



# Oak Grove: Fast-paced Real-Time Design for \$200M, 110 Acre Churchill Downs Redevelopment



## SERVICES

Mechanical/HVAC,  
Plumbing, Fire Protection,  
Fire Alarm, Electrical,  
Data

## PROJECT SNAPSHOT

Concord Engineering was the Engineer of Record and provided Mechanical, Electrical, and Plumbing services for a fast-paced, large redevelopment project. Our intuitive design enabled smooth facility operations and qualified for energy incentives.

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CONCORD-  
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## PROJECT BACKGROUND

Oak Grove Racing, Gaming & Hotel is a Churchill Downs, Inc. property just off I-24 in Oak Grove, KY, just an hour's drive north of Nashville, TN. Concord was the Engineer of Record and provided Mechanical, Electrical, Plumbing, Fire Protection and Teledata systems' design services for the 100-acre development. The main facility includes over 100,000 sq. ft. of gaming, 1,300 gaming machines, a 128-room hotel, four restaurants, and multiple high-end bars. The site includes a ½ mile horse track including harness racing, an Equestrian Center, and an outdoor music amphitheater.

## THE CHALLENGE

- An aggressive 18-month design and construction schedule required fast-paced, real-time design efforts and frequent direct communication with a variety of stakeholders.
- Multiple consecutive design deadlines with an initial priority focus on opening the track in time for the 2020 racing season.
- Meeting the deadline required design and construction to be performed in parallel.
- The diverse structures and building programs made for a complex design.

## THE CONCORD DIFFERENCE

- ✓ **Industry leaders in MEP design**
- ✓ **Extensive experience in gaming and high-end interiors**
- ✓ **Able to meet requirements for energy incentives**
- ✓ **Communicate directly with sub-contractors and vendors to expedite decision making and real-time problem-solving**
- ✓ **Intuitive design for ease of operations and ongoing maintenance**

## THE SOLUTION

- The facility was completed on time with an intuitive MEP design that allowed facility operations to acclimate and learn the new system quickly.
- We worked closely with the design and construction teams to identify and solve problems in real-time to maintain the construction schedule.
- The mechanical systems design included high-performance rooftop equipment with energy recovery ventilation, free-cooling economizers, variable air volume controls, and high-performance data room cooling.
- The temperature control system is web-based with a graphics interface, allowing for real-time data retrieval.
- Hotel HVAC utilizes water-cooled VRF systems in guest rooms for increased energy efficiency.