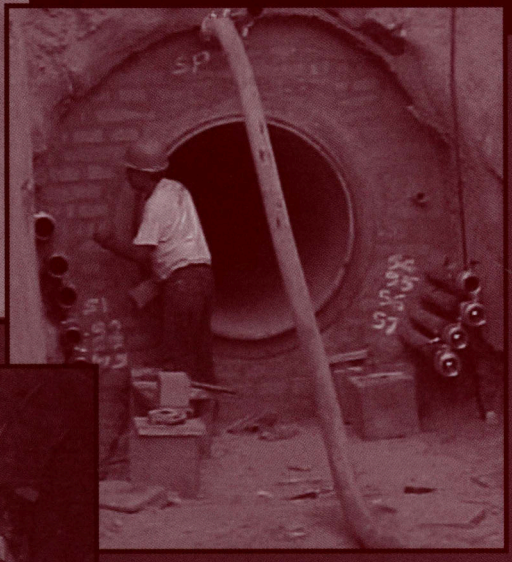
AUA Guidelines for Backfilling and Contact Grouting of Tunnels and Shafts



Edited by
Raymond W. Henn

ASCE PRESS

Thomas Telford

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PREPARED BY
Technical Committee on Backfilling and Contact Grouting of Tunnels and Shafts of the American Underground Construction Association

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Abstract: This book focuses on backfilling and contact grouting performed to fill the voids between the excavated surface and the tunnel and shaft linings, as well as voids between the final structure and the initial support. Although only two types of underground facilities, "tunnels" and "shafts," are used in the title and are referred to throughout, the book is intended to be used in reference to all types of lined underground structures. For example, in addition to transportation, water, and wastewater tunnels, this book can be used for lined underground storage facilities, powerhouses, railroad stations, sports complexes, warehouse and document storage facilities, housing facilities, and other types of lined underground structures.

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AMERICAN UNDERGROUND
CONSTRUCTION ASSOCIATION

The American Underground Construction Association (AUA) is an organization of professionals involved in every aspect of the underground design and construction industry. Many professional disciplines are represented in the membership including engineers, contractors, and equipment and materials suppliers.

The goals of the Association are:

- to serve as an advocate for its members and the underground construction industry.
- to promote the development and use of underground facilities
- to create greater understanding of the potential and benefit of siting facilities underground
- to encourage appropriate policies and planning for successful development, construction and use of underground facilities

The Association serves as a network within the industry and a point of contact between the industry and the public. The Association represents the United States in the International Tunnelling Association, a non-governmental advisor to the United Nations on matters related to the development and use of underground facilities.

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Backfilling and Contact Grouting of Tunnels and Shafts

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Lee C. Warnock started his construction career in 1966 as an ironworker. He has more than 27 years of professional experience in hard money contracting operations, contract development, and disputes resolution. His expertise includes heavy civil construction for water programs, pipelines, tunnels, utilities, aviation and industrial facilities, and oil and gas projects, both publicly contracted and privately negotiated. Mr. Warnock has extensive experience in developing and executing project delivery strategies and contracting plans, with enhanced skills in presentations, contract negotiations, and contracts troubleshooting.