



north (public) end with light rail train



north end with trolley



north end



south (service) end with light rail train



north end interior (Phase 2)



north end interior (Phase 3)

CHARLOTTE CONVENTION CENTER RENOVATIONS FOR LIGHT RAIL TRANSIT

Charlotte, NC

When the Charlotte Convention Center was originally designed, the idea of a future trolley and light rail transit (LRT) system was only an uncertain proposition. Completed in 1995, the building was located unavoidably in the proposed path of the rails, where the historic trolley had previously run. A separate isolated structure for a future train had been provided, but little else was known. The 2001 renovations were to make the required modifications to accommodate the more certain vintage trolley line, and later a new light rail transit system. The renovations took place over three phases and were completed in 2006.

Phase 1

Construction of a vibration isolation slab over the existing structure along the LRT Corridor, employing a system of 465 springs to dampen vibrations, and laying of tracks.

Phase 2

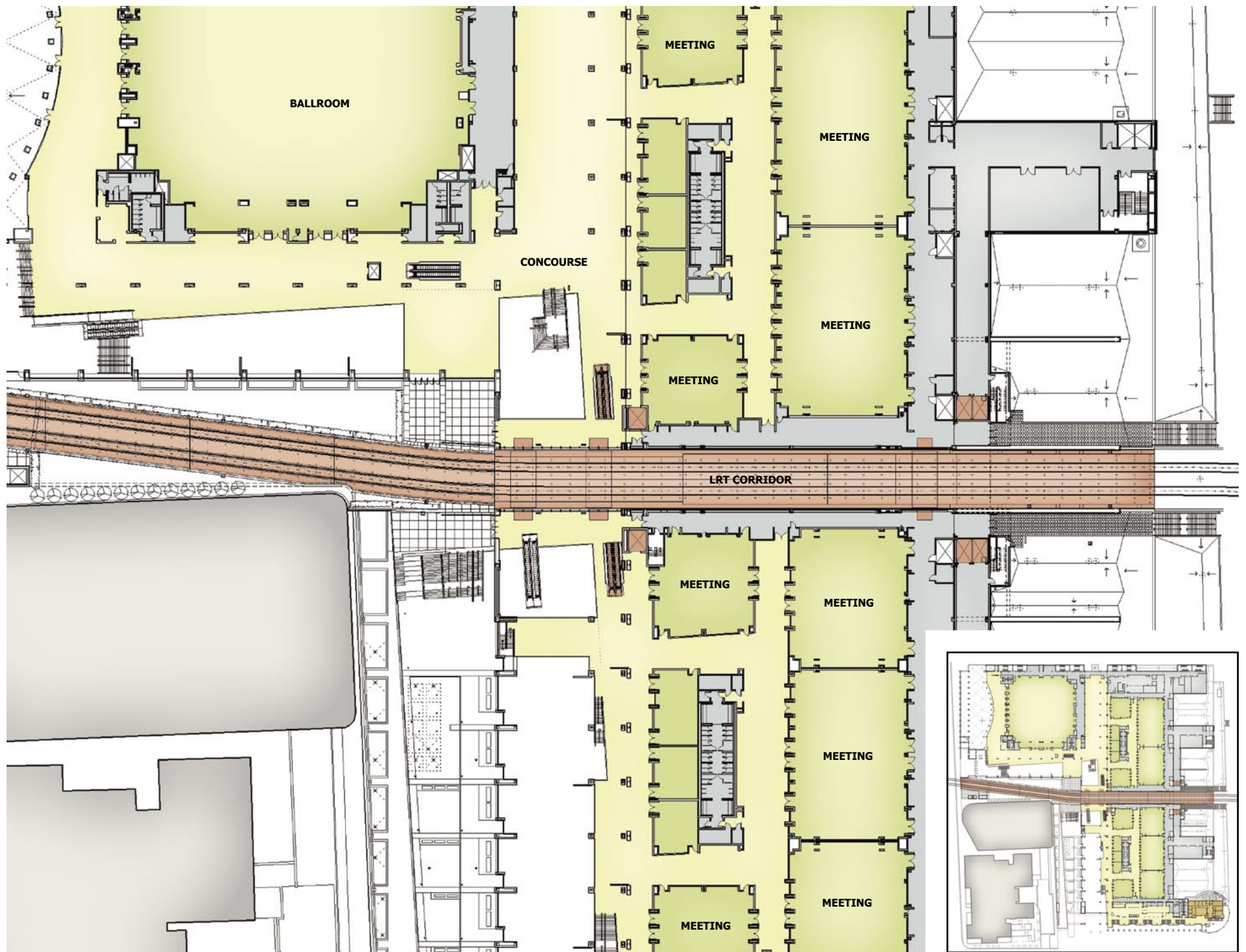
Construction of a glass enclosure with acoustical glazing through the main public concourse (north end), and an enclosure for back-of-house service crossing (south end). Pedestrian access is across the LRT Corridor, controlled with double doors at crossing points, and four roll-down doors at points along the corridor and at each building end, segregating pedestrians from the trains. Smoke evacuation is installed.

Phase 3

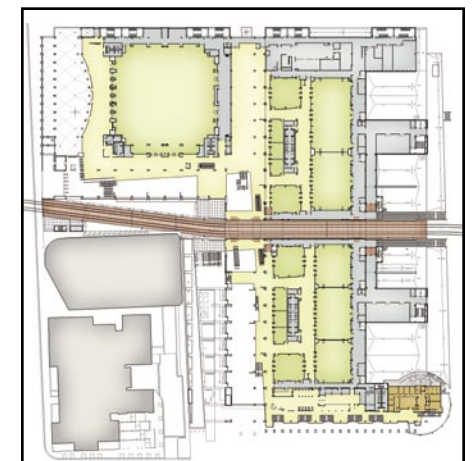
Construction of escalators (north end) to carry pedestrians down and under the elevated LRT Corridor, and service elevators (south end) to carry personnel and service carts up and over via a new elevated crossing. The system of doors is removed, allowing unimpeded train access.

34,000 SF (renovation)
16,000 SF (addition)
\$20 M

March 2006
The FWA Group

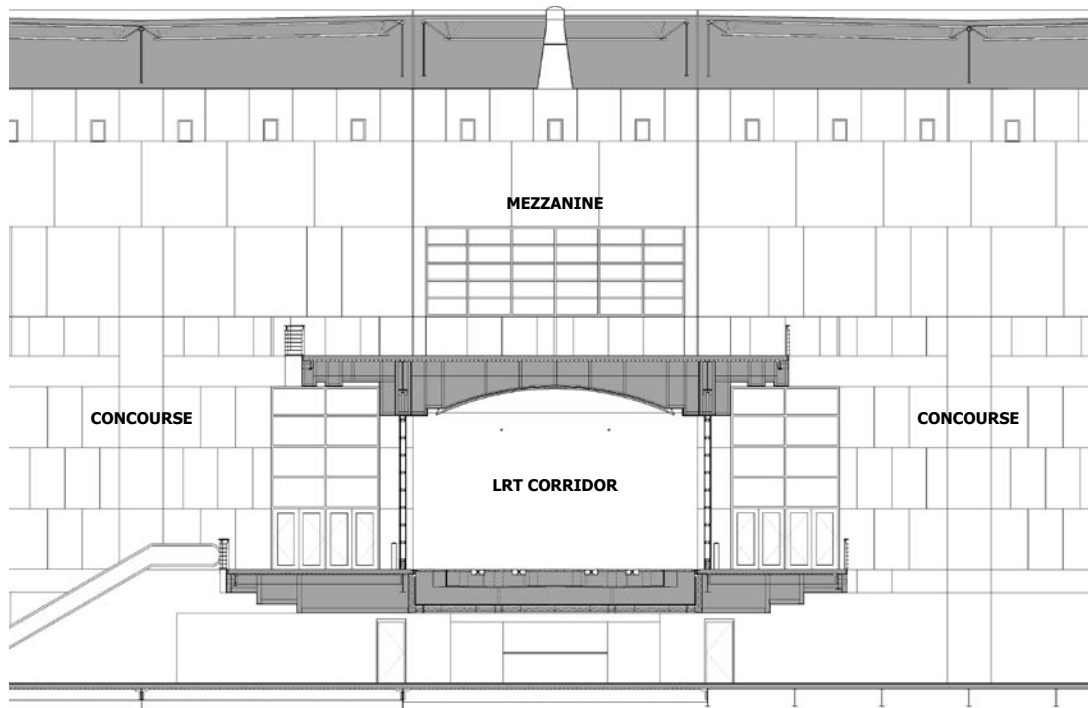


[18] plan at LRT Corridor level

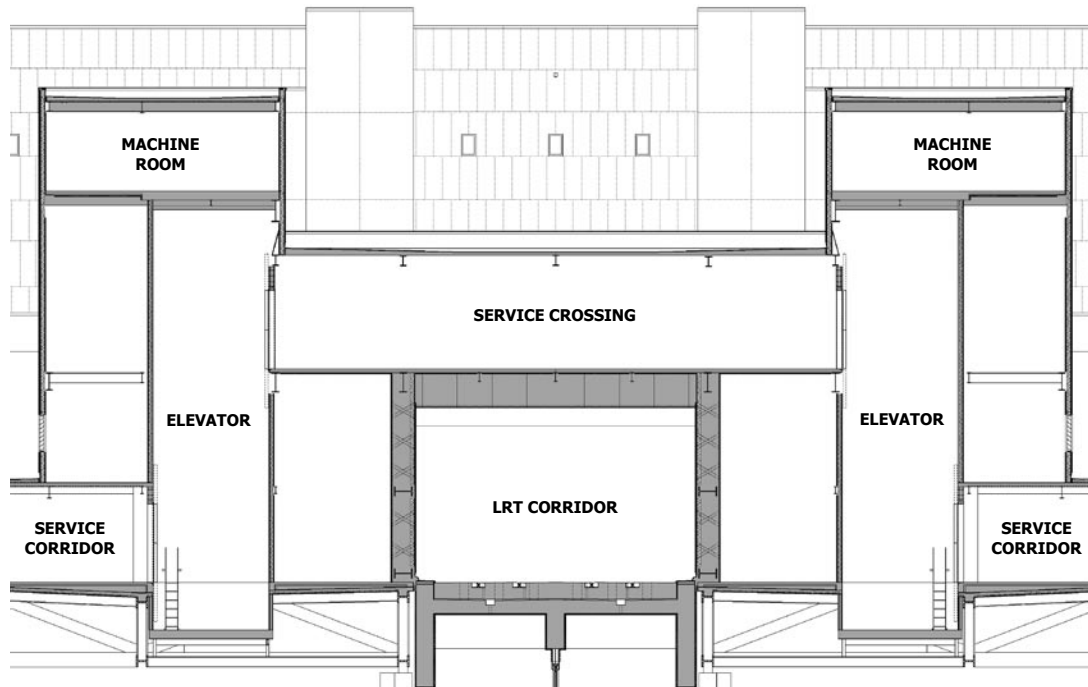


key plan

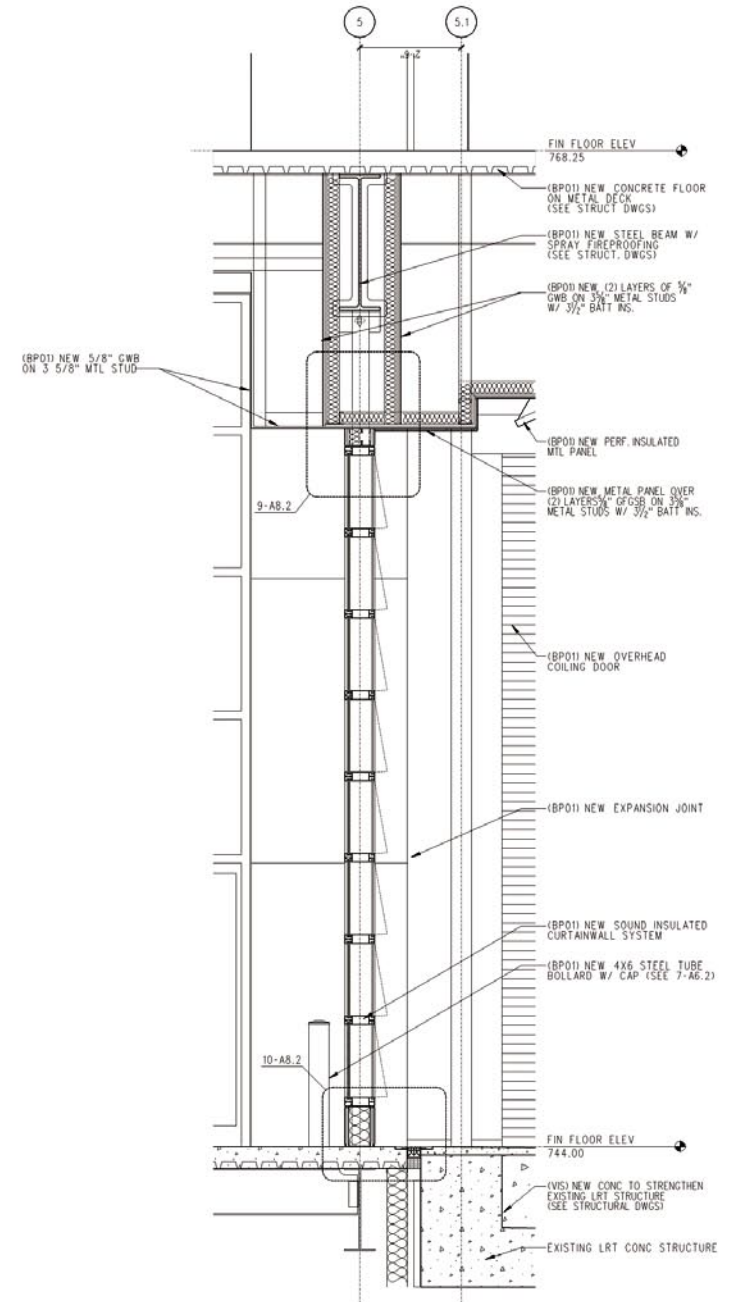




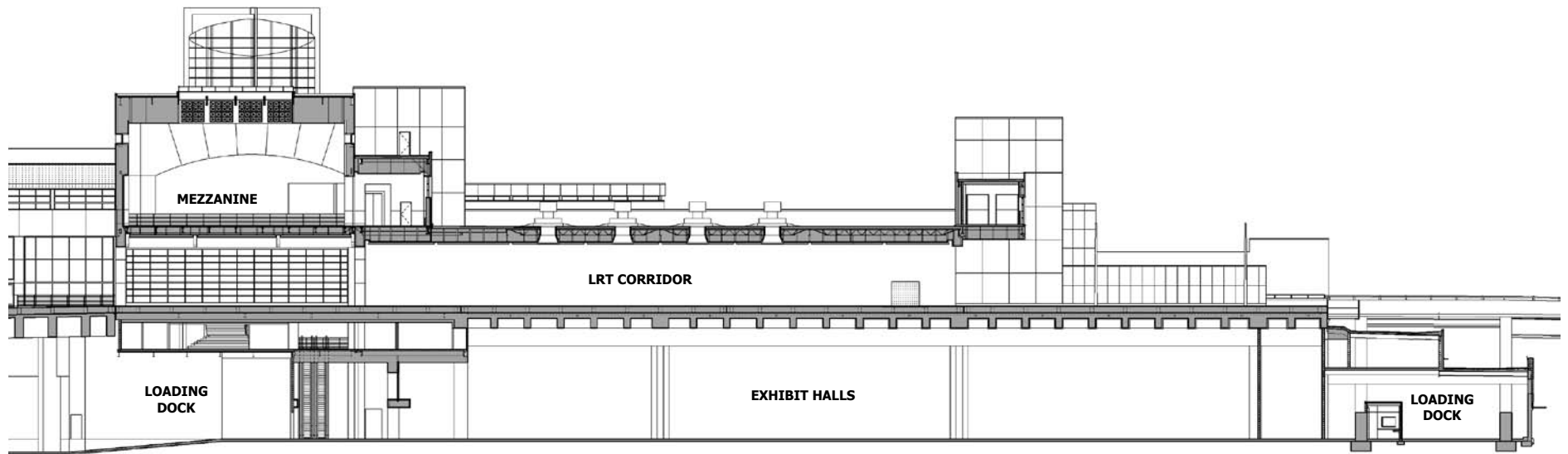
building section at north (public) end



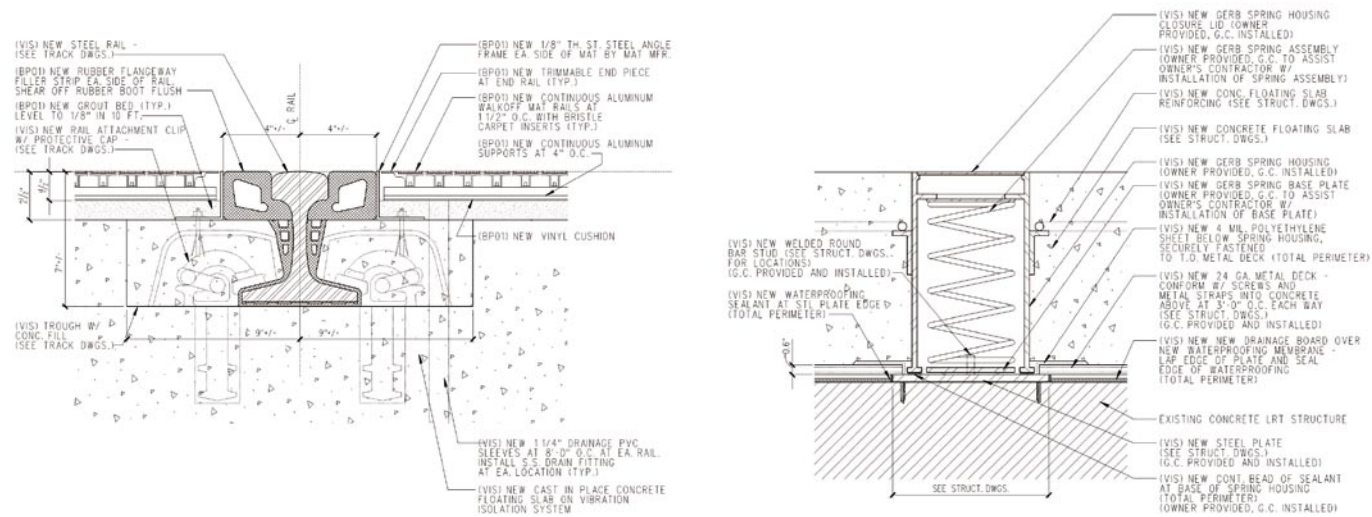
[20] building section at south (service) end



wall section at north (public) end



longitudinal building section



rail detail

vibration isolation spring detail