



# LACH<sup>3</sup>



NEW UNITED STATES COURTHOUSE - LOS ANGELES, CA

MAY 2015

The Project achieved a major milestone this month with the “Jacking” of the building which was the release of the building load from the temporary columns around the perimeter. Prior to this “Jacking” procedure, large steel trusses were welded into place at the top of the building. With the removal of the temporary columns these steel trusses have allowed the building to go from being in compression to being in tension. The overhang of the building is hanging from the roof trusses. The action of the structure performed very closely to the computer modeling, settling into place within a ¼” of what was predicted. This made the Structural Engineer extremely happy. The photo below shows the column removal in progress.



**Removal of Temporary Column**

With the building supporting itself as intended, the loading of the perimeter structure was able to proceed and this included the start of the curtain wall assemblies. These are triangular assemblies supported from Level 2 and suspended down to form the line for the ceiling of the overhang. This installation will continue around the entire Level after which the installation will move to Level 3 and repeat until complete through the roof level. The curtain wall installation is scheduled to go into October. The photos on the next page show the outline of the floor slab edge and also the start of the curtain wall installation.



# LACH<sup>3</sup>

May 2015



**West Façade Slab Edge**



**Curtain Wall Installation at Level 2**

Another success that was achieved in May was the review and acceptance of the Courtroom Mockup by the Judge's Ad-hoc Committee on the 20th of the month. Comments were very positive and reflective of the efforts of the Design/Build Team and their Subcontractors. This success will permit the manufacturing of the millwork to proceed as scheduled for the twenty-four courtrooms in the building. Tours are scheduled in June for the other Judges and select Court's personnel to review.

This month saw work continue on the perimeter walls of the Vehicle Sallyport and the Jury Assembly area with formwork commencing for the roof structure of the Jury Assembly area. Limestone



# LACH<sup>3</sup>

May 2015

installation is continuing on the exterior west walls of the Podium at the first floor level and is preparing to expand to the east side of the building. Work in the Light Court, the Atrium that extends the full height of the building, has included setting the last of the horizontal fire shutters and installation of the “rail shoe” for the perimeter glass handrail at the elevated floors.

Masonry work has made very good progress with the construction of the holding cells nearing completion which will yield to the start of the overhead work in the area and preparation for the placement of the terrazzo flooring. The hanging of drywall and taping and sanding of the walls in the Basement have progressed well which has permitted the start of painting to commence. The Basement has the major mechanical and electrical equipment in place and steps are now being taken to start pulling of wire to connect the equipment and wall devices.

## **Design & Construction Activities Completed This Period**

- Issued of the Draft of Bulletin #14 for review and comment
- Completed welding of the roof trusses to permit release and removal of the temporary columns
- Spray-applied fireproofing completed on Level 9, the framing for underside of Level 10
- Commenced the installation of the Curtain Wall units at Level 2 and working counter-clockwise around the building
- Commenced overhead formwork for the roof structure of the Jury Assembly Area
- Installed the last of the horizontal fire shutters on the north end of Level 9
- Continued Glazed Masonry installation on Level 3 and layout for the Court floors

## **Activities for Next Period**

- Concentrate on the placement of the shear walls on the Penthouse Level to encase the roof truss structure
- Commence limestone installation on the east side of the Podium at Level 1
- Complete the supporting structure for the Cooling Towers at the Penthouse Level
- Deliver AHU's for the remaining floors
- Complete all construction in the Transformer Vault and turn-over to DWP

## **Project Milestones**

- Release of Structure from Temporary Columns – 18 May
- Started the removal of the Temporary Columns – 19 May
- Started the installation of the Curtain Wall Units – 20 May



# LACH<sup>3</sup>

May 2015

- Delivered final Fire Shutter – 22 May
- Completed installation of Final Fire Shutter on Level 9 – 26 May

## **Sustainability Features: Heat Island Effect**

The Urban Heat Island Effect is a phenomenon in densely developed areas where impervious surfaces such as rooftops, hardscape, concrete and brick absorb solar radiation. The solar radiation is retained and released throughout the day and night, causing elevated temperatures, especially in summer months. The Heat Island Effect leads to poorer air quality, human health concerns as well as increases the energy demand for buildings and systems. In order to mitigate these effects as well as meet LEED Credits SSc7.1 and SSc7.2, "Heat Island Effect - Roof & Non-Roof" the project utilizes materials with high Solar Reflective Indexes (SRI) on all horizontal surfaces.

The roofs of the Cafeteria and Jury Assembly which will be constructed in the coming months are light in color and therefore have a high reflectivity. Portions of these roofs are planted with drought tolerant plants which will help reduce CO2 and improve air quality as well as insulate the space below, thereby reducing cooling loads. The roof of the "cube" is light in color and covered with a solar array panels, which contributes to this and other LEED credits. The hardscape surrounding the building qualifies for the credit, having an SRI of at least 29. Vast asphalt parking lots are a large contributor to the heat island effect; 100% of parking being underground on this project eliminates this concern.

The LA Federal Courthouse project is taking several steps to mitigate the heat island effect, thus improving the comfort of the building occupants as well as the surrounding LA City in addition to reducing cooling demands for the project.



# LACH<sup>3</sup>

May 2015

## Progress Photos



**Courtroom Mockup**



**Jury Assembly Roof Formwork**



# LACH<sup>3</sup>

May 2015



**Glazed Masonry Installation – L3**



**Piping Insulation in Basement**