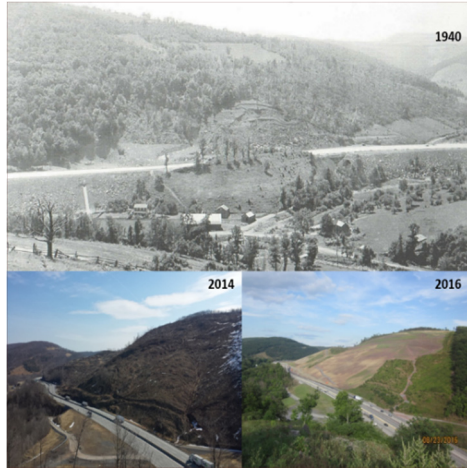


THE ASCE PITTSBURGH SECTION GEO-INSTITUTE CHAPTER PRESENTS

February 2017 Dinner Meeting

New Baltimore Landslide Remediation – Design Perspective

Presented By: *Suresh Gutta, Ph.D., P.E.*



In 1940, the Pennsylvania Turnpike was constructed mostly along the path of the original alignment of the old South Penn Railroad and as a result, passed through the Borough of New Baltimore, PA, and the Allegheny Mountains. The original construction reactivated an ancient landslide, referred to as the “New Baltimore Slide” that had occurred in the geologic past due to undercutting of the mountain slope by the Raystown Branch of the Juniata River which lies in the valley beneath the Turnpike. This slide zone eventually extended to 800 feet wide, 1,500 feet upslope of the roadway, with an average of 60 feet thick overburden sliding along a weathered clayey siltstone bedrock defined as the failure plane for over 70 years.

Historical records indicate that this slide moved 13 feet in 1940. These large movements had caused major scarps as much as 80 feet wide on the mountainside. Over the past 20 years, active movements are closer to 10 inches/year, with peak movements of 2 inches/month in the spring season. The proposed widening and the reconstruction of the Turnpike required the removal of the toe of this active landslide. The design involved characterizing the failure mechanism, instrumentation, treatment, development of sequence of construction, and development of safety systems for the protection of traffic during construction. Construction for the remediation of the slide was successfully completed in September 2016. This presentation will provide an overview of the history of the slide, geotechnical investigation, instrumentation, monitoring results, and the design challenges.

Mr. Suresh Gutta, Ph.D., P.E. is a Geotechnical Project Manager at American Geotechnical & Environmental Engineering (A.G.E.S.), Inc. He previously served as Chairperson for ASCE Geo-Institute Pittsburgh Section from 2010 to 2011. He earned his Ph.D. degree in Civil Engineering with Geotechnical Engineering specialization from University of Delaware.

Attendance at this presentation qualifies participants for 1.0 PDH

Date: **THURSDAY, FEBRUARY 23, 2017**

Place: Gaetano’s Restaurant
1617 Banksville Road
Pittsburgh, PA 15216

Time: 6:00 PM Social Hour (Open Bar)
7:00 PM Dinner
8:00 PM Presentation

Reservations received on or before 2/15/17:

\$20 ASCE Pittsburgh Section Members
\$25 Non-members
Students are Free

Reservations received between 2/16/17 and 2/21/17:

\$25 ASCE Pittsburgh Section Members
\$30 Non-members
Students are \$10

PLEASE RSVP by contacting Mr. Alex Potter-Weight at APotter-Weight@menardgroupusa.com or by registering online at <http://www.asce-pgh.org/>.