Unconventional Construction with DSI: Parking Structure serves as the Civic Center's new Portal

The city of Santa Monica located west of downtown Los Angeles is one of the most popular residential areas in the greater Los Angeles area. The city has approximately 94,000 inhabitants and is known for its shortage of parking. Parking spaces were especially scarce for visitors to the Santa Monica Civic Center.

Consequently, a new 900 car parking structure facility was built in 2006 to serve the parking needs of the Santa Monica Court House, Police Station, City Hall and Civic Auditorium. The plans envisioned an exceptional design: instead of an ordinary functional parking structure, a lively building was to serve as the Civic Center's portal.

Colorful shades at the facade of the parking structure protect the interior from direct sunlight, yet still allow the wind to pass through the structure to keep the temperature down. Solar panels were also located at the top of the structure to power the lighting in the garage and the 14 electric charging stations for zero emission electric vehicles.

Owner City of Santa Monica, CA, USA +++ **Architect** International Parking Design, Sherman Oaks,CA,USA +++ **Engineering** Frame Design Group, Sherman Oaks, CA, USA +++ **General Contractor** ARB Incorporated, Lake Forest, CA, USA +++ **Subcontractor** Pacific Coast Steel, Santa Fe Springs, CA, USA
DSI Unit DSI USA, BU Monostrand, Long Beach, CA, USA
DSI Scope Supply of DYWIDAG Monostrand Tendons including accessories as well as supplying and installing 11 strand galvanized barrier cables and structural steel components

The building's design, the materials that were used and the construction practices preserved natural resources and reduced waste. That is why the US Green Building Council (USGBC) recognized the structure as a "Green Building".

The exceptionally light structure of the building was made possible by incorporating the DYWIDAG Monostrand Tendon Post- Tensioning System. The six level parking structure was built using a combination of post-tensioned beams and slabs. The beams were poured monolithically with the columns that support the structure. DYWIDAG Monostrand Tendons were used in the beams and slabs for building the 25,270m² beam and slab system.

In addition, DSI USA supplied and installed runs of 11 strand galvanized barrier cable for the 6 levels of ramps from their local production facility in Long Beach. The barrier cables were attached to the exterior of the columns with galvanized structural steel angles with cap angles at the ends of each run. The galvanized cables were also attached at each intermediate column with structural steel channels. Galvanized spacer bars were placed between each column in order to maintain the proper clearance between cables.

DSI is pleased to have contributed to this special project for the city of Santa Monica.

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