



XL Construction

The California Best Buildings Challenge

Reducing our energy, water and waste by
20% in **2** years



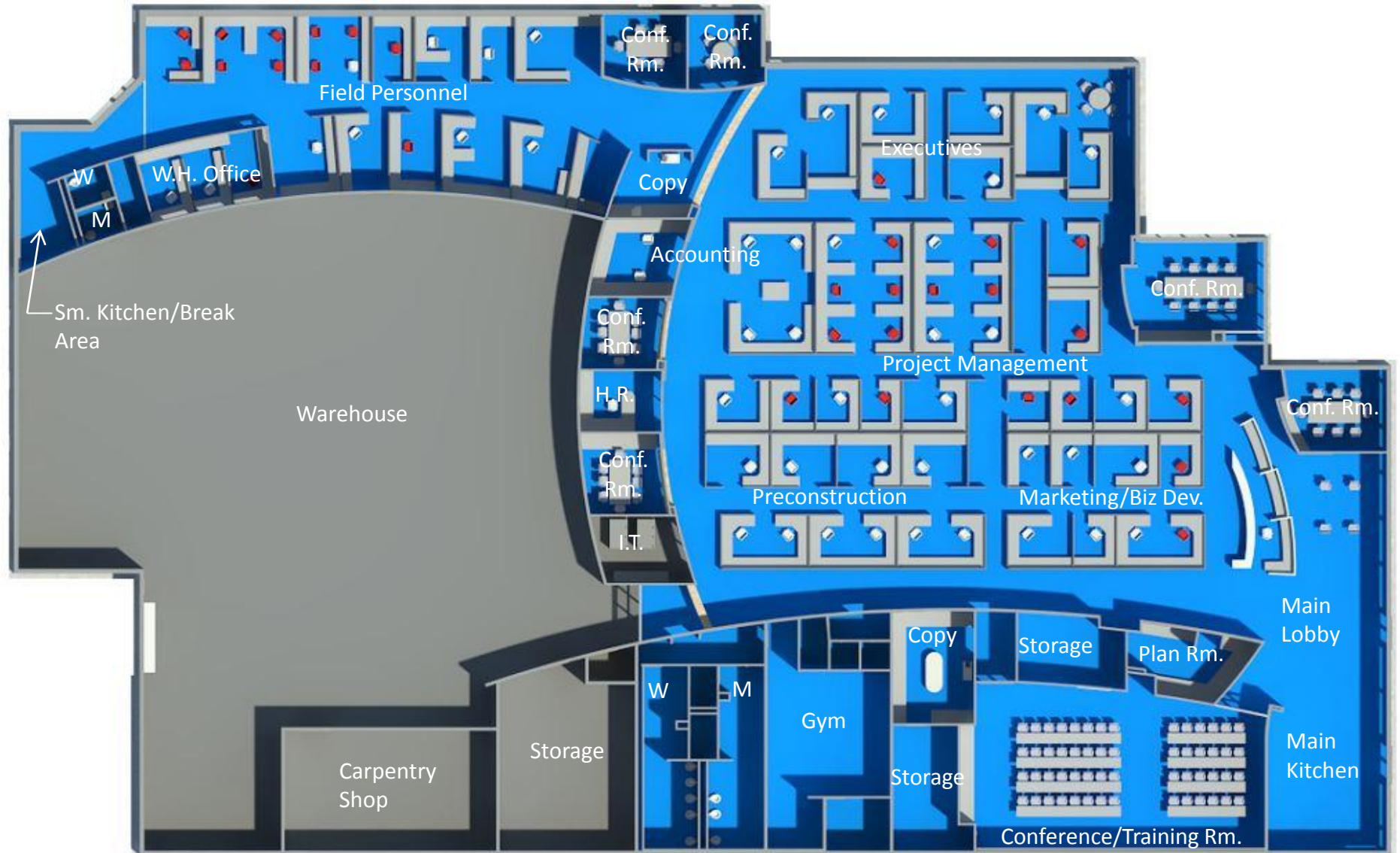
Existing Facility

XL built out its current corporate office space in 2007. It was constructed and certified under LEED-CI V2 and obtained a Silver Rating, achieving a 40% water reduction from baseline standards. Daylighting controls were provided throughout the facility, new energy efficient HVAC systems were installed, and EnergyStar rated equipment and appliances were provided throughout.

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Legend

 Office: 23,790 SF	 Fulltime Occupants: 49
 Warehouse: 13,780 SF	 Transient Occupants: 39
Total : 37,570 SF	Total Occupancy: 88



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Water

Existing on-site reclaimed water was extended to the main restrooms and connected to all toilets and urinals.

The existing reclaimed water irrigation system was re-commissioned to reduce water based upon the matureness of the landscaping.



HVAC

The existing HVAC systems operated from 5:00 AM to 6:00 PM a period of 13 hours. This time period was reduced to operate between 6:30 AM and 5:00 PM a period of 10.5 hours.

The temperature range set points for cooling and heating of 72-74 degrees were increased to 70-75 degrees.

The set point for non occupied cooling was raised from 75 to 85 degrees.

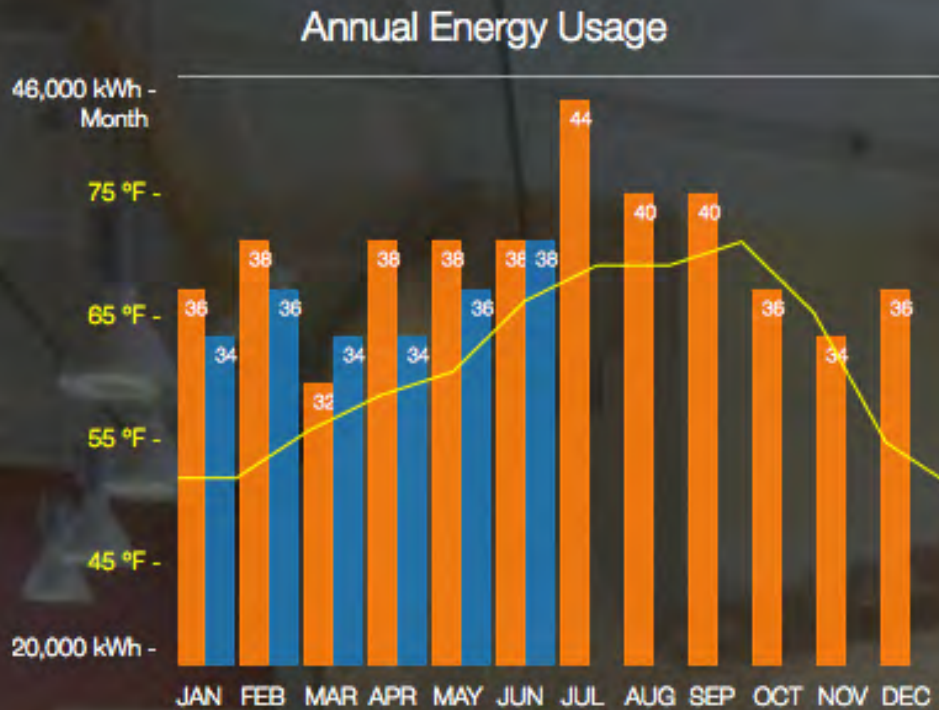
The set point for non occupied heating was lowered from 72 to 60 degrees.



HVAC

At the main Server-Network room a new high efficiency exhaust fan was installed to remove heat from the hot aisle area. Make up air at 72-74 degrees is drawn in from the main office. This system now provides the main source of cooling for the network room. The existing dedicated split system set point for cooling was raised from 75 to 85 degrees and will only come on if the exhaust fan fails to maintain temperature. The existing HVAC control system was re-Commissioned to prove out all functionality.

Total Electrical Load



Electrical

The prior 2 year energy bills were analyzed to develop a base line usage.

XL ran a 10 day 24 hour electrical data logger study at the main substation to capture hourly usage throughout the day for both work days and weekends. This information pointed to high electrical usage during non-occupied hours.






Electrical

To reduce electrical loads during non occupied hours, a relay panel was installed and all dedicated circuits for reproduction and café equipment were transferred to this panel. This panel is controlled by a time clock and turns power 100% off during all unoccupied times. An override switch was installed to allow powering up of this equipment during non occupied periods. A two-hour sweep automatically turns this equipment off after being engaged.

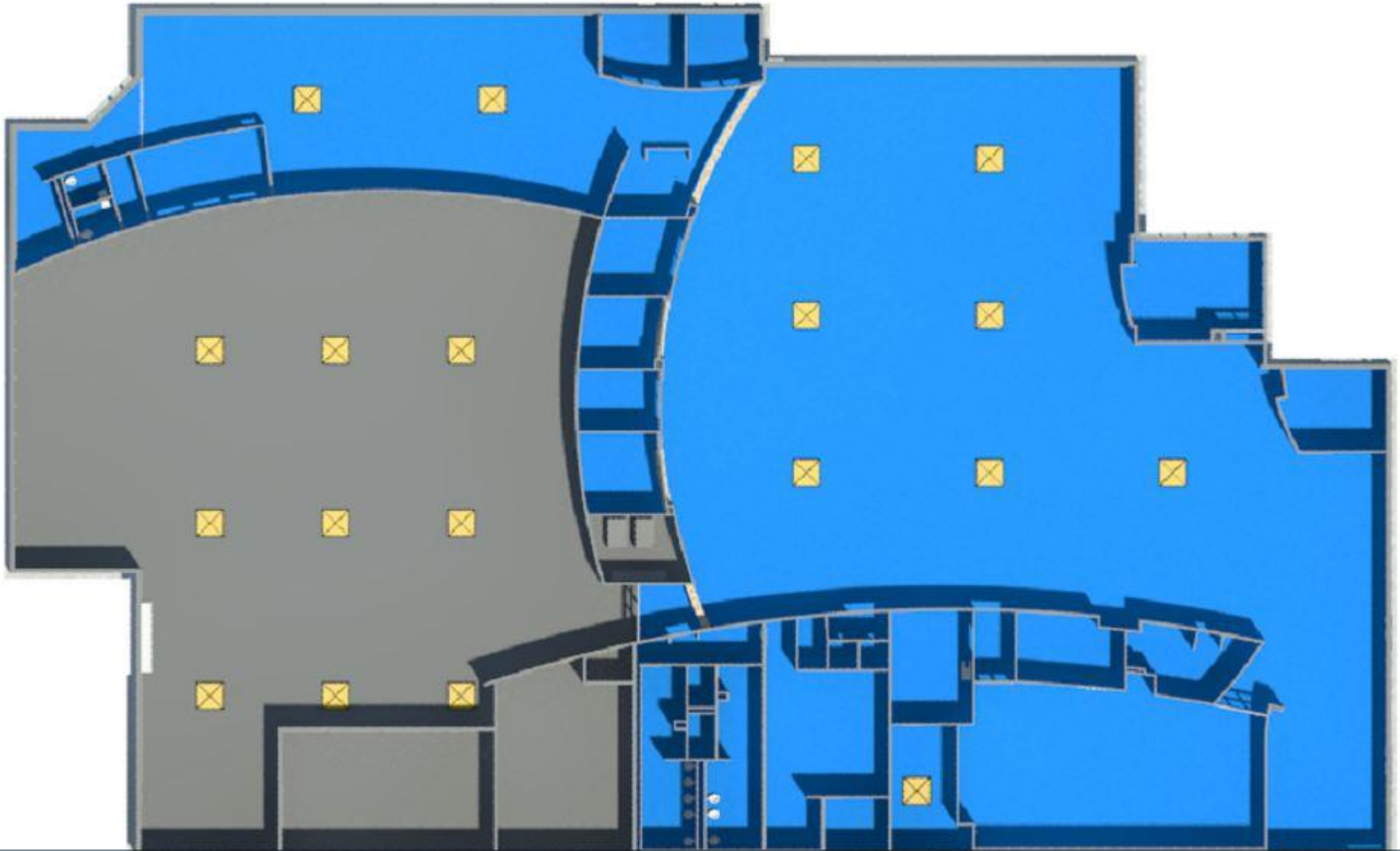
Plug strips with motion sensors at high use transient offices and cubes were installed which switches off power to electrical devices when the area is unoccupied.

A floating Kilowatt reader was provided to help educate staff on levels of usage for various office equipment being used in cubes.

Legend

	Office: 23,790 SF		Skylights: 19
	Warehouse: 13,780 SF		
	Total : 37,570 SF		

As part of our lighting assessment, we also recalibrated the 19 Solar Tracking Skylights throughout the office, maximizing the amount daylight brought into the space.





Waste Diversion


Separate large exterior debris containers were provided to allow source separating of debris into specific bins. A compost container was provided to capture all food waste from kitchen and break room areas.

All office cubes were provided with both waste and recycling bins. A retraining of employees was undertaken to emphasize our goals for recycling.

Building Performance Monitoring





 Current Electrical Load

 Prior 24 Hour Electrical Load

 Prior Year Electrical Load

 Domestic Water

 Reclaimed Water

 Natural Gas

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