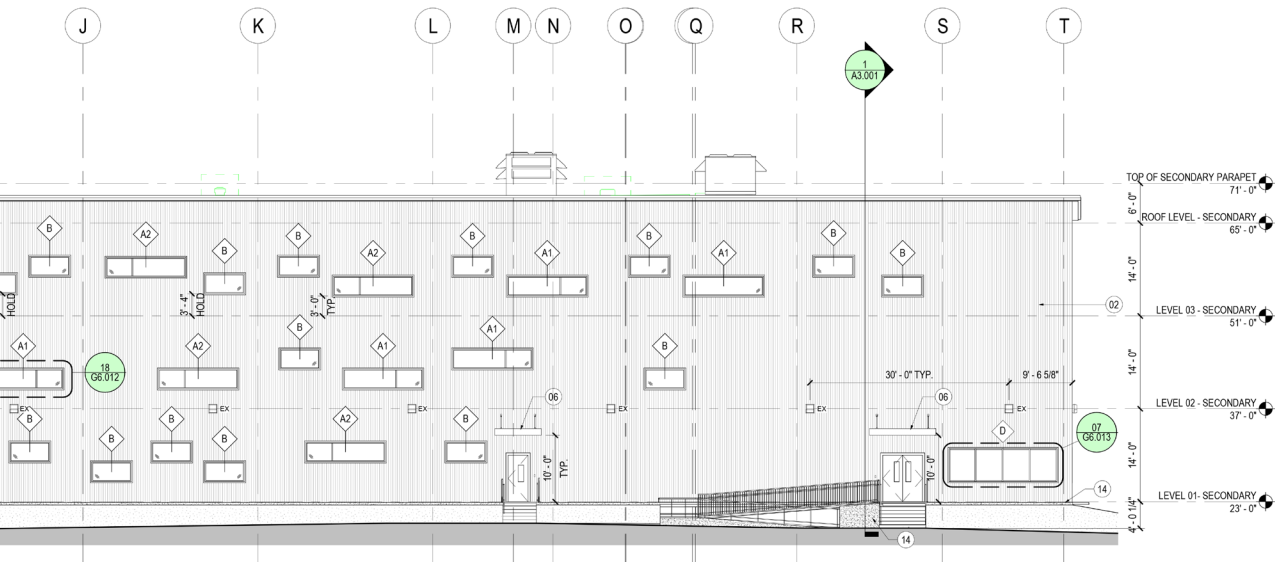
- 01 CARD READER
- 02 METAL PANEL SIDING
- 03 BUILDING SIGNAGE - SHOWN FOR REFERENCE ONLY
- 04 PREFINISHED GUTTER AND DOWNSPOUTS - MATCH ADJACENT PANEL COLOR
- 05
- 06 PRE-ENGINEERED ALUMINUM ENTRANCE CANOPY WITH INTEGRAL SCUPPERS
- 07 1 HR FIRE RATED WALL PROTECTION OF EXTERIOR STAIRWAY - NO WINDOWS AT CROSSHATCH SECTIONS PER IBC SECTION 1023.2 AND 1027.6
- 08 METAL PANEL PARAPET WALL (BOTH SIDES) - PREFINISHED COLOR PT21
- 09 STANDING SEAM METAL ROOF AND METAL TRIM FASCIA, RE: SPECIFICATIONS AND ROOF PLAN
- 10 PREFINISHED PARAPET COPING - MATCH ADJACENT PANEL COLOR PT21
- 11 BUILDING LIGHTING, RE: MEP
- 12 ROOF ACCESS LADDER WITH SECURITY PANEL, RE: SPECIFICATION
- 13 ALUMINUM STOREFRONT WINDOWS
- 14 SMOOTH RUBBED FINISH
- 15 RETAINING WALL IN FOREGROUND NOT SHOWN FOR CLARITY, RE: CIVIL AND STRUCTURE

- A FOR ALL STOREFRONT
- B PROVIDE 2" STANDARD BUILDING.

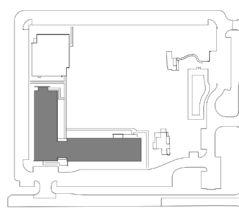
**SHEET NOTES**

**GENERAL NO**

2/25/2022 2:57:57 PM BIM 360://0027800.042 - Kipp Sense Pod - Phase 1 ARCH - 027800.042 - SOMOS Pod - SECONDARY.rvt



NOTES: RE: SHEET G6.12 AND G6.13 WINDOW SCHEDULE AND DETAILS.  
 PROVIDE TRIM AT ALL WINDOWS AND 4" TRIM AT ALL DOORS, TOP OF PANELS AND CORNERS OF



KEY PLAN

Images courtesy of Gensler

# RELEVANCE FOR STUDENTS

Leaders of the project team for the KIPP Somos Campus stated how valuable it has been to collaborate on numerous projects in multiple locations. Gensler and Linbeck have completed over 40 buildings for KIPP Texas over the past two decades, and Red Dot Buildings has engineered, fabricated and installed 16 metal buildings for this client in the last 10 years. Working hand-in-glove on so many KIPP Texas projects has resulted in personnel from these firms becoming trusted advisors—ones who are strongly committed to helping KIPP Texas achieve its mission.

## Entering the Process Early

“Typically, we bid on design development drawings and then continue through construction if we win the contract,” Flatt said. “With KIPP Texas, we enter the process a lot earlier to provide budgeting and construction analysis services during the site selection and predesign phases. For example, when KIPP Texas was first looking at buying the piece of property along Callaghan Road in San Antonio, they asked if we would work up a pro forma budget, which was a rough cost estimate based on a site plan. This was the first time we’d done this for a three-story structure, but we had a good idea what it would cost. After reviewing the information we provided, KIPP Texas decided to purchase the property and construct the KIPP Somos Campus. We continued to provide updated budget information as the architectural design was developed and refined to make sure it aligned with the pro forma budget. For a project of this size and complexity, we may prepare a budget or bid proposal four to five times.”

## Optimizing Investment

Long before the doors first opened and classes began, the project team members analyzed how design and construction decisions would impact the lives of the students, teachers and staff who would use the buildings. While metal building systems can be custom designed and engineered to achieve schools that vary greatly in size, shape, cladding and other features, Kot said KIPP Texas constructs basic buildings to optimize the organization’s capital investment and make sure there are sufficient funds to furnish and equip learning spaces.

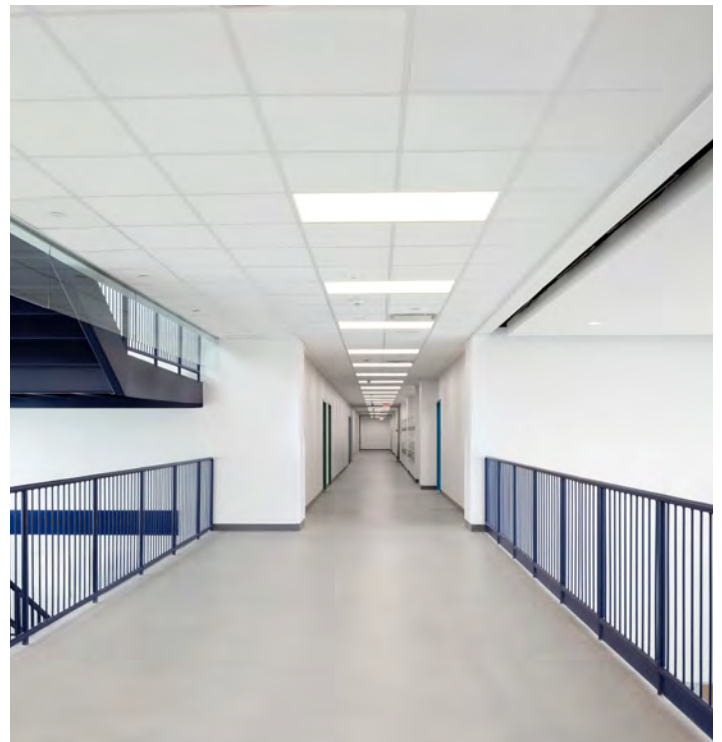
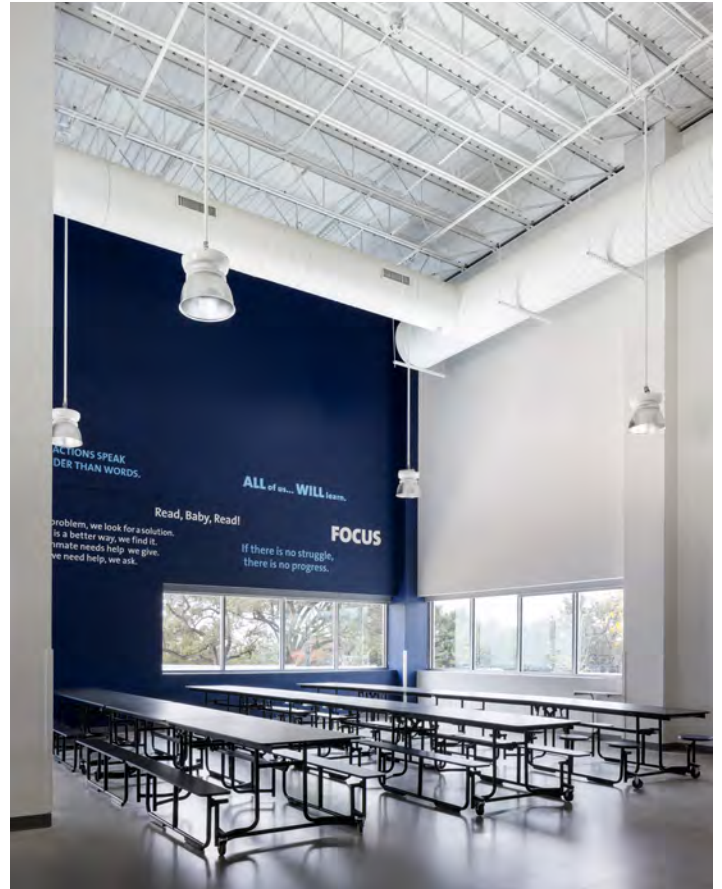




Photo by JD Swiger

“Our buildings primarily consist of rectangles and squares,” he explained, “but they are designed, organized and finished in ways that provide quality learning spaces. We try to minimize customization because that usually costs more, and affordability is a key part of our purpose statement. If it costs \$10,000 more to customize some aspect of a building, that could take \$10,000 away from another part of the budget, such as computer or science lab equipment.”

### Measuring Success

While members of the project team said successfully completing the KIPP Somos Campus “pushed the envelope” for what they could accomplish, witnessing how well these facilities work for the students and staff made their efforts incredibly worthwhile.

“I’m lucky to be able to visit buildings after they are completed,” Lampe said. “For KIPP Somos, I was on-site during the first day of school to make sure everything went well. At the end of the day, one of the middle schoolers came up to the table where I was sitting and asked who I was. I told him ‘I work for the company that built this building.’ He said: ‘You guys did a really great job!’ Comments like that make all the difference.”

### Practical Application

1. Why must public charter schools in Texas “do more with less”? In what ways does using metal building technology help KIPP Texas maximize the value of the funds it invests in construction projects?

2. How did using metal buildings to construct the schools and gymnasium on the KIPP Somos Campus help the KIPP Texas real estate and development team to achieve its purpose of “constructing safe, equitable and affordable space conducive to great teaching and learning?”
3. What design strategies, techniques and technologies did the project team for the KIPP Somos Campus use to optimize the use of metal building technology?
4. Generally, what characteristics and capabilities of metal building systems are beneficial for school construction projects? Are there benefits that haven’t been described in this folio that might appeal to both charter school systems and public school districts?

Review these resources:

- [MBMA Education Campus Facilities Case Study](#)
- [Aesthetic Appeal](#)
- [Resilience in Metal Buildings](#)
- [Eco-Friendly Metal Buildings](#)

# RESOURCES/RELATED READING

## Related Reading

- [Architect Magazine: 5 Creative Ways to Design with Metal Cladding](#)
- [KIPP Somos Collegiate and KIPP Somos Primary](#)
- [KIPP Texas Public Schools](#)
- [KIPP Texas-San Antonio Unveils New Campus](#)
- [Metal Building Manufacturers Association, Education Campus Facilities Case Study](#)
- [Texas Public Charter Schools](#)

## Video Resources

Over 50 videos highlighting metal building architecture, engineering, design and application can be accessed at [www.youtube.com/mbmamedia](http://www.youtube.com/mbmamedia). We recommend you begin your educational process with the following programs:

- [Metal Building Systems 101](#)
- [An Introduction to Metal Building Systems](#)
- [How It's Made: Metal Building Innovations Are Revolutionizing Low-Rise Commercial Construction](#)
- [How It's Built: Metal Building Construction Raises the Bar for Low-Rise Commercial Structures](#)

## Additional Videos

An interesting array of videos providing information about KIPP Public Charter Schools and illustrating the carefully planned and executed construction of the KIPP Somos Campus can be found here:

- [Building it Better: Earthquake Testing of Metal Buildings](#)
- [Linbeck Group, LLC's Videos of KIPP Somos Campus Construction](#)
- [Introducing the NEW KIPP Somos Campus](#)
- [Josue Coronado's KIPP Texas Story](#)

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## Learn About Other Intriguing Projects

Additional educational folios may be downloaded for free at [mbmaeducation.org/resources/](https://mbmaeducation.org/resources/).

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