Showcase Cinemas Project Profile

Geotechnical Investigation

G2 Consulting Group, LLC performed a geotechnical investigation and provided recommendations for the construction of a new 104,000 square feet, 20 theater Showcase Cinemas in Springdale, Ohio. The information obtained in the investigation was used to determine soil strength parameters pertinent to foundation design, total site development, and pavement recommendations.

The geotechnical investigation consisted of drilling 33 soil borings; 15 within the limits of the proposed building, 16 within the existing and proposed parking areas, and 2 within the limits of the proposed detention pond.

At completion of drilling operations, G2 performed soil classification and laboratory testing to determine natural moisture content, unconfined compressive strength, dry density, Atterberg limits, and organic content. Our field and laboratory investigation indicated varying layers of topsoil and silty and sandy clay fill overlying native silty and sandy clay soils which extended to the explored depths of our borings. Encountered groundwater levels varied across the site from 3 feet to 13 feet.

Based on information obtained in the soils investigation along with laboratory testing, we recommended the proposed building be supported on conventional strip and spread footings bearing on the native silty and sandy clay. Additionally, we recommended pavement cross-sections for the parking, entrance, and drive areas using AASHTO flexible pavement analysis. We prepared an engineering report summarizing our findings and presenting our conclusions and recommendations about the subsoils and groundwater conditions, recommended foundations, allowable soil bearing pressures, pavement cross-sections, and estimates of settlement and other subsurface conditions which impact design.

Quality Control

G2 was retained by the general contractor to perform quality control/quality assurance (QC/QA) testing during the duration of the Showcase Cinemas construction project. G2 observed subgrade preparation for building floor slabs; backfill of utility trenches, pavement fill areas, and building subgrade; foundation excavation and construction; concrete placement for foundations, curb and gutter, sidewalks, and floor slabs; pavement construction including subgrade preparation, aggregate base, leveling course, and wearing course installation; masonry wall construction; steel erection including verification of welded and bolted connections; and fireproofing.

During concrete placement operations, G2 obtained samples of the fresh concrete and tested for slump, entrained air content, unit weight, concrete temperature, and molded compressive strength test cylinders for laboratory moist curing and subsequent testing. G2 also obtained masonry block prisms for individual wall sections throughout the project. Additionally, samples of fresh mortar were obtained and cubes molded for compressive strength testing.

Finally, G2 prepared and submitted daily field reports along with associated laboratory tests documenting the construction activities at the time of construction.