

Project summary

Organization:
Mortenson | McCarthy Joint Venture

Solution:
Construction

Location:
Chula Vista, California, United States

Project playbook:
SYNCHRO

Mortenson and McCarthy deliver landmark luxury resort for Chula Vista's bayfront area

Leveraging SYNCHRO™ for advanced 4D construction planning saved six weeks, completing the West Coast's largest hotel project

Project objectives

The Gaylord Pacific Hotel and Convention Center is the largest hotel project ever built on the West Coast, expected to generate a USD 500 million annual economic boost and create over 4,000 permanent jobs.

Mortenson and McCarthy partnered to deliver the massive project on a 36-month construction timeline.

Leveraging SYNCHRO, they developed a proactive, collaborative scheduling approach and robust 4D model.

ROI

Mandating the use of SYNCHRO across the entire project enabled over 100 team members to plan and coordinate with precision, integrating over 36,000 schedule activities.

Leveraging Bentley's 4D construction software, Mortenson and McCarthy delivered the project six weeks ahead of schedule, completing it in 34 months instead of the planned 36.

As the largest hotel ever built on the West Coast, the team expects it to generate a USD 500 million annual economic boost and create over 4,000 jobs.

Putting Chula Vista on the map

When the city of Chula Vista and the Port of San Diego set out to transform Chula Vista's bayfront area into a world-class destination and economic engine for the region, they envisioned more than a hotel—they envisioned a legacy. Sitting on 36 acres of waterfront property, the 2-million-square-foot Gaylord Pacific Resort and Convention Center is the cornerstone of that vision, estimated to provide a USD 500 million boost to the local economy. Mortenson and McCarthy (M&M) partnered to deliver the massive, resort-style hotel and convention center, serving as the centerpiece and catalyst for the Chula Vista Bayfront Master Plan. “The Gaylord Pacific Resort & Convention Center will put Chula Vista on the map and help it become a destination point for everyone,” said Andrew Gibson, senior integrated construction manager at Mortenson.

At the heart of this effort is a highly motivated team of building professionals committed to a jobsite culture that values safety, teamwork, innovation, and meticulous planning—crucial to meeting the 36-month delivery schedule for this mega hospitality initiative. The USD 1.3 billion resort features 1,600 premium guest rooms, a 4.25-acre outdoor water park with wave pool and lazy river, unobstructed ocean views, 12 culinary venues, and more than 477,000 square feet of meeting and event space. Designed and built on reclaimed property, protecting wildlife and natural sanctuaries, with over 80% of the workforce sourced locally,

and estimated to generate 4,000 permanent jobs, the project demonstrates its commitment to environmental and social sustainability. “This project will be a beacon for tourism in Chula Vista for decades to come,” said Andrew Corson, project executive for M&M.

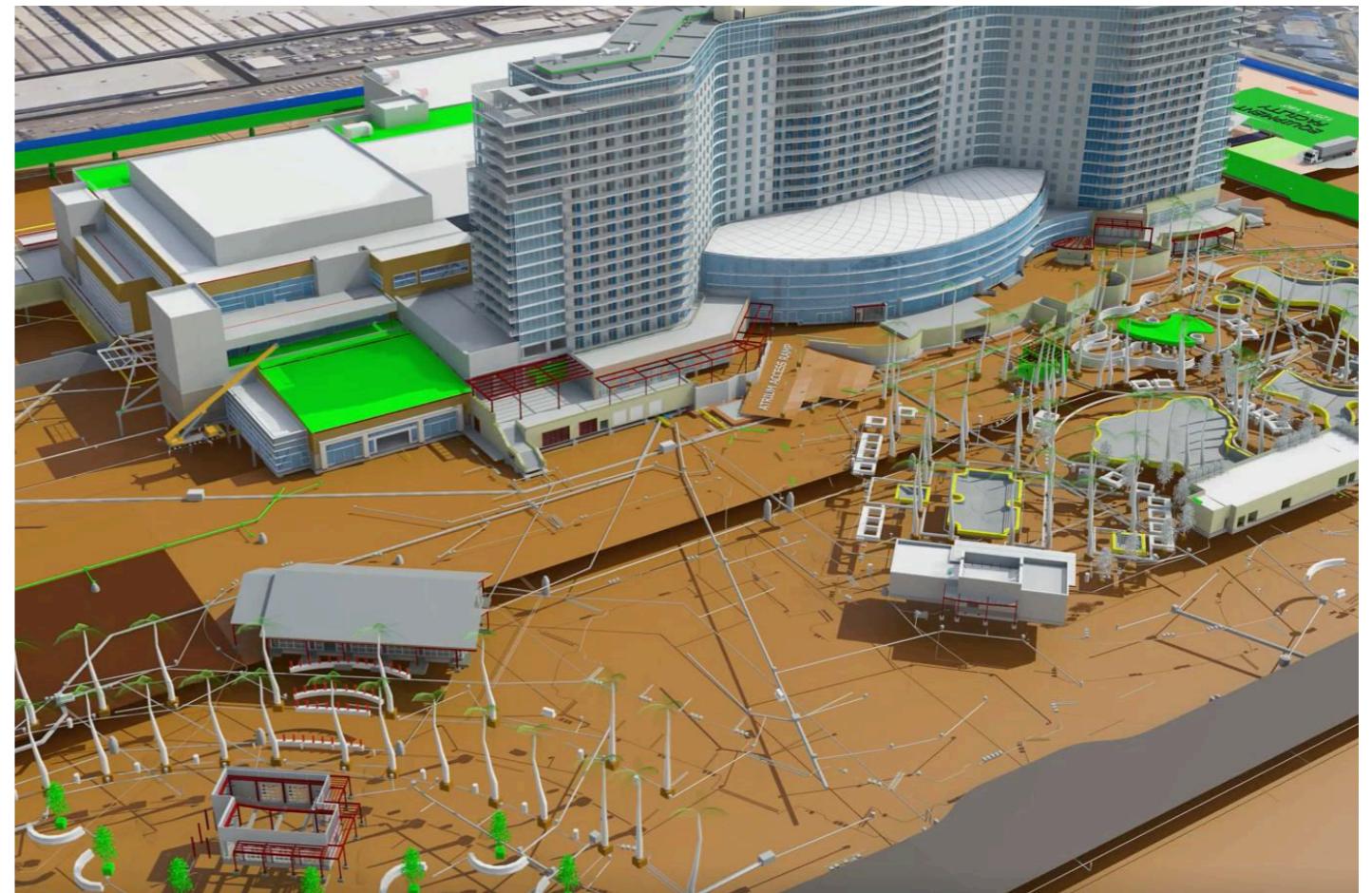
Tricky sequencing, complex logistics, early turnover

Located on brownfield land amid industrial areas, demanding sensitive, eco-friendly design and construction solutions to reduce the development's footprint, the project presented planning, coordination, and logistics challenges to meet the tight delivery timeline. “Planning the construction sequence of both the hotel tower and the convention center was tricky,” explained Gibson. M&M needed to coordinate two distinct structures—a concrete hotel tower and a steel convention center—linked by an expansion joint. It was critical that the team create a detailed schedule and robust 4D model to communicate and visualize the sheer size and integration of the building structures, so that craft partners could better understand the resources and plans required within the project footprint.

“The other challenge was being able to turn over the first three floors four months prior to project completion in order to allow the hotel staff and team to start honing operations so processes were running smoothly by the time the hotel opened,” emphasized Gibson. This requirement introduced additional



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The best use of SYNCHRO 4D and, as a result, one of the best planned, and smoothest running projects I've been on.

— David Mortenson, Chairman, Mortenson

sequencing and site coordination difficulties. M&M needed to determine how to provide safe access to the customer while construction was ongoing on the upper floors and convention center.

Managing a project of this scale—while meeting the early turnover requirement and maintaining on-site safety—required deep involvement from all teams and clear visibility into how each trade's work impacted others. M&M was challenged to think differently. They knew that for a project of this complexity, an advanced digital construction solution would be imperative for a successful outcome.

Leveraging SYNCHRO for 4D planning, collaboration, and safety

M&M selected SYNCHRO to manage their planning and execution strategy, developing a proactive, collaborative scheduling approach and robust 4D model to visualize construction sequencing, coordinate between the concrete tower and steel convention center, and communicate logistics to craft partners. They made SYNCHRO mandatory across all project teams and provided training to ensure consistent, effective use. This fostered deeper engagement and improved understanding of how each trade impacted others. “This proved

to really create a team mentality, as we were able to showcase the work in 4D to confirm or poke holes in the logic and then work together to figure out the best possible solution for both the trade and the project as a whole,” explained Gibson.

The team added to the overall 4D model by developing a specific model for the interior space, including framing and mechanical and electrical equipment. This provided visual insight for craft workers to understand their working space and facilitated planning of the interior logistics—including sequencing of works and material staging—to know when, and if it was conducive for, multiple craft workers to be working in the same area. “After participating in the pull plans and utilizing the 4D [model], it was crystal clear what the expectations were and what they agreed to,” stated Gibson. Together, the models supported hundreds of meetings, including more than 800 plan-of-the-day sessions, to guide decisions and track progress.

Finally, with an unwavering dedication to avoiding workplace danger, M&M implemented a variety of safety initiatives—including utilizing SYNCHRO to model scaffolding and fall protection systems to identify and mitigate risks early. “We also had a breakthrough in getting our safety professionals involved with the 4D model,” said Gibson. This enabled the entire team and craft workers to visualize and collaborate virtually to ensure all works were safely coordinated.

Setting a new benchmark in digital construction delivery

Over the course of the project, more than 32 companies and 200 people were introduced to and benefited from SYNCHRO. The 4D models

facilitated collaboration among team members, reducing misunderstandings and conflicts, which promoted a unified and cohesive approach to construction. Working in Bentley's 4D digital construction environment improved planning and coordination by linking 32 million geometry pieces to over 36,000 activities. M&M's entire team, and all outside parties and stakeholders, were able to realistically and tangibly visualize the construction process. This streamlined workflows and improved risk management, enabling the team to deliver the large-scale resort in 34 months, two months ahead of the 36-month budgeted timeline. “We were not only able to hit a majority of our scheduled activity dates, but, in a lot of cases, were able to speed up the work and beat the durations,” emphasized Gibson.

“Spending the time on taking the overall 4D and interior 4D to such levels of detail proved to be a winning combination for our team,” he added. By doing monthly schedule updates, the team was able to track and validate planned-vs-actual progress, demonstrating not only the efficiency and productivity gains of 4D planning in SYNCHRO, but also award-winning safety performance on a project with nearly 4 million hours logged and over 7,000 craft workers involved. “We beat the schedule on enclosure by one floor, concrete decks by two floors, prefab panel install by two floors, and safety net and scaffolding logistics were planned and executed two floors ahead,” concluded Gibson.

The software is now standard practice for M&M's sports operating group and was critical to completing the west coast's largest hotel project six weeks early, setting a new benchmark for digital construction delivery and better coordination and visibility within large project teams.

Find out more at Bentley.com

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