



Purpose

This practice bulletin defines and clarifies *authentication* and *validation* requirements for as-built drawings, record drawings, as-acquired drawings, change orders, change directives, and site instructions.

The italicized terms throughout this bulletin are defined in the following publications. Refer to the latest versions available at apega.ca/practice-standards:

- *Authenticating Professional Work Products* practice standard
- *Relying on the Work of Others and Outsourcing* practice standard
- *Field Reviews of Engineering and Geoscience Work* practice guideline

Background

As-built drawings, record drawings, and as-acquired drawings are commonly used terms in engineering and geoscience practice. However, their *authentication* and *validation* requirements are not consistently applied. Refer to the practice standard *Authenticating Professional Work Products* for specific *authentication* and *validation* requirements.

As-Built Drawings

“As-built drawings” reflect the installed, fabricated, constructed, or commissioned condition of a *professional work product (PWP)* and have typically been generated or marked up by someone other than the *licensed professional* who prepared the *PWP*. They are also called “redline drawings.” These drawings are intended to incorporate on-site conditions not represented in the original *PWP*. The changes to the *PWP* may have been initiated by someone else, such as a *constructor* or *field reviewer*, to accommodate site conditions.

If the changes affect the intended purpose of the original *PWP* or deviate from its specifications, these are material changes and they must be discussed with the *licensed professional* responsible for the original *PWP*. When possible, material changes in the field should be handled through change orders, change directives, and site instructions and authenticated accordingly, instead of leaving them to be captured in the as-built drawings.

Do as-built drawings require *authentication*?

Typically, as-built drawings do not require *authentication* because material changes are handled through change orders, change directives, and site instructions.

However, if the redlines do result in material changes, then the as-built drawings need to be authenticated as soon as possible after implementation. If the work is done through a *permit holder*, such changes also require *validation*.

To authenticate and take professional responsibility for an as-built drawing, a *licensed professional* must complete all of the following tasks:

- Conduct a *thorough review* of the revisions or markups.
- Confirm the site conditions are accurately represented in the as-built drawings.
- Verify the site conditions reflected by the changes in the as-built drawing are suitable and aligned with the intended purpose of the original *PWP*.

When *authentication* is required, the *licensed professional* who issued the *PWP* should also authenticate the as-built drawings. If the *licensed professional* who issued the *PWP* is not available, another *licensed professional* who is qualified and competent in that area of practice can authenticate the as-built drawings.

Permit holders can use the change management process specified in their *Professional Practice Management Plan* to manage the *authentication* of as-built drawings.

Record Drawings

“Record drawings” are prepared by a *licensed professional* to record design changes for which they accept professional responsibility. The *licensed professional* may have issued the changes and authenticated them previously through change orders, change directives, or site instructions. The changes are then incorporated into one final drawing set along with the original design elements. Since the *licensed professional* is professionally responsible for the record drawings, they must authenticate the drawings to comply with the practice standard *Authenticating Professional Work Products*. Note that authenticating record drawings does not mean the *licensed professional* conducted a *field review* or reviewed the site conditions.

As-Acquired Documents

The term “as-acquired” is typically used in reference to geoscience documents (e.g., seismic programs, survey changes). As-acquired information is another party’s representation of what occurred in the field. *Licensed professionals* should not authenticate as-acquired documents unless they can verify them and are willing to accept professional responsibility.

Change Orders, Change Directives, and Site Instructions

At times, the implementation requirements represented in the original *PWP* must be modified to accommodate site conditions, design changes, regulatory requirements, *field reviews*, or any number of other factors. In these cases, a *licensed professional* must communicate these changes, which are commonly referred to as “change orders,” “change directives,” or “site instructions,” to provide the individuals implementing the *PWP* on site with details about the modifications.

Recognizing that such changes could be small, numerous, or issued in various forms of communication (e.g., verbal or written communications, drawings, sketches), and that these may be material changes, *licensed professionals* must use a documented change management process to manage such changes and complete all *authentication* and *validation* requirements as specified in the *Authenticating Professional Work Products* practice standard.