

Cambridge Crossing Project Profile

G2 Consulting Group, LLC was retained by a development company to provide Construction Engineering Services for a large commercial development. The site included construction of a “big box” department store with an attached retail structure, three separate retail buildings, future industrial buildings, associated parking and drive areas, and a retention pond.



A substantial amount of earthwork was performed within the building, pavement, and retention pond area. A G2 field technician observed subgrade preparation and engineered fill placement. Representative samples of the fill material were obtained and tested within our laboratory to determine grain size distribution, maximum dry density, and optimum moisture content for use in compaction control. A nuclear moisture-density gauge was used to verify compliance of fill materials with compaction specifications. The retention pond was constructed under specific guidelines due its use by the adjacent airport.

Field tests and observations documenting the building foundations, bearing soils, and reinforcing steel placement were performed. During cast-in-place concrete placement operations, appropriate field tests were performed including temperature, slump, air content, unit weight, yield, molding compression cylinders, and obser-

vation of concrete finishing and curing. Additionally, laboratory testing to determine compressive strength of the concrete was performed.

During bituminous paving operations of the parking and access drive areas, G2 observed the surface preparation, asphalt placement and compaction operations, evaluated asphalt delivered to the site, observed layer thickness, and verified density of the finished pavements. Upon completion of paving operations, a sampling and laboratory testing program was implemented which involved extractions, sieve and crushed particle analysis, and determination of the Maximum Marshall Density of placed asphalt. This work was performed in accordance with requirements of the national retail store constructed at the site.

On-site steel inspections were performed during steel erection for the structures. Inspection included structural steel, bolted connections, and welding of metal decking. Additionally, during site masonry construction, sampling of grout and block for compliance testing was performed.