

Theme Note on
Defending Trenchless

Usage of Trenchless Technology (TT) in India is accelerating with the growth of Infrastructure due to demands of water, drainage, oil & gas sectors, roads & other major Urban Projects like Metros/CWG. City engineers and managers are increasingly adopting TT in their projects as it helps in completing construction projects quickly with least surface damage. Non-standardized and technically unsafe construction methods, which at times are claimed as trenchless technology, can be detrimental to the main cause as has been observed recently in New Delhi where 23 road locations had major cave-ins. Though such cave-ins generally occur due to factors like failure of existing aged & deteriorated pipelines, bad materials or workmanship or geological and physical factors, the blame, at times, is put on the use of subsurface construction methods claimed as trenchless, as has been the case in the New Delhi accidents.

As the apex organization to promote the application of Trenchless in India, Indian Society for Trenchless Technology (IndSTT) is taking the responsibility of defending the technology and sensitizing the common user about the merits of Trenchless. Having deliberated over the matter in depth during the Defending Trenchless Meeting on 30th August, 2010 and the ensuing period, (IndSTT) proposes as under:

Trenchless Technology consists of the state-of-the-art engineering techniques addressing complete concerns in any construction process. Cave-ins, as reported, can generally never occur in case of the appropriate use of TT. Damages, as reported, could also have been caused due to entirely unrelated factors. Trenchless, in fact, is the engineering process that can help in avoiding such damages and needs to be practiced more vigorously to rectify the existing damages as well, while preventing any such future damage.

A proper application of TT is possible only if the following points are addressed:

1. Selection of appropriate and standard, technically sound, and safe Trenchless Techniques;
2. Development of a project report addressing the work and structural requirements;
3. Conclusion of appropriate design prior to project execution;
4. Usage of appropriate contract conditions;
5. Appropriate subsurface investigations;
6. Proper project management;
7. Employment of quality manpower;
8. Employment of adequate capacity equipment;
9. Adequate works supervision.

The cave-ins have sensationalized the Trenchless applications as they have occurred during the run-up to Commonwealth Games. Though, an immediate press statement was initially felt to be imperative, it would be appropriate that we should avoid sensationalizing the matter further as this will create a completely negative sentiment for Trenchless in the users' minds. Proposed approach is that IndSTT should provide the following guidelines on the above points to the users.

1. Trenchless Technology Selection Guidelines

- 2. Trenchless Technology Project Design Guidelines**
- 3. Trenchless Technology Project Preparation Guidelines**
- 4. Trenchless Technology Contracting Guidelines**
- 5. Trenchless Technology Works Supervision Guidelines**
- 6. Trenchless Technology Project Management Guidelines**
- 7. Trenchless Technology Subsurface Investigation Guidelines**
- 8. Trenchless Technology Disaster Management Guidelines**
- 9. Trenchless Technology Manpower Development & Management Guidelines**

As there is a complete disconnect between the Trenchless users and service providers, such guidelines shall provide the proper bridge joining the both ends and help in avoiding such mishaps in future. To meet the development needs, it is proposed that separate IndSTT committees be formed under the chairs of Senior Trenchless Technology Stakeholders. IndSTT secretariat shall be inviting the Technology providers, user departments, and right-of-way owners to join the committees for an all-encompassing-condition development.

Such committees shall deliberate and evolve the guidelines which then will be formally placed before the users and the departments for use in their projects in the following manner:

1. Placement of information on all information dissemination channels for an overall sensitization;
2. Release of press notifications to the news agencies for media coverage;
3. Submitting the approved guidelines to the MoS, PMO followed by specific workshops on the guidelines;
4. Initiation of professional competency evaluation process;
5. Issuance of necessary guidelines for appropriate project cost estimation processes;
6. Issuance of necessary directives for the employment of tested and certified professionals by different work executing authorities and right-of-way owners.