

APA CASE STUDY

Engineering Solutions for a More Inclusive Community

A California nonprofit creatively incorporates engineered wood into a new, affordable housing complex to keep costs low, tackle a public predicament and give rise to a stronger, more inclusive community.



A housing crunch was mounting in the City of Mountain View, California. Faced with four consecutive years of burgeoning homelessness, the city was determined to find a solution. They developed an innovative approach to help address the issue affecting their community, including funding basic hygiene services, outreach to assess community needs, connecting residents to local services and partnering with local nonprofit organizations to facilitate affordable housing solutions. One local nonprofit stepped in with an approach to the problem.

Alta Housing, a community-based nonprofit specializing in affordable housing development, came powered by a mission to create stronger, more diverse communities by providing and maintaining high-quality affordable housing where residents can thrive.

Alta Housing worked closely with the city to formulate a strategic plan to help address the situation and provide high-quality housing for low-income individuals and those with developmental disabilities within the Mountain View community.



Plans were drawn, bids submitted and Luna Vista was born.

The 71-unit, 100% affordable housing community offers affordable housing to single- and two-person low-income households. Fifteen of the units are designated for adults with developmental disabilities.

Centrally located, the housing community is within walking distance to public transit, shopping and dining options, activities and a public library.

For the housing complex, the design team set out to create a plan that reflected the community, and at the same time, develop a community where the residents could exercise personal independence, make new connections and thrive.

The design for Luna Vista unifies contemporary, modern elements while paying homage to the area's unique historical architecture.

Lilly Wellington, architect with Van Meter Williams Pollack (VMWP), explained that "one of the main inspirations for the project was the historical car shops and gas stations from the '50s that were in the area."

The City of Mountain View was involved early in the design process to ensure contemporary elements were included to reflect their modern vision for the developing El Camino Real area. "It was absolutely a collaborative process," said Wellington.

The floor plan incorporates shared balconies, a community room, an open

PROJECT SPOTLIGHT



RENDERINGS COURTESY OF VMWP

Project Name:
Luna Vista

Location:
950 W El Camino Real,
Mountain View, California

Completed: Fall 2021

Type: Multi-family

Size: 48,200 total
square feet

Developer:
Alta Housing

Architect:
Van Meter Williams
Pollack

Structural Engineer:
Murphy Burr Curry

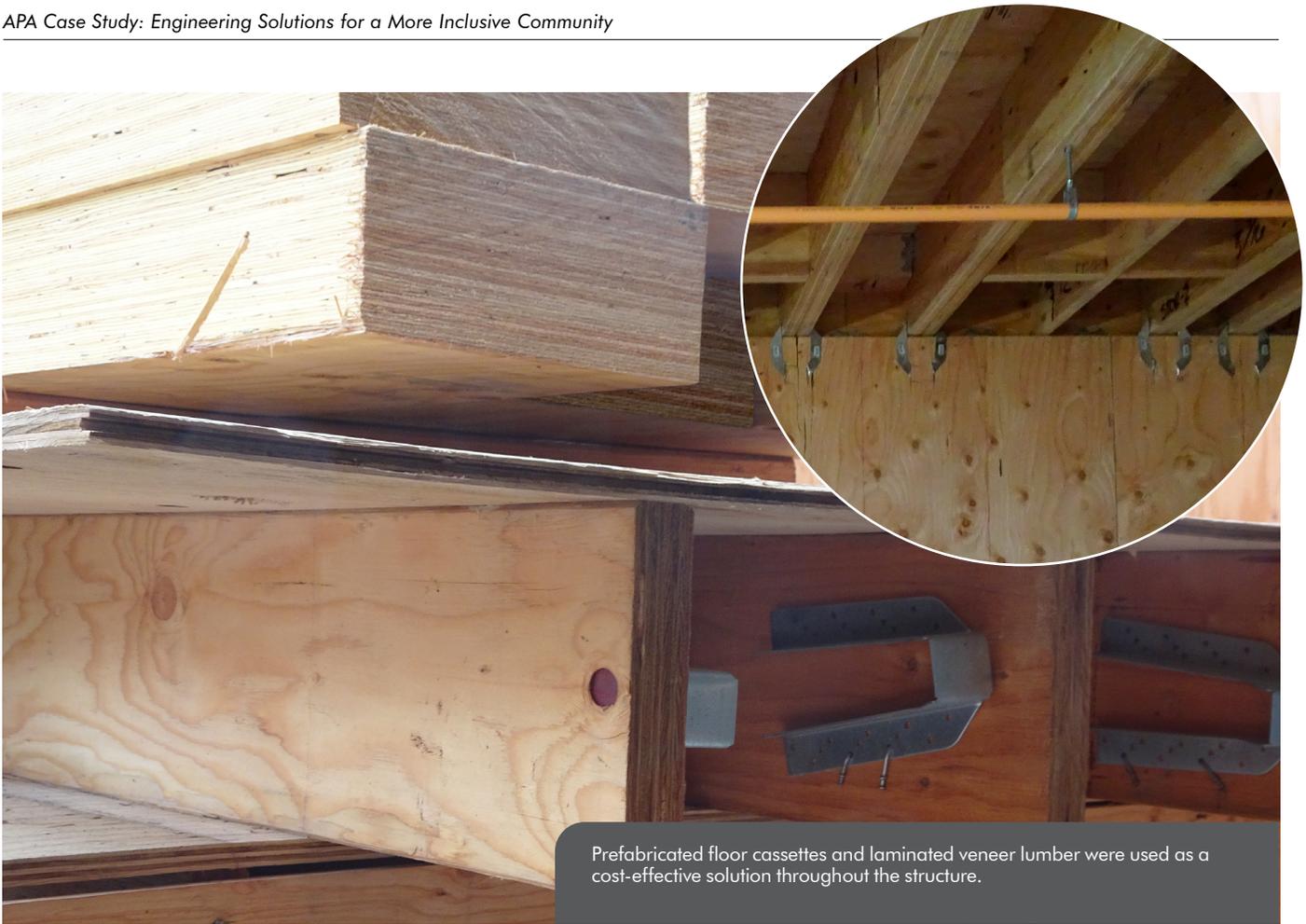
Contractor:
Nibbi Brothers General
Contractors

I-Joist Manufacturer:
Boise Cascade
Company

Plywood Manufacturer:
Boise Cascade Company

Glulam Manufacturer:
Rosboro

LVL Manufacturers:
Boise Cascade Company
& Murphy Company



Prefabricated floor cassettes and laminated veneer lumber were used as a cost-effective solution throughout the structure.

roof deck and a communal lounge on each floor to encourage residents to get to know each other.

“The design we’ve created really fosters a sense of community with the residents, where you actually get to know your neighbor and they’re not just the person next door,” said Wellington.

Alta Housing will also be providing on-site support to help residents thrive, including case management, job counseling, educational assistance, health and wellness programs, financial planning and help accessing community resources.

“The services offered will assist tenants in achieving their goals,” said Diane Dittmar, Alta Housing project manager. “Many of our residents with developmental disabilities will be living on their own for the first time.”

ENGINEERING SOLUTIONS WITH ENGINEERED WOOD

With a total budget of \$30.5 million, it was crucial the production team found creative building solutions to minimize construction costs.

“One of the things that’s really important to us is being able to keep the costs low and have each dollar go further so we can house more people while also providing high-quality housing,” said Dittmar.

The prefabricated engineered wood elements specified for the project provided an innovative and cost-effective solution.

Floor cassettes constructed by Nobles Construction Components Inc. from plywood structural panels, laminated veneer lumber (LVL) and I-joists from APA member Boise Cascade were used as the main floor components throughout the structure.



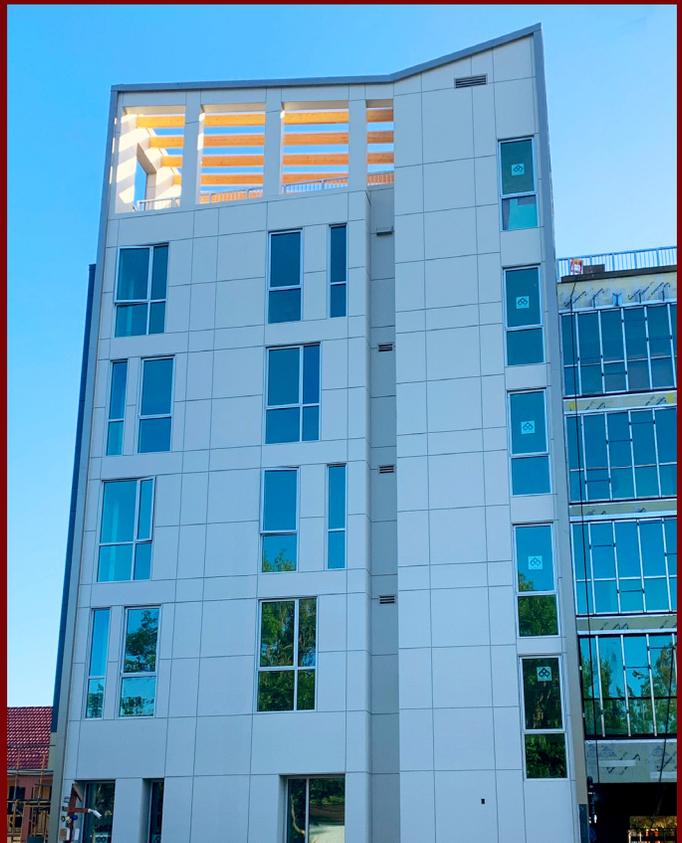
Gilded with Glulam

PHOTO COURTESY NIBBI BROTHERS

Exposed glued laminated beams (glulam) from APA member Rosboro were specifically selected for the rooftop trellis due to their beauty and natural wood appeal. “They were essential in creating this beautiful space,” said Wellington, the architect.

“We really wanted the space to look nice and be enjoyable, and we wanted to bring in that same wood feel that was already incorporated throughout the structure,” said Wellington. “The glulam beams are really stunning; they look nice, and they’re incredibly structurally sound so they can span the longer distance.”

Glulam was also incorporated structurally throughout the building, which further helped to keep costs down. “The glulam was much more affordable than steel,” said Dittmar.



Pictured: Alaskan yellow cedar glulam beams from APA member Rosboro add warmth to the rooftop trellis.

Panelized walls and prefabricated stairs were also incorporated to further accelerate construction times.

“We were able to set all the floors in just six days by using the floor cassettes,” said Shibata. “Each floor of the complex we could construct in about two weeks.”

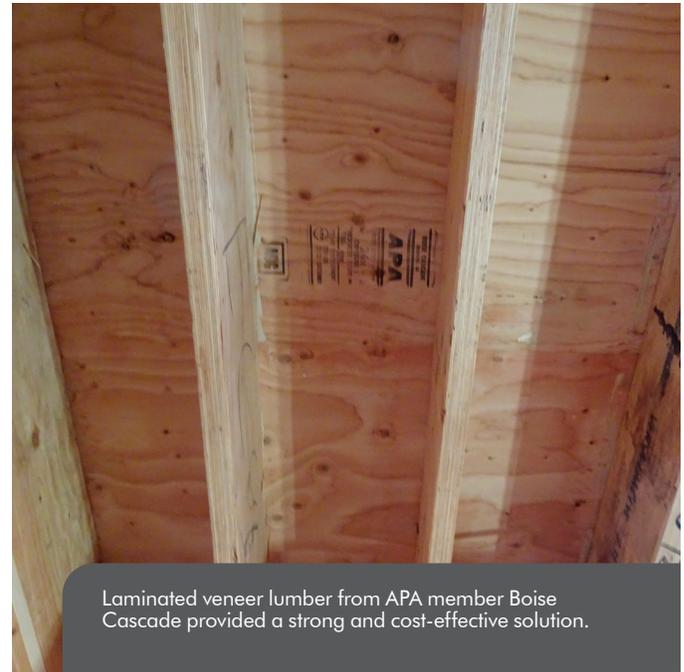
LVL from APA members Murphy Company and Boise Cascade proved to be a cost-effective solution for multiple demanding design challenges. The weight of the rooftop amenities created a substantial load, but the savvy design team found a simple solution. LVL framing provided the needed strength and support while keeping the budget in check. LVL and parallel strand lumber (PSL) were also used as a cost-effective solution for headers, and LVL was used in areas where the walls did not align floor to floor.

The floor cassettes not only helped Alta Housing stay within their tight budget, but the prefabricated elements also delivered numerous benefits for the construction team.

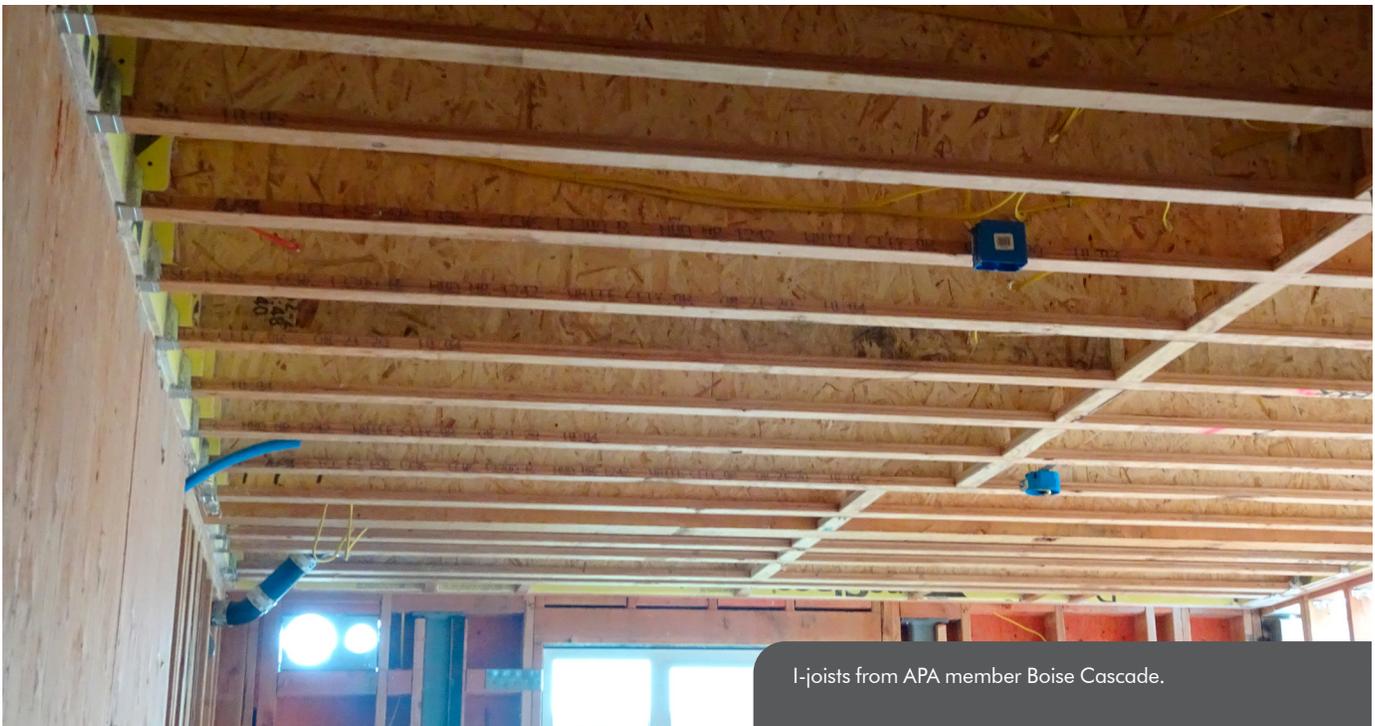
“Using the floor cassettes greatly improved safety for my crew,” said Shibata. “Instead of the guys having to walk on the upper floors, rolling joists and

constructing the floors in place, we were able to easily set a floor cassette, use that to tie off of and continue working from there—you’re always tied off.”

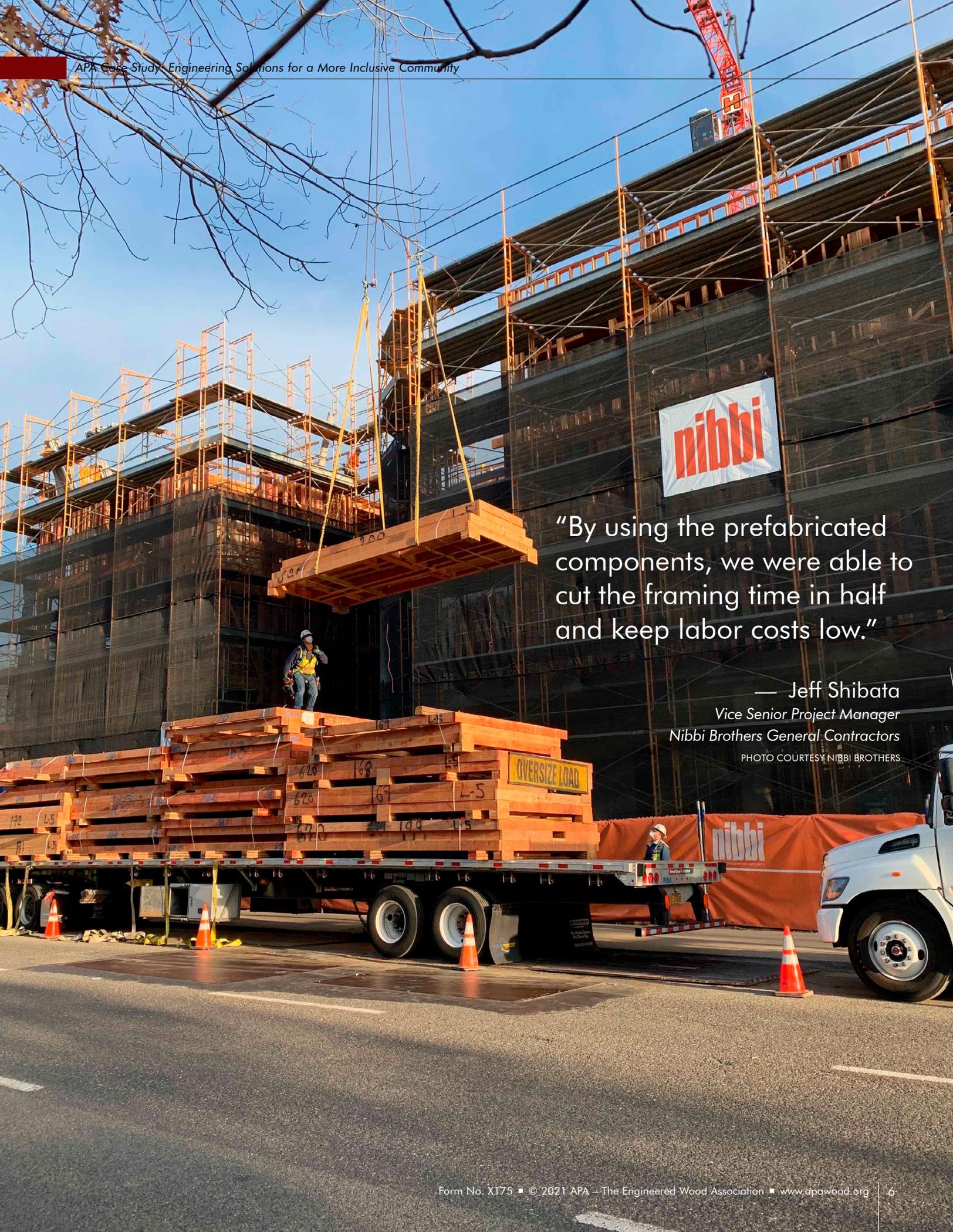
Working in downtown Mountain View, the construction team faced another challenge—a compact construction site with very limited on-site storage. Working within the confined area



Laminated veneer lumber from APA member Boise Cascade provided a strong and cost-effective solution.



I-joists from APA member Boise Cascade.



“By using the prefabricated components, we were able to cut the framing time in half and keep labor costs low.”

— Jeff Shibata

Vice Senior Project Manager
Nibbi Brothers General Contractors

PHOTO COURTESY NIBBI BROTHERS



Construction crew setting a floor cassette.
PHOTO COURTESY NIBBI BROTHERS

in the middle of busy traffic, the prefabricated components and promptly coordinated deliveries proved to be critical.

“We were getting about one trailer of building materials per day, and since all the components for the walls and floors came prefabricated, we were able to set everything that was delivered in the same day,” said Shibata. “All the walls we could lift and set exactly where they needed to be.”

The prefabricated materials allowed the construction team to limit the amount of building materials stored on-site and significantly reduce construction debris and cleanup.

“With the floor cassettes, everything was coordinated ahead of time; we didn’t have any issues,” said Wellington. “The floor installation went very smoothly.”

This was only the second project that Shibata had worked with prefabricated engineered wood products. With a history of concrete-focused construction, Nibbi is exploring integrating all parts of the construction process, including framework, to become fully self-performing.

“We’re definitely going to continue to use engineered wood products as we expand this side of the business—all the engineers are on board for it as well,” said Shibata. “Instead of dimension lumber, which can often come with inconsistencies, the reliability of the engineered wood products is there—they have confidence in the product.”

The project is on track to hit the fall 2021 completion date and obtain LEED Gold certification.

Combining innovative design, ingenuity and the creative use of engineered wood products, this team united with the community to build affordable housing for the residents of Mountain View and cost-effectively build a community that offers a sense of independence, connection and well-being to the residents at Luna Vista.





PHOTOS COURTESY NIBBI BROTHERS

Shining Light on an Inclusive Community

Stained glass panels were installed between the running vertical fins on the front of the building. The panels feature original artwork created by locals who are a part of the Morgan Autism Center, a community nonprofit working with individuals with autism and other developmental disabilities. The artwork on the panels is projected into the lobby and lounges on each floor as the sun shines through them.

"We feel really lucky to be able to work with a local organization," said Anna Cole, associate project manager at Alta Housing. "It's such a great way to connect with the community."

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