

victoria interval  
**MTOB**  
pennsylvania

[ multi-tenant  
office building ]

ae senior thesis  
[struc]

primary project team

## general building data

**occupancy + function** | multi-tenant office building  
**construction dates** | July 2012 to July 2013  
**approximate size** | 152,000 square feet  
**number of stories** | 5 (all above grade)  
**location + site** | Pennsylvania

**owner** | a real estate developer  
**architect** | Kernick Architecture, LLC  
**general contractor** | Rycon Construction  
**site+civil engineer** | The Gateway Engineers  
**structural engineer** | Atlantic Engineering Services

## MEP systems

The MEP systems for MTOB are design-build. The design-build process will save time and money by designing the smaller pieces of construction around what is already there. This way, the smaller duct feeds and sprinkler lines will be able to easily avoid obstacles. Specifics of the MEP systems are listed below.

- 4 | packaged direct expansion (DX) roof top units
- 11 | secondary conduits from transformer
- 22 | feeder conduits from MSB
- 11 | panels from MSB
- 13 | luminaire types

## structure

**deck** | 2" 20 gauge  
**floor system** | 3 ½" reinforced concrete  
**lateral system** | eccentrically braced frames  
**framing system** | W-shape columns and beams  
**foundation** | drilled piers (caissons) and grade beams

The symmetrical building shape allows for a simple structure, with even and regular bays. Composite floor/beam system maximizes efficiency of the member sizes.