

National Building Code – Alberta Edition Schedules User Guide

Jointly developed by
the **Alberta Association of Architects**
& the **Association of Professional
Engineers and Geoscientists of Alberta**

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Version 1.1

To better protect the public interest, there are Schedules attached to the National Building Code – Alberta Edition (NBC[AE]). The purpose of the NBC(AE) Schedules is to track the legislated responsibilities of registered architects/*licensed interior designers* and professional engineers involved in *building projects* in Alberta, as defined in the National Building Code – Alberta Edition, the *Safety Codes Act*, the *Architects Act*, and the *Engineering and Geoscience Professions Act*.

The NBC(AE) Schedules User Guide is intended to help architects/*licensed interior designers* and engineers meet their obligations under the *Safety Codes Act*, the *Architects Act*, and the *Engineering and Geoscience Professions Act*.

The User Guide was developed jointly and is approved for use by the Alberta Association of Architects (AAA) and the Association of Professional Engineers and Geoscientists of Alberta (APEGA).

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2023 NBC(AE) Schedules User Guide

Abbreviations

AHJ *Authority having jurisdiction*

CRP *Coordinating registered professional*

DDP *Delegated design professional*

RP *Registered professional*

RPR *Registered professional of record*

SCA *Safety Codes Act Revised Statutes of Alberta 2000 Chapter S-1*

SCO *Safety codes officer*

SDP *Secondary design professional*

Definitions

Defined terms, shown in italics, are from the National Building Code – 2023 Alberta Edition (NBC[AE]). Please refer to the NBC(AE) for definitions. Words and phrases that are not defined in the NBC(AE) shall have the meanings that are assigned to them in relevant regulations or contexts.

Note: The official titles of acts are also italicized, but they are not defined terms.

Introduction

This guide provides direction for completing the National Building Code – 2023 Alberta Edition (NBC[AE]) Schedules (Schedules) correctly and consistently. Consult the NBC(AE) itself whenever the NBC(AE) is interpreted or applied. Updates to the Schedules program were motivated by the core concepts of coverage and design role clarity. The disciplines identified in the Schedules are the same as those in previous versions (architecture/licensed interior design, structural, mechanical, electrical, and geotechnical). The Schedules are essentially a public declaration of the involvement of the owner or the owner's representative and **all** design professionals in a *building project* and their statement of commitment to fulfil their obligations in accordance with the *Safety Codes Act (SCA)* and with the standards of practice established by their professional associations.

The Schedules that were introduced through a Standata in 2022 and adopted into the 2023 code are significantly different from previous Schedules. The Schedules of Professional Involvement have been updated to:

- clearly identify the professional design entities responsible for the design and *field review* of the different portions of the design work
- make certain all aspects of the SCA and enabled codes have been fully considered as part of the design

- describe a clear line of coordination, responsibility, and accountability amongst all professional design disciplines that tracks the legislated responsibilities of key players in a *building project* to uphold the public interest

The focus of the Schedules is to provide better clarity on the roles and responsibilities of all stakeholders using the Schedules. This is achieved by:

- involving stakeholders—owners, *registered professionals (RPs)*, *constructors*, and safety codes officers (SCOs)—earlier in the process
- making certain owners and the *coordinating registered professional (CRP)* establish a *project scope* that clearly outlines professional involvement and specifies which disciplines are involved in the *project*
- clarifying that owners have a responsibility to make certain the appropriate licensed professionals are hired and continue to be involved throughout the *project*
- making certain the *CRP* confirms that the scope and disciplines identified for the *building project* are adequate for the job
- clarifying the role and responsibilities of the *CRP*

This guide describes how the Schedules are to be completed, interpreted, and used in the field by owners, *constructors*, professional engineers, architects/*licensed interior designers*, SCOs, and the public in general.

Professional permit holders are directly accountable for ensuring that the *RPs* employed in the design and technical work are competent and that there is continuity should an *RP* no longer work for the company that initially signed the commercial contracts. The Schedules include a section for the *professional permit holder* to validate the work done by the *RP* who authenticates the technical documents. See aaa.ab.ca and apega.ca for authentication requirements for AAA/APEGA licensed professionals.

It should be noted that the design professionals are not responsible for the means and methods of the *constructor* nor do they assume any type of responsibility whatsoever for the construction work.

The *CRP* and *registered professionals of record (RPRs)* on a *project* are relying on the work of other licensed professionals and are to be guided in that relationship by the associations' practice standards, practice bulletins, and practice guidelines (e.g., APEGA's *Relying on the Work of Others and Outsourcing*, AAA Practice Bulletin 26) in their due diligence.

All design professionals involved in the project must submit their Schedules regardless of how they are retained or who retains them.

Overview of Schedules

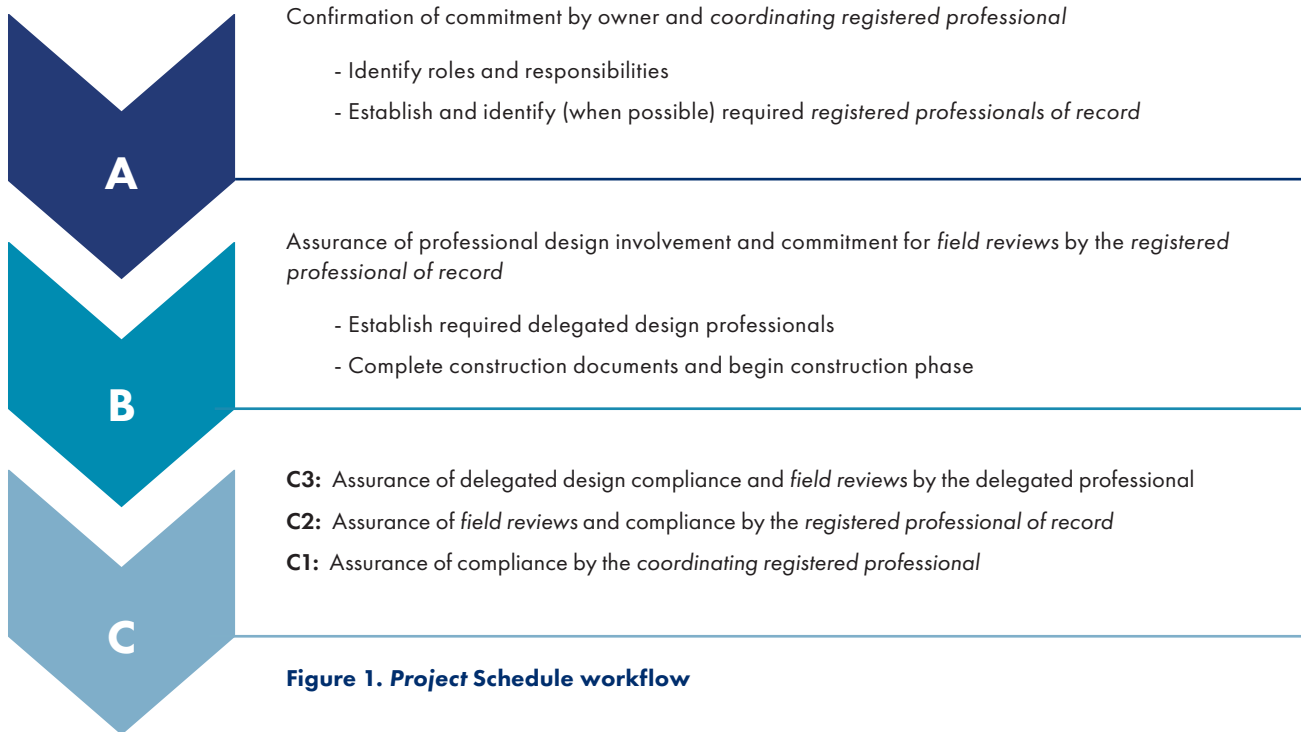


Figure 1. Project Schedule workflow

Schedule-by-Schedule Guidance

Purpose and Intent of Schedule A

Schedule A is submitted prior to the completion of all construction documents.

Schedule A provides clarity on the roles of the owner and the *coordinating registered professional (CRP)* only. The *CRP* identifies all professional involvement through a documented code analysis that remains with the *project* documentation. The *CRP's* obligation is to confirm the owner has a reasonable understanding of professional involvement. The *CRP* is responsible for confirming there are no professional responsibility gaps in the *project* Schedules. The *CRP* provides clarity on who is accountable and responsible not only for the professional work product(s), but also for showing through the Schedules and documentation that the work has been done without any gaps. The *CRP* needs to have a deep understanding that professionals rely on the work of others and that responsibility flows down through the Schedules, while the paperwork related to the Schedules flows up the same accountability and responsibility path (see Figure 1).

Registered *licensed professionals* are expected to use the standards provided by AAA and APEGA regarding the concept of relying on the work of others, which can be found on their websites at aaa.ab.ca and apega.ca.

Instructions for Completing Schedule A

- Complete the *authority having jurisdiction (AHJ)* information. If the *building* is located in an accredited municipality, the *AHJ* will be the municipality itself. If the *building* is located in an unaccredited municipality, the *AHJ* will be the Alberta Safety Codes Authority (ASCA). Information on *AHJs* for different locations is available at safetycodes.ab.ca.
- Complete the name of the *project*, which will correspond to the name on the design documents of all disciplines.
- Provide either the civic address of the *project* or the legal description of the site, whichever is available.
- Identify the *constructor* by full legal name and their contact information, including legal mailing address, business phone number, and email address. If the *constructor* is not yet determined, this can be left blank and updated once information is received.
- The relationship between the *CRP* and the *constructor* is to be documented.
- The code analysis is considered a professional *work product* and is to be fully documented and authenticated by the *CRP*.
- Complete the *professional permit holder* information and the *CRP* information. The *professional permit holder* firm name and the licensed professional's name must match the names on the licences issued by AAA or APEGA.
- Authenticate Schedule A.
- Document that the *CRP* has reviewed the completed Schedule A with the owner.
- Submit a copy of the completed Schedule A to the owner for inclusion with the *building permit* submission.

Purpose and Intent of Schedule B

The primary focus of Schedule B is to clearly identify which design professionals have been involved in the design for which portions of the *project* and to clearly identify which portions of the design are to be prepared by others that may be retained during tender and/or construction.

Schedule B focuses on design compliance and a commitment for *field review* by the *registered professional of record (RPR)*. There are five *building* disciplines listed in the Schedules, and there is to be only one *RPR* for each discipline (there may be cases when not all five disciplines are required). The *RPR* who takes responsibility for a discipline has total responsibility for that discipline. *RPRs* are not to cross out *work* on a Schedule. An *RPR* accepts this *work* with the understanding that they have total professional accountability and responsibility for the design *work* of that discipline.

Under the five high-level disciplines, multiple specialists may be required. *RPRs* can rely on the *work* of other professionals during the design phase and incorporate their *work* into documents submitted for a *building permit* or they can delegate responsibility for certain components to design/build specialists who complete that portion of the *work* through the Schedule C-3 section Assurance of Delegated Design Compliance and *Field Reviews* by the Delegated Professional. The *RPR* is to facilitate a due-diligence process to confirm the delegated specialist is a registered licensed professional with the requisite skills needed to complete the task(s) and that all professional *work* completed under the *RPR's* discipline is properly authenticated, allowing others to rely on that professional *work product*.

Schedule B is submitted by each *RPR* to both the *authority having jurisdiction (AHJ)* and the *coordinating registered professional (CRP)*. Schedule B provides assurance that the design presented on the design documents substantially complies with the relevant parts of the NBC(AE) and that the *RPR* has continued involvement in the *project* during the construction process.

Given that *building projects* can vary significantly in their complexity, Schedule B reinforces the role of the *RPRs*—one individual for each discipline with the knowledge to ensure that all the required scope under that discipline has been considered, even if they themselves do not perform the design work. This allows both for the use of secondary design professionals (SDPs) during the development of the design documentation and for the use of delegated design professionals (DDPs) who may be tied to the *constructor* or suppliers instead of being involved as part of the design team.

In the case of SDPs who are involved prior to *building permit* applications, either their authenticated design documents can be submitted as part of the *permit* submission and referenced on the *RPRs'* own design documents, or the design information can be incorporated into the design documents of the *RPRs* (or other SDPs) while those professionals rely on the authenticated work product of the SDP. If the SDP provides authenticated design documents for the *permit* submission, these need only carry the authentication of the SDP and do not need to also be authenticated by the *RPR*.

In the case of DDPs, Schedule B contains an area for the *RPR* to indicate which *building* components will require delegated design and consequently will require the completion of Schedule C-3. It is strongly recommended that this list also be included in the design documents so that *constructors* and suppliers are aware of the requirements. The *RPR* will ensure that the design documents contain all the information required for the delegated design and that it is clear where the responsibility for each portion of the delegated design will lie.

The responsibility for coordinating how the different components work together as intended remains with the *RPR*.

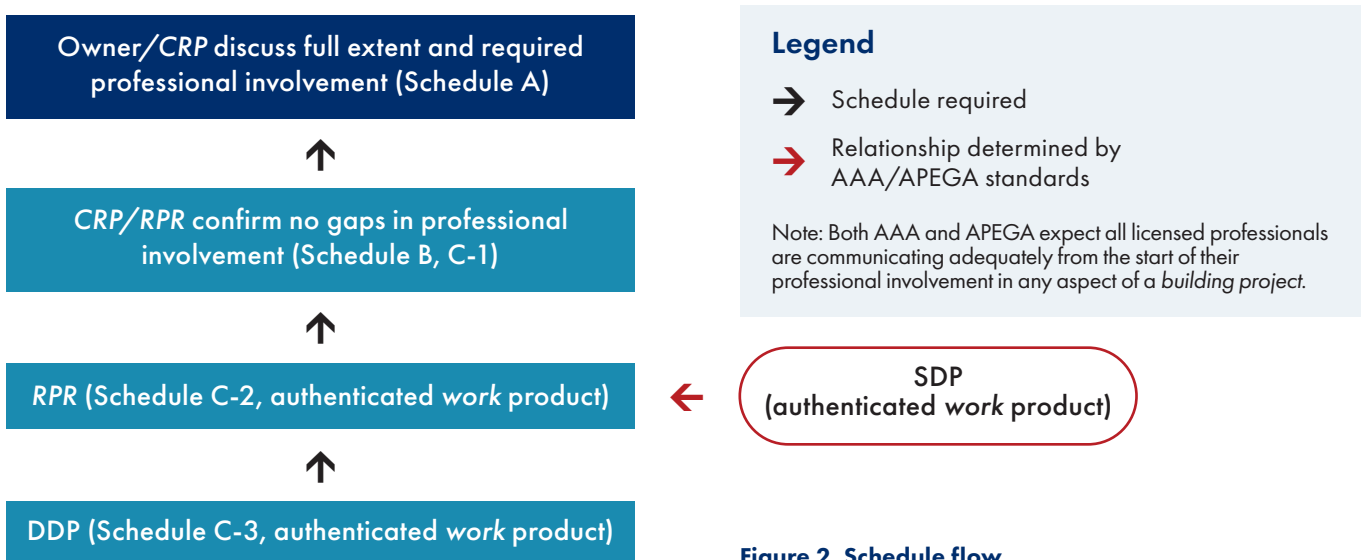


Figure 2. Schedule flow

The continued involvement of the design professionals during construction is necessary so they can:

- appropriately deal with design changes and clarifications
- review and coordinate submittals, such as shop drawings or product specifications
- review construction *work* in relation to the interpretation of the design documents
- review construction *work* for unintended or unforeseen design deficiencies

As specified in the NBC(AE), the *constructor* is responsible for accurately implementing the design as presented in the design documents. AAA and APEGA acknowledge that continuity of professional involvement is important to the design and construction process. It is expected that each individual design professional will continue to be involved, at least in an oversight capacity, during the construction process. For more information about the professional's duty of care during the construction process, refer to the respective standards of practice from AAA and APEGA, including professional requirements for supervision of *field reviews*.

In the event that an *RPR* ceases to be retained on a *project* (either due to a change of employer or the termination of the contract with their client), the professional is to notify the owner, *AHJ*, and *CRP* so that, if necessary, the *project* can be put on hold until another suitably qualified individual is engaged on the *project*.

Instructions for Completing Schedule B

- Complete the *AHJ* and *CRP* information. Typically, the *AHJ* is the accredited municipality in which the *building* is located or the Alberta Safety Codes Authority (ASCA). The *CRP* may be identified by either the *professional permit holder* or the individual licensed professional's name.
- Complete the name of the *project*, which will correspond to the name on the design documents of all disciplines.
- Provide either the civic address of the *project* or the legal description of the site, whichever is available.
- Indicate, though marking or initialling, which discipline the *RPR* is responsible for. See notes above for modifying this area in the rare event that it is required.
- List the components under the marked discipline that will require delegated design. This may also be done with a specific reference to a sheet and/or section number of the design documents.
- Complete the *professional permit holder* information and the *RPR* information.
- Authenticate Schedule B.
- Submit the completed Schedule B to the *CRP* for inclusion with the *building permit* submission.

Purpose and Intent of Schedule C

There are three Schedule Cs that work in conjunction to confirm that the *registered professionals (RPs)* involved in the *project* have completed their obligations.

Schedule C-3

Schedule C-3 allows *registered professionals of record (RPRs)* to delegate professional work to an *RP specialist* and for that *RP specialist* to accept professional responsibility by authenticating their professional work. The *RPR* is responsible for confirming there are no gaps in the discipline and that an adequate number of competent *RP specialists* are performing the needed work. The *RP specialists* provide proof, through an authenticated professional work product, to the *RPR* relying on the professional work.

Schedule C-3 is sent by a delegated design professional (DDP) to the *RPR* to provide assurance that the design and, if necessary, *field review* of the components have been completed in accordance with the design documents and the requirements of the NBC(AE) and the *Safety Codes Act (SCA)*.

It is typically left to the DDP to determine what level of *field review* is required given their knowledge of the components and their construction or installation. It may be that the component is manufactured under a certified manufacturing process. In these cases, the DDP's involvement is limited to specifying the appropriate product or products on submitted shop drawings. Alternatively, the delegated design might correspond to a complex system, in which case one or more in-person *field reviews* would be required to determine compliance with the requirements of the design documents, the NBC(AE), and the *SCA*. As noted in the Schedule B section, the responsibility for reviewing the interface between different components designed by different design professionals will remain with the *RPR*.

Schedule C-3 notes the importance of submittals to the construction process and requires the DDP to provide a revised set of submittals to the *RPR* if changes were made to the design during fabrication or construction. This will enable the *RPR* to confirm there are no implications beyond the scope of the *RPR*.

Schedule C-2

Schedule C-2 rolls up all professional work for that discipline, including any delegated design, through all C Schedules. The *RPRs* have the responsibility to confirm that all delegated design work has been completed and that the appropriate Schedules have also been completed to their satisfaction.

Schedule C-2 is sent by the *RPR* to the *coordinating registered professional (CRP)* to provide assurance that the *RPR* has fulfilled their commitment for ongoing involvement in the construction process, including periodic *field reviews*. They affirm that, based on their interaction with the *constructor* and on periodic *field reviews*, the final design of the components of the completed *building* for which they are responsible substantially complies with the NBC(AE) and the *SCA*.

The *RPR* will make available to the *CRP* documents supporting all approved changes to the design documents. This may take the form of revisions or supplements to the design documents, reports from *field reviews*, emails, or other similar documentation. If these documents are not authenticated, an authenticated cover letter should be included referencing the supporting documentation.

The *RPR* will attach the completed Schedule C-3 to their Schedule C-2 to provide evidence to the *CRP* and *authority having jurisdiction (AHJ)* of their reliance on the work of third-party *RPs* in the completion of Schedule C-2. If the required Schedule C-3s have changed since Schedule B was issued, the *RPR* should state this on Schedule C-2 to inform the *CRP* and *AHJ* of the change.

Schedule C-1

Schedule C-1 rolls up all professional work documentation described in Schedule C-2 corresponding to the five high-level disciplines. The completion of Schedule C-1 completes the entire professional involvement loop that started with the CRP defining what full professional involvement was required for the *building project*. The CRP is responsible and accountable for confirming that all the professional involvement needed for the *building project* has been completed and that the appropriate Schedules have been completed to the CRP's satisfaction.

Schedule C-1 is sent by the CRP to the AHJ to provide assurance, in the opinion of the RPR and the CRP, that the *building* is ready for occupancy. The CRP will attach the completed Schedule C-2 and Schedule C-3 supplied by the RPR to provide a record of professional involvement on the *project* to the AHJ. If required by the AHJ, the CRP should submit documents supporting all approved changes to the design documents, as noted above.

Completing Schedules C-1, C-2, and C-3

- Complete the name of *project*, which should correspond to the name on the design documents of all disciplines.
- Provide either the civic address of the *project* or the legal description of the site, whichever is available.
- On Schedule C-3, fill in the *building* components for which the DDP is responsible. If it is not clear which discipline the component falls under, or if multiple disciplines are affected, indicate this as well.
- On Schedule C-2, indicate, through marking or initialling, which discipline the RPR is responsible for. See notes for Schedule B for modifying this area in the rare event it is required.
- Indicate on Schedule C-2 if there are any changes from those previously required on Schedule B.
- Complete the *professional permit holder* information and the RPR information.
- Authenticate Schedules C-1, C-2, and C-3.
- Attach any required supporting documentation for the C Schedules.
- Submit the completed Schedules C-1, C-2, and C-3 to the RPR, CRP, or AHJ, as required.

EXAMPLES

Example 1

Schedule A

An owner has been working with an architect to develop a concept design for a new *building*. They have developed the design to the point where consultants can be engaged to develop the design documents in preparation for a *building permit* application. The architect confirms with the owner that the architect is to act as the *coordinating registered professional (CRP)* for the *project*, and they discuss the scope of the project and the code analysis that has been performed by the architect to determine which other professionals will need to be engaged.

In addition to the role of an architectural *registered professional of record (RPR)*, which the architect will fill, there is a requirement for structural, mechanical, electrical, and geotechnical *RPRs*. An energy consultant and *building envelope* consultant will also be required to provide specialist input in their respective areas. The owner has a previously prepared geotechnical report for the site, but the owner's *constructor* has indicated a desire to use a geotechnical engineer they have worked with before to perform the on-site testing and monitoring, so the new engineer will act as the geotechnical *RPR*.

Once the owner has determined which permit holders and/or individual professionals they would like to engage to fill each role, the *CRP/architect* reviews the qualifications, scopes of practice, and professional standings of the *professional permit holders* and professionals to confirm they can fill the appropriate roles. Once this has been completed, the owner can formally engage the design professionals and the *CRP* and owner can complete Schedule A. The design team can then proceed to develop the design documents. During the design development, the *CRP* is to oversee the sharing of information between design professionals so that the design is coordinated between disciplines.

Schedule B

The design team outlined in the example above has completed its design documents and wishes to apply for a *building permit*. The *building* will need a sprinkler system and a specialist *pile foundation* system—both components will be tendered by the *constructor*. There is an electrical control system that will be custom designed and supplied by an out-of-province supplier.

Note: Both AAA and APEGA expect all licensed professionals to communicate adequately from the start of their professional involvement in any aspect of a *building project*.

Architectural—The architect of record will need to incorporate into their design documents the relevant aspects of the report from the energy consultant (a secondary design professional [SDP]) to confirm that the overall design complies with the National Energy Code for Buildings of Canada (NECB; acting as an SDP) requirements referenced in the NBC(AE). The architectural design documents will reference information provided by the *building envelope* specialist (an SDP) and the design documents prepared and authenticated by the *building envelope* specialist are included as part of the submission. In their role as the *CRP*, the architect compiles the design documents and ensures they are authenticated in line with AAA and APEGA requirements prior to submission to the *authority having jurisdiction (AHJ)*.

Structural—The structural engineer of record will provide loading information for the delegated design of the *pile foundation*. They will include a requirement for a Schedule C-3 to be submitted by the delegated design engineer for the *pile foundation* in their design documents and on their Schedule B.

Mechanical—The mechanical engineer of record will need to incorporate into their design documents the relevant aspects of the report by the energy consultant (an SDP) to confirm that the overall design complies with the NECB requirements referenced in the NBC(AE). They should summarize on their design documents the requirements for the sprinkler system and will include a requirement for a Schedule C-3 to be submitted by the delegated design engineer for the sprinkler system in their design documents and on their Schedule B.

Electrical—The electrical engineer of record will need to incorporate into their design documents the relevant aspects of the report by the energy consultant (an SDP) to confirm that the overall design complies with the NECB requirements referenced in the NBC(AE). They are to provide requirements for the custom control system in their design documents and will include a requirement for a Schedule C-3 to be submitted by the delegated design engineer in their design documents and on their Schedule B.

Geotechnical—The geotechnical engineer of record will need to review the existing geotechnical report and provide a cover letter to be submitted with the *building permit* application to confirm that they have reviewed the report and still consider the recommendations to be appropriate for the *project* in question. They may rely on the authenticated *work product* of the previous engineer/geoscientist provided they review it in accordance with APEGA's guidance on relying on the *work of others*. They will include a requirement for a Schedule C-3 to be submitted by the delegated design engineer for the *pile foundation* in their cover letter and on their Schedule B.

Energy consultant—The energy consultant will work with the *RPRs* to determine product selection and component specifications during the development of the design documents. They will provide an authenticated report summarizing these decisions to the *RPRs* for them to rely on.

Building envelope consultant—The *building envelope consultant* will provide authenticated design documents to be included as a referenced supplement to the architectural design documents.

Schedule C

During the construction process, the *CRP* continues to engage with the design team, the *constructor*, and if needed, the owner to ensure *field reviews* for all disciplines (including delegated design professionals [DDPs]) are taking place at the appropriate time.

The DDP for the sprinkler system performs a *field review* to confirm that the installation of the sprinkler system is compliant with their design and with the design documents. They complete a Schedule C-3 and submit it to the mechanical engineer of record together with an updated submittal showing revised sprinkler-head locations that were relocated during construction due to interference with the *building structure*.

The DDP for the *pile foundation* provides remote oversight of the *pile* installation process and reviews the installation records upon completion. They complete a Schedule C-3, noting they are responsible for both the structural and geotechnical aspects of the *pile foundation*, and submit it to the structural and geotechnical engineers of record.

The DDP for the control system, who must be licensed to practise in Alberta, has no requirement for a *field review* as the control system is assembled in a facility accredited by an organization that has the appropriate certification with the Standards Council of Canada, and the installation will be reviewed by the electrical engineer of record. The DDP provides a Schedule C-3 so that the electrical engineer of record may rely on their design and their involvement is documented.

The *building envelope consultant* completes a *field review* of a mock-up of part of the *building envelope* and makes recommendations to the *constructor* on some minor adjustments. They summarize these in a report that they authenticate and submit to the architect of record. The architect of record includes the report as part of their documentation of approved changes and prepares an authenticated cover letter referencing the report, which will be made available to the *CRP* and/or *AHJ* should they require it. Schedule C-3 is not required as the *building envelope consultant* is still acting as part of the design team under the scope of the architect of record.

The *RPRs* complete their Schedule C-2s and submit them, with supporting Schedule C-3s, to the *CRP*.

The *CRP* compiles the Schedule C-2s and Schedule C-3s, completes their Schedule C-1, and submits the package to the *AHJ*. At the request of the *AHJ*, they may also be required to submit documentation supporting any approved changes to the *project*.

The *CRP* hired by the owner provides the Schedule package to the owner who provides it to the safety codes officer to obtain an *occupancy permit*.

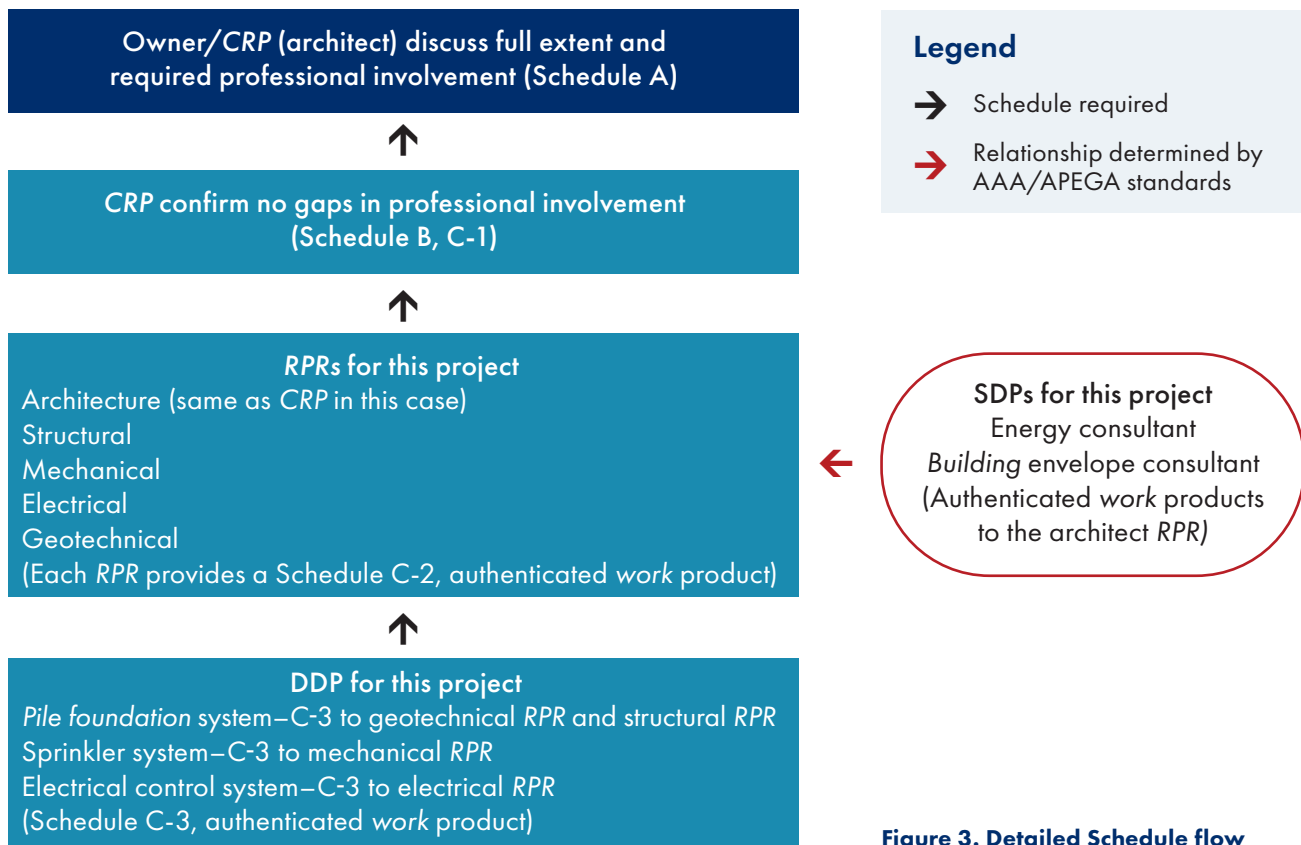


Figure 3. Detailed Schedule flow

Example 2

A tenant-improvement *project* inside an existing *building* requires architectural work that entirely falls within the scope of licensed interior design, as well as electrical work and a limited scope of mechanical work. There are no structural modifications, so structural and geotechnical involvement is not required. The owner engages a *licensed interior designer* to act as both the *coordinating registered professional (CRP)* and the *architectural registered professional of record (RPR)*, in addition to hiring *RPRs* for mechanical and electrical. The owner and *CRP* complete Schedule A accordingly, and the design team proceeds with the design documents.

During the development of the design documents, the client requests a change that will affect the exterior of the building and has wider implications for the mechanical systems. The *licensed interior designer*, in their role as *CRP*, identifies the need for an architect and structural engineer to join the *project* team to deal with this change, and the mechanical professional (who has a limited scope of practice) identifies that the increased scope requires the involvement of a professional with a full scope of practice. Therefore, additional professionals are added to the *project* team. The *licensed interior designer* is the *RPR* for the architectural scope, including and referencing authenticated design documents prepared by the architect as the secondary design professional in their submission. The full-scope mechanical professional takes over as *RPR* for the mechanical scope, including and referencing authenticated design documents prepared by the limited-scope mechanical professional in their submission. As there is no impact on the *building foundations*, there is still no need for geotechnical involvement. The owner and *CRP* (the *licensed interior designer*) modify Schedule A to reflect the new design team.

During construction, the electrical engineer retires. Another electrical engineer under the same *professional permit holder* provides a new Schedule B to show ongoing professional involvement. The design documents do not need to be resubmitted as there are no revisions needed, and the new engineer can rely on the authenticated work of his former colleague.

Example 3

An owner has been working with an electrical engineer to develop a design for a fire-alarm system replacement in their existing *building*—fire-alarm system upgrades require a *building permit*. They have developed the design to the point at which further consultants can be engaged to develop the design documents in preparation for a *building permit* application. The electrical engineer confirms with the owner that they are to act as the *coordinating registered professional (CRP)* for the *project*, and they discuss the scope of the *project* and the code analysis to determine which other professionals will need to be engaged.

As well as an electrical engineering *registered professional of record (RPR)*, there is a requirement for a mechanical engineer to provide design documents and a performance specification for the new clean-agent fire-suppression system, which will replace an obsolete halon system in an existing computer server room.

Once the owner has determined which *professional permit holders* and/or individual professionals they would like to engage to fill each role, the *CRP* reviews the qualifications, scopes of practice, and professional standings of the *professional permit holders* and professionals to confirm they can fill the appropriate roles. Once this has been done, the owner can formally engage the design professionals, and the *CRP* and owner can complete Schedule A. The design team can then proceed with the development of the design documents. During the design development, the *CRP* is to oversee the sharing of information between design professionals so that the design is coordinated between disciplines.

Schedule A has now been issued.

The design team has now completed its design documents and wishes to apply for a *building permit*. The *building* will need to have a clean-agent fire-suppression system designed and installed, which will be tendered by the *constructor*.

Electrical—Acting as both the *CRP* and the electrical engineer of record, they need to incorporate into their fire-alarm design documents the relevant aspects of the clean-agent fire-suppression design to make certain the overall fire-alarm system design complies with the requirements referenced in the NBC(AE). In their role as the *CRP*, the electrical engineer compiles the design documents and ensures they are authenticated in accordance with AAA and APEGA requirements prior to their submission to the *authority having jurisdiction (AHJ)*.

Mechanical—The mechanical engineer of record will need to incorporate into their design documents the relevant aspects of the design to confirm that the fire-suppression system performance design meets the requirements referenced in the NBC(AE). In addition, they are to summarize on their design documents the requirements for this system and will include a requirement for a Schedule C-3 to be submitted by the delegated design engineer for this system in their design documents and on their Schedule B.

All required Schedule Bs have now been issued.

During the construction process, the *CRP* continues to engage with the design team, the construction team and, if needed, the owner to ensure that *field reviews* for all disciplines (including delegated design professionals [DDPs]) are taking place at the appropriate time.

The DDP for the fire-suppression system performs a *field review* to confirm that the installation of the clean-agent system is compliant with their design and with the design documents. They complete a Schedule C-3 and submit it to the applicable *RPR* (i.e., the mechanical engineer of record) together with an updated submittal showing the revised clean-agent canister locations, which were relocated during construction because the original proposed locations were no longer suitable. Meanwhile, the electrical engineer of record has completed witness-verification testing of the fire-alarm system and has issued a fire-alarm certificate of verification in accordance with the requirements of the NBC(AE).

The *RPRs* complete their Schedule C-2s and submit them, with supporting Schedule C-3s, to the *CRP*.

The *CRP* compiles the Schedule C-2s and Schedule C-3s, completes their Schedule C-1, and submits the package to the *AHJ*. At the request of the *AHJ*, they may also be required to submit documentation supporting any approved changes to the *project*.

The *CRP* hired by the owner provides the Schedule package to the owner who provides it to the safety codes officer to obtain an *occupancy permit*.

All required Schedules Cs have now been issued.