UCSF TIDELANDS STUDENT HOUSING

EXCEEDING EXPECTATIONS WITH A PREFABRICATED BUILDING ENVELOPE AND TARGET VALUE DESIGN.

STRIKING A BALANCE

USCF design architects Kieran Timberlake wanted the buildings to fit into the look and feel of the Dog Patch neighborhood, in San Francisco. Because of this, the University sought out an exterior system that balanced aesthetics with cost and environmental considerations.

The design team decided on a rainscreen system but quickly discovered it would exceed the budget and add substantial time to the project schedule. As a field installed system, it would also require scaffolding.

This added cost and created multiple issues because the site didn't allow the space for this method of construction and there was a shortage of field labor in the Bay Area.

It also required collaboration across multiple trades, each installing one of many systems such as cladding, insulation, windows and interior finishes. With a budget of $125 per sq. foot, USCF had to explore other options.

CLARK PACIFIC

A SINGLE SOURCE

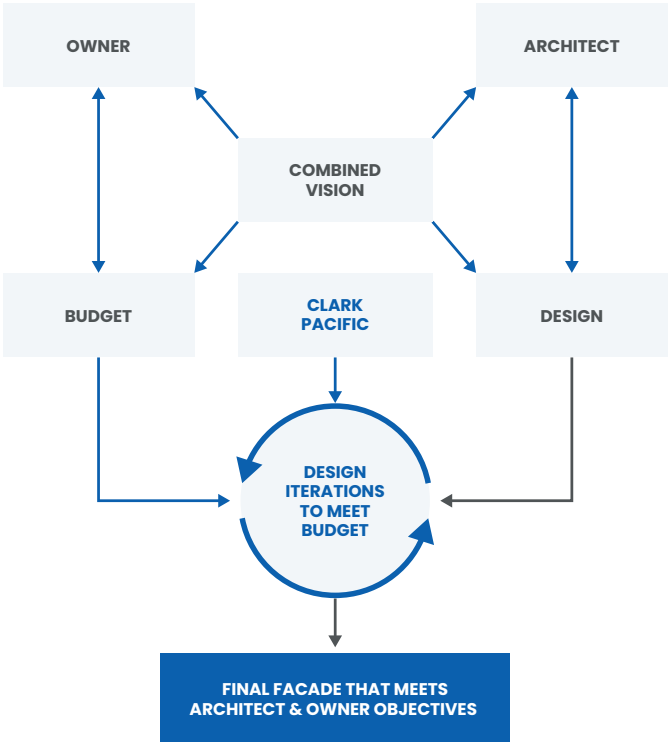
A single source barrier system would expedite construction, reduce risk and eliminate the need for UCSF to manage work with multiple trades. Clark Pacific's Target Value Design (TVD) methodology gave the University a blank palette to start with and one source for a complete building envelope system that is prefabricated offsite and already tested for ASTM and AAMA air, water and vapor penetration, and meets or exceeds Title 24 building code requirements for every climate zone in California.

Clark Pacific's system meets or exceeds requirements for:

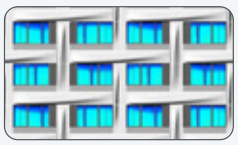
- **Water, Air, Vapor, Energy**
- **Standard Transmission Coefficient**
- **Title 24 & ASHRAE 90.1**
- **Resilient, Seismic, Fire Performance**

With standards and requirements already met, UCSF only needed to think about aesthetics.

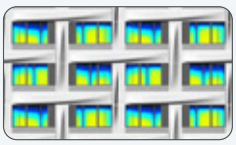
TARGET VALUE DESIGN



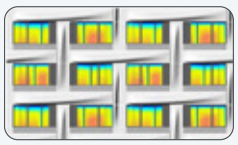
NORTH FACADE
37% INCIDENT
SOLAR REDUCTION



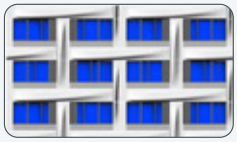
NORTH FACADE
28% INCIDENT
SOLAR REDUCTION



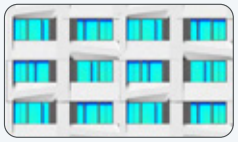
NORTH FACADE
39% INCIDENT
SOLAR REDUCTION



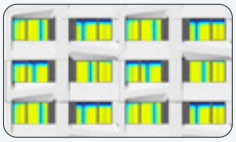
NORTH FACADE
21% INCIDENT
SOLAR REDUCTION



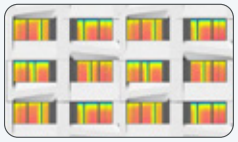
NORTH FACADE
25% INCIDENT
SOLAR REDUCTION



NORTH FACADE
16% INCIDENT
SOLAR REDUCTION



NORTH FACADE
20% INCIDENT
SOLAR REDUCTION



NORTH FACADE
10% INCIDENT
SOLAR REDUCTION

INCIDENT SOLAR RADIATION COMPARED TO FLAT FACADE
UNIVERSITY OF CALIFORNIA SAN FRANCISCO MINNESOTA STREET HOUSING

INCIDENT SOLAR RADIATION COMPARED TO FLAT FACADE. UNIVERSITY OF CALIFORNIA SAN FRANCISCO MINNESOTA STREET HOUSING

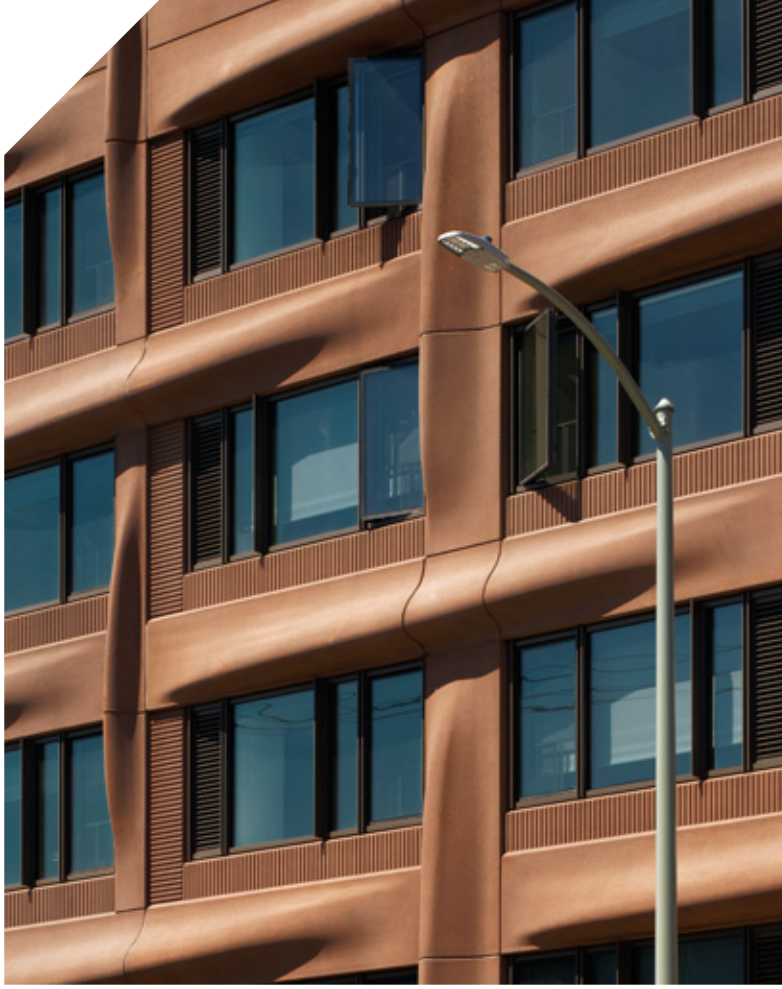
KWH/M²
TOTAL INCIDENT RADIATION

ENERGY USAGE AND THERMAL COMFORT FOR RESIDENTS

Clark Pacific worked with UCSF to determine a window-to-wall ratio that would keep cost within budget while also focusing on thermal comfort. The design team was able to explore multiple scenarios and the effect each would have on energy systems, cost and performance.

Kieran Timberlake also conducted a façade sun exposure analysis to determine impact of solar heat gain on the rooms. The design team selected billows and both horizontal and vertical sunshades were built directly into the Clark Pacific panels on the sun-facing elevations and flat panels on the others.

Clark Pacific's baseline system meets Title 24 prescriptive requirements and exceeds the requirements on performance. A key component of this is the continuous insulation built into the system. UCSF was able to achieve the U-value with a single source and without hiring another trade subcontractor. The design paramaters of the system made it easier for the owner's energy consultant to analyze the input.



Form liners, a cost-effective way to provide depth and contrast.

Complete panel; insulation, windows and frame ready for transport to the job-site.

Insulation applied on panel during the manufacturing process. Form liners, a cost-effective way to provide depth and contrast.

WHY PARC PROVIDED THE IDEAL SOLUTION

- **Working with Clark Pacific as the single source provider eliminated the need for UCSF to work with multiple trades.**
- **Working through its target value design process and production, Clark Pacific shaved six months off the design schedule.**
- **Weekly meetings allowed for multiple iterations in design on the fly and as the job progressed while maintaining the TVD budget.**
- **Standards and requirements were met automatically, eliminating the need for extra consultants and testing.**
- **Clark Pacific is the single contact for the envelope warranty.**

ABOUT CLARK PACIFIC

For over 60 years, Clark Pacific has led the way in prefabricated building systems, combining innovative manufacturing with construction excellence to improve project outcomes and enhanced customer experiences. Our offsite construction approach reduces project risk through better cost and schedule certainty and greater supply chain controls without compromising a project's overall design. We are committed to delivering energy-efficient, sustainable buildings that address our clients' unique needs and make a positive impact on both the community and environment.