

# Contractual and Legal Issues Related to Geotechnical Baseline Reports

Risk Management in Underground  
Construction Course  
April 12, 2022

# Presentation Focus

- Subsurface Conditions Risk Allocation: General Legal Principles and Perspectives
  - Common Law Regime
  - Civil Law Regime
- Contractual Approaches to Subsurface Conditions Risk Allocation
- Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation
- Geotechnical Baseline Reports: Contractual and Legal Issues

# Subsurface Conditions Risk Allocation: General Legal Principles and Perspectives

- Common Law Regime: Contractor (generally) assumes cost/time impacts due to subsurface conditions
- Civil Law Regime: Owner retains risk due to subsurface conditions

# Contractual Approaches to Subsurface Conditions Risk Allocation

- Contractual Approaches: Altering the Generally Prevailing Legal Subsurface Conditions Risk Allocation Regime
- Contractual Risk Allocation Approaches: Comparative Law Perspectives
  - Common Law Regime: Sharing **Contractor** Risk with the Owner
  - Civil Law Regime: Sharing **Owner** Risk with the Contractor

# Contractual Approaches to Subsurface Conditions Risk Allocation

- Contractual Approaches: Subsurface Conditions Entitlement Standards
  - Standard U.S. Contractual Differing Site Conditions Provisions
    - Type 1
    - Type 2
  - International Federation of Consulting Engineers (“FIDIC”) and New Engineering Contract (“NEC”) Approaches: “Unforeseeability”

# Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation

## Geotechnical Baseline Reports (“GBRs”):

- Purpose: To clearly, realistically, objectively and effectively allocate risk for **certain** reasonably anticipated subsurface conditions
- Derivation: Project-specific data, tests, analyses, and reasonable and realistic interpretations, judgments, characterizations and assessments

# Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation

- Relational Context:
  - GBR status as Contract Document
  - GBR Exclusive Interpretive risk allocation source as to specific baselined conditions
  - GBR is not intended or reasonably expected to address all anticipated subsurface conditions
  - Other portions of the Contract Documents, e.g., the Geotechnical Data Report, may provide indications as to non-baselined conditions
  - GBR is not intended to address design parameters, criteria, prescriptions, or details.

# Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation

## FIDIC Emerald Book Approach to GBRs\*

- GBR Universality/Exclusivity

GBR is the sole (or singular) contractual source and basis for (a) *all* subsurface conditions risk allocation and (b) the evaluation and determination of *all* DSC claims. No other portion of the Contract Documents (or Site Data) may be considered or has contractual risk allocation relevance.

\*D.J. Hatem, “Should Geotechnical Baseline Reports Be the Universal and Exclusive Contractual Basis for Subsurface Conditions Risk Allocation?”  
January 2022 Tunnel Business Magazine

# Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation

- **The FIDIC *Emerald Book***

Par. 4.12, “Unforeseeable Physical Conditions,” is the contractual risk allocation provision applicable to subsurface physical conditions. That provision, in substance, allocates to the Owner the risk of “Unforeseeable” subsurface physical conditions if those conditions “will have an adverse effect on the progress and/or increase the Cost of the execution of the Works ....”

The Term “Unforeseeable” is defined in Par. 1.1.101 as meaning a subsurface physical conditions *“not reasonably foreseeable by an experienced contractor ... [and] [n]otwithstanding the foregoing, all subsurface physical conditions described in the GBR are deemed to be foreseeable, and all subsurface physical conditions outside the scope of conditions defined in the GBR are deemed to be Unforeseeable”*. The latter phrase certainly strongly implies, if not prescribes, the universality and exclusivity of the GBR for risk allocation of subsurface physical conditions and DSC evaluation/determination

# Geotechnical Baseline Reports: Role in Subsurface Conditions Risk Allocation

- The Notes to the *Emerald Book* define the GBR “as the single contractual source of risk allocation related to subsurface physical conditions” (The actual definition of the GBR states, in part, that “[t]he GBR sets out the allocation of the risk between the Parties for ... subsurface physical conditions.”).
- The Guidance for the Preparation of Tender Documents and Annexes, in Par. 4.3, states: “The GBR contains the only contractual definition of what is assumed to be encountered in defining the contractual allocation of the risks for subsurface physical conditions...” Appendix A (“The Geotechnical Baseline Report”) to the *Emerald Book* repeats most of the preceding statements and characterizations as to the GBR.
- Notably, one commentator has distinguished the “sole or single source,” or universal and exclusive, characterization of the GBR in the *Emerald Book* from the description of the GBR in the *ASCE Gold Book* (Essex 2007); the latter of which qualifiedly defines the GBR as the “single source document where contractual statements describe the geotechnical conditions anticipated (or to be assumed) to be encountered....” (Gillion et al. 2019). The *ASCE Gold Book* approach allows that other portions of the Contract Documents may be considered for subsurface conditions risk allocation and DSC evaluation/determination purposes for conditions not included in GBR Baseline Statements.

# GBRs: Contractual and Legal Issues

- Do GBR statements constitute an affirmative warranty that those conditions **will be** encountered?
- Do GBR statements constitute a warranty that no conditions other than those baselined will be encountered?
- Do GBR statements provide the basis for Contractor claims that the Owner breached implied warranty obligations to the Contractor
- Does the Emerald Book universality/exclusivity approach elevate Owner warranty risks?

# GBRs: Contractual and Legal Issues

- Must a Contractor prove reliance upon a GBR baseline statement as to a particular condition to establish entitlement for DSC recovery based on encountering a substantially or materially different condition from that baselined?

# GBRs: Contractual and Legal Issues

- How is DSC entitlement determined in circumstances in which a Contractor:
  - Bases its bid on an independent and more “favorable/optimistic” interpretation of subsurface conditions than the relevant baseline statements in the GBR?
  - Bases its bid on an independent and more conservative interpretation of subsurface conditions than relevant baseline statements in the GBR?
- What is the professional standard of care that should be applied as to an Engineer who prepares a GBR?

# Questions and Discussion

# Contact Information

David J. Hatem, PC  
dhatem@donovanhatem.com  
Direct: 617-406-4800

**Donovan Hatem LLP**  
Exchange Place  
53 State Street  
Boston, MA 02109

Donovan Hatem LLP © 2022