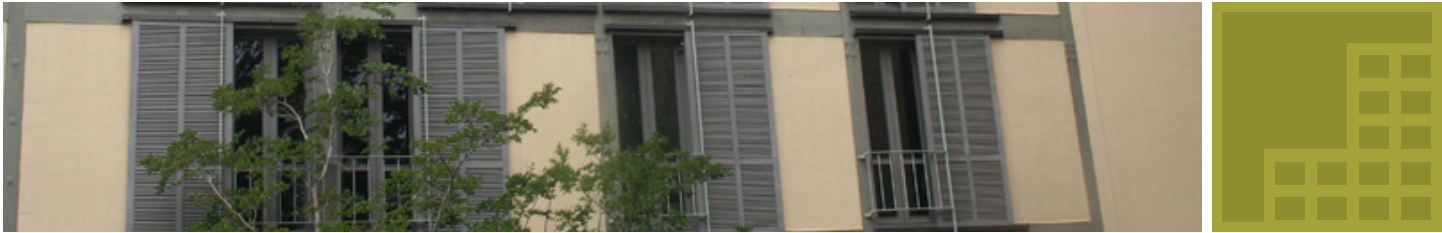




FACT SHEET: SUSTAINABLE DEMOLITION — FREDERICK E. TERMAN ENGINEERING CENTER



SUSTAINABILITY OPPORTUNITY

The demolition of the Frederick E. Terman Engineering Center underscores Stanford’s commitment to sustainability and demonstrates responsible resource management at the end of a building’s life. Many of the sustainability features embodied in Terman have evolved into widely-accepted mainstays of high-performance design today. Some of Terman’s innovations, however, introduced challenges, such as the advanced deterioration of the exposed structural laminated beams. Terman paved the way for the School of Engineering’s programmatic evolution and transition into the new Science and Engineering Quad and through its demolition, Terman showcases Stanford’s ability to leverage salvage and recycling to achieve diversion rates in excess of 99% and to balance sustainability, costs, and neighborhood improvement goals. Stanford’s balanced approach to the demolition process ensures that the Terman Building’s legacy will continue to serve the university for years to come.

A LEGACY OF SUSTAINABILITY

Completed in 1978, the Terman Building incorporated many leading-edge sustainability features, including operable windows to facilitate passive ventilation and timber structural members sourced locally. Both natural ventilation and sustainable material sourcing are now common practice in Stanford’s new high-performance buildings. Lessons learned from both the Terman Building’s construction methodology and its operational history informed subsequent projects and thereby enriched the university’s building portfolio. Once the demolition project is complete, and until the area is needed for future academic development, the university will create a neighborhood park for the entire community. The Terman Building’s popular rectangular fountain will remain in place as a centerpiece of the new landscape.

SALVAGED MATERIALS

Stanford used a balanced approach to evaluate material salvage opportunities, weighing the feasibility and likelihood of reuse for various building elements against the recovery cost, schedule, and other impacts to the surrounding community. Input from the university community, including faculty and staff, as well as the Project’s contractors and consultants, helped guide the selection process. Key salvaged items of special interest to the Stanford community include the following:

Roof Tiles

Existing Spanish clay roof tiles will be carefully palletized by hand and reused on the planned West Campus Recreation Center and Arrillaga Family Sports Center Addition projects.



Concrete Pavers

Existing concrete pavers from the plaza overlooking the fountain will be hand-crated and redeployed during the scheduled landscape renovation project in the Petersen-Mitchell courtyard.

Exterior Lighting

A number of exterior light fixtures will be reused onsite, including the three specialty pole fixtures surrounding the Terman Building’s fountain which will be reincorporated into the new park.



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Interior Wood Features

Decorative cedar ceiling slats were sold through Stanford's Surplus Property Sales to members of the Stanford community interested in using the lumber for departmental and school projects.



Terman Auditorium Seating

Fixed auditorium seating from Terman Auditorium has been removed and stored by a restoration firm that specializes in the refurbishment of auditorium seating for new projects. Stanford plans to install the refurbished seating in the auditorium of the fourth and final SEQ building, currently under construction.

Generator Refurbishment

The generator formerly located in the small enclosure yard at the corner of Samuel Morris and Santa Teresa was sold to an independent company that specializes in refurbishing generators for resale and reuse via responsible processing methods.



Exterior Shutters

A number of louvered exterior shutters will be reused during the renovation of a staff building in the Stanford Research Park. In addition, the Project team plans to fulfill the numerous requests from members of the Stanford community interested in purchasing the shutters for departmental and school projects.

Site Furnishings

Exterior furnishings such as bike racks, trash receptacles, and recycling receptacles will be retained for use in the new neighborhood park and redistributed to other campus projects as needed.



Wooden Seating

Large seating planks lining the edge of the plaza overlooking the fountain will be made into site benches in the landscape plan for the new pocket park.

Other Items

Stanford's Surplus Property Sales reclaimed and sold office and laboratory equipment and furniture, interior office doors, and metal bathroom partitions. Items reclaimed by Stanford's Buildings & Grounds Maintenance group include general equipment like compressors and pumps, as well as low voltage, line voltage, and fire alarm equipment.



RECYCLED MATERIALS

The Terman Building demolition project is expected to divert more than 99% of all building materials and components from the landfill. Material not salvaged will be recycled, with preference given to onsite recycling where feasible. For example, concrete from the Terman Building will be pulverized into compactable rock and used to infill portions of the basement to stabilize the structure during demolition and the subsequent park construction. This strategy reduces the need to truck in soil to serve the same purpose and therefore decreases the carbon footprint of the project as a whole. Where soil is required for rough grading above the pulverized concrete, it will be obtained from excavation spoils associated with concurrent campus projects.

MORE INFORMATION

SUSTAINABLE DEMOLITION

http://sustainable.stanford.edu/sustainable_demolition

<http://lbre.stanford.edu/dpm/>

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