

# CONCRETE MASONRY ARCHITECTURE PANEL

**DESIGN TRENDS, SUSTAINABILITY,  
BENEFITS AND CHALLENGES OF DESIGNING  
WITH CMU**



**#masonry  
matters**



**Mark Swanson**  
**North Central Regional Director,**  
**International Masonry Institute**

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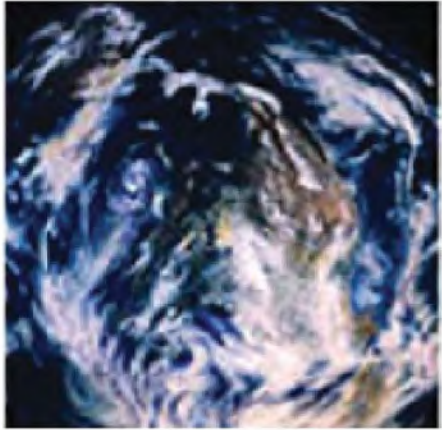
**James Krueger**  
**Director of Design, HMC Architects**



DEL ORO HIGH SCHOOL  
KERN HIGH SCHOOL DISTRICT | BAKERSFIELD, CA







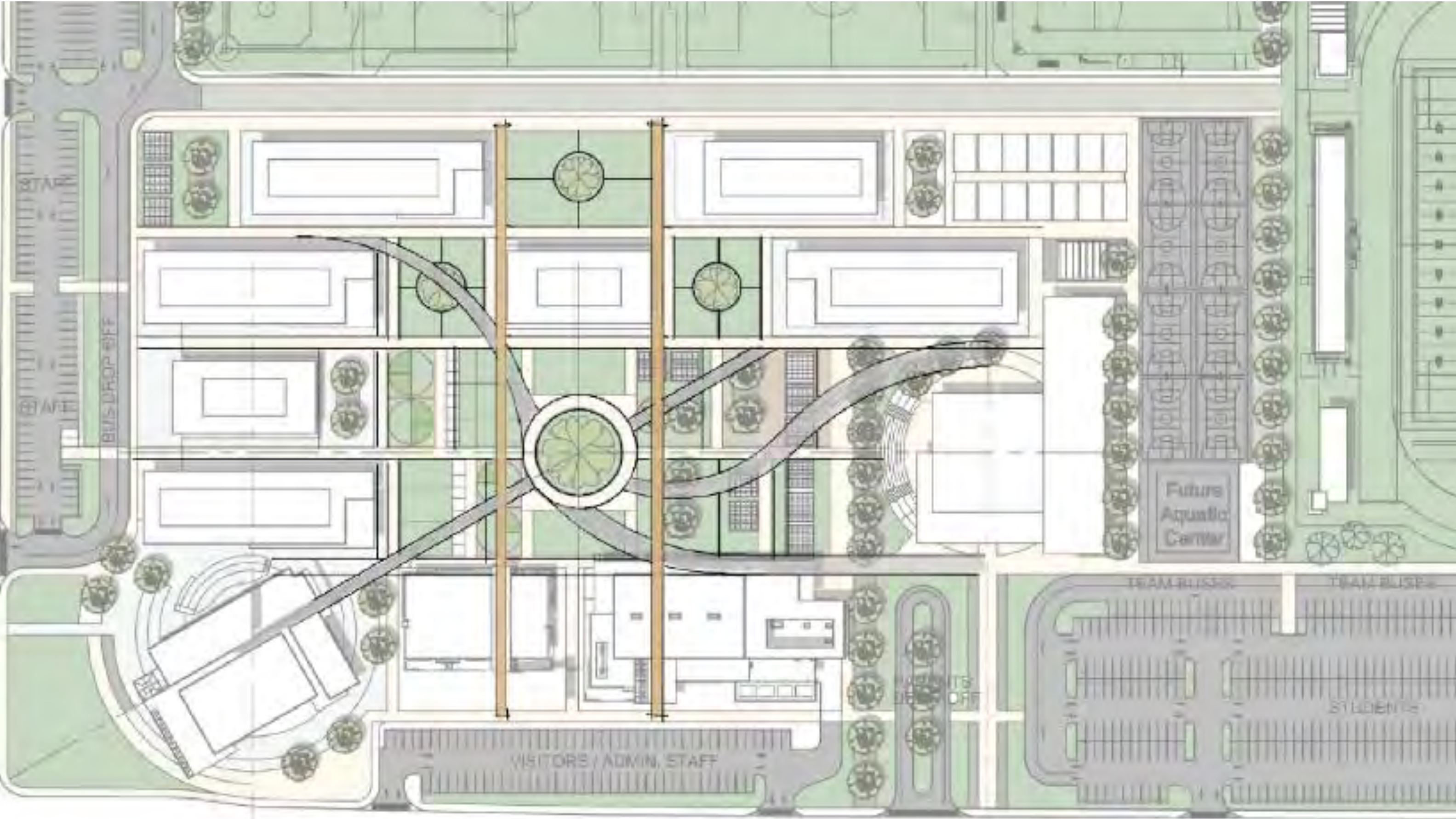


# QUILTED LANDSCAPE

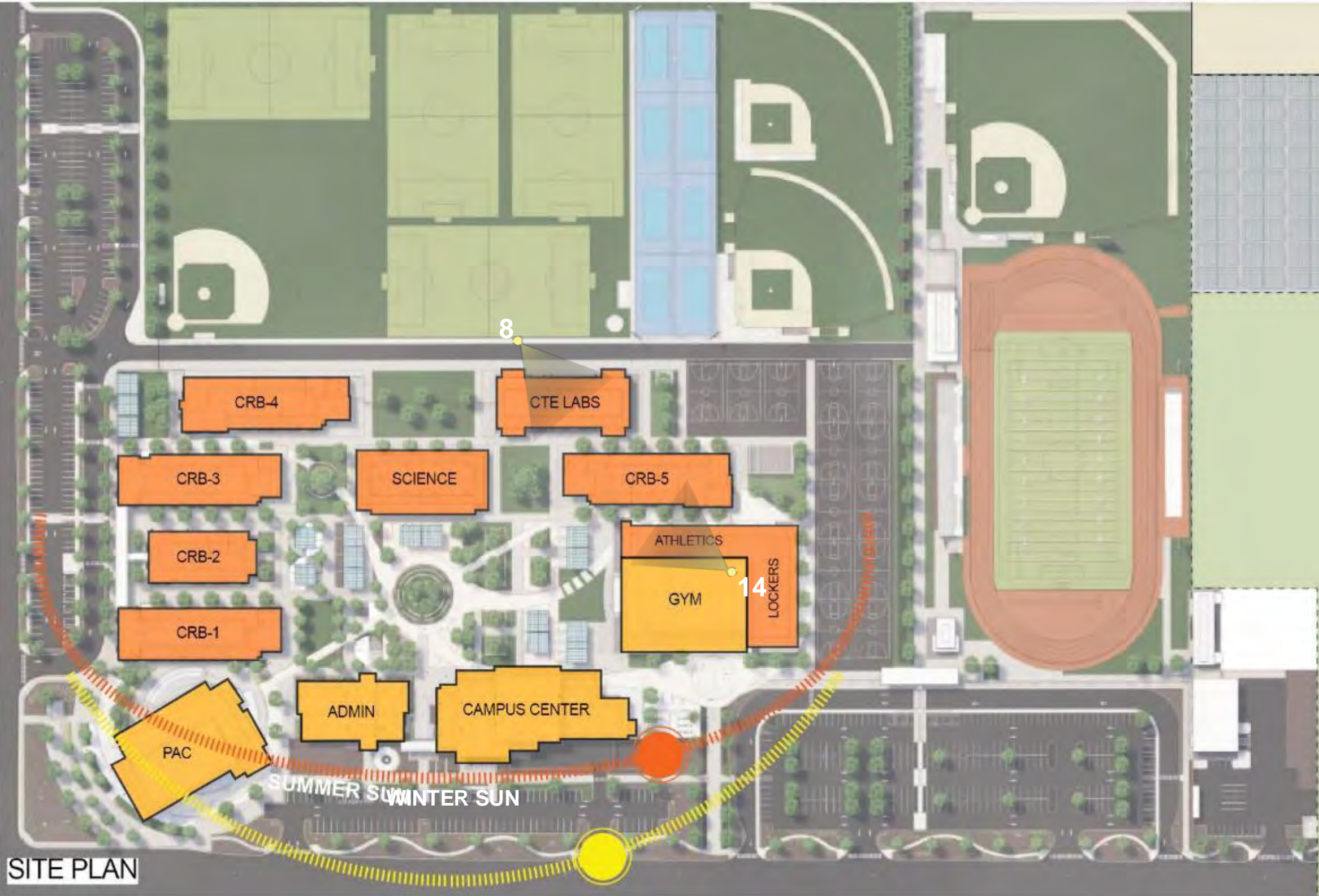




QUILTED LANDSCAPE EXPRESSED IN SITE DESIGN



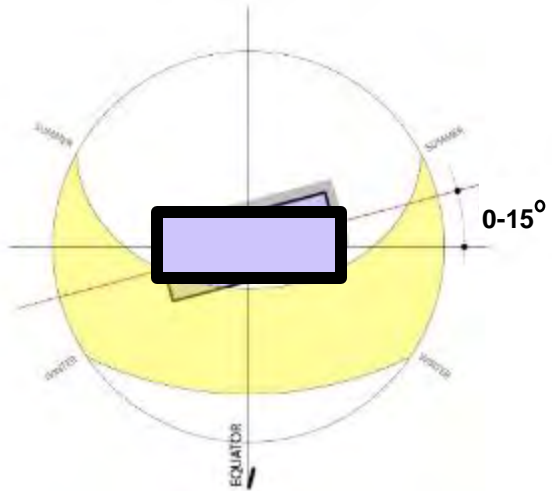




DETENTION BASIN

SOLAR  
PV  
FARM

DESIGN FOR DAYLIGHT: ORIENTATION



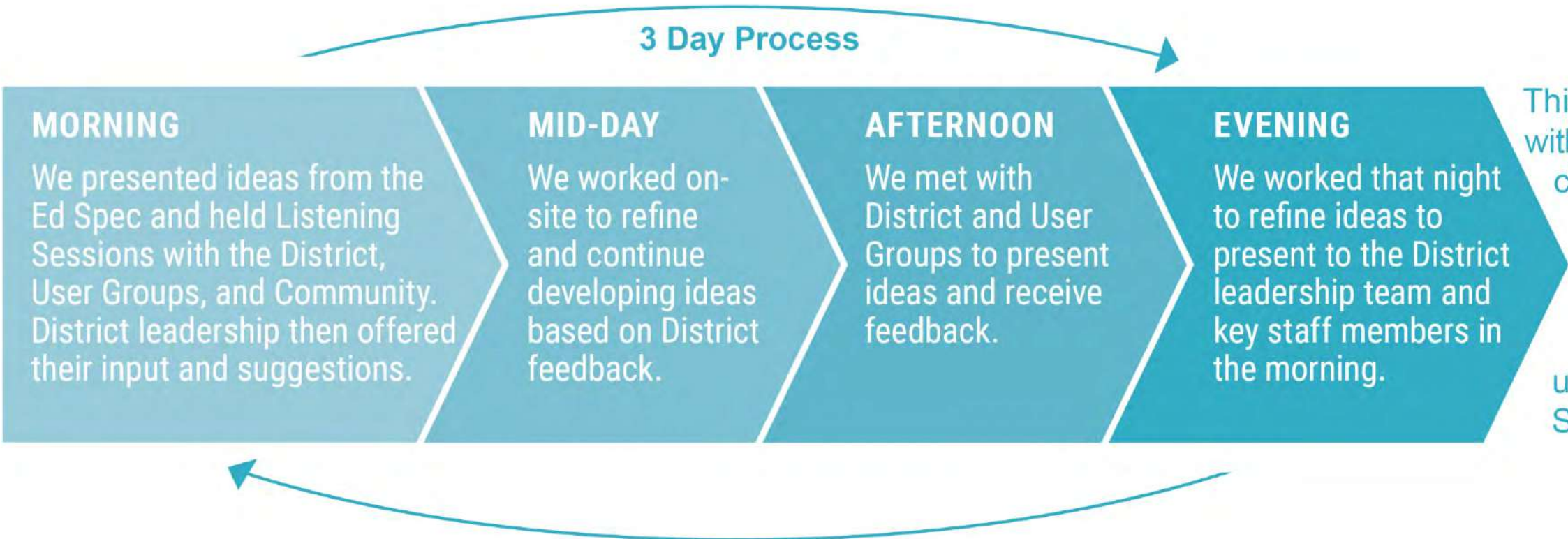
BENEFITS:

- ENERGY SAVINGS: 20-50%
- LOWER HEAT GAIN: 30-50%
- BETTER DAYLIGHT: 35-45%
- LOWER GLARE: 45-50%



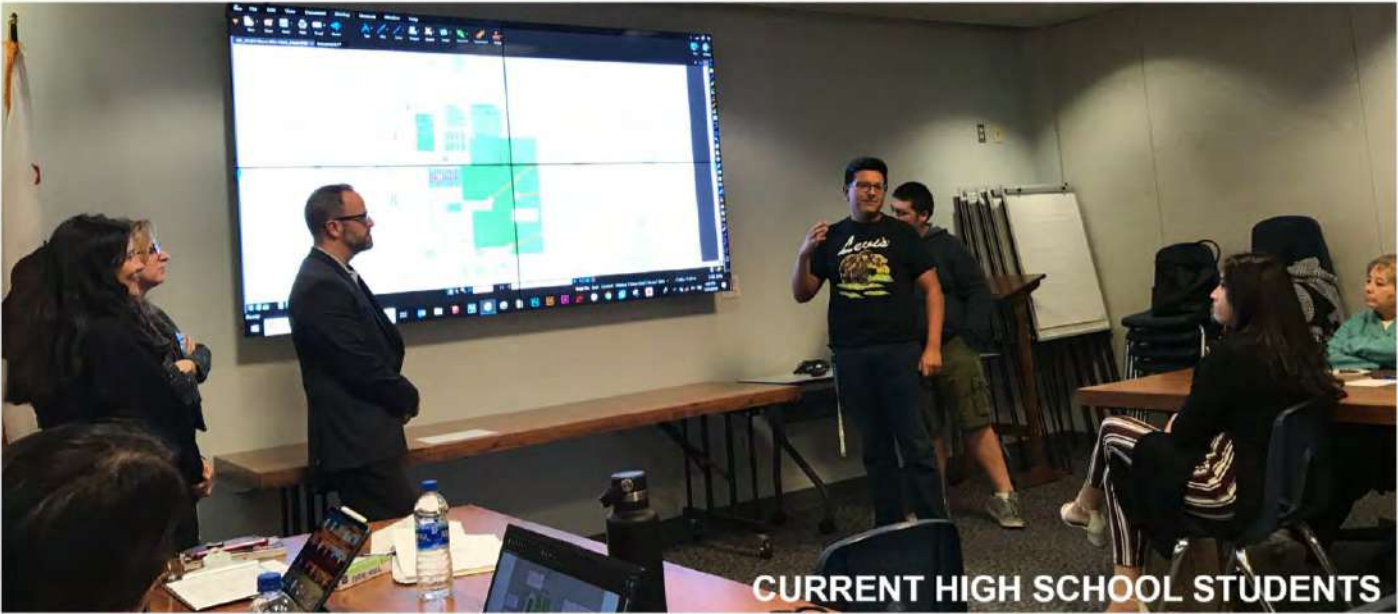
# PLANNING: CREATING AN IMMERSIVE DESIGN PROCESS FOR EQUITY & INCLUSION

We created an immersive design process that engaged diverse voices, resulting in real-time decision making. We worked side-by-side, testing ideas in real time, and building consensus along the way.

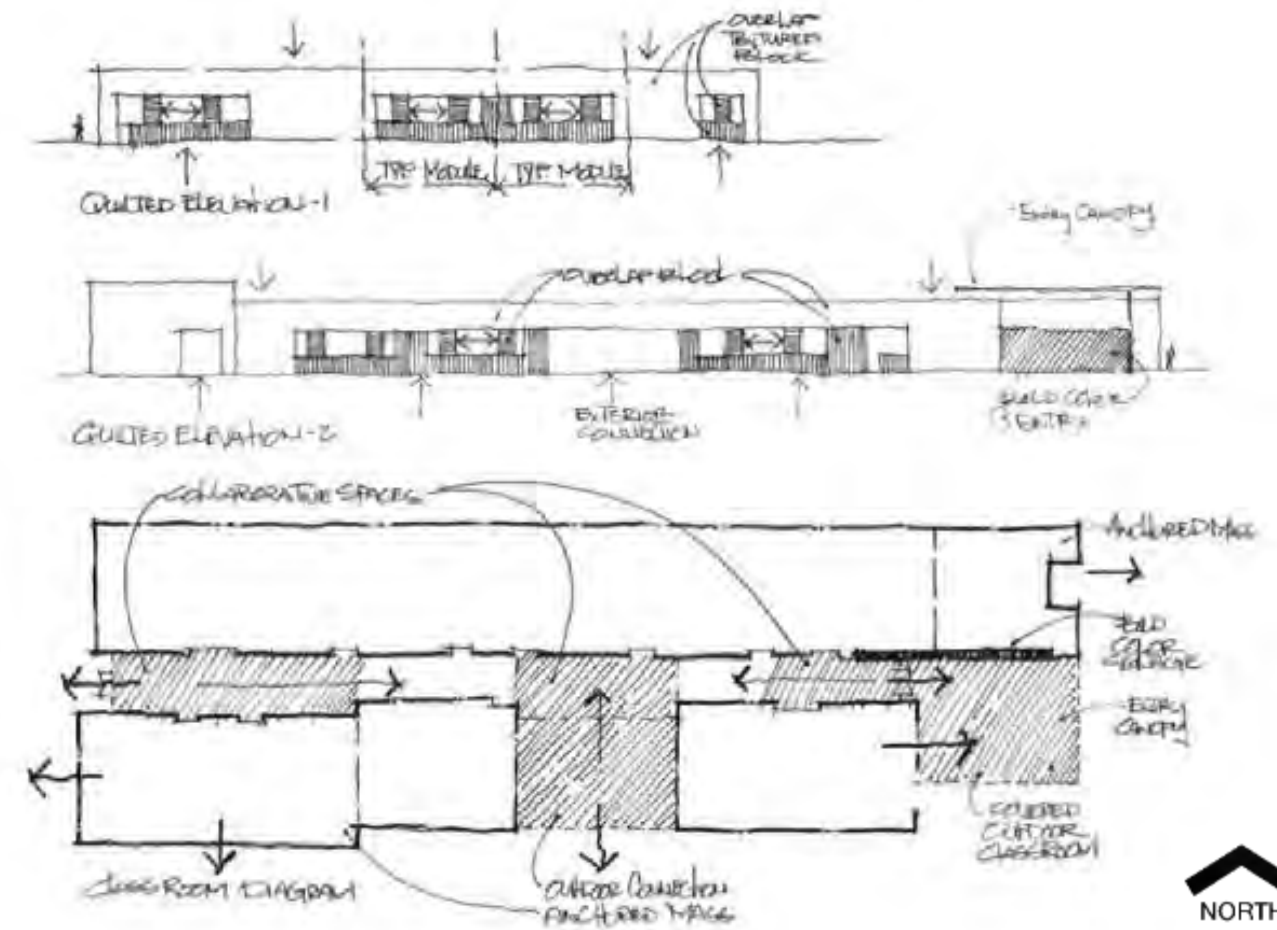
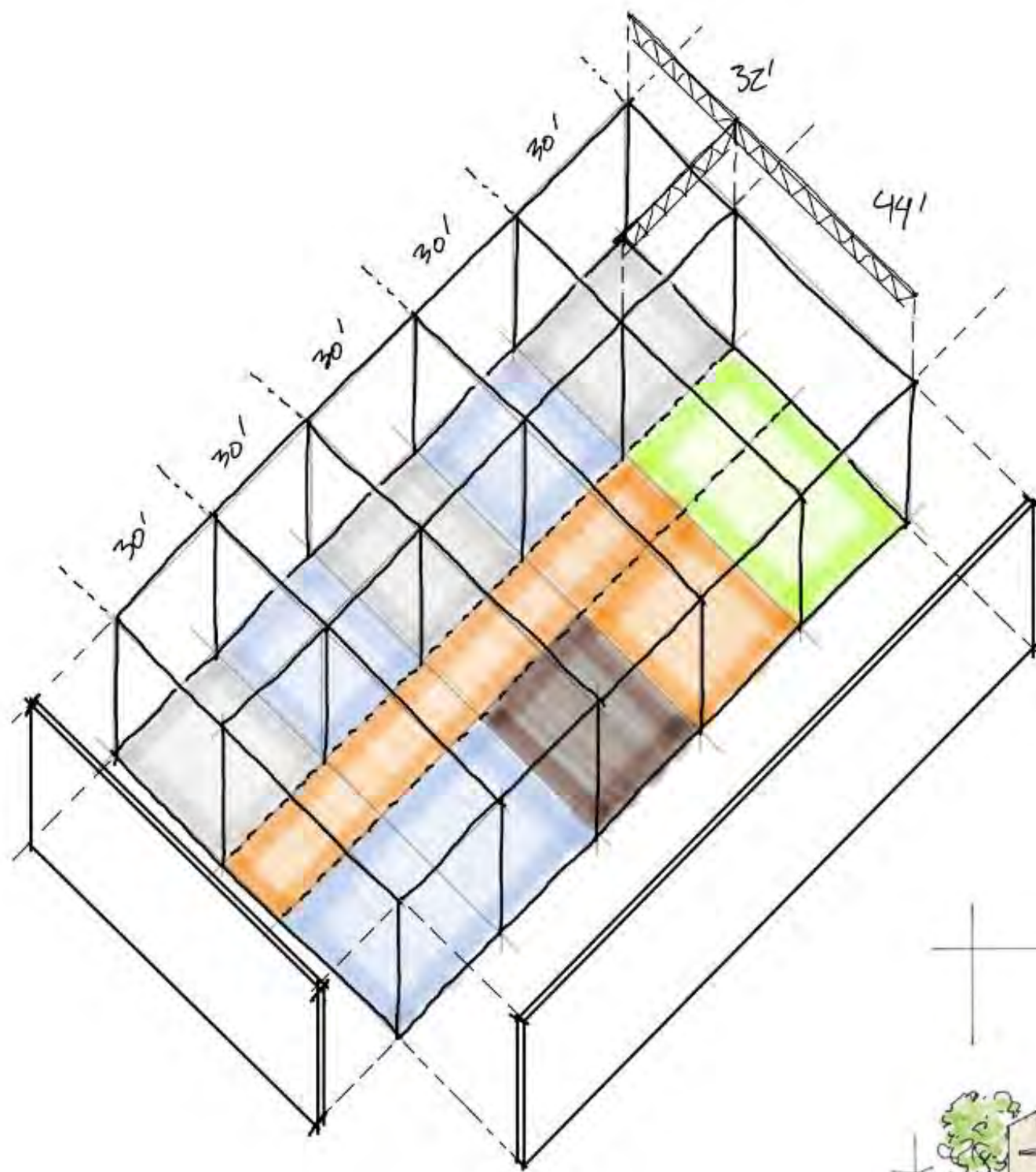


This process started with us exploring and challenging the Ed Spec to ensure we met the district's goals, and continued until we completed Schematic Design.

THIS PROCESS RESULTED IN MORE ENGAGED PARTICIPANTS AND, WE BELIEVE, BETTER, MORE RAPID DECISION MAKING.









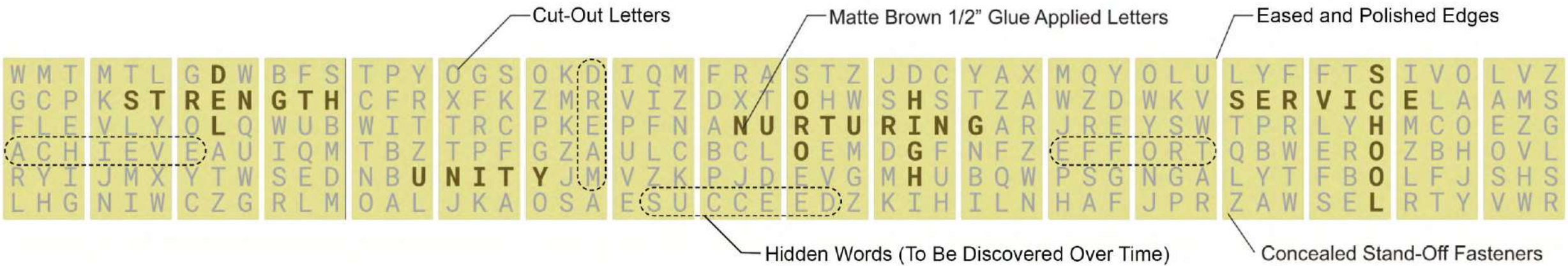


**CREATING A WARM AND POSITIVE ENTRY EXPERIENCE**

1: ADMINISTRATION BUILDING EXTERIOR VIEW



**DESIGN FOR  
DISCOVERY**  
Admin Lobby  
Word Search



Administration Building Campus Entry



Administration Reception Lobby



"The spaces that (our architect) created here at Del Oro High School are specifically designed to meet our needs, and allow our students to seek out the best way that each student learns. Our collaboration rooms have roll up doors, movable walls that open up to bring flexibility to the learning spaces, and collaborative/movable furniture that allow classes to teach in many different ways. Education happens everywhere on our campus."

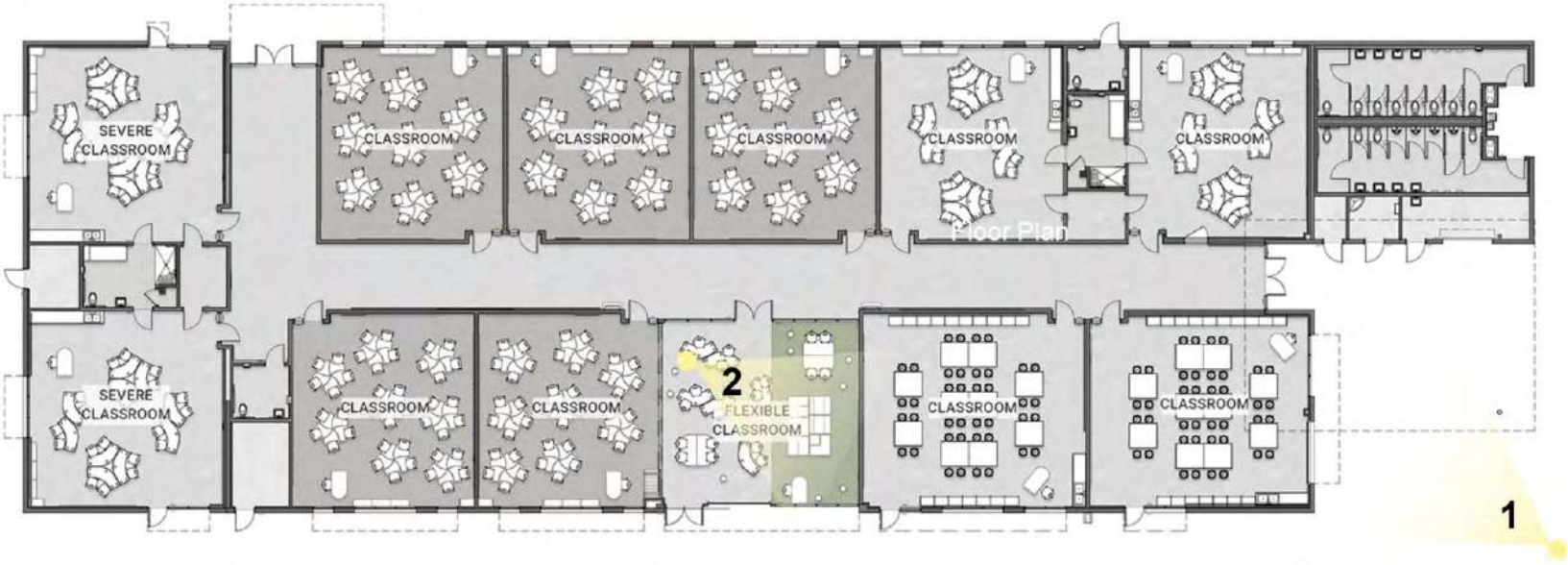
- Jenny Hanna Brown, Exec Facilities Director, Kern HSD



1: Discovery Pavilion (Showing Satellite Outdoor Dining Service)



2. View Inside Flex-Lab



DISCOVERY PAVILION FLOOR PLAN



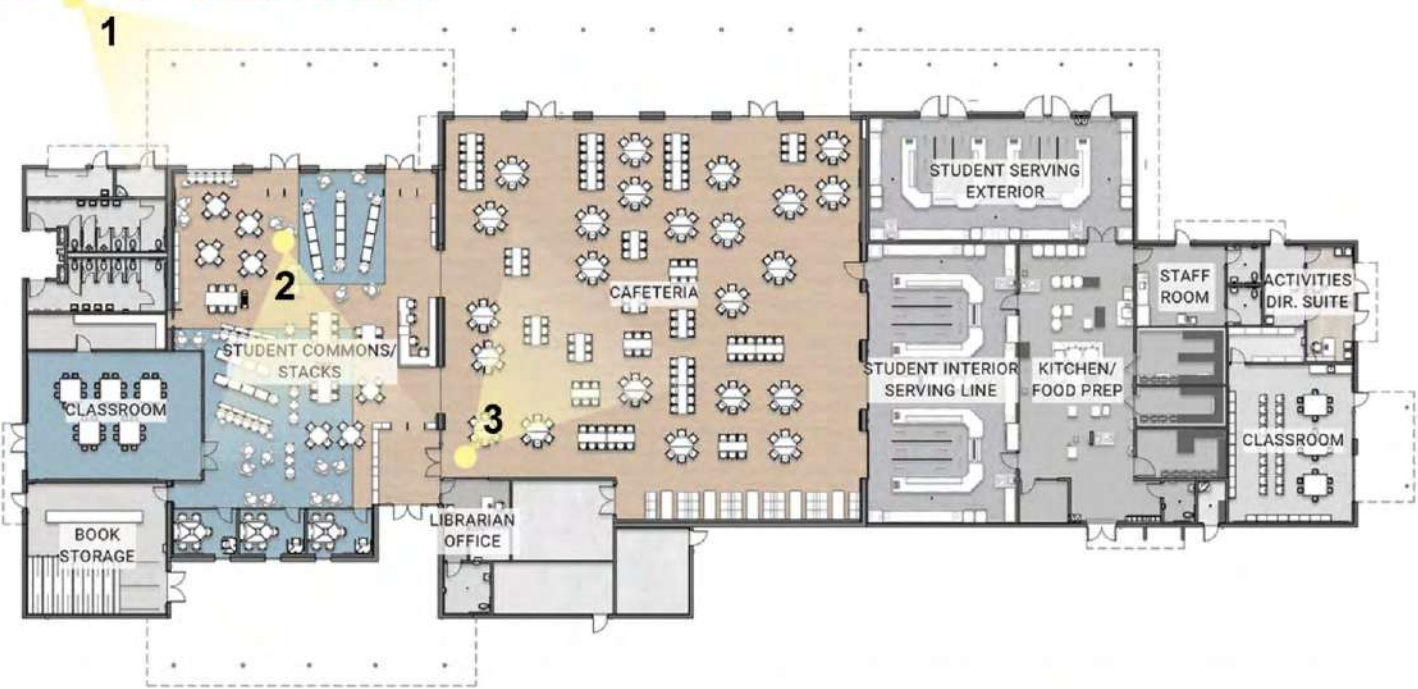




View Inside Flexible Classroom



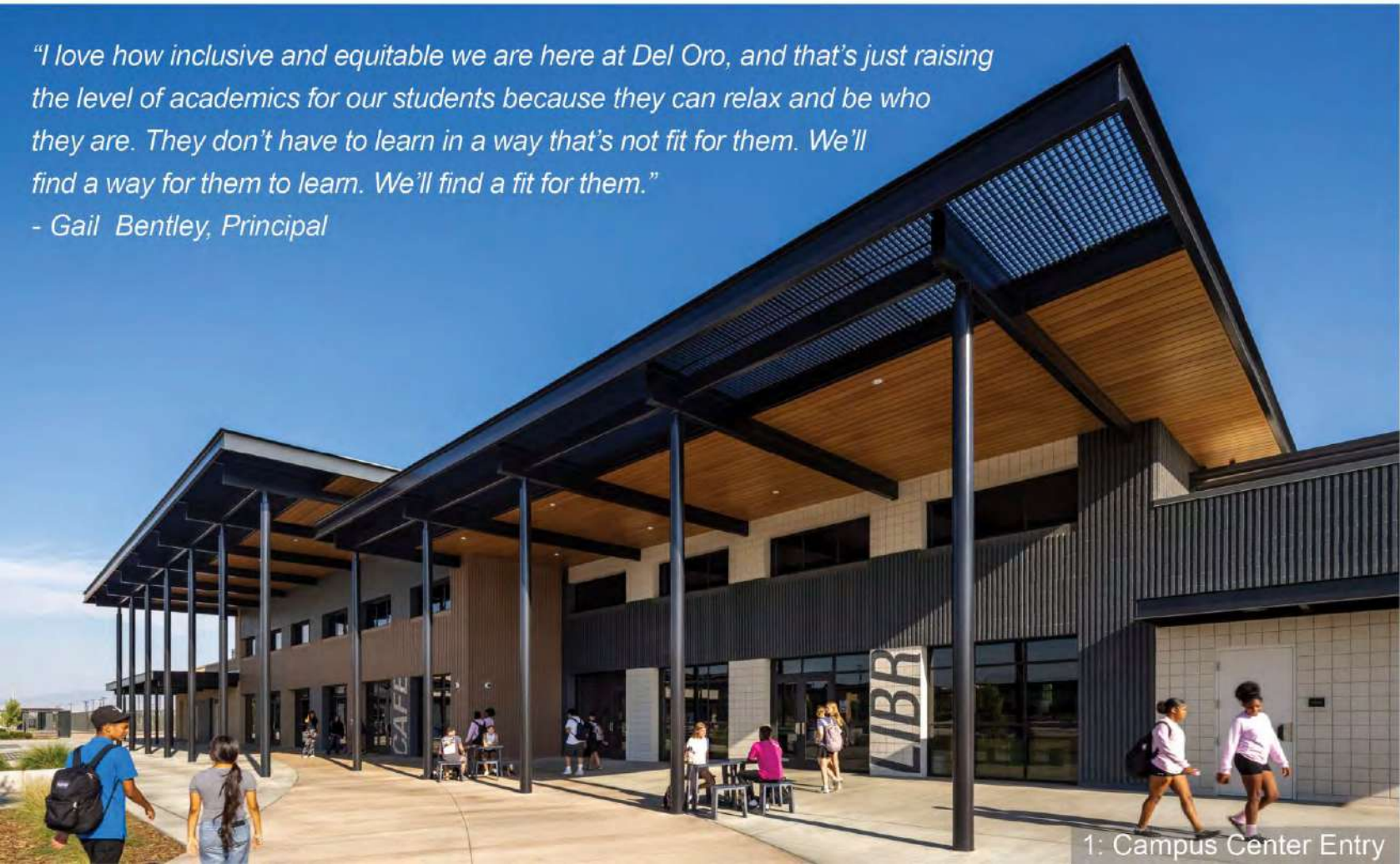
# CAMPUS CENTER



3: Cafeteria

*"I love how inclusive and equitable we are here at Del Oro, and that's just raising the level of academics for our students because they can relax and be who they are. They don't have to learn in a way that's not fit for them. We'll find a way for them to learn. We'll find a fit for them."*

- Gail Bentley, Principal



1: Campus Center Entry



2: Library





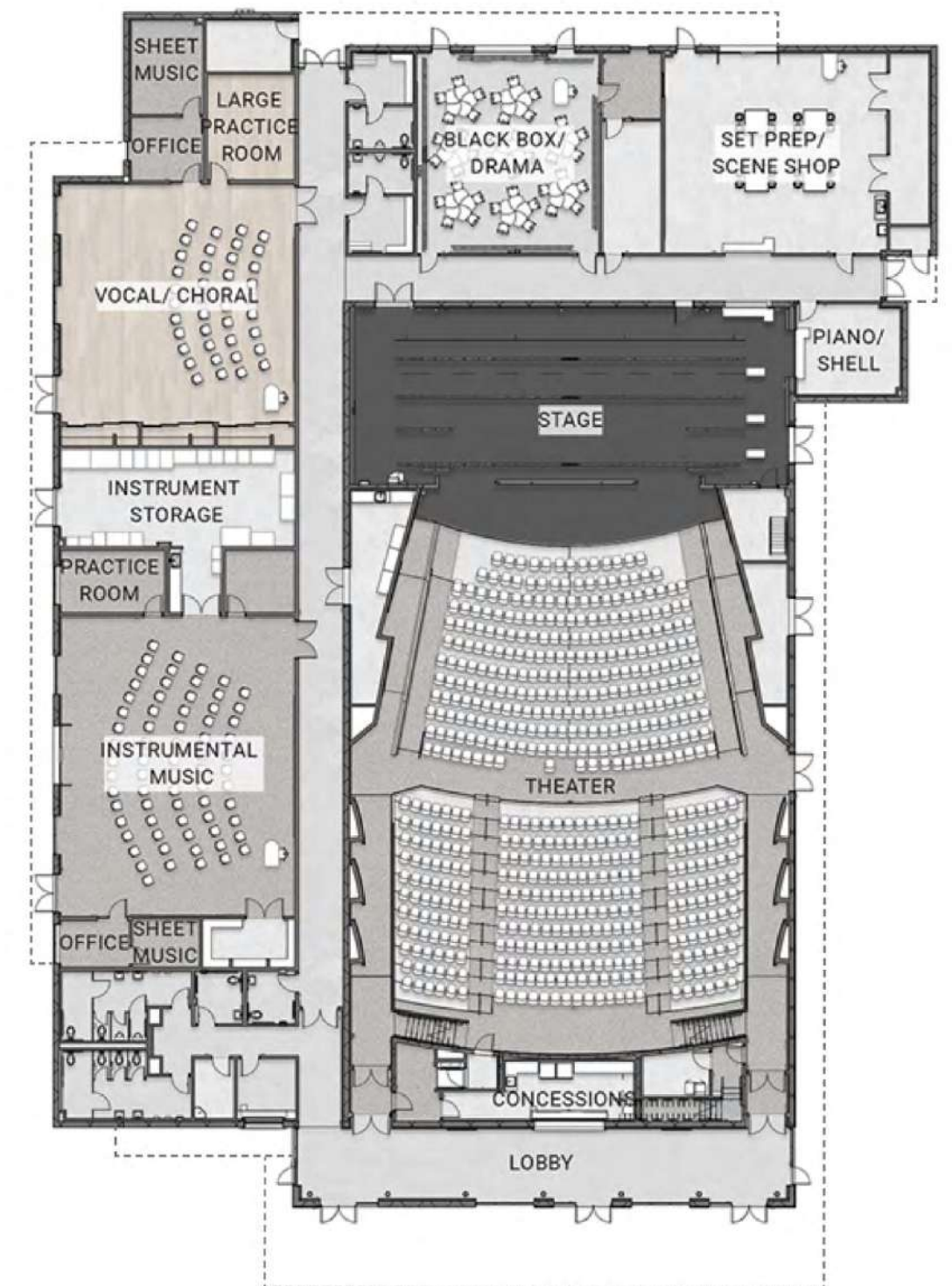
Elevated View of Performing Arts Public Entry



Lobby



View of Performing Arts Public Entry



## PERFORMING ARTS

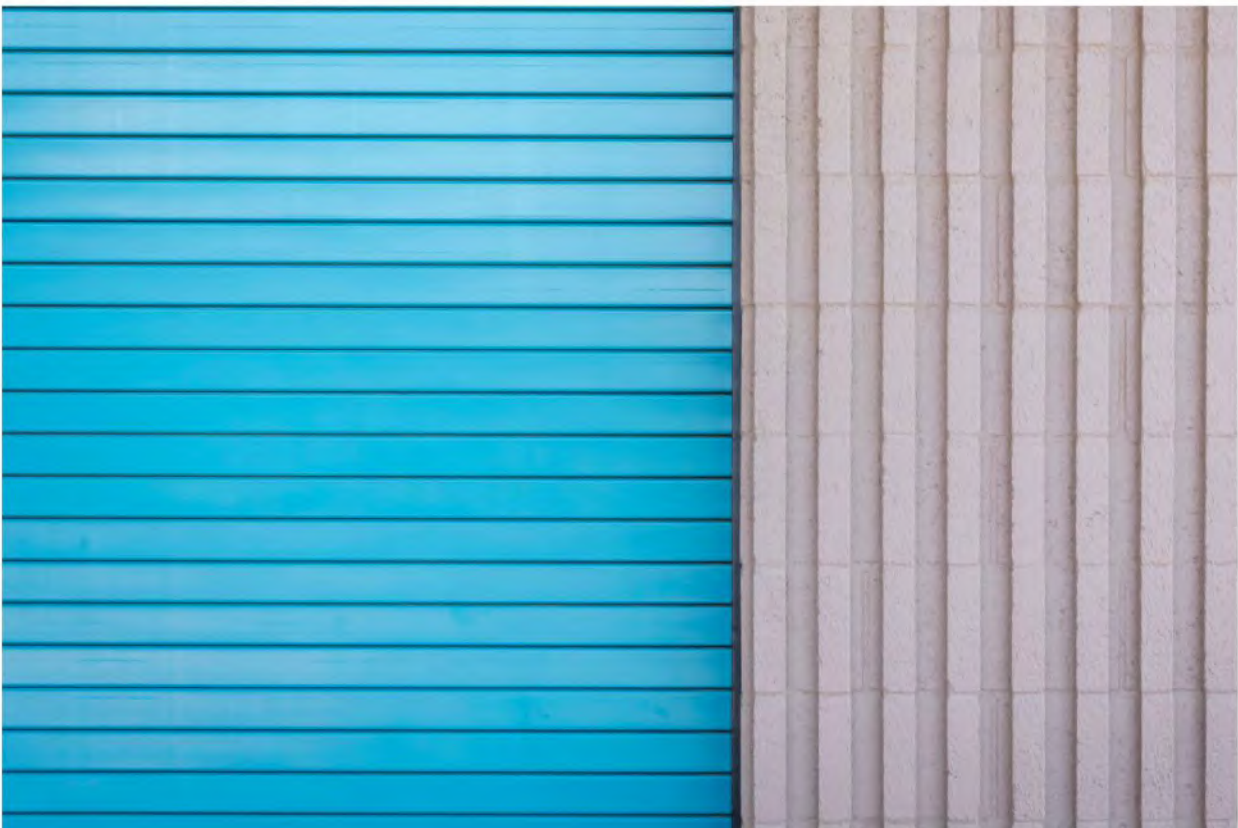
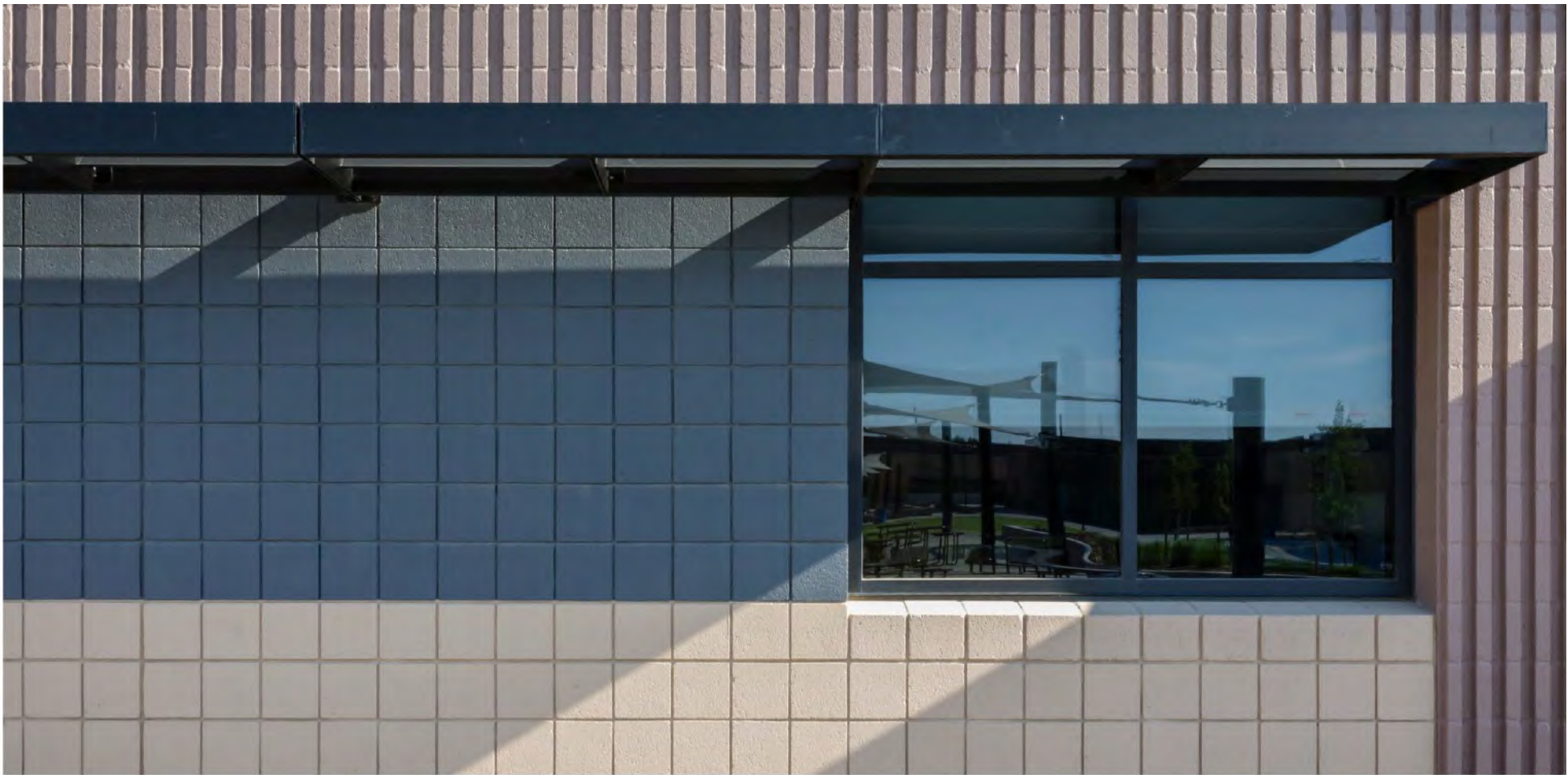
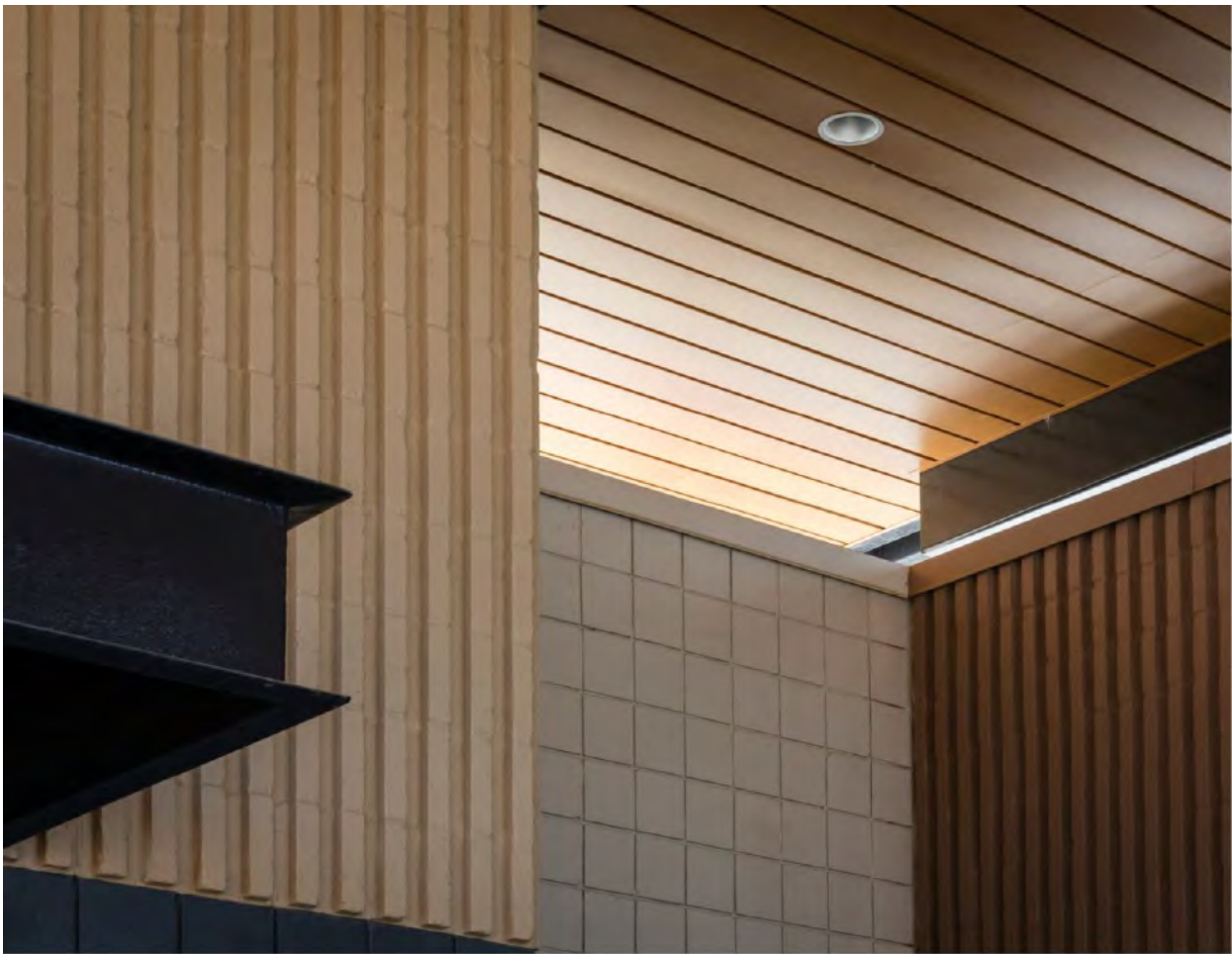






View Inside PAC Theater





Quilted Landscape  
Expressed in Materials





Aerial View of Campus





**2,500** Students

**12%** Reduction in Grade Failure Rates

**89%** Increase in Students Receiving 4.0 GPA

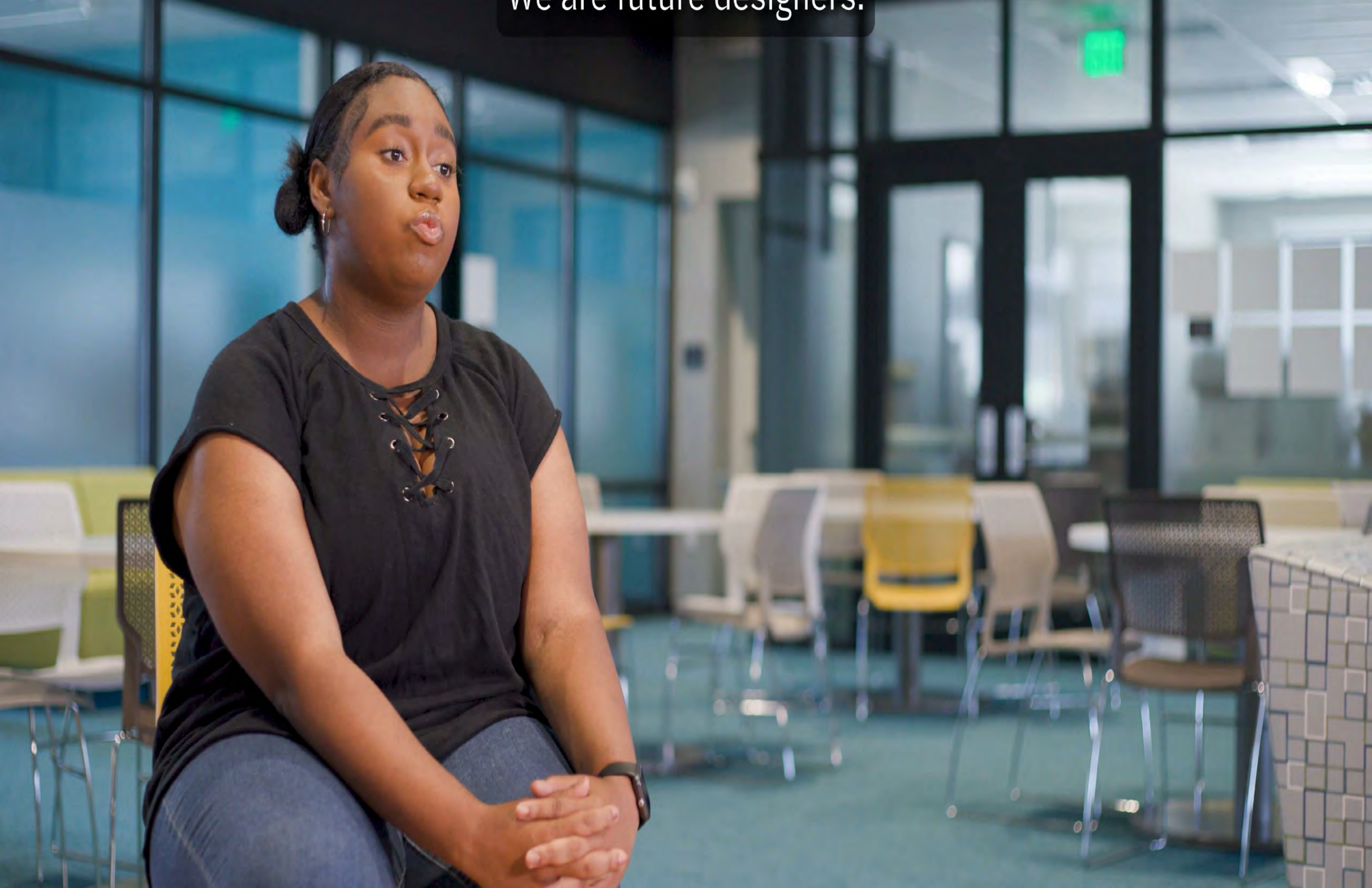
*“This place is different. The whole design of the facility was meant to inspire learning.”*

Gail Bentley  
Del Oro High School Principal.





we are future designers.





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**Athenel Trazo**  
**Senior Designer, AC Martin**



**CSUDH**

# ORTHOTICS & PROSTHETICS



ACMARTIN



# VISION

- Create a **distinctive permanent** home for the only O&P program in the CSU system
- Highlight **innovation** and collaboration
- Increase **community** engagement
- **Draw** more people to vocational programs

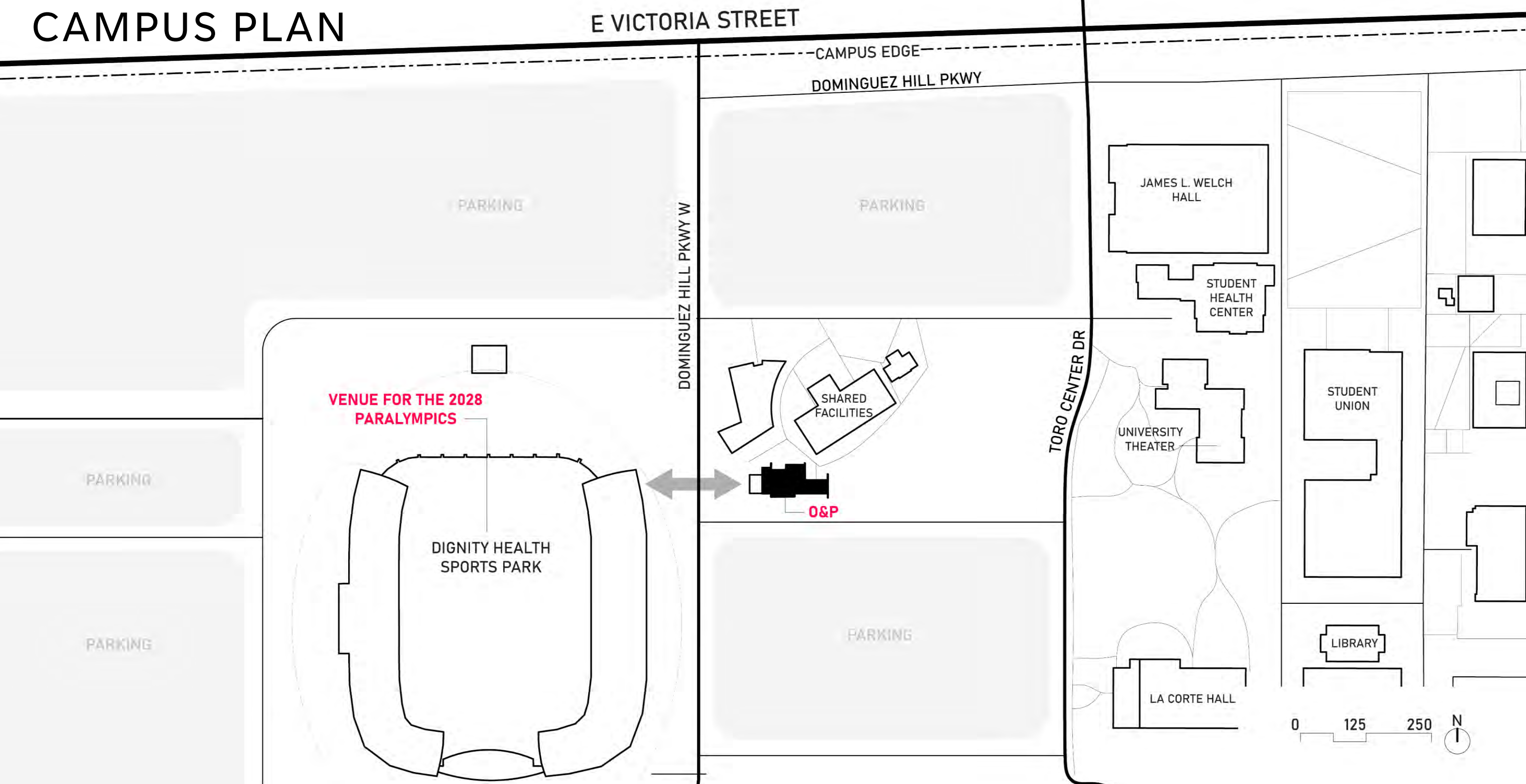


AC/MARTIN



# CAMPUS PLAN

E VICTORIA STREET

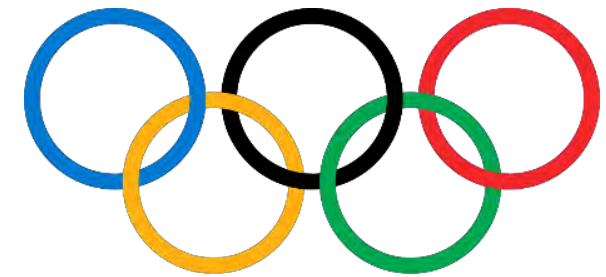


AC MARTIN





**The CSUDH Orthotics and Prosthetics Fabrication Lab will serve as the repair facility for events held in the adjacent Dignity Sports Park at the 2028 Paralympic Games.**





# CAMPUS CONTEXT



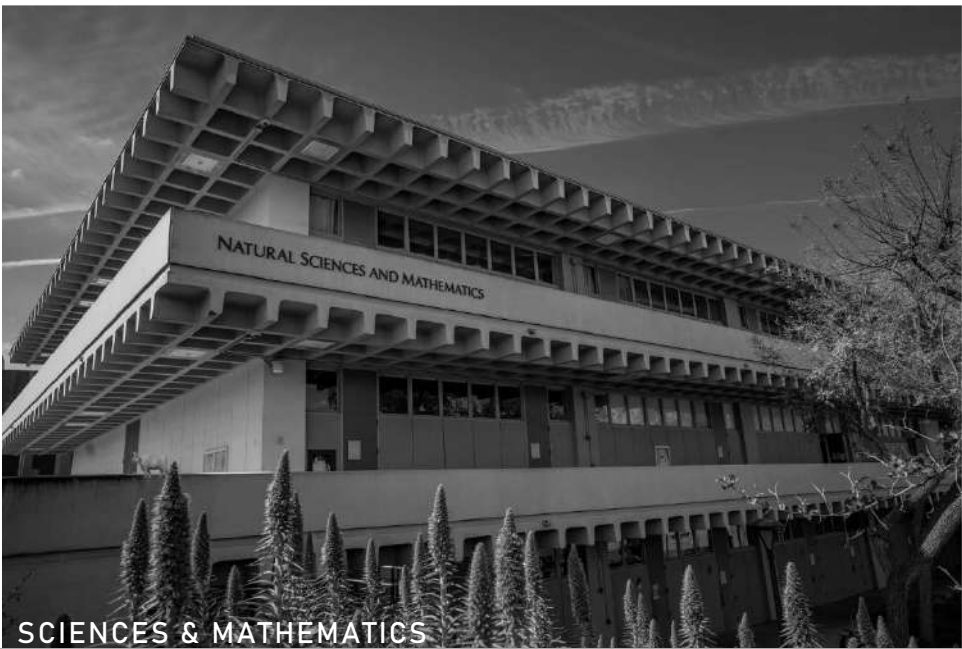
SHARED ADJACENT STRUCTURE



LIBRARY



ADJACENT STRUCTURE



SCIENCES & MATHEMATICS

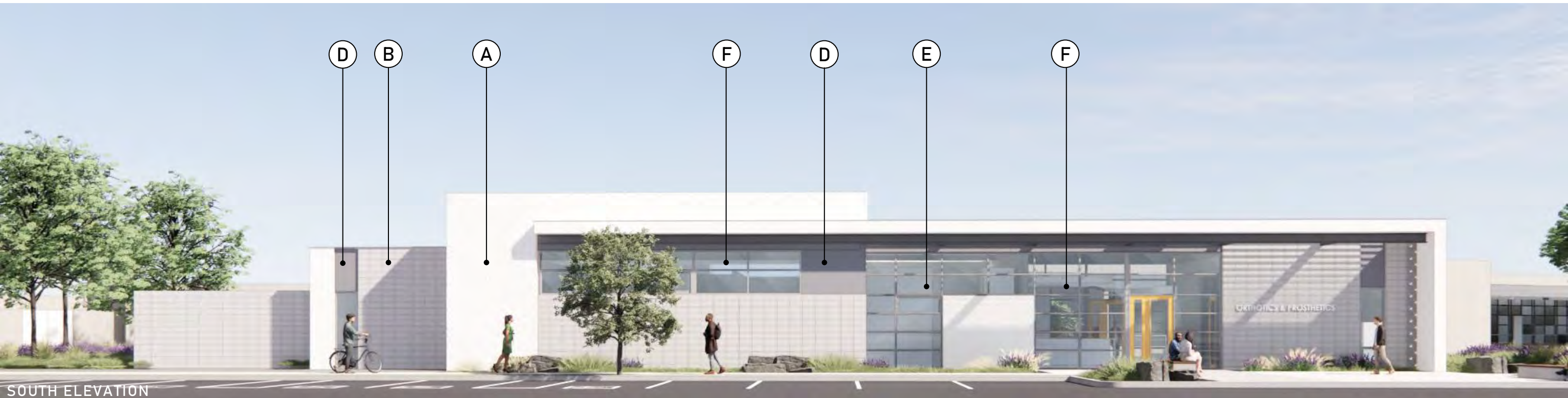


HUMANITIES & FINE ARTS



# ELEVATIONS

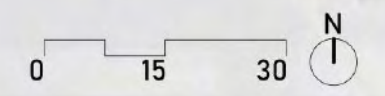
- (A) EXTERIOR CEMENT PLASTER
- (B) CMU IN NATURAL GREY PRECISION FINISH
- (C) CMU BREEZE BLOCK IN NATURAL GREY PRECISION FINISH
- (D) METAL PANEL IN DARK BRONZE
- (E) EXPOSED STEEL STRUCTURE W/ HIGH PERFORMANCE COATING
- (F) ALUMINUM STOREFRONT SYSTEM W/ HIGH PERFORMANCE GLAZING



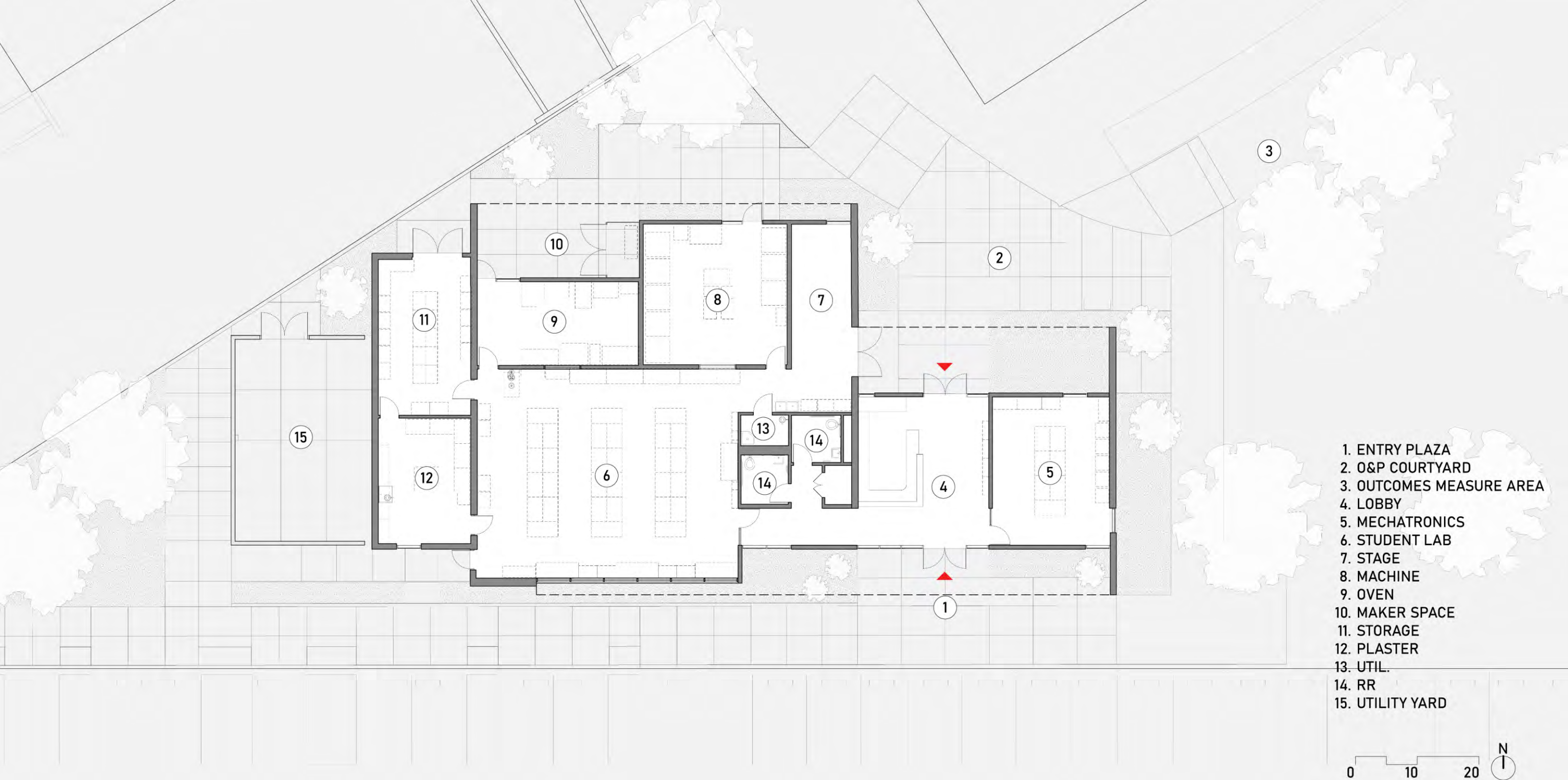




- 1. ENTRY PLAZA
- 2. O&P COURTYARD
- 3. OUTCOMES MEASURE AREA
- 10. MAKER SPACE
- 15. UTILITY YARD
- 16. SHARED FACILITY









**CSUDH**  
ORTHOTICS & PROSTHETICS

**CSUDH**

ACMARTIN



**CSUDH**

# ORTHOTICS & PROSTHETICS



ACMARTIN



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matters



**Carol Lanham**  
Principal,  
Lionakis Civic Studio



MAY | 9 | 2025

# Designing with Concrete Masonry

Design Trends, Sustainability, Benefits and Challenges

ARCHITECTURE | STRUCTURAL ENGINEERING | INTERIOR DESIGN





Walter J. Leinberger Memorial Center  
Woodland, CA | Yolo County









# Napa County Replacement Detention Facility

Napa, CA | Napa County

















Multipurpose Rehabilitation Center  
Orange, CA | Orange County Public Works





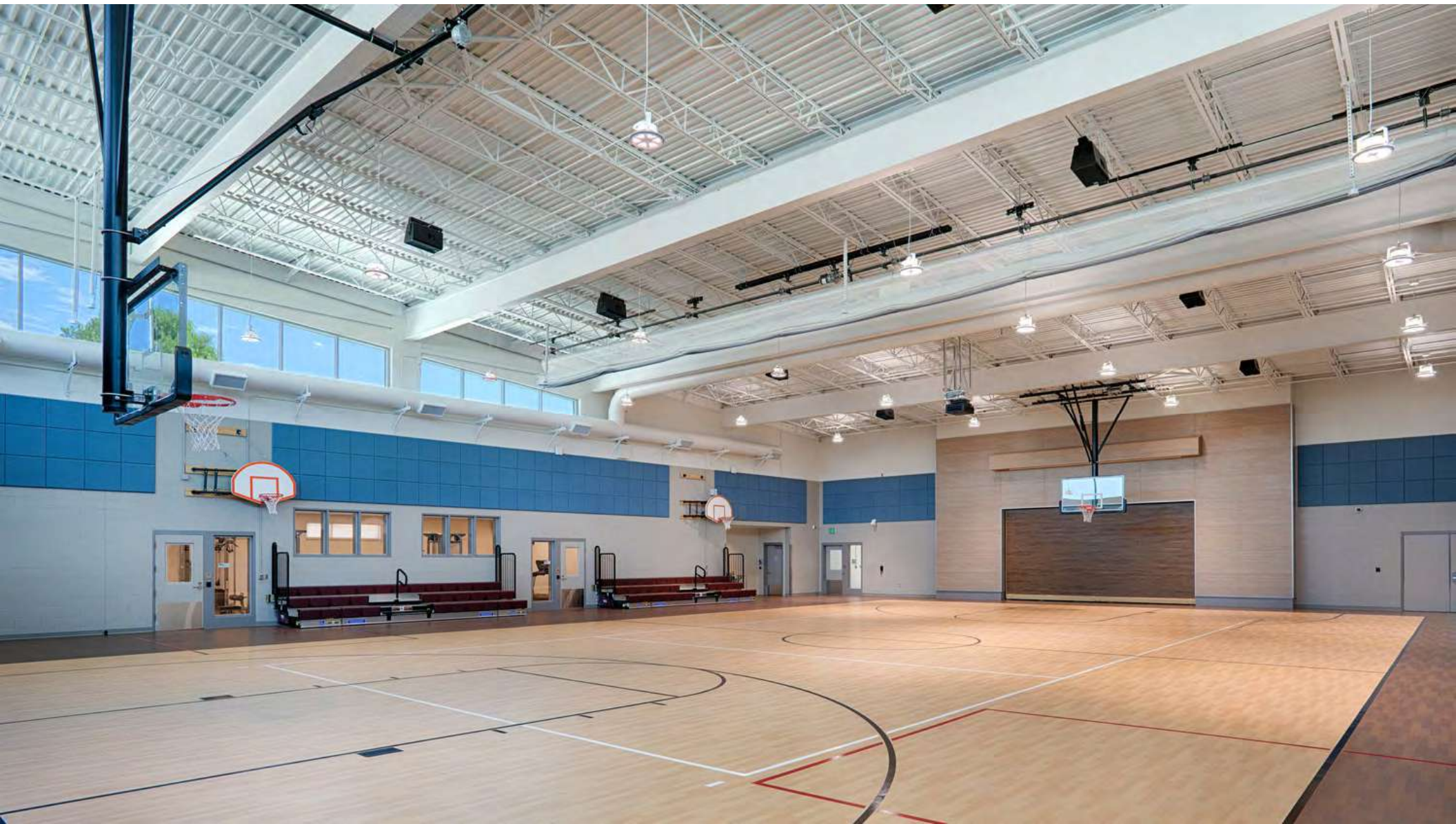
INSPIRE  
VISION  
COURAGE  
FRIENDSHIP

HOPE  
CONFIDENCE  
TRUST  
RESPECT  
VALOR

FAITH  
PURPOSE  
HONOR  
GRATITUDE  
SUPPORT  
DREAM

MULTIPURPOSE REHABILITATION CENTER  
ORANGE COUNTY PROBATION DEPARTMENT

















relationships. performance. design.

LIONAKIS



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**Dominique Houriet**  
**Architect and Partner, oo-d-a studio**



[oo-d-a]

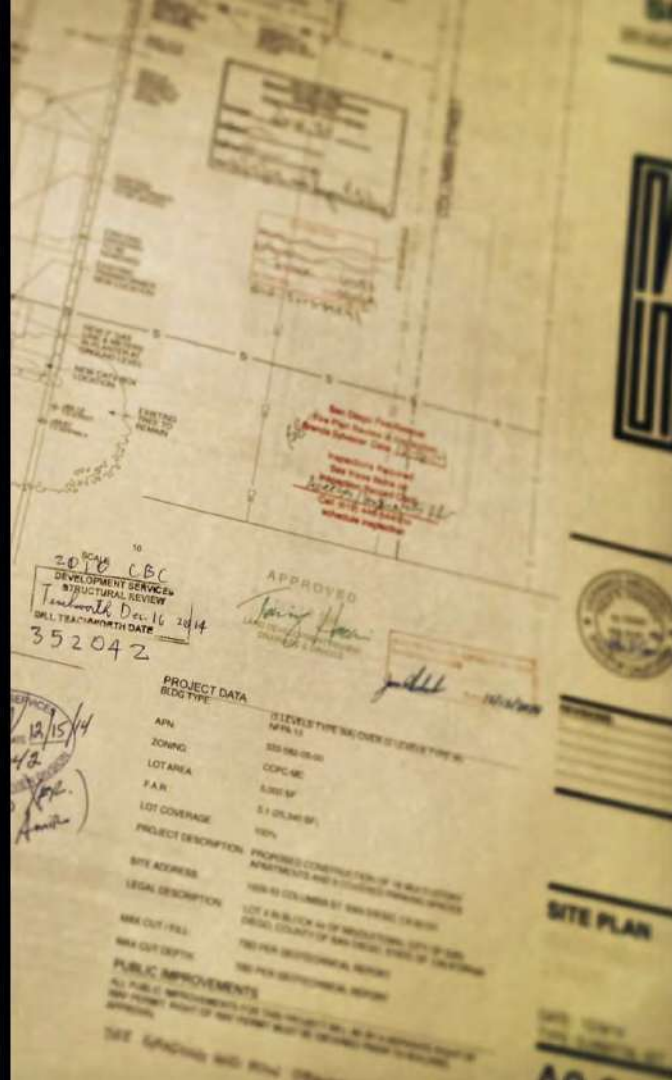


develop / design / build





HJH · FIRST LEVEL · 1/8"



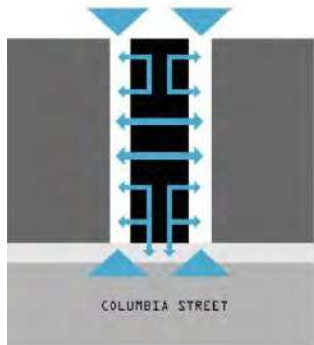












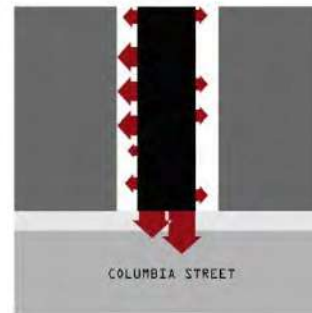
AIR INFILTRATION



CIRCULATION



LIGHT WELLS



FENESTRATIONS





























HLWH



620 Rushville Street, La Jolla, CA 92037







H.H. FIRST LEVEL • 1/4"

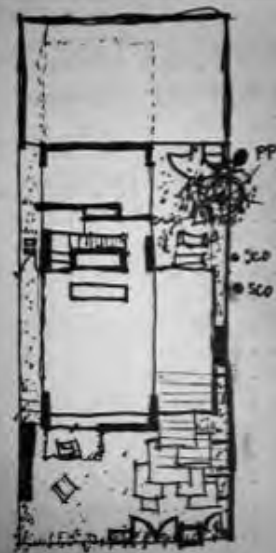
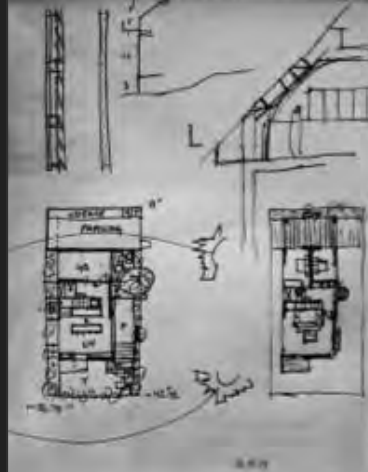
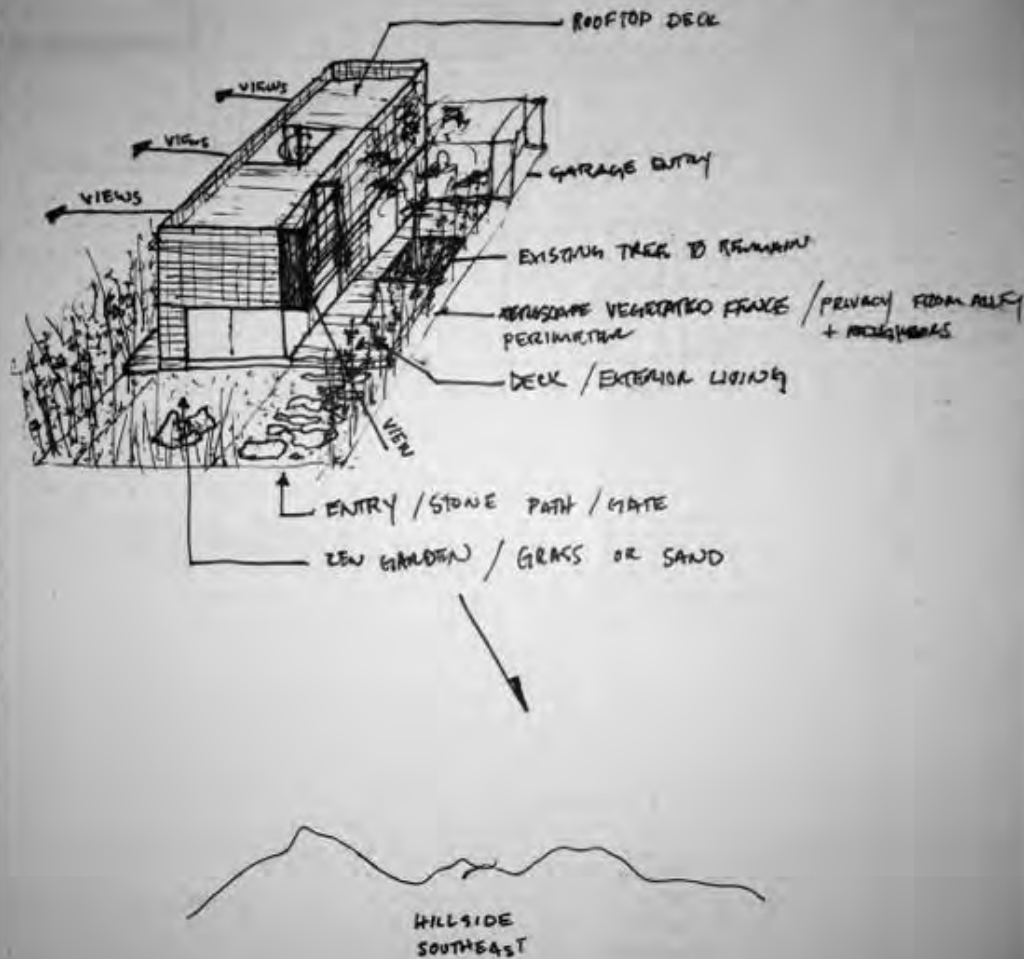


H.H. SECOND LEVEL • 1/4"

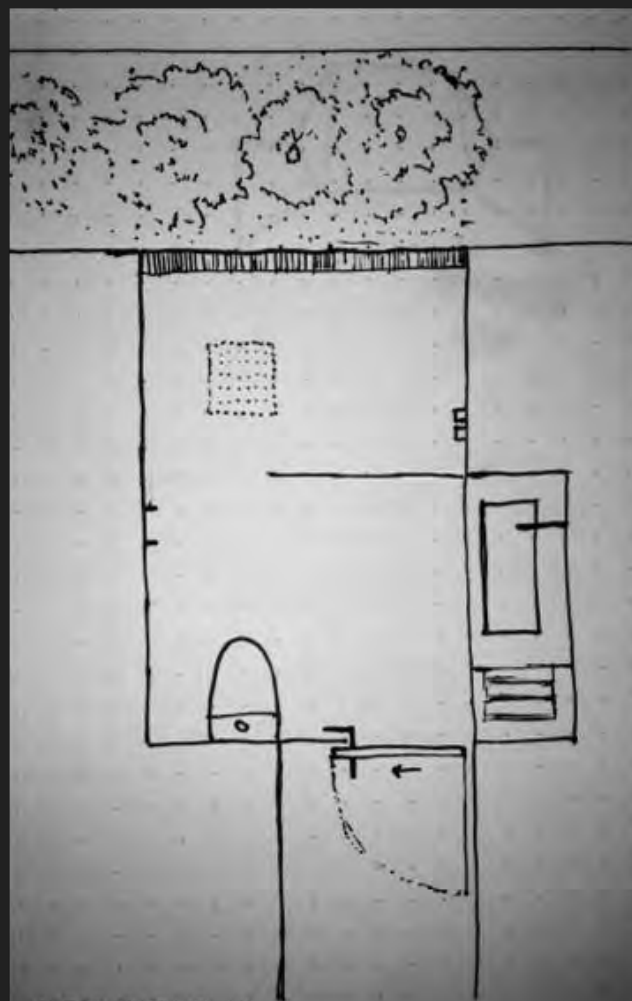


H.H. ROOF DECK • 1/4"

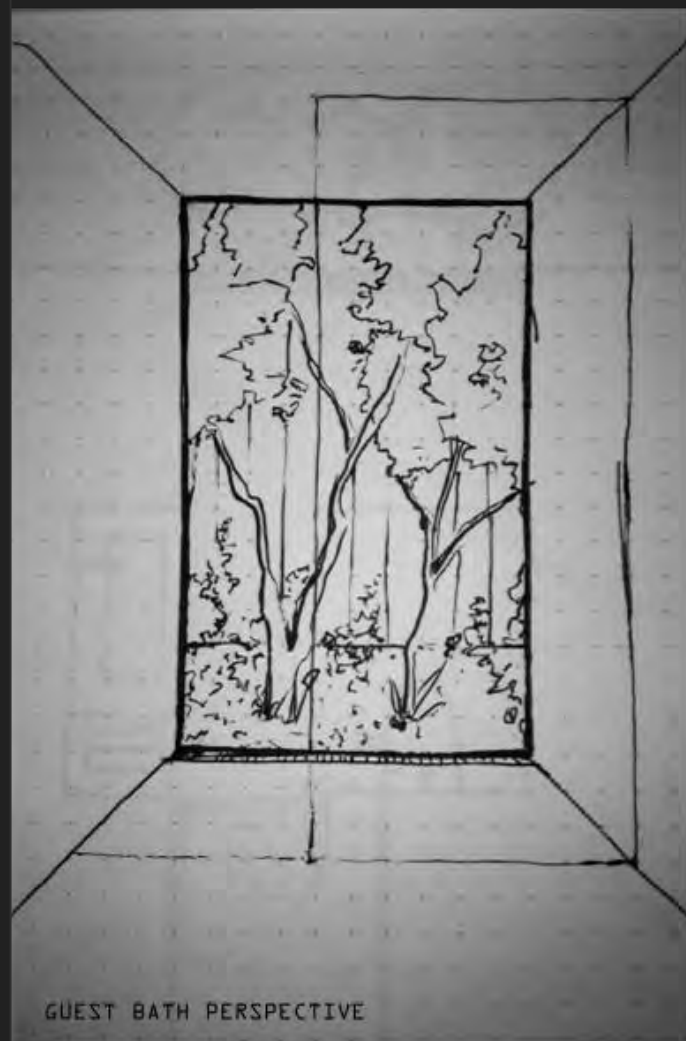








GUEST BATH PLAN



GUEST BATH PERSPECTIVE



































# SAN DIEGO HOME/GARDEN

LIFESTYLES

## A Warm Welcome

Nostalgic modern gem, upside-down  
family home, artful remodel



FEBRUARY 2020 \$4.95



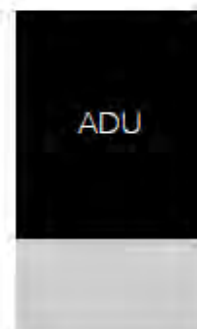
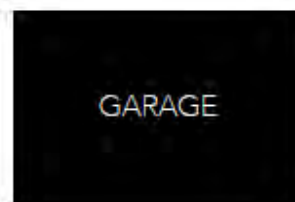
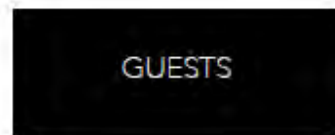
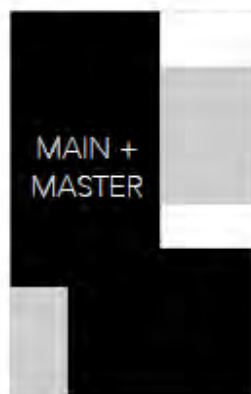
Entryways *transformed*

Visiting Sonoma—the wine,  
the food, *the beauty*



THREE4























































[oo-d-a]

+





# LE PARC

A new approach to housing and community in North Park.







**Overview**  
**Location**  
**Floor plans**  
**Imagery**  
**Rent Roll**  
**Costs + Assumptions**



## **SHOVEL READY, 32 UNIT COMPLETE COMMUNITIES PROJECT IN HEART OF NORTH PARK.**

### **UNITS**

- 10 LOFTS
- 21 STUDIOS
- 1 TWO BEDROOM
- 5 AFFORDABLE UNITS

### **PARKING**

- 8 GARAGE
- 1 ADA
- 1 SURFACE
- 3 MOTORCYCLE
- 13 BIKE RACKS

### **AMENITIES**

- ROOF TOP DECK (OCEAN VIEWS)
- ELEVATOR
- LARGE PRIVATE PATIOS
- INTERIOR / EXTERIOR LIVING

### **DOCUMENTS AND BUDGETS**

- FULL SET OF CDs
- SET OF HARD BIDS
- CONSTRUCTION BUDGET
- PROFORMA
- SDGE WORK ORDERS
- RIGHT OF WAY PERMIT

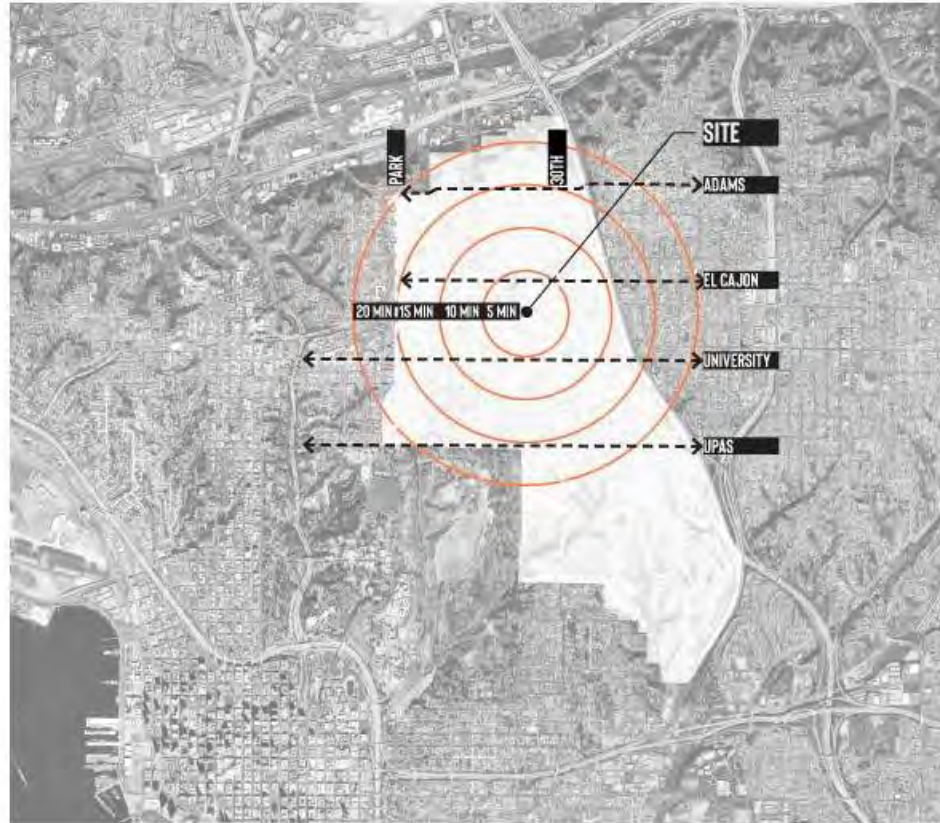


LOCATION.





## LOCATION.







EXTERIOR DECKING



BUILDING EXTERIOR



BUILDING INTERIOR



WOOD TRIM EXTERIOR DOORS AND WINDOWS



TURF PAVER



CARBON SLATE



INTERIOR FLOORS AND PATIOS PER PLAN



RUSTY BALCONY RAILING



EXTERIOR GLOSS METAL



BLACK BAMBOO



EXTERIOR WALKWAYS (ABOVE FIRST FLOOR)

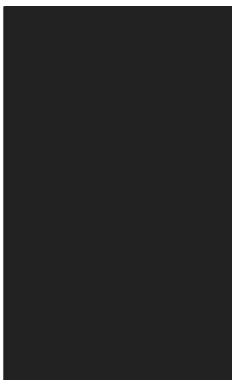
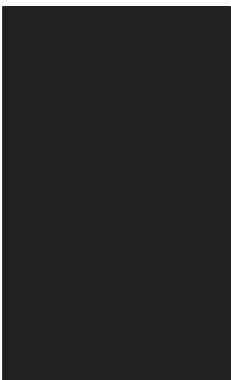


RUSTY RAILING MESH



RUSTY GARAGE PERF MESH







## FLOOR PLANS.

### LEVEL: 01

- A. SIDEWALK
- B. 1 BEDROOM / LOFT
- C. 2 BEDROOM
- D. STUDIO
- E. PRIVATE PATIO
- F. ELEVATOR
- G. ELEVATOR MACHINE ROOM
- H. EXIT STAIR 1
- I. EXIT STAIR 2
- J. ZEN GARDEN
- K. PLANTER
- L. COMMON OPEN SPACE
- M. BIKE PARKING
- N. PARKING
- O. ADA PARKING
- P. MOTOR CYCLE PARKING
- Q. MAILBOXES
- R. TRASH SHOOT
- S. FIRE PUMP
- T. ELECTRICAL METER
- U. STORAGE LOW VOLTAGE
- V. TRANSFORMER

ALLEY



POLK AVE



## FLOOR PLANS.

LEVEL: 02

- A. SIDEWALK
- B. 1 BEDROOM / LOFT
- C. 2 BEDROOM
- D. STUDIO
- E. PRIVATE PATIO
- F. ELEVATOR
- G. ELEVATOR MACHINE ROOM
- H. EXIT STAIR 1
- I. EXIT STAIR 2
- J. ZEN GARDEN
- K. PLANTER
- L. COMMON OPEN SPACE
- M. BIKE PARKING
- N. PARKING
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- S. FIRE PUMP
- T. ELECTRICAL METER
- U. STORAGE LOW VOLTAGE
- V. TRANSFORMER

ALLEY



POLK AVE



## FLOOR PLANS.

### LEVEL: 3-6

- A. SIDEWALK
- B. 1 BEDROOM / LOFT
- C. 2 BEDROOM
- D. STUDIO
- E. PRIVATE PATIO
- F. ELEVATOR
- G. ELEVATOR MACHINE ROOM
- H. EXIT STAIR 1
- I. EXIT STAIR 2
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ALLEY



POLK AVE







# RENT ROLL.

UNIT	UNIT TYPE	SF	PSF (MONTHLY)	PSF (ANNUAL)	RENT (MONTHLY)	RENT (ANNUAL)
Unit 1 - 1 Bedroom Loft	lofts	690	\$3.80	\$45.65	\$2624.88	\$31498.50
Unit 2 - 1 Bedroom Loft	lofts	690	\$3.73	\$44.78	\$2,574.85	\$30,898.20
Unit 3 - 1 Bedroom Loft Very Low (15%)	lofts	690	\$2.13	\$25.54	\$1,468.73	\$17,624.74
Unit 4 - Studio	studio	496	\$4.59	\$55.04	\$2,275.00	\$27,300.00
Unit 5 - Studio	studio	496	\$4.34	\$52.02	\$2,150.16	\$25,801.92
Unit 6 - Studio - Managers Unit	studio	496	\$2.89	\$34.67	\$1,433.03	\$17,196.32
Unit 7 - 2 Bedroom - Moderate (15%)	2 bedroom	882	\$3.20	\$38.45	\$2,825.71	\$33,908.49
Unit 8 - Studio	studio	496	\$4.84	\$58.06	\$2,400.00	\$28,800.00
Unit 9 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 10 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 11 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 12 - Studio - Very Low (15%)	studio	496	\$2.35	\$28.24	\$1,167.13	\$14,005.55
Unit 13 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 14 - Studio	studio	496	\$4.64	\$55.65	\$2,300.20	\$27,602.40
Unit 15 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 16 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 17 - Studio-Low (10%)	studio	496	\$2.83	\$33.92	\$1,402.19	\$16,826.30
Unit 18 - Studio	studio	496	\$4.64	\$55.65	\$2,300.20	\$27,602.40
Unit 19 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 20 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 21 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 22 - Studio-Moderate (15%)	studio	496	\$4.43	\$53.13	\$2,196.04	\$26,352.48
Unit 23 - Studio	studio	496	\$4.74	\$56.85	\$2,349.80	\$28,197.60
Unit 24 - 1 Bedroom Loft	lofts	690	\$3.91	\$46.96	\$2,700.20	\$32,402.40
Unit 25 - 1 Bedroom Loft	lofts	690	\$3.84	\$46.09	\$2,650.18	\$31,802.10
Unit 26 - 1 Bedroom Loft	lofts	690	\$3.84	\$46.09	\$2,650.18	\$31,802.10
Unit 27 - 1 Bedroom Loft	lofts	690	\$3.84	\$46.09	\$2,650.18	\$31,802.10
Unit 28 - 1 Bedroom Loft	lofts	690	\$3.95	\$47.39	\$2,725.00	\$32,700.00
Unit 29 - Studio	studio	496	\$4.69	\$56.25	\$2,325.00	\$27,900.00
Unit 30 - 1 Bedroom Loft	lofts	690	\$3.95	\$47.39	\$2,724.93	\$32,699.10
Unit 31 - Studio	studio	496	\$4.59	\$55.04	\$2,274.99	\$27,299.84
Unit 32 - 1 Bedroom Loft	lofts	690	\$3.95	\$47.39	\$2,724.93	\$32,699.10
Building Total					\$73,368.35	\$880,420.21



## COST + ASSUMPTIONS.

General	Areas
Units	32
Parking Spaces	10
Parking Ratio	0.31
Parking GSF	843
Residential Efficiency	59.80%
Gross Bldg. SF	31,262
NRSF Residential	18,198
Parking SF	843

Cost Breakdown	Total	Per SF (Gross)	Per SF (Net)
Hard Costs	\$9,019,652	\$289	\$496

Loan Terms	Construction	Perm
Rate	TBD	TBD
Term	24 Months	95 Months
LTC	TBD	TBD
Loan Amount	TBD	TBD

Stabilization	Total	Per Unit
Effective Gross Income	\$949,690	\$29,678
Operating Expense	-\$270,505	-\$8,453
NOI @ Stabilization	\$679,186	\$21,225
Stabilized Value	\$16,979,646	\$530,614

Unit Mix	Units	SF	Rent PSF
1 Bed 1 Bath Loft	10	690	\$3.69
Studios	21	496	\$4.32
2 Bed 1 bath loft	1	882	\$3.20
Total / Avg.	32	2,068	\$4.03

Hard Costs	Total	\$/Unit	\$/SF
Construction Hard Costs	\$7,036,920	\$219,904	225
Demo	\$30,000	\$938	1
Parking	\$315,938	\$9,873	10
General Requirements	\$10,300	\$322	0
Hard Cost Contingency (12%)	\$887,179	\$27,724	28
Site Supervision	\$739,316	\$23,104	24
Total Hard Costs (Gross)	\$9,019,652	\$281,864	\$289
Total Hard Costs (Net)	\$9,019,652	\$281,864	\$496













































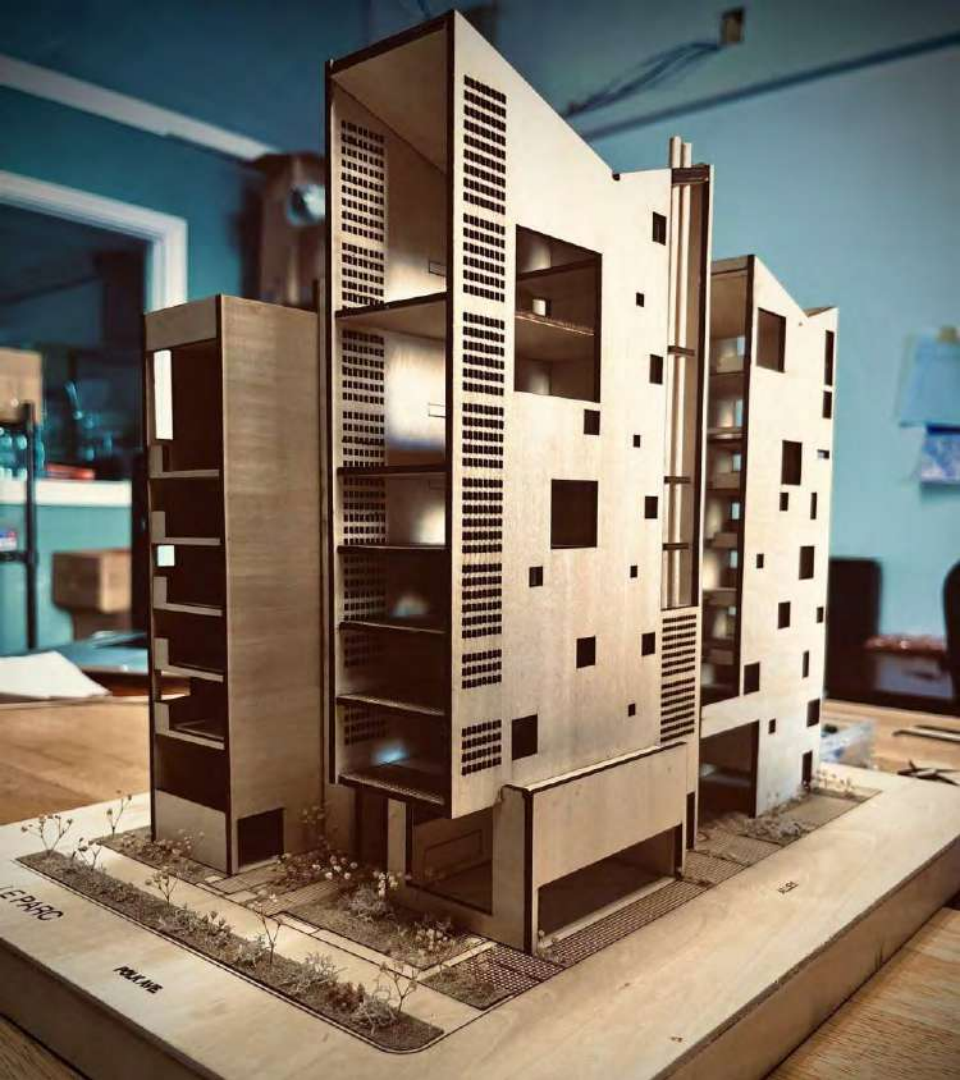












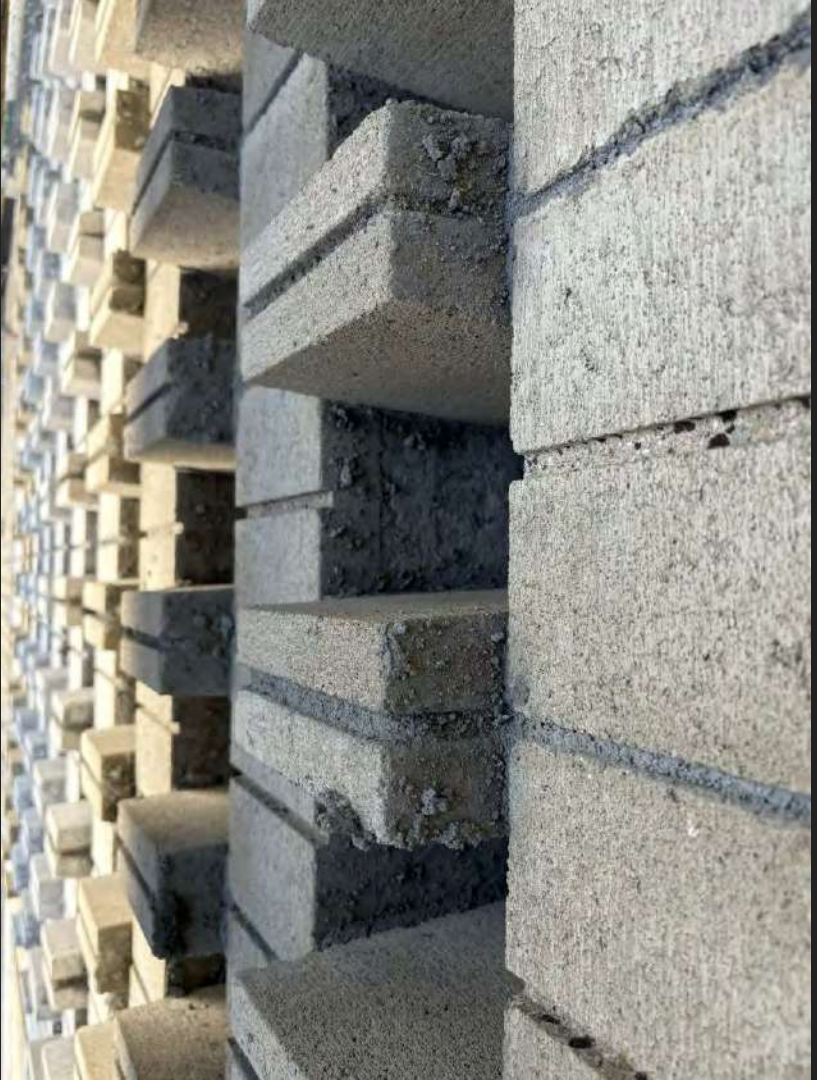


















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