

Geotechnical Engineering

Associated Engineering & Technology, Inc.

Provides services for :

- *Subsurface Exploration*
- *Geophysical Exploration*
- *Settlement Aanalysis*
- *Slope Stability Aanalysis*
- *Failure Analysis*
- *Retaining Wall Design*
- *Pavement Design*
- *Geosynthetic Design*
- *Chemical Stabilization*
- *Dynamic Compaction*
- *Foundation Design*
- *Recommendations*

Foundation Design & Recommendations

- Bearing capacity analysis & allowable design loads for foundations including spread, continuous, wall, mat or raft, drilled caissons, helical piers, compacted aggregate piers, micro piles, driven piles and cast-in-place concrete caissons.
- Laterally loaded pile or caisson analysis
- Design of Foundations

Settlement Analysis

- Provide settlement investigations and analysis for foundation structures, deep fills associated with commercial developments, roadway embankments and drainage structures
- Provide recommendations for foundation improvements

Retaining Wall Design

- Mechanically stabilized earth walls, soil nail walls, tieback anchor walls, soldier pile walls incorporated with different types of wall facing materials, sheet pile walls, caisson walls, wire basket walls, gravity rock walls, combination walls

Slope Stability

- Analyze potentially or existing unstable slopes, existing landslide areas using a detailed drilling program, laboratory-testing program, stability analysis and geotechnical analysis
- Analyze in-situ measurements of soil and rock behavior via instrumentation such as pressure-meters, piezometers, inclinometers, transducers, resistivity meters and deflection measuring devices
- Provide recommendations for slope stabilization or propose slope construction

Pavement Design

- Arterials, collectors, local streets, parking areas, runways
- AASHTO, IDOT, CDOT design procedures
- New pavement or rehabilitation for flexible or rigid pavement sections
- Pavement management program
- Asphalt and concrete mix designs
- Pavement subgrade improvements/stabilization

Max L. Calhoon, P.E., S.E.
Chief Engineer

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Fees Schedule & Unit Rates Geotechnical Engineering, Laboratory & Construction Testing Services

Description of Service		Rate
STAFF		
1	Chief Geotechnical Engineer (P.E.)	\$120 /hour
2	Project Engineer (P.E.)	\$95 /hour
3	Staff Engineer (E.I.T.)	\$90 /hour
4	Field Technician II (E.I.T.)	\$85 /hour
5	Field Technician I - Certified ACI, ASTM, IDOT	\$75 /hour
	Daily Minimum per trip charge (incl. travel, gauge)	\$350 /trip
DRILLING		
6	Soil Borings to 40' depth	\$ 30 /feet
7	Mobilization & Demobilization	\$ 350 /site
LAB		
8	Modified or Standard Proctor Tests	\$150 /each
9	Mechanical Analysis (AASHTO T-88)	\$150 /each
10	Atterberg Limits Tests	\$55 /each
11	Compressive Strength Testing (Portland Cement Concrete, Mortar and Grout)	\$25 /each
12	Cast-in-Place Concrete, Core Samples	\$25 /each
13	Structural Steel Technician II	\$85 /hour
14	Ultrasonic Steel Testing Unit	\$100 /day
15	Asphaltic Cement Concrete Cores	\$ 100 /each
16	Asphaltic Cement Concrete Cores Density and Thickness	\$ 75 /each
17	Laboratory Asphaltic Cement Concrete Extraction/Gradation	\$ 50 /each
18	Modified or Standard Proctor Tests	\$150 /each
19	Nuclear Gauge Rental / day	\$35 /day
20	Transportation – vehicle mileage	\$0.55 /mile

MAX L. CALHOON, P.E., S.E.
Chief Engineer

Raj Ojha, P.E.
Senior Project Engineer



RECENT PROJECT REFERENCES

SCHOOL BUILDINGS & GROUNDS (2006-09)

AE&T has provided construction testing services for over 25 new school buildings, additions and renovations projects in the past 10 year.

Listed below are some recent projects:

Waubonsee Community College, Sugar Grove, IL - Turner Construction

New Student Center Building (2007-08)

AE&T performed construction monitoring, soils and material testing services for the project comprising 35000 SF, 3 story, steel frame building and site development which involved identifying unsuitable soils, excavation and removal to a depth of 15 feet below existing ground and backfilling with compacted 3 inch size crushed limestone and CA-6 materials. The structure comprised steel frame and pre-cast concrete wall. Performed nuclear density testing on compacted backfill materials and monitored the building pad construction, inspected electrical duct bank, water, sewer and other utility line installations, inspected steel frame welds, nuts and bolts and conducted floor moisture & flatness tests. Also, monitored and tested subgrades and asphalt placement for the parking lot.

North Campus Improvements (2007)

AE&T performed construction monitoring and material testing services for new asphalt pavements, sub-grades, concrete sidewalks and curbs for the north campus.

Lincoln-Way School District 210

Henry Brothers, Co.

AE&T provided Construction Monitoring and Testing services for two new schools:

(1) New Lincoln-Way North High School, Frankfort, IL (2006 - present)

110 Acres site development including cut and fill monitoring for the main building pad, utility lines, playground, stadium, parking lots, light and heavy duty pavements, and construction of new 350,000 SF school building. 2006 - 08

(2) New Lincoln-Way West High School, New Lenox, IL (2007)

Monitored heavy earthwork and performed construction inspection and nuclear density tests on engineered backfill for the 90 Acres new school building site including over 10 feet of engineered fill for three building pads, playgrounds, storm sewer, water main and sewer utility lines, parking lots and roads.



Addison School District 4 (7 Buildings)
Gilbane Building Co. (2005-06)

Fullerton Elementary School

- Ardmore Elementary School
- Army Trail Junior High School
- Indian Trail Junior High School
- Wesley Elementary School
- Lake Park School
- Stone Elementary School

Pleasantdale School District 107, Burr Ridge, IL. (2005 - 07)

C.M. : Gilbane Co., Architect: STR Partners

AE&T performed geotechnical investigation, construction monitoring and material testing services for 30,000 SF new Pleasantdale Middle School addition.

Manhattan School District 114 (2005-06)

International Contractors, Inc., Architect: STR Partners

AE&T performed Geotechnical investigation, Construction monitoring and Material testing services for the 20 acres site development and construction of the 40,000 SF new school building comprising steel frame and pre-cast concrete wall with slab on grade.

School Town of Munster, IN

AE&T was retained by the School Town of Munster to provide construction monitoring and material testing services for five (5) school building additions and renovations:

- Munster High School 1996-99
- Wilbur Wright Middle School 1996-99
- Frank Hammond Elementary School 1996-99
- Eads Elementary School 1996-99
- Elliot Elementary School 2003

School City of Hammond, IN 1998 - 2005

- New Jefferson Elementary School, Hammond, IN. (2003 – 05)
 - Morton Elementary School
 - Edison Elementary School
 - Maywood Elementary School
 - Hammond Gavitt High School
 - Clark High School
 - Jefferson High School



References

CLIENT	PROJECT
<p>GILBANE BUILDING CO. 8550 W. Bryn Mawr Avenue, # 500 Chicago, IL 60631 Matt Seago,, C.M. mseago@gilbaneco.com (773) 331-8719 cell</p>	<p>- NEW MINOOKA SCHOOL (2008-09) and Two School Additions - Addison School District (2006-08) FIVE (5) SCHOOL Buildings - Pleasantdale MiddleSchool Addition</p>
<p>Waubonsee Community College Sugar Grove & Aurora, IL TURNER CONSTRUCTION Phil Lerman / Brad Booker (PM) plerman@tcco.com (847) 417-0065</p>	<p>- New Student Center Building - North Campus Improvements - New 4 Story Aurora Campus - New Plano School Building & Grounds</p>
<p>Kaneland School District, Sugar Grove, IL NICHOLAS & ASSOCIATES Harold J. Borg, P.E. Suptd. haroldborg@nicholasquality.com 630-677-2027</p>	<p>2008-09 New Kaneland Middle School Sugar Grove, IL</p>
<p>MCNAUGHTON DEVELOPMENT 11900 Southwest Hwy, Suite 101 Palos Park, IL 60464 Rick Raspante rickr@mcnaughtondevelopment.com (708) 361 8300</p>	<p>Foxborough Estates, Mokena, IL 2006-'08 Residential Development, 800 Acres Geotechnical & Materials Testing</p>