

Residential

**Carpenter
Wright
Engineers**



Structural Consultants



Alexan North Hills
Raleigh, North Carolina

*Retail &
Condominiums*

Mixed-Use Facility

With a bottom floor housing retail businesses and condominium-quality apartments above, this mid-rise structure can be found in one of Raleigh's most popular new retail centers. Over 396,000 square feet of mixed-use space is surrounded by lush courtyards and landscaping, providing shoppers and residents with a sense of luxury. The redeveloped North Hills area is located near downtown Raleigh.

Three levels of wood framed residential units are supported on an elevated 8" thick cast-in-place concrete two way post-tensioned support / podium slab, which forms the ceiling of the retail units. Lateral forces from wind and seismic loadings to the residential framing are carried through wood clad shear walls to the surface of the supporting concrete system and then redistributed to reinforced concrete shear walls. This combined (wood/concrete) framed building surrounds and disguises a 5 story, 170,000 square foot, parking garage. The parking garage is a cast-in-place and post-tensioned one way slab and beam framing system supported on concrete columns and conventional foundation.

Architect: *The Preston Partnership, PLLC*

CWE Design Offices:

**Nashville
Knoxville**