

POST-TENSIONING INSTITUTE ANNOUNCES WINNERS OF 2015 PTI PROJECT AWARDS

ABOUT THE AWARDS

The Post-Tensioning Institute (PTI) announced 11 winners for the 2015 PTI Project Awards, who were honored during the PTI Awards Presentation at the 2015 PTI Convention, April 26-28, 2015, in Houston, TX.

The awards recognize excellence in post-tensioning applications. Any structure completed or rehabilitated in the past 7 years that uses post-tensioning as a structural component was eligible. Entries were submitted by owners, architects, engineers, contractors, and post-tensioning suppliers. Awardees were selected by a jury of industry professionals and were judged based on creativity, innovation, ingenuity, cost-effectiveness, functionality, constructibility, and aesthetics.

The highest honor, "Project of the Year," was awarded to the **San Francisco-Oakland Bay Bridge New East Span Skyway**. This award is given to a project that demonstrates excellence in post-tensioning applications and stands out above all other entries. The project was submitted by T.Y. Lin International.

The remaining winners were selected from six categories, with an 'Award of Excellence' given in each category, and an 'Award of Merit' presented to other projects deserving recognition. The categories and winners include:

- Bridges
 - Award of Excellence: **West 7th Street Bridge** in Fort Worth, TX, submitted by the Texas Department of Transportation
- Buildings
 - Award of Excellence: **Parkland Replacement Hospital** in Dallas, TX, submitted by Datum Engineers

- Award of Merit: **Dumptop Residence** in Dallas, TX, submitted by Datum Engineers
- Industrial/Special Applications
 - Award of Excellence: **Glacier Skywalk** in Jasper National Park, AB, Canada, submitted by Dywidag-Systems International, Canada
 - Award of Merit: **Twin Vehicular Jacked Box Tunnels** in Lynchburg, VA, submitted by Dywidag-Systems International, USA
- Parking Structures
 - Award of Excellence: **Tapiola Central Parking Facility** in Espoo, Finland, submitted by Sweco Structures Finland
- Repair, Rehabilitation & Strengthening
 - Award of Excellence: **SBR Tank #1 Repairs** in Mount Carmel, PA, submitted by Concrete Protection & Restoration, Inc.
 - Award of Merit: **Dover Dam Safety Assurance Phase 1 & 2** in Dover, OH, submitted by Brayman Construction Company
- Slab-on-Ground
 - Award of Excellence: **Sky View Parc Tennis Facility** in Flushing, NY, submitted by Classic Turf Company, LLC
 - Award of Merit: **New Canaan High School Tennis Courts** in New Canaan, CT, submitted by R.S. Site & Sports

The PTI Project Awards program runs every 2 years. The next round will be held in 2017. To see examples of past winners, visit www.post-tensioning.org. If interested in submitting a project for the next awards program, details and an application kit will be available in 2016.

2015 AWARD OF EXCELLENCE: TAPIOLA CENTRAL PARKING FACILITY

USE AND ADVANTAGE OF POST-TENSIONING IN STRUCTURE

Post-tensioning (PT) and cast-in-place methods were selected because of the nature of the underground cave construction project (Fig. 1). Easily adapted architecture to uneven rock surface, watertight floor structure, high-quality finish, and cost-effectiveness were driving this solution forward. PT was used in beam slab structures. Slab thickness was typically 7.9 in. (200 mm) for 27.2 ft (8.3 m) spans with loading of 115 lb/ft² (5.5 kN/m²). Beam height was typically 35 in. (900 mm) and width 23.6 in. (600 mm) for span length of 47.6 ft (14.5 m) (Fig. 2 and 3).

PROJECT SUMMARY

This parking cave project was the start for renewal Tapiola area in the city of Espoo, Finland. In the overall

project, all parking facilities will be relocated underground and the released space on ground level will be reserved for pedestrian traffic and other new activities (Fig. 4). This parking cave's first phase will have 1669 parking spaces, and another smaller underground car park in Tapiola related to this one has 337 parking spaces. Together, they have space for 2006 cars and therefore form Finland's largest underground cave park. There is also space for future expansion. There will be also charging points for electrical cars in every floor. This parking cave will provide parking space not only for people using the commercial services in Tapiola, but it will also work as connecting parking for the new metro line (from 8/2016). A large amount of the commercial buildings in Tapiola centrum will be demolished and rebuilt in the next 15 years.

For more information about renewal of Tapiola centre, visit, www.tapiolankeskus.fi/en/Welcome-to-Tapiola.

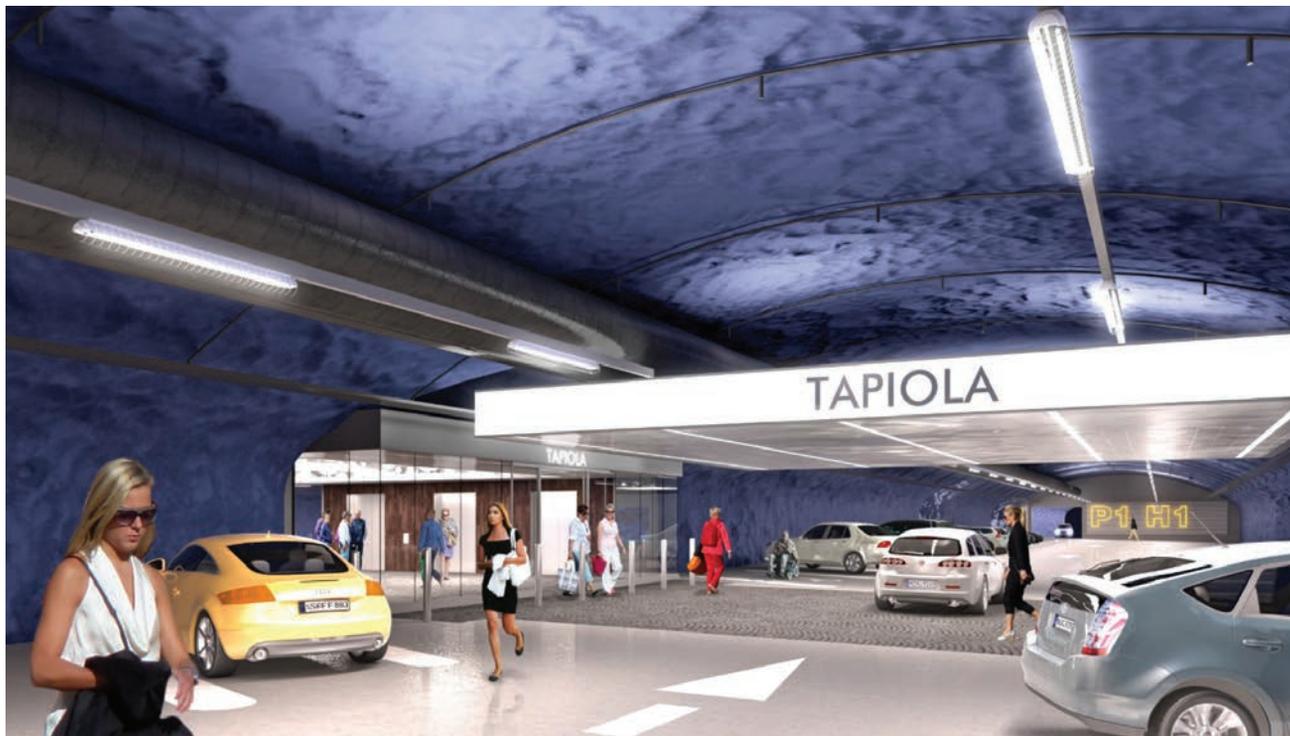


Fig. 1—Rendering of underground cave parking.



Fig. 2—Typical parking deck support structure.

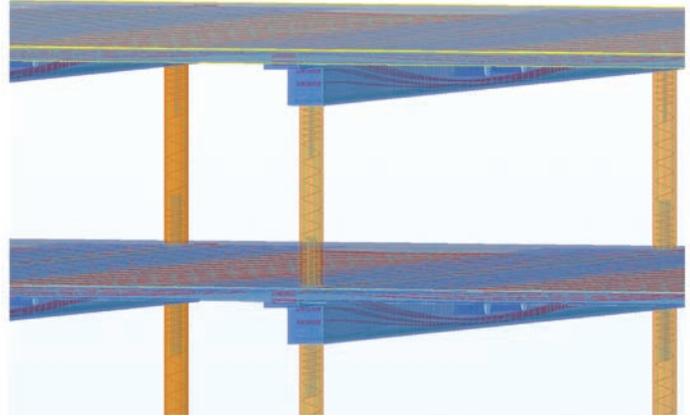


Fig. 3—PT layout for typical beam and slab.

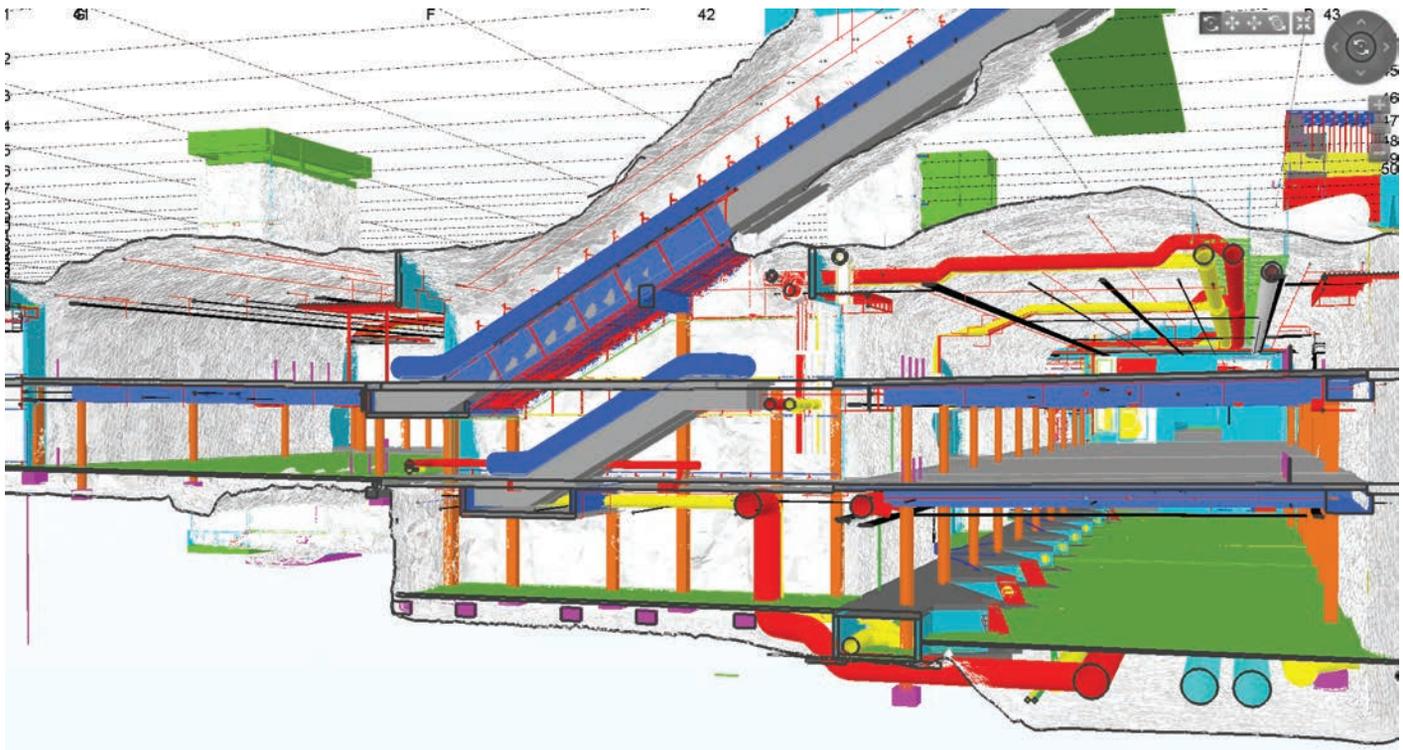


Fig. 3—Parking garage section.

Location: Espoo, Finland
Submitted by: Sweco Structures Finland
Owner: Apiolan Keskuspysäköinti Oy
Architect: Arkkitehtitoimisto Hkp Oy
Engineer: Sweco Structures Finland
Contractor: SRV Rakennus Oy
PT Supplier: Lemminkäinen Infra Oy (MK4 Unbonded System)

Jury Comments:

- It has it all—the innovation, the aesthetics, the constructibility, and functionality
- Impressive that the project used PT underground
- Intriguing that concrete was poured up against the rock
- Great use of space