PNWS Annual Spring Conference:

The Legal Impact of Geotechnical Baseline Reports

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General Principles

- GBRs are written by Engineers
- GBR is a contract document
- Statements have legal implications
- Legal impacts often not understood by Engineers and Owners
- DSCs evaluated by Judges and Attorneys, not Engineers
- There is a disconnect

Owners and Engineers should understand…

- How courts interpret geotechnical statements
- How to draft GBR statements that “hold up”
- How to avoid GBR statements that don’t

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The GBR and the DSC Clause

- Meant to be Used Hand-in-Hand
  - Saves the Government money
  - Minimizes amount of speculative cost contingency
  - Removes the uncertainty from the Contractor's perspective

Format of the Presentation

- General Rules of Interpretation
- A Few Case Studies
- Specific Suggestions
  - Example of How to Craft a Good GBR Statement

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Differing Site Conditions

- Type 1: Conditions encountered at the site that differ materially from those "indicated" in the Contract Documents

- Type 2: Unknown or unusual conditions encountered at the site that differ materially from those normally encountered and generally recognized as inherent in the Work

Easy to State: Difficult to Implement

- Type 1 DSC "stands or falls" on what is actually <u>indicated</u> in the Contract Documents
- The legal focus is:
  - *How* the conditions are described
  - *How* those conditions will be interpreted
  - *How* the caveats or limitations will be interpreted by the courts

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The Bad Old/Good Old Days

- Old rule – if no DSC Clause and no GBR (and no other representations of ground conditions), all subsurface risk belongs to contractor
- Old rule still in effect today if you choose not to include DSC Clause or make soils representations
- One example:

Dravo v. Metro (1971)

- Sewer interceptor project in LW
- Gravity flow – elevation fixed in plans
- Laid on hardpan (or piles if hardpan below design elevation)
- Some borings were done, but cost "prohibitive" to find exact contour
- Plans showed piles from stations 20-25 to 38-00 where hardpan assumed to drop off
- But hardpan actually rose sharply at 30-00 so piles became useless

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Dravo v. Metro (1971)

- Contractor drove piles anyhow (as shown) and claimed extra compensation for laying pipe in this segment

- Issue: was Metro responsible for difficulties encountered in section where hardpan contour rose more rapidly than shown on plans?

Dravo v. Metro (1971)

No. Why? Two mains reasons.

- First, "Metro expressly avoided making any representations concerning the subsurface soil conditions"
- Second, no DSC Clause
- Are we smarter and fairer now? Is the DSC clause/GBR approach working??

General Rules of Interpretation

1. Reference Documents: Referring to a Geotechnical Document as a “reference document” does not negate the bidders right to rely on the document for a DSC claim.
2. Some courts regard boring logs as “the best indicators of subsurface conditions and bidders ought to be able to rely heavily on them.”

Rules of Interpretation (cont.)

3. "For information only" or "Bidders make their own explorations" holds little weight with the courts
4. Contractor's interpretation need not be the best or only interpretation – must only be "reasonable" -- Contractor must consider the <u>entire</u> set of documents – can't cherry pick
5. GBR is"ambiguous" if can be read reasonably to mean two different things

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Case Studies
Case Study #1

- 1 Mile Concrete Tunnel Utilidor
- Boring Logs did not indicate high groundwater
- Baseline Statement: “Condition of high groundwater exists in this area”
- Contractor filed Type 1 DSC for groundwater pumping and dewatering costs

Case Study #1

- Government rejected the DSC based on the baseline statement
- Court ruled in favor of Contractor
- “Condition of high groundwater” not enough
  - Low key message
  - Muffled by specific information
  - Obviously a relative term
  - Undefined and unexplained generality
  - Did not negate the <u>bidder’s reliance on specific borings</u>

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Case Study #2

- Federal Bridge with Pier Foundations
- Design had boring logs and profile
- Geotech Report said conditions are
  "Not guaranteed, not representations, and the bidder is urged to draw his own conclusions."
- Contractor filed Type 1 DSC
  - Soil is "wetter" than indicated in borings

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Case Study #2

- Owner rejected claim - “The borings did not guarantee conditions or necessarily represent conditions”
- Court ruled in favor of Contractor
- Boring logs showed relatively impermeable material
- Mandatory investigation clause of broad application not a defense

Case Study #3

- Well Water System
- Design contained geotechnical borings
- Special Provisions stated borings were “representations only” and that “any localized variations characteristic of the region” were not the basis for a change.
- Contractor filed a Type 1 DSC:
  - Excessive cobbles (# and size)
  - High compressive strengths

Case Study #3

- Claim denied based on statements in the geotech report
- Court ruled in favor of Contractor
- Statements in the Special Provisions were not specific or clear enough to override the inference of the borings
- Contractor could assume that only small rocks would be encountered because sample sizes were small when samples were collected with drill rig (auger size not disclosed in geotech report)

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General Suggestions

- Be specific: Clarify precedence of statements and indications. Without adequate clarifying language, some courts would hold that the Contractor may rely on borings over baseline statements.
- Be comprehensive: Specifically identify those baselined risks that are not evident from the borings.
- Avoid ambiguity: Understand that any baseline with two reasonable interpretations is ambiguous.

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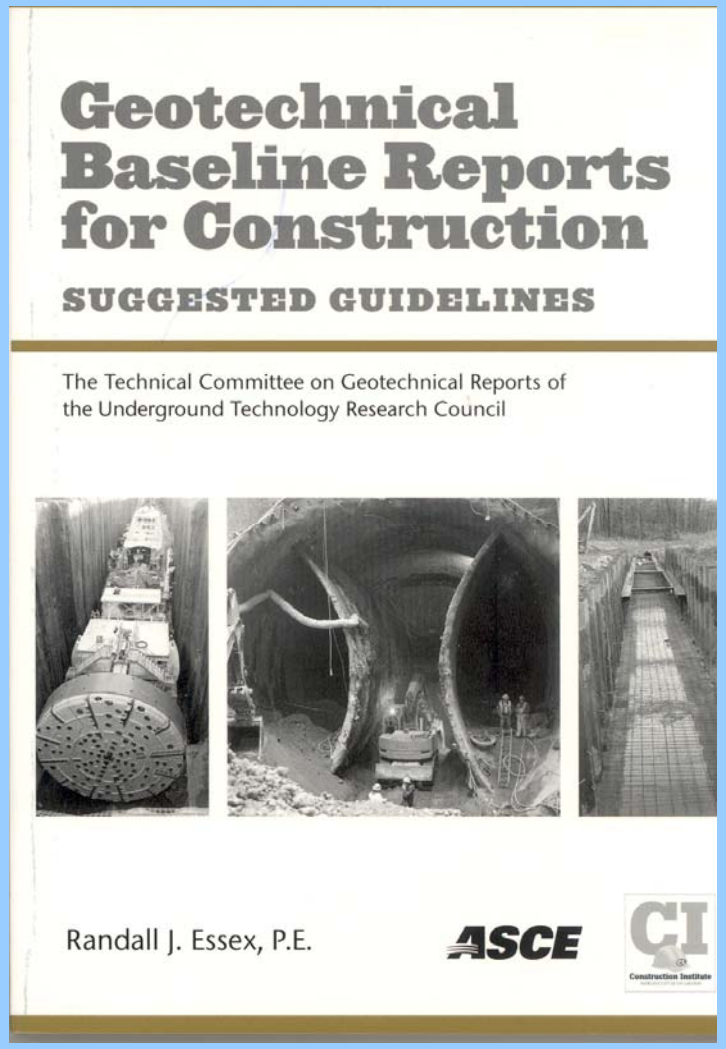
ASCE Guidelines (2007)



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Fixing the Disconnect

- ASCE Guidelines: Complexity of predicting the unknown "creates a tendency to use ambiguous words"
- There is the disconnect between engineering view of DSC world and legal view
- Baseline statement as contractual assumption vs. engineering mindset of "tendency to use ambiguous words"
- How to fix the disconnect?

Specific Suggestions - Things to Avoid

- Don't use soft language such as "may" "potential" "should" "can" "might" "some" "large" "minor" "major"
- Don't use ranges such as "5 to 10%"
- Don't use geotechnical design report as your baseline – often filled with soft (but not wrong) language

  "Although not encountered in our borings, cobbles and boulders are common with glacial foils. Accordingly, the potential for cobbles and boulders should be considered when selecting the microtunneling machine."

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Specific Suggestions - Things to Do

- Do keep the report as brief as possible – 5 to 10 pages, 2-3 hours to read
- Do include definitions – cobble, boulder, rock strength
- Do make sure GBR is consistent with remainder of Contract Documents
- Do make your limitations/caveats conspicuous and reasonable
  - No generic disclaimers

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Typical Scenario

- Gravity sewer project
- Depths of 20-30 feet
- Geotech borings reveal dense sandy salt at tunnel elevation
- No gravel, cobble, boulder specifically encountered
- But given the glacial region, how to properly notify bidder and avoid DSC claim?

Sample Baseline Statement

"For the purpose of preparing the bid, the contractor is instructed to assume:

- 5% of the material by weight is gravel
- 5% of the material by weight is cobbles,
- 5 boulders will be encountered
- Boulders– max dimension of 18 inches
- The baseline makes no representation as to the location where gravel, cobbles, or boulders will be encountered"

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Conclusions

- Purpose of the GBR is to create an enforceable and effective baseline. Do not cloud the picture with engineering mumbo jumbo or geotechnical wizardry
- Keep the GBR as simple as possible. The GBR is read and interpreted from the standpoint of a prudent Contractor
- Make conscious decisions – and write specific clauses – on how to reconcile log and borings with the actual baseline

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Questions….

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