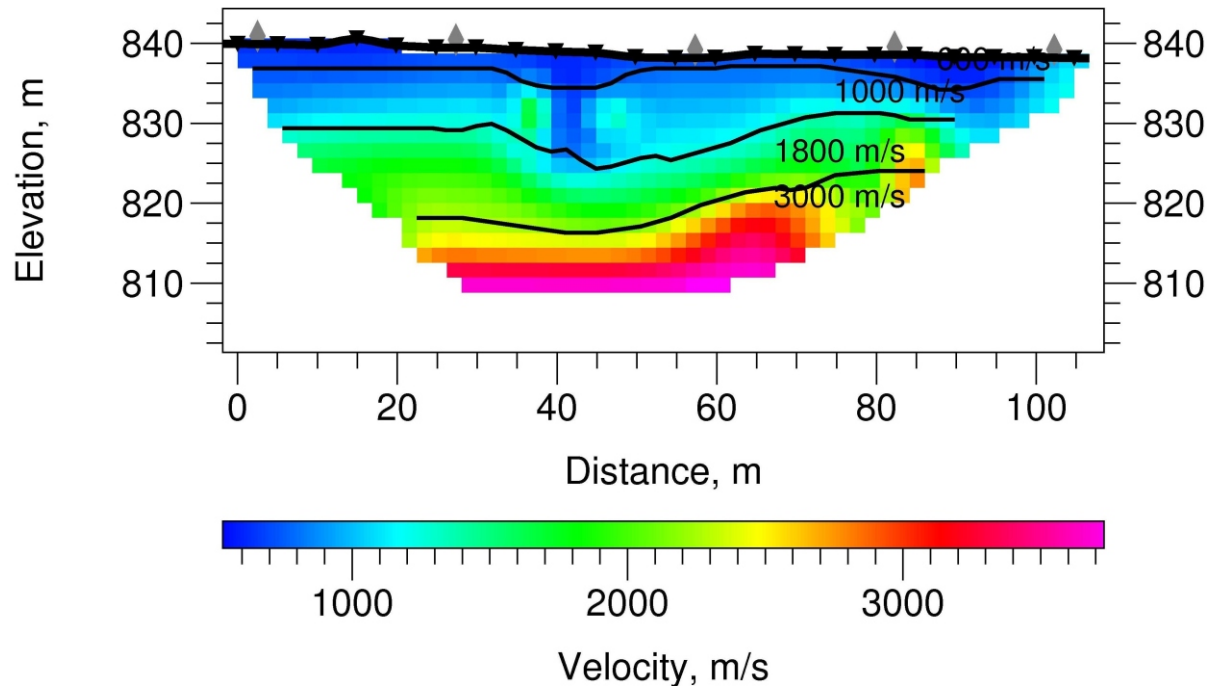
Training Workshop

Geophysical Techniques for Trenchless Technology Installations

Rapid & Cost Effective Site Investigations for Trenchless Projects

August 22-23, 2019, New Delhi, India

24 CPD Hours



Duration	:	02 days workshop
Format	:	Classroom with Equipment Demonstration & Live Field Work
Venue	:	India Habitat Center, New Delhi
Time	:	09:00 AM to 05:00 PM

Organized by:

IndSTT

Indian Society for Trenchless Technology

Training Partner:

AFA

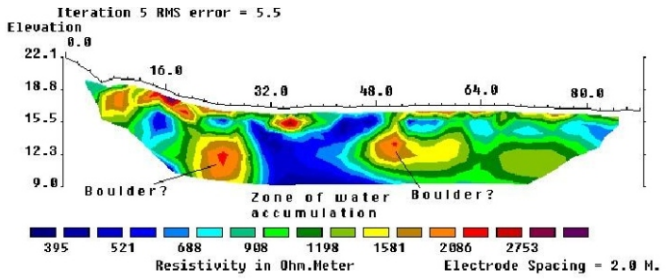
AF Academy

Introduction:

Various latest technologies including Trenchless Technology are being used for creating and maintaining subsurface infrastructure in India at an increasing rate. The successful use of these technologies, and benefits in terms of speed and least inconvenience to people, are well known.

Data on soil profile, rock, local heterogeneities and subsurface conditions are critical for safe and successful execution.

Various geophysical techniques are available which are capable of providing the subsurface data in quick, totally non-destructive and economical manner. These advanced technologies can very effectively be used to handle the present day complex problems related to optimum utilization of available resources and infrastructure.



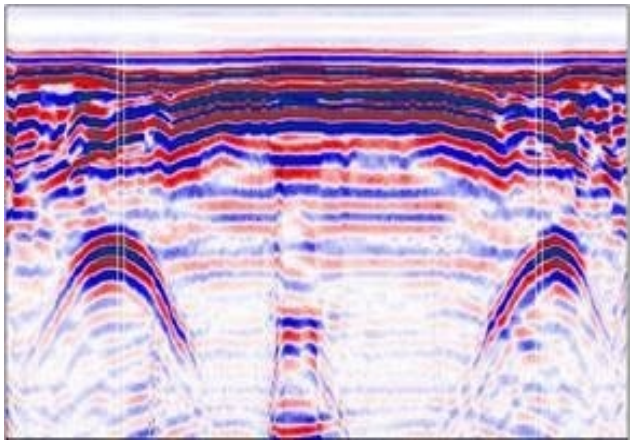
Engineering geophysics is an efficient means of subsurface investigation. The merit of application of this low cost aid lies in its ease of deployment and rapidity in providing a reliable knowledge of the underground over a large area, substantiating the requisite geotechnical evaluation studies thereby. Technological advancements and development of portable digital data acquisition instrument systems have increased the versatility in evaluating underground conditions and site characterization.

Geophysical tools such as Ground Penetration Radar (GPR), Seismic Refraction, Seismic Reflection, Electrical Imaging etc., can be used for the accurate mapping of the underground infrastructure facilities (Electrical & telecommunication cables, pipelines etc.), soil-rock interface, geological identification of soil, water table mapping, dimension of a sub stratum, elastic properties of the medium, geometry of various layers and other subsurface features.

The workshop is aimed at familiarizing participants with these advanced geophysical investigations techniques including principle, field procedures, data processing & interpretation, capabilities, limitations and selection criteria for techniques suitable for diverse geological conditions.

Objectives:

The full potential of geophysics for site investigation in India is yet to be fully realized. The incorrect and inappropriate use of geophysics has over the years caused a great deal of damage to its reputation as a bona fide and reliable technology. The objective of this workshop is to familiarize participants with details of various available techniques and empower them with required knowledge to plan/ execute/ supervise geophysical investigation program for trenchless project site investigations. The program will also cover quality control and quality checks on data, ensuring quality results are obtained from geophysical program.



Learning Focus:

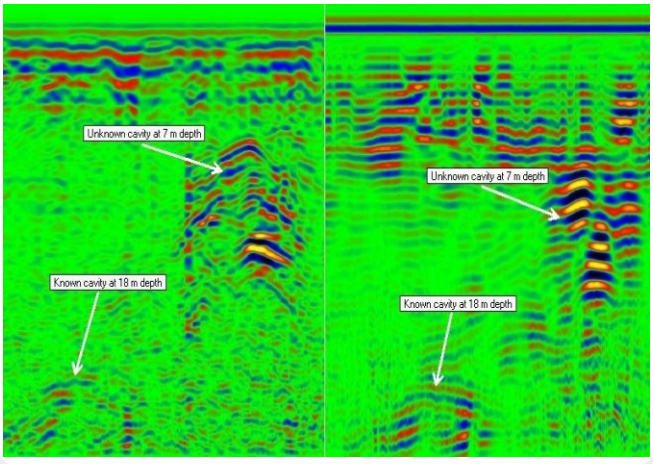
1. Refreshing the knowledgebase of various methods of surface investigations essential for trenchless new installation projects.
2. Acquiring basic knowledgebase of various subsurface strata investigation methods for trenchless new installation projects.
3. Gaining understanding for merits of various geophysical methods and their appliction for a specific set of site conditions.
4. Development of Capabilities to determine the optimum installation location and path prior to executing any new installation trenchless project.
5. Conducting mock field investigation procedure using common geophysical investigation methods.

Who Should Attend:

This 02 day program will help professionals, engineers, geotechnical engineers and geo-scientists dealing with trenchless projects. The program will also help project owners hiring services of geophysical surveys, enabling them understand capabilities and limitations of various methods and derive maximum return on their investment on a geophysical survey.

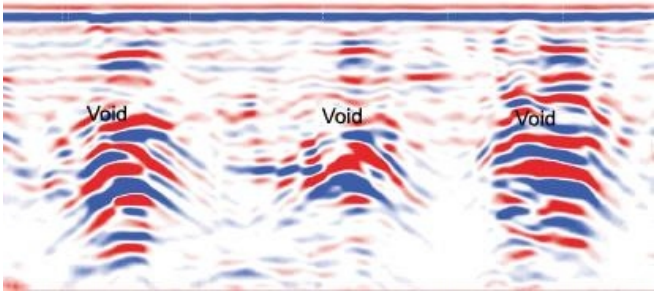
Benefits:

The program will enable the participant to derive maximum information from geophysical investigation program and help them design the right investigation program for a particular project requirement. It will also enable them to choose the right combination of techniques for varied geological conditions. The state-of-the-art subsurface geophysical investigations are helpful towards minimizing involvement of the conventional direct exploration methods, aiding in accelerated and economical development of projects.



Key Elements:

- Introduction to Geophysics
- Investigation requirement for trenchless projects- Mapping of bedrock depth and topography, rock strength, shear wave parameters for earthquake site response, detection of faults, fractures, water lenses, cavities, existing utilities etc.
- Principles, methodology, data acquisition, processing & interpretation of
  - Seismic Refraction
  - Electrical Resistivity Imaging/ tomography
  - Ground Penetrating Radar
  - MASW/ SASW/ ReMi
  - Crosshole/ downhole/ uphole
  - River crossings investigations
- Case studies
- Mock field investigation procedure
- Interactive session with trainees



CPD Hours Credit

The training program is approved by Engineering Council of India for the award of 24 Continued Professional Development Hours, to the registered event delegates who participate for the complete event.

Certification

Upon successful participation & clearing the test, the participant would be awarded two certifications, CPD Hour Credit certificates and IndSTT trade Skill Certificate on SSI 1.1

About IndSTT:

Indian Society for Trenchless Technology (IndSTT) is the autonomous apex organisation to promote the application of Trenchless Technology in India. It was established in 1995. Founders of this Society include various luminaries from the Construction Sector. Society is formed by its members and the Membership is open to all the interested persons and organizations. It is one of the founder members of Engineering Council of India. Website of society is www.indstt.com.

About AF Academy:

AF Academy is an entity of Aqua Foundation, registered under Societies act in year 1998. AFA provides training & knowledge sharing platform to decision & policy makers, working professionals, operating level personnel and aspiring students willing to specialize in technical sector. Specialized trainings/ workshops and courses are been offered by AFA on subjects like Water, Geophysics and Land Survey.

Venue:

Hotel The Hans, No. 15, Barakhamba Road, Connaught Place, New Delhi-110001, India

Date:

August 22-23, 2019

Fee Structure:

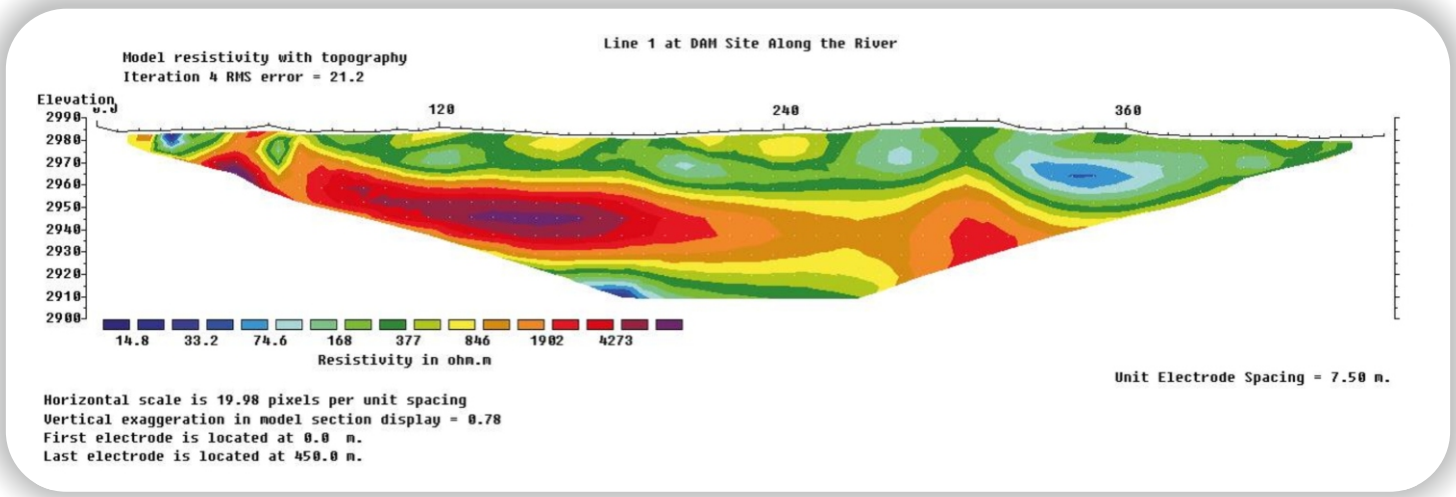
Rs 16,000 per participant, inclusive of training notes, morning and evening tea, & lunch. A discount of 20% for students and 10% discount on group booking of 04 or more participants from a single organization is applicable. GST will be charged extra as applicable (present rate of GST is 18%).

Registration Process:

Prior registration is must by sending email to indstt@indstt.com. Fee to be paid through DD in favour of Indian Society for Trenchless Technology payable at New Delhi. The fee can also be deposited in following Bank account:

Name of the Bank: The Federal Bank Ltd; Address of the Bank: G. I - 6, Satkar Building, Nehru Place, New Delhi-110019

Name of the Account holder: **Indian Society for Trenchless Technology; A/C no: 13020100203697, IFSC Code: FDRL0001302**



For registration or further enquiries and details, please contact:

Indian Society for Trenchless Technology

908, Hemkunt Chambers 89, Nehru Place, New Delhi - 110019

Tel.: +91-11-4767 0800, Fax: +91-11-4161 7863; Mobile: +91-9811499248, 9810833128, 9873010226, 9013125123

E-mail: indstt@indstt.com, indstt@gmail.com; Web.: www.indstt.com

AF Academy

Telefax: +91-11-41318030, Ph: +91-9873556395, 9818568825, Email: praggya@trenchlessprojects.com; info@aquafoundation.in

Web: www.trenchlessprojects.com; www.afacademy.info