

Mary Washington Hospital ASC Building Fredericksburg, Virginia

McKinney and Company performed a geotechnical investigation to determine the subsurface conditions at the site of the proposed Multi Story Ambulatory Services Center adjacent to Mary Washington Hospital. The facility is a four story office/surgery structure supported on shallow reinforced concrete foundations. The structure consists of a structural steel frame, masonry veneer exterior and a concrete slab on grade and slab on deck floor system.



The geotechnical investigation was performed to determine the subsurface conditions at the proposed building. Services included retrieving soil samples from field exploration and performing testing on selected soil samples in McKinney's laboratory. A report stating the findings of the field investigation, general geotechnical design recommendations, foundation design recommendations and construction recommendations was prepared McKinney and Company for use in the design of the structures.

Subsequently, McKinney and Company was contracted to perform construction materials testing services and to assist the Special Inspections Engineer of Record.

During the earthwork phases of the project, McKinney technicians observed the placement of and performed compaction testing on the structural fill and backfill. In support of the field testing operations, laboratory testing services (to include several classification tests and Proctor tests) were performed by McKinney to evaluate off-site borrow sources. Additionally, the structure contained a basement that required the implementation of a de-watering system. McKinney personnel provided consultation on the implementation of the de-watering system and the unique foundation and slab on grade installation conditions.

At the completion of earthwork operations McKinney technicians observed the placement of cast in place concrete including the observation and probing of exposed bearing strata, review of the reinforcement placed in the foundation elements, basement walls and concrete slabs, field testing of fresh concrete, and laboratory testing of compressive strength test specimens.

McKinney and Company's Certified Weld Inspector monitored the erection, bolting, welding and plumbing of the structural steel elements on site. In addition to visual observations, several moment welds were tested ultrasonically under the direction of McKinney personnel.

Following steel erection, McKinney technicians evaluated the sprayed on fire resistant material (SFRM). This evaluation included thickness, density and bond strength testing.

Client:
MediCorp Services, Inc.

Mary Washington Hospital ER Addition

Fredericksburg, Virginia

McKinney and Company performed a geotechnical investigation to determine the subsurface conditions at the site of the proposed Multi Story Emergency Room Addition at Mary Washington Hospital. The facility is a two-story office/medical structure supported on shallow reinforced concrete foundations. The structure consists of a structural steel frame, masonry veneer exterior and a concrete slab on grade and slab on deck floor system.

The geotechnical investigation was performed to determine the subsurface conditions at the proposed building. Services included retrieving soil samples from field exploration and performing testing on selected soil samples in McKinney's laboratory. A report stating the findings of the field investigation, general geotechnical design recommendations, foundation design recommendations and construction recommendations was prepared by McKinney and Company for use in the design of the structures.

McKinney and Company was subsequently contracted to perform construction materials testing services and to assist the Special Inspections Engineer of Record. During the earthwork phases of the project, McKinney technicians observed the placement of and performed compaction testing on the structural fill and backfill. In support of the field testing operations, geotechnical testing services (to include several classification tests and Proctor tests) were performed in McKinney's laboratory to evaluate off-site borrow sources. During excavation for the basement portion of the structure, soft previously placed fill was encountered. This fill was not encountered in the geotechnical exploration and, subsequently, McKinney geotechnical engineers provided additional consultation during construction to remedy the unsuitable soil condition.

At the completion of earthwork operations, McKinney technicians observed the placement of cast-in-place concrete, including the observation and probing of exposed bearing strata, review of the reinforcement placed in the foundation elements, basement walls and concrete slabs, field testing of fresh concrete, and laboratory testing of compressive strength test specimens.



McKinney and Company's Certified Weld Inspector monitored the erection, bolting, welding and plumbing of the structural steel elements on site. In addition to visual observations, several moment welds were tested ultrasonically under the direction of McKinney personnel. Following steel erection, McKinney technicians evaluated the sprayed on fire resistant material (SFRM). This evaluation included thickness, density and bond strength testing.

Client:
MediCorp Services, Inc.

Multi Story Patient Tower
Mary Washington Hospital
Fredericksburg, Virginia

McKinney and Company provided construction materials testing services for the Multi Story Patient Tower adjacent to the existing Mary Washington Hospital. The five level patient tower incorporated a structural steel frame supported on shallow reinforced concrete spread footings.



During the earthwork phases of the project, McKinney technicians observed the placement of and performed compaction testing on the structural fill and stone subbase for pavement support. In support of the field testing operations, laboratory testing services (to include several classification tests and Proctor tests) were performed by McKinney to evaluate off-site borrow sources.

During the installation of the spread footings McKinney technicians performed hand auger borings to evaluate the bearing strata in accordance with the geotechnical report prepared by others. In a few instances, bearing surfaces were undercut to natural soils where uncontrolled fill was encountered in accordance with the geotechnical report.

At the completion of earthwork operations McKinney and Company observed the placement of cast in place concrete for the foundation elements, slabs on grade and upper level slabs on deck. Concrete testing included a review of the placement of the steel reinforcement, and field testing of fresh concrete to include slump, entrained air, and ambient and concrete temperatures. Compressive strength test specimens cast on site were tested in our laboratory. Floor flatness was evaluated by McKinney on the first level slab on grade and the upper level slab on deck.

McKinney and Company's Certified Weld Inspector observed the erection, bolting and welding of the structural steel components. These observations included visual review of the field welds and review of the qualifications of the welders. Additionally, McKinney personnel supervised the ultra sonic testing of numerous moment connections. Light gauge structural framing was observed by McKinney personnel to evaluate conformance with the approved structural plans.

McKinney and Company engineers served as the BOCA Special Inspections Engineer of Record.

McKinney Project Team:
Paul Burch, P.E.
Kenny Beville, ET II
Jerry Rogers, CWI

Multi Story Parking Deck
Mary Washington Hospital
Fredericksburg, Virginia

McKinney and Company provided construction materials testing services for the Multi Story Parking Deck adjacent to Mary Washington Hospital. The five level parking deck incorporated a precast concrete frame and above grade slabs supported on shallow reinforced concrete spread footings. The deck contained an at grade entrance, basement area and multiple above ground parking areas.

During the earthwork phases of the project, McKinney technicians observed the placement of and performed compaction testing on the structural fill, backfill for several new deep storm water and sanitary sewer systems, and stone subbase for pavement support. In support of the field testing operations, laboratory testing services (to include several classification tests and Proctor tests) were performed by McKinney to evaluate off-site borrow sources.

At the completion of earthwork operations McKinney and Company observed the placement of cast in place concrete including the observation and probing of exposed bearing strata. Due to the time of the year construction was performed and the elevation of the groundwater, McKinney engineers provided on site evaluations of the bearing strata in conjunction with our field personnel. As part of the concrete testing services, McKinney personnel reviewed the placement of the steel reinforcement in the foundation elements, basement walls and concrete slabs, and performed field testing of fresh concrete and laboratory testing of compressive strength test specimens.

McKinney and Company's Certified Weld Inspector observed the erection and welding of the precast elements which comprised the majority of the above grade four level structure. These observations included visual review of the field welds and review of the qualifications of the welders.

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Paul Burch, P.E.
Kenny Beville, ET II
Jerry Rogers, CWI

