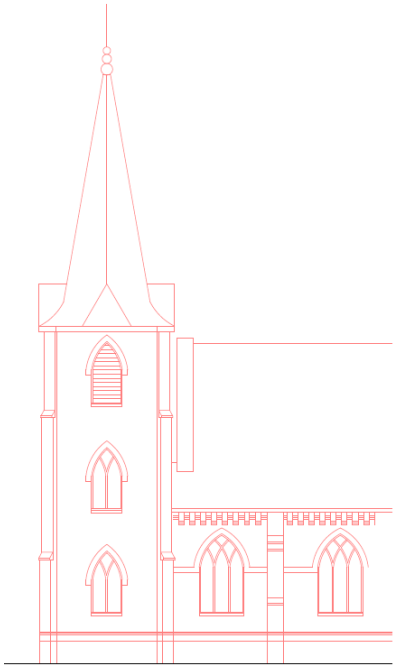
April 12, 2012



THE PRESBYTERIAN CHURCH IN CANADA
COMMITTEE ON CHURCH ARCHITECTURE

GUIDELINES FOR SUCCESSFUL CONSTRUCTION PROJECTS
(Updates to Guidelines for Planning a Church)

Welcome to your resource for undertaking construction projects for The Presbyterian Church in Canada.

Whether you are planning renovations to make your church accessible for people with disabilities, or building a new addition to your existing building, such as a church hall, or planning to build a new church on a new site, these guidelines are intended to offer you information, resources, and links to assist you on the journey through the design and construction process.

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Attachments: - Application forms for approval of construction projects:
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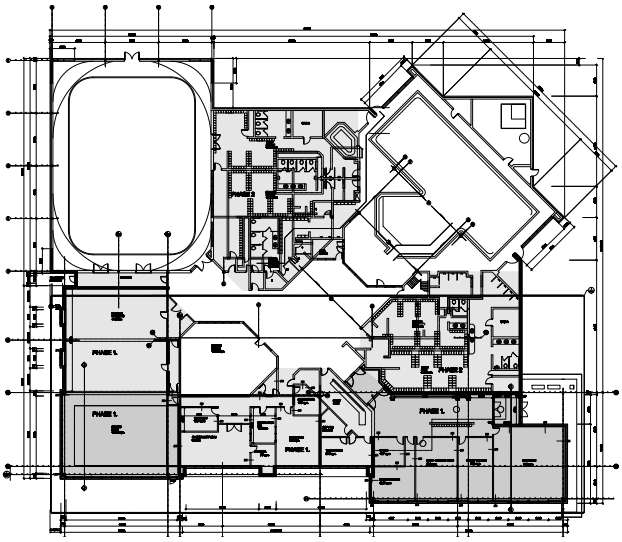
1. Inspiration

Knox Presbyterian, Waterloo – Baird Sampson Neuert Architects
Photo Credit: Terence Tourangeau

Within The Presbyterian Church in Canada, there is a wide range of worship styles, from traditional to modern. Each congregation develops its own style and personality; and each Presbytery or Synod can develop its own vision within the Church.

Understanding the vision of your particular congregation is key to describing and communicating ideas for new facilities or improvement projects.



Your Planning Group should try to identify goals and objectives for your project.

Architects can help to guide the thought process, and can translate the ideas that you have into built form. Even when the requirements are simple, there are considerations of space, welcome, materials, light, cost and energy efficiency that will enhance your project without adding cost.

The Committee On Church Architecture (referred to as COCA) is inspired by the desire to express our Christian traditions and culture in built form. In addition to assisting you with the logistics of your project, the committee will also provide input as to appropriate design, for consideration by you and your Architect.

Remember, although your project is specific to your congregation, you don't have to re-invent the wheel! Lots of other congregations have gone before you, and within the experience of others, there may be some ideas or knowledge that you can use in your project.

If your project is a renovation to an existing building, then the goals may be functional.
The church is an asset, and the value of the asset should be maintained. In this case, an extensive visioning process may be unnecessary. However, for a new facility this is a fundamental step which should NOT be skipped. The sharing of ideas and the consensus building of the project can bring people together, bring agreement, and build ownership in the congregation.

There may be a congregational leader who can champion the project, and provide leadership to the shared goal. Depending on how many different stakeholder opinions you have to deal with, you may wish to consider inviting a facilitator to help you and your group to develop a consensus view, and a shared vision for your project.

Here are some projects that have been completed in the past across Canada. If there are ideas that you might find useful, we can connect you with others who have been through the process.

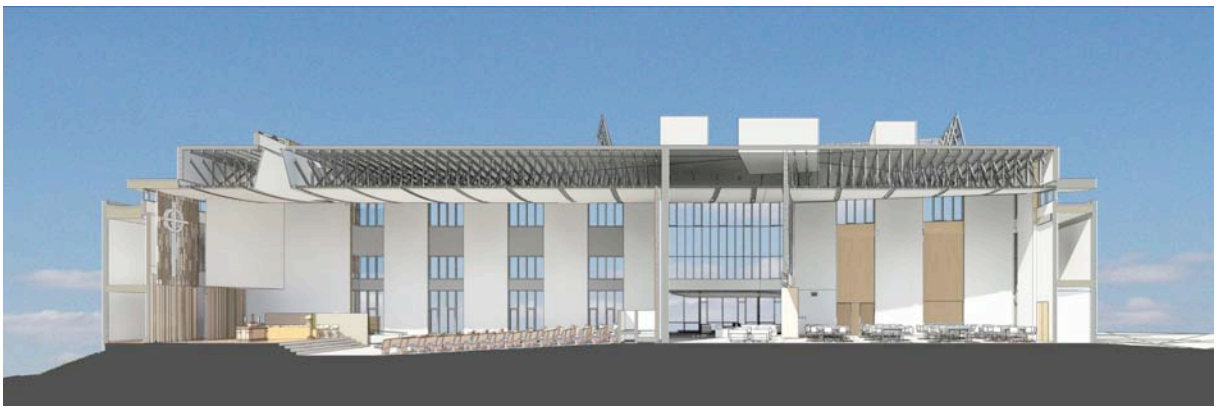
P.C. Kirkwall

Oakridge P.C.

Rockwood P.C.

St.John's, Bradford

Images of Knox Waterloo courtesy of Baird Sampson Neuert Architects
Photo Credit: Terence Tourangeau



Knox Waterloo- section

2. Who we are

The Committee On Church Architecture consists of up to 11 members from across Canada (some contribute by correspondence): There are representatives from the Presbyterian Church in Canada's National Office, and registered professionals; there are also be members of other related professions as well as ministers and lay members of the Presbyterian Church in Canada who have familiarity and expertise in the field. COCA is responsible to the Assembly Council.

The terms of reference for this Committee were established by the General Assembly and are summarized by the following decisions of the 88th General Assembly, (A & P 1962, p291)

Following Recommendations 1-3 are taken from A&P 1962, p291, under "Report of The Committee on Church Architecture, Recommendations:

1) That all Congregations and Presbyteries be reminded of the rulings of the 1953 and 1957 Assemblies, namely: "in the future, congregations applying for financial assistance from the funds of the Presbyterian Church in Canada must have their designs submitted to this Committee, and before a grant or loan is made, the report of this Committee must be received by the General Board of Missions and the Presbytery concerned informed".

2) That all congregations contemplating building a church or educational building, regardless of their method of financing, be required to submit the preliminary drawings of their proposed project to this Committee before

the working drawings are undertaken; and that the Presbytery concerned receive the report of this Committee before it grants final approval to the congregation.

3) That all congregations undertaking the building of a sanctuary or education building be required to employ a qualified architect.

Following Recommendations 1-2 are taken from A&P 1990, p247, under Recommendation No. 2:

1) That "The Property Committee Handbook" be commended to presbyteries and congregations as a helpful resource in the maintenance of church buildings and manses.

2) That Presbyteries be instructed to ensure that congregations make regular safety inspections of all buildings.

What we do:

The COCA wants to help you make the best possible project for your congregation.

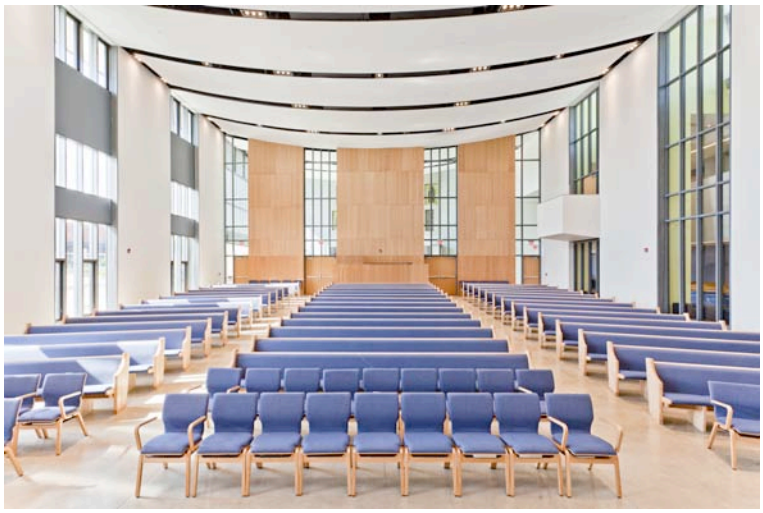
1. We review and approve plans for construction projects on buildings which belong to the Church; whether or not the project will be funded by a loan from the Church
2. We can offer experience and resources to help you plan the design and construction process
3. We can help you to bring together the best design team and constructor for your project.
4. We can guide you to determine the appropriate project budget and how to keep that budget in control.
5. We can link you to other congregations with similar experiences.

St.Paul, Amherst Island

3. Administration

If this is your first experience of organizing a construction project, we encourage you to read some or all of the publication "When you build – A guide for congregations." by F. Ralph Kendall. It includes a description of the typical stages of a construction project, advice for organizing your project leadership and communications, as well as guidance on financing. Although it was written in 2004, it still is relevant in many respects to what you will face today.

The text is available at the following link: http://presbyterian.ca/wp-content/uploads/gao_architecture_when_you_build_guide.pdf



Knox Presbyterian, Waterloo – Baird Sampson Neuert Architects
Photo Credit: Terence Tourangeau

How to get started with your project:

Having established the idea that a construction project is desirable or necessary, the first step to be taken is to form a Building Committee. The Committee should consist of between 4-7 members, but not more than 10. The minister will be an ex-officio member.

There may be a congregational leader who can champion the project, and provide leadership to the shared goal. Depending on how many different stakeholder opinions you have to deal with, you may wish to consider inviting a facilitator to help you and your group to develop a consensus view, and a shared vision for your project.

The Building Committee should represent all major interests within the congregation. It should have vision of the future needs of the congregation and should consist of practical people capable of thinking clearly, impartially, decisively and with the ability to communicate effectively with an architect. The Committee should elect a convener, a vice- convener and a secretary.

The Building Committee should be given clear terms of reference to enable it to act decisively, without having to refer to the congregation or to other committees. However, the congregation should be informed of the Committee's decisions and progress.

It is important that the Committee seek minuted Congregational approval for all contractual obligations including retaining an architect and the letting of a building contract.

If your project is an accessibility upgrade or minor renovation to an existing building, then an extensive visioning process may be unnecessary.

However, for a new facility, or larger project, the goal-setting and visioning process is a fundamental step that should NOT be skipped. The sharing of ideas and the consensus building of the project can bring people together, bring agreement, and build community.

Selecting the Design Team:

Knox Presbyterian, Waterloo – Baird Sampson Neuert Architects
Photo Credit: Terence Tourangeau

After establishing a building program and budget the Building Committee should proceed to engage an Architect.

Because churches and gathering spaces fall into an "Assembly" occupancy type, the Building Code usually requires that you engage an architect / engineering team to assist you in designing your project, for reasons of fire and life safety. Check with your municipality about the requirements in your area.

Generally, for building modifications, the COCA requires the involvement of an architect. Don't fall into the belief that by hiring a builder directly, that you will save time, money, or that you will be more in control of the process. There are many excellent reasons why you should ask for the guidance of an architect, and mechanical, electrical, structural, and civil engineers. The cost of "design fees" will not be reduced by hiring your builder first. The constructor will "build in" the costs of architect and engineer into the construction costs; although it may seem that you will receive the consulting fees "for free," it is simply not true. The architect and engineering fees are rolled into the construction costs.

Because your direct-hire architect / engineering team is objective about the costs of your project, you will receive the best advice without making any commitments about costs of construction, by hiring your architect and engineer team independently of the construction team.

Your ability to influence the result of your project is greatly improved by working directly with a design team before committing to a builder and a quote for construction. Construction advice from builders, and "Value engineering," or cost reductions, can all be delivered through the design process before committing to a cost for the construction.

When choosing the most suitable architect for your project, remember that the cheapest price does not equate to the best value.

There are as many design solutions as there are projects. The design for your particular project will be specific to your unique ideas and congregation. Architects and engineering consultants are able to design to your requirements, and can help you get the necessary approvals, select the best builder or construction method for your project, and can help manage your budget for construction.

Your provincial architects' association may be able to provide you with selection standards. For instance, the Ontario Association of Architects (OAA) also has some useful resources for owners to help select an architect. Follow the links at http://www.oaa.on.ca. Their phone number is 1-800-565-2724.

If you would like to see what tasks you can expect your architect + engineer consultant team to undertake, download the RAIC Standard Client Architect agreement Document 6. There is a short form as well, called Document 7, which is suitable for simpler projects.
http://www.raic.org/practice/contract_documents

The typical consultant team (hired under the umbrella of the Architect), consists of the Architect, Mechanical, Electrical, and Structural engineers (as required for your particular project). Depending upon the nature of your project, you may wish also to retain a lighting consultant and an acoustics engineer. These are specialities which do not fall under the typical scope of an electrical engineers work. You should also consider the need for hiring a Cost Estimator, to give you independent advice on costs of construction; Civil Engineer, if site services, grading, and stormwater design are required; and specialist engineers such as Hazardous Materials surveyors, Geotechnical (Soils) engineers, as necessary. Note: Hazardous Materials and Geotechnical are the responsibility of the Owner, not of the Consultant Team.

As part of the selection process, the Committee should:

1. Talk to organizations, companies or individuals in the community that have employed architects for projects similar to yours. Provincial architectural associations are a worthwhile resource for obtaining information about Architects and their services.
2. View buildings designed by the architects being considered
3. Interview three or four architects. Use evaluation techniques offered by your provincial architects association, or RAIC.

Your project committee should be able to communicate openly and freely with the Architect. The Architect, through the design of the building will be giving physical expression to the needs and desires of the congregation. It is important that there be a good flow of ideas between both parties and mutual respect. The design of the building is a creative exercise and should go beyond merely satisfying the functional needs of a building program. You will be working with your architect for a year or several years – make sure that you will have a happy experience with the team you select.

4. Implementation

Be realistic about the time needed to organize a project. Prepare a schedule that includes enough time to hire your architect, work through the design process, prepare construction documents, obtain planning approvals and building permit, determine appropriate costs, engage a builder / general contractor, and complete the construction process.

Keeping a strong and open line of communication between your committee and the congregation will be vital to the success of your project. You need the support of the people financially as well as

spiritually: If the congregation feels together in support of a project, the journey will be much smoother, and the results will give satisfaction to all.

When working with an Architect / Engineer design team, it is normal to go through various stages of design before pricing is requested from contractors, and before construction starts.

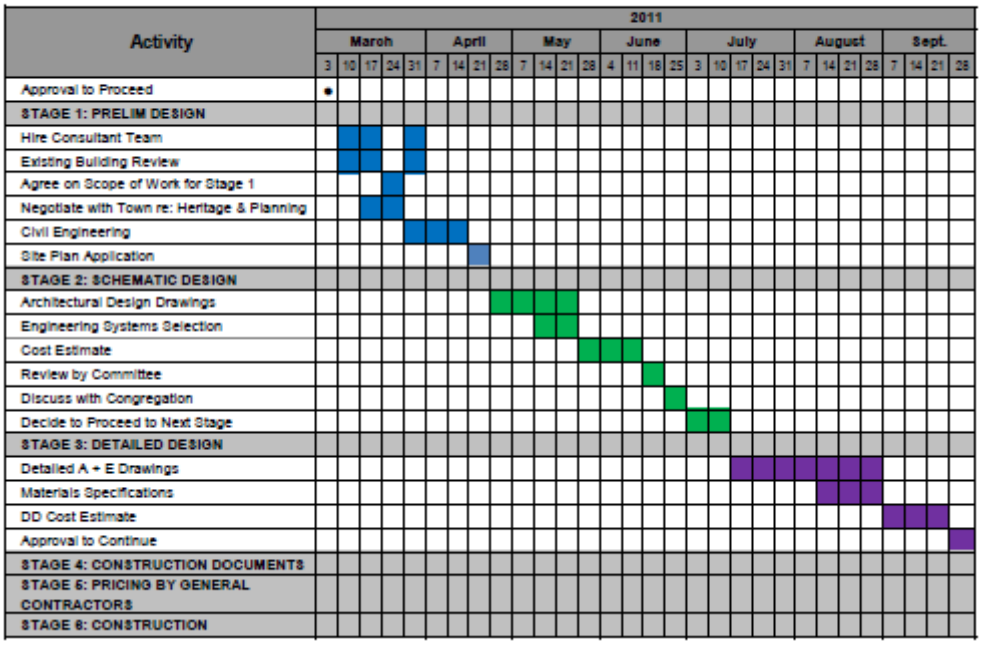
The typical stages of a construction project are:

- Programming / Pre-design
- Schematic Design
- Design Development
- Construction Documents
- Tendering (Bid period)
- Construction
- Warranty Period

The RAIC Document 6 (Client – Architect Agreement), specifically Schedule C describes the tasks in each of the phases.

The following schedule gives you examples of the typical stages of a project.

PRESBYTERIAN CHURCH TYPICAL PROJECT SCHEDULE



Design Process:
When you are ready to embark on your journey, let the Committee On Church Architecture know by filling out the attached "Notice of Project." (Go to: https://adobeformscentral.com/?f=7g13kdsIlaLMmrZNEs0FQg) This notice will allow you to access the assistance of the committee, to address whatever questions you may have along the way.

Programming / Pre-Design Stage

- Feasibility Study
- Space Needs Study

- Master Planning
- Most important phase

Schematic Design Stage
The Architect designs a building by taking the program of requirements and the budget and proposing one or more solutions based upon this information, which will meet the congregation's needs and limitations. Eventually the Architect produces final drawings and specification's from which the building can be built.

The first stage in designing a building is the Schematic Design stage. At the beginning of this stage the Building Committee should give the Architect the following information:

- Location of site, survey and soil tests
- Functions to take place in building
- Projection of future development
- Budget objectives and projection of financial resources

The Architect's objective is to provide advice on the technical and economical feasibility to build the required building within the budget and with adequate provision for future expansion. He or she must from the outset design a building that the congregation can afford. Having advised the Committee that it is realistic to construct the required building, the Architect will prepare the first schematic sketch designs of the proposed building.

At the end of this stage the Architect should submit the following to the congregation's Building Committee.

- Master plan for site showing building, required parking area, expansion area.
- Floor plans, gross area, cubic footage, room sizes, materials and finishes
- Elevations
- Section
- Description of structural, mechanical, electrical concepts
- Elemental cost plan

When the Building Committee has accepted the above, it should be submitted to the Committee On Church Architecture (COCA) for comment. An application form for this submission is found in Appendix A or go to: https://adobeformscentral.com/?f=QqTUamN8Dt3N4fyozKrvJA

Design Development Stage
After the schematic design and costs have been approved by the Building Committee, there are a considerable number of decisions to be made in the design development stage. Materials, finishes and details of the building work all need to be finalized. It is important that the cost estimates be kept up-to-date as each of the design elements in the building is developed.

At the end of the detailed design stage your Building Committee should approve the developed design and cost estimate. It should then obtain congregational approval for the design and, if a loan will be necessary, authorization to seek a loan.

Contract Documents
When the foregoing approvals have been obtained, your Building Committee should obtain the approval of the congregation to authorize the Architect to prepare the working drawings and specifications.

These working drawings and specifications show in detail how the building is put together, the quality of materials, and location of special items. The drawings and specifications become a part of the legal contract documents for the construction of the building.

While the working drawings are being prepared, a final cost check should be done to ensure that the building is still within budget. The congregation's Building Committee should check that the comments of the Committee On Church Architecture have been incorporated into the building design at this stage.

At the end of this stage the Architect should present the finished drawings and specifications and indicate to your Building Committee that the building is within the budget. Your Building Committee should approve the drawings and specifications.

When the design is complete, it is time to consider the most suitable way to hire a builder. There are 3 main options:

- Fixed Price Contract – using a General Contractor
- Construction Management – hiring trades directly, with a construction manager doing the administration of the contracts on your behalf
- Design Build – Performance type proposals from General contractors that include amendments to the design documents to produce the most cost efficient design.

Once again, remember that the Cheapest Price does not equate to the Best Value. Keep in mind that you, the building owner, will have to pay the heating and cooling bills for the next 20-50 years: Cutting corners on construction quality to save capital costs is short sighted. More energy efficient buildings may costs a little more in capital, but will save you money over the life of the building because they cost less to operate.

Call For Tenders

Calling for tenders is a procedure whereby a list of general contractors, investigated as to their capabilities by the Architect, are invited to submit bids stating the amount of money which they will charge to construct the building as shown on the architect's drawings and specifications.

The Architect should be present at the opening of tenders and will advise the congregation's Building Committee on the award of the contract.

Congregational approval is required before your Building Committee can sign a building contract. It is also essential that all financing be arranged before entering the contract.

Contract Administration

Once the construction contract is signed, the Architect becomes responsible for administering the contract on behalf of the church.

It is essential that all comments, ideas or suggestions be channelled through only one representative of the congregation's Building Committee to the architect. Only the architect is responsible for issuing instructions to the (Building) Contractor and authorizing changes to the work. The Architect will also approve the Contractor's requests for payment and issue an "approval to pay," called a Certificate of Payment, to the Building Committee. The Building Committee / Congregation then pays the Contractor. This usually happens monthly. On no account should you advance funds to the Contractor before work is actually done on site.

The Architect certifies final payment only after his/her inspection of the completed work provides reasonable assurance that the Contractor has fulfilled the contract obligations, and prepares the final account. The Congregation (Client) makes final payment to the Contractor when satisfied through the solicitor that the project is free of liens or other legal obligations.

Inspection after Occupancy
Contract documents prepared by the Architect usually require a minimum 12-month warranty from the Contractor for all the labour and material. During this period, the architect's advice and assistance are available to the client. At the end of the warranty period, the architect, with the client, conducts an inspection of the building. Any defective materials, construction, and equipment issues that have arisen during the 12 month period are identified, and the Client / architect notifies the Contractor to rectify or address the items.

Approvals
In every construction project, there are many approvals necessary in the course of the project, including Approval from Presbytery, Financial institution, and your local / Regional Municipality (planning approvals, building permits).

Some of the approvals take several months to obtain. It is advisable to meet with your municipal planning and building officials at an early stage to determine if your idea is possible within their legislation.

Questions you should ask include:
- Do we require planning approval for this project?
- What zoning by-law requirements apply?
- Are there parking requirements?

If you are building close to a property line, you should ask:
- What setback requirements are for the property?
- Are there construction restrictions if we build close to the property line?

Building Code:
Depending on which province the project is located in, there may be a provincial Building Code, or National Building Code, to be followed. All projects should be submitted to the local municipality to ensure compliance with the applicable Building Code. A building permit is required for any construction project bigger than 10 sq.m.

If undertaking the work by construction management, you may become the "Constructor." ***In this case, you attract all the liability of an employer.*** Contact the Ministry of Labour to determine your liability if this is applicable.

Approvals by COCA:
When you are considering building on property of The Presbyterian Church in Canada, you are also required to obtain the approval of the Committee On Church Architecture (COCA)

The committee's review has the objective of maintaining a standard of care in the building assets of the church, and that the shared purpose of serving God and the Church through Living Faith is being met.

After the program of requirements has been considered, and you have completed the schematic design with your Architect / Design Team, you should submit the Application form

(https://adobeformscentral.com/?f=QqTUamN8Dt3N4fyozKrvJA) together with the required documentation, for review and approval by the Committee:

- Site Plan (with a legal survey)
- Floor Plan(s)
- Existing Floor Plan(s) if applicable
- Roof Plan
- Ceiling Plan showing lighting
- Building Sections
- Elevations – showing materials / textures
- Phasing Plan (if applicable)
- Photos of the existing building if applicable; or of the property where the new church will be built
- 3-d rendering or model of the proposed building
- Building Code Analysis

An application form is available at: https://adobeformscentral.com/?f=QqTUamN8Dt3N4fyozKrvJA

It is advisable to discuss your project with the Committee early in your project's process. This is an opportunity for you to benefit from the knowledge and experience of professional and lay members of the Church

If your plans have been thoughtfully prepared with the guidance of your design team, it is possible that your plans will be approved based on a single submission. Sometimes there are issues that the Committee feels need to be addressed; if so, the process may take a couple of months or more.

Because membership of the Committee is from across Canada, part of the Committee's work is by correspondence. It is necessary that the plans be received by the Secretary's office at least a week before their scheduled meeting. If you also have your submission in electronic form, it would be useful.

Scheduled Meetings of the Committee On Church Architecture
The Committee usually meets in the afternoon on the third Wednesday of the month, except during the summer. It is best to contact the Secretary of the Committee to find out if there is a meeting scheduled for the month you wish to submit your plans.

If you wish, you may attend a committee meeting to present your proposal, and discuss its contents with the COCA Arrangements should be made with the Secretary.

Decisions
The COCA will decide if:

- They approve of the architect's design proposal (with or without comments), or
- They will ask for a re-submission

The Secretary of the COCA will write to you concerning the decision on your submission, including any comments made by the Committee.

If your submission has been approved, the Secretary will send a copy of the letter to your Presbytery for their information.

If a re-submission has been requested in the Secretary's letter to you, the Committee will attempt to address in their comments, all of the deficiencies that have been identified.

Re-Submissions
Re-submissions should be received by the Secretary at least a week before any scheduled meeting of the Committee.

Your re-submission only needs to address the noted deficiencies / items identified by the COCA It is not unusual that new issues may arise as changes are made to the plans. The COCA will endeavour to keep you advised of issues that need to be resolved.

Upon approval of your submission, you will be advised in writing, with a copy of the letter sent to your Presbytery for their information.

5. Cost Estimates for Construction Projects

Figuring out the Costs of your Project:
Your Architect may be able to provide historic costs for similar projects, for general guidance.
A cost estimator will be able to provide more accurate guidance with regard to anticipated construction costs. A general contractor will also offer "ballpark" costs based on previous experience.

However, until there are definitive drawings describing the scope of work, everyone is only guessing at the actual cost.

Because the cost of a project is a very important component in the overall scheme, it is critical to arrive at a realistic and thorough cost estimate before committing to proceed. Many people make the mistake of hoping that they will be lucky; that they can reduce costs by cutting corners; doing work with volunteers.

People frequently try to minimize the scope at the start, and think that scope can be added during the design process without adding to the cost.
It is best to make an honest and complete cost plan at the beginning of the project, and plan to minimize sleepless nights over unrealistic commitments.

If you have to do the same work over a longer time frame (for example, in phases, so that the building can continue to be used during construction), the extra time is going to cost more money. There is no magic bullet!!
Cost estimates are prepared based on drawings or text descriptions of the work required. Until it is described on paper, it is a guesstimate. Basement space is NOT free.

Aswell, there are other costs related to the project that you may have to factor in.
Attached is a "proforma" of a theoretical project, with line items which you may or may not wish to include.

SAMPLE CONSTRUCTION COST ESTIMATE			
Calculate cost of the building construction by costs per square foot or by measuring			$XXXX
Sub-Total Construction Costs	XXX sq. ft.		$XXX
GC Overhead and Profit Roof Replacement (or other additional scope items) **Soft Costs:** ***(edit as appropriate to the project)***		Include 15% O&P,10% design,10% construction	
Permit-2%			
Design Fees - 10% of Hard Construction			
Misc - Geotech / Topo - .05%			
DSS Survey - Lump Sum			
Site Plan Approval - 1%			
Escalation Costs (1%/year)			
Fit-up (Furnishings) - 2.5%			
Insurance & Builders Risk 1%			
Advertisement (Allowance)			
Contingency on Hard Costs (post tender) -15%			
LEED Premium 5%			
Sub-Total Soft Costs			$ -
Total Project Costs			**$**
Total Separate Prices:			
Project Management Services - 2%			
Moving Costs			
Rental Costs -			
Storage Costs			
Mobile Home			
Mobile Office			
Sub-Total Separate Prices	**$ -**		$ -
TOTAL PROJECT			**#VALUE!**

Cost estimates are typically prepared at the end of the Schematic design and Design Development stages. The cost estimate at the end of the design development stage in widely regarded as the most important reference for the likely cost of construction. If the cost estimate at this stage is different from your capital cost target, this is the time to make scope and design changes required to meet your budget expectations.

6. Heritage Buildings

These are older buildings that are remarkable for either their past use or their architecture. This can be both a general term and a legal term, and it may differ among municipalities, provinces, etc.. The designation is usually given to retain aspects (or the whole) of a building which are of such a nature that they are considered valuable in the historic sense/design sense to the general population and may therefore require certain standards with regard to any renovation construction anticipated.

Whether it is a quaint clapboard sided church or a monumental brick or stone masonry one, each of these buildings represent a repository of our shared denominational church experience. Within them we have been baptized, confirmed, married and eulogized and they form an integral part of the communities in which we have participated. The challenge comes when these church buildings are no longer able to appropriately meet the needs of our congregations (Program Limitations) or have become expensive to maintain, repair or renew (Financially Unfeasible).

Programme Limitations can take many forms, for instance,

- *The need for an elevator or ramps to allow for barrier free access to the sanctuary and/or principal programme areas within the building, including washrooms,*
- *The need to upgrade a worship space to provide a fresh look or accommodate a new arrangement of the available space,*
- *The need to expand an existing sanctuary or the other programme spaces within the church,*
- *The need to provide upgraded site and building access, etc.*

The second challenge is a difficult one for a congregation, when it appears that the physical needs of the building and its condition exceed their capacity to resolve the issues. For instance,

- *The building structure has been discovered to contain a major defect that is costly and raises the question as to whether the congregation should continue to invest in this existing building,*
- *The combined costs of repairs, renewal and replacement of existing building elements and service components are greater than their capacity to respond,*
- *In some instances a shrinking congregation is left to deal with a building that exceeds their current needs for space while the daily costs of the maintenance alone may be greater than they can meet.*

In each of these situations, congregations need to assess their resources realistically and develop an overall strategy to plan for the near and distant future. There may be resources within the congregation to undertake this review, generally the services of an architect would be invaluable.

It is imperative for the congregation to determine whether their church has been recognized as having heritage value or significance as it may affect any solutions to their current planning. The church may be deemed to have heritage value in one of the following ways:

- The church building may be included in a List that is maintained by the local municipal authority. *The listing of any building within a municipality may require the submission of drawings to the municipal heritage authority prior to obtaining a building permit.*

- The church building may be Designated within the municipal records.
  A Designated property usually contains a written description of the property and the features that have been identified as being of heritage significance both within and outside the building. Changes to any of these portions of a heritage building would require consultation with the municipality as well as the services of a qualified heritage consultant to prepare the proposed modifications to the building.

- The church building may be included in a Heritage Conservation District Plan within the municipality. *A Heritage Conservation District Plan usually describes a fixed community area with specific boundaries. The District Plan enumerates the special qualities of this overall precinct and then provides a set of planning guidelines for its ongoing maintenance and development. There are comments related to materials, scale of the buildings, common setbacks, recommendations for the scale of development and the retention of the character of the community. Changes and the renewal to a church within this setting would require consultation with a qualified heritage consultant.*

  The church building may be a National Historic Site and is deemed to be federally significant. *A National Historic Site designation brings along a special description of the reasons for designation. This may include the history of people associated with a building or place, the architect of record for the original building or later additions, the specific features of the building including its style, its details, its windows, etc. A building that has been identified as being federally significant will require careful consideration and consultation with an architect who has the appropriate conservation skills and heritage experience.*

How do you determine whether your church building qualifies for heritage consideration? In some provinces, any building over forty years of age would need to be evaluated to determine whether it has heritage significance. Each province has established heritage conservation departments to deal with the recognition, celebration and protection of historic places for today and for future generations. A full listing of these individual heritage branches for the provinces and territories can be found at www.historicplaces.ca/en/pages/register **(**follow the link to "The Partners" on the Home Page).

Heritage Buildings are unique in their character, formation and construction. The maintenance, repair and renewal of heritage buildings will require heritage consultants and trained heritage trades. It is important for congregations to understand that the ongoing maintenance of a heritage building requires specialized expertise. The selection of repointing mortars must be carefully evaluated to retain a similar overall mix of sand, mortar and lime to protect the stone and allow for the longevity of the mortars themselves. Stained glass windows, stone relief carvings and intricate plaster features each need to be repaired, restored or replaced in consultation with conservation specialists.

The cost to renew heritage buildings can be substantially higher than other buildings. The materials used may be more expensive, but the associated benefit of these materials is that their life expectancy is greater than current building products. Some municipalities have established Community Improvement Plans to assist individual property owners by granting matching funds for the renewal and repair of heritage buildings. Congregations should consult their local municipalities, provincial and federal authorities to confirm whether their buildings qualify for any of these funds.

7. Energy Efficiency / Sustainable Design / Green Design

The term sustainable design became popular during the 1990's, and since then it has gathered support and influence amongst building owners, designers, and government agencies. The general purpose of sustainable design is to be careful about our use of natural resources (oil, electricity, gas) by designing buildings so that they use less energy / less heat /less air conditioning, less artificial light, etc.

Links to some useful websites can be found in the "Links & Resources" section.

As a building owner, it is in your best interest to promote energy efficiency, since it will directly affect the cost of operating your building. Simple approaches to reducing these costs, like insulating to higher than minimum standards, use of proper sealants and construction details, will save large sums of money over the life of the building. In addition, incorporating natural day-lighting techniques, natural ventilation, and high performance glazing in any building project will lower the energy demand and thereby save additional money.

Given the urgency of action by the design community under the threat of Global Warming and Climate Change, several programmes have been established to promote sustainable design, energy efficiency, and green design.

Specifically in relation to buildings / facilities, here are some things that you can do:
- Form a group to explore your ecological footprint as a way to increase your awareness. Identify the impacts and brainstorm how to reduce them.
- Conduct an energy audit on your church building, and take steps to make it more energy efficient.
- Retrofit older buildings or building more energy efficient new buildings. Loans up to $100,000 are interest-free if repaid by the end of the twelfth year of the loan and are available from The P.C. in Canada's Lending Fund (A&P 2008, p. 212).
Costs for retrofitting can be recovered over time through the resulting savings, but provide immediate carbon emission reductions. Some municipal and provincial government programs will partially reimburse the cost of energy audits.
- Form a "Green Team" in your church with people of different ages and backgrounds to encourage thinking ecologically in all aspects of the church's life.
- Celebrating Earth Day every year on or near April 22nd. Make caring for creation the focus of worship.

KAIROS published a case study of a retrofit experience for St. Thomas the Apostle Anglican

Church, Ottawa. The project was based on a recently eliminated federal program and a resource entitled “Energuide for Existing Buildings”. St. Thomas’ goals were to reduce energy consumption and related costs, increase the health and comfort of all users of the building, increase energy use awareness and responsibility among all users of that facility, and contribute to Canada’s Kyoto commitment. The results were encouraging. They achieved their goals by reducing gas consumption by 48% and electricity use by 26%.

Congregations are invited to review this document and to carry out an energy assessment of their buildings. The capacity to introduce energy conservation measures will vary from congregation to congregation. Major retrofits may be possible for some congregations and prohibitively expensive for others. The challenge is to take practical steps to conserve and to reduce our ecological footprint.

8. Accessibility Design Guidelines

Accessibility design guidelines are changing as our society develops ways to integrate people with a wide variety of challenges to be able to access and be comfortable within the built environment. “Equal access” is becoming the standard for design of buildings, particularly public and community buildings.

Although there is a Canadians with Disabilities Act, the equal access provisions must be legislated at the provincial level; and not all provinces have done so.

Currently (2011) the Ontario Building Code (OBC) establishes the minimum requirements for accessibility in Ontario. The Accessibility for Ontarians with Disabilities Act will phase in requirements for providing a more accessible built environment.

In addition to the OBC, several municipalities have adopted accessibility design guidelines, which exceed the requirements of the OBC. These municipalities in many cases also have an “accessibility co-ordinator”. This person will help you determine the appropriate design standards for your project. Take note however that the municipal guidelines cannot supercede provincial legislation. As an example, a link to accessibility design guidelines for London Ontario is provided in the links area. You should check with your own municipality as to the standards / design guidelines that apply for your project.

In the absence of Canada wide legislation to provide for universal accessibility in the built environment, we have included a link to the CAN/CSA-B651-04 (R2010) “Accessible design for the Built Environment” Note that these are a starting point only, and that your municipal / provincial legislation may differ from these standards.

9. Links / Resources / References

- For Ontario:
  - oaa.on.ca
  - How to find an architect
  - Client architect agreement (good source for finding out exactly what the architect will do)
  - Quality based architect selection
- For Other Provinces:
  - Provincial Architects Association, and raic.org for all provinces
- OGCA / RAIC / OAA / different forms of contract for construction
- Architectural Heritage organizations
  - Canadian Association of Professional Heritage Consultants
  - www.heritagecanada.org
  - Architectural Conservancy (Ontario) – www.arconserv.ca
- Canadian Green Building Council – www.cagbc.org
- Faith and the Common Good - www.greeningsacredspaces.net
- Energy Efficiency – oaa.on.ca / professional resources / sustainable design / knowledge centre
- MOEE
- Accessibility – Presbyterian resource page
- e-laws – Building Code

Provincial / Territorial Associations of Architects

Architectural Institute of British Columbia
100-440 Cambie Street
Vancouver, BC V6B 2N5
Tel: (604) 683-8588
Fax: (604) 683-8568
E-mail: info@aibc.ca
www.aibc.ca

Ordre des architectes du Québec
1825 boul. René-Lévesque Ouest
Montréal, QC H3H 1R4
Tel: (514) 937-6168
Fax: (514) 933-0242
E-mail: info@oaq.com
www.oaq.com

Alberta Association of Architects
Duggan House Building
10515 Saskatchewan Drive
Edmonton, AB T6E 4S1
Tel: (780) 432-0224
Fax: (780) 439-1431
E-mail: info@aaa.ab.ca
www.aaa.ab.ca

Architects' Association of New Brunswick
P.O. Box 5093
Sussex, NB E4E 5L2
Tel: (506) 433-5811
Fax: (506) 432-1122
E-mail: aanb@nb.aibn.com
www.aanb.org

Saskatchewan Association of Architects
200-642 Broadway Avenue
Saskatoon, SK S7N 1A9
Tel: (306) 242-0733
Fax: (306) 664-2598
E-mail:

Nova Scotia Association of Architects
1361 Barrington Street
Halifax, NS B3J 1Y9
Tel: (902) 423-7607
Fax: (902) 425-7024
E-mail: diane.scott@nsaa.ns.ca

memberservices@saskarchitects.com
www.saskarchitects.com

Manitoba Association of Architects
137 Bannatyne Avenue
2nd Floor
Winnipeg, MB R3B 0R3
Tel: (204) 925-4620
Fax: (204) 925-4624
E-mail: info@mbarchitects.org
www.mbarchitects.org

Ontario Association of Architects
111 Moatfield Drive
Toronto, ON M3B 3L6
Tel: (416) 449-6898
Fax: (416) 449-5756
E-mail: oaamail@oaa.on.ca
www.oaa.on.ca

www.nsaa.ns.ca

Architects Association of Prince Edward Island
PO Box 1766
Charlottetown, PEI C1A 7N4
Tel: (902) 566-3699
Fax: (902) 566-1235
www.aapei.com

Newfoundland and Labrador Association of Architects
PO Box 5204
Station A
St. John's, NF A1C 5V5
Tel: (709) 726-8550
Fax: (709) 726-1549
E-mail:
nlaa@newfoundlandarchitects.com
www.newfoundlandarchitects.com

Northwest Territories Association of Architects
P.O. Box 1394
Yellowknife, NWT X1A 2P1
Tel: (867) 766-4216
Fax: (867) 873-3654
Email: nwtaa@yk.com
www.nwtaa.ca

Useful Publications

- "When you build: a guide for congregations of The Presbyterian Church in Canada" by F. Ralph Kendall. Download link:>>>>>>>>>>>>>>>>>>>>
- *"Leading with Care"*

Download online : www.presbyterian.ca/resources/online/275. or contact the Book Room, ext 239

- RAIC Document 6 - Standard Client Architect Agreement – www.raic.org
- RAIC Document 7 – Abbreviated Version
- CCDC-2 Stipulated Sum Construction Contract – www.ccdc.org/documents/index.html
- CCDC- 13 Design Build Construction Contract

10. Glossary of Terms

We recognize that there are a lot of words specific to the architectural design community that you may not be familiar with. This list, while not conclusive, explains some of the more common terms.

Accessible – also "Equal Access" – meeting certain design and construction standards required to accommodate wheelchairs and mobility issues
Addendum– A change to the contract documents, described in written or drawing form, issued during the bidding / tendering process to the bidders.
Aesthetics – The overall appearance and style of a new project or renovation that takes into consideration the relationship between the different parts of the building, its placement on the property/site, its relationship to the community around and within which it will be built, use of similar or complementary materials in construction, thoughtfulness with regard to signage and decoration, pleasantness of exterior landscaping/parking areas, and does not jar in any way.
AIBC – Architectural Institute of British Columbia; licensing body for the profession in B.C.
Architect - for someone to be called an "Architect" they must have become registered with – and remain in good standing - the provincial licensing body for Architects; The architect's "seal" or "stamp" is provided upon registration and is surrendered upon retirement, death or misconduct.
Capital costs – Those costs relating to building or renovating a building. Capital cost excludes "Operating Costs", and "Soft Costs"
CaGBC Canada Green Building Council
CAHP – Canadian Association of Heritage Professionals
Change Orders – A document prepared by the Architect to describe a change to the construction contract, for approval by the Owner.
Construction/Contract/Production Drawings and Documents – after approval of the design development stage - the final detailed working drawings of what will be undertaken , including materials and finishes, as provided by all consultants, and final cost check on which the General Contractor will make his bid for the job. The Specifications are a part of these documents. All legal requirements are noted.
Consultants – the professionals engaged to lend their expertise to the project: engineers, landscape architects, quantity surveyors, lawyers, etc.
Contingency – an amount, usually 15% of the contract cost that is included in the Construction Contract to pay for unforeseen items, changes requested and required during the course of construction.
Design-Build Construction Management: the provision of services, often without the participation of an architect, for a building project; often touted as being more economical – questionable –which makes the client the constructor and therefore liable as an employer. This is often more than a church body can – or should – undertake.
Design/Preliminary Design Phase– drawings roughly blocking out the program, a review of the scope of the project as determined by the client; review of relevant by-laws and heritage review; consideration of client's budget; presented for approval before commencing the next stage.
Elevation – a drawing that shows the wall surface of the building. It could be an inside wall, r the outside.
Engineer – Civil, Structural, Mechanical, Sound (Acoustic), Electrical, etc. These individuals, like architects, must be licensed by a professional body (usually provincial) to be called "Engineers". Their expertise relating to the structure and systems of a building is complementary to the work of an architect.
Functional – a detail in the plans that satisfies a practical need and works!
Geotechnical – Information about soils, and underground conditions
Hazardous Materials – Materials which are considered hazardous to your health – In the context of buildings, typically including asbestos, lead, mercury, mould,

Heritage Buildings – These are older buildings that are remarkable for either their past use or their architecture. This can be both a general term, and a legal term (which may differ among municipalities, provinces, etc.) The designation is usually given to retain aspects (or the whole) of a building which are of such a nature that they are considered valuable in the historic sense/design sense to the general population and may therefore require certain standards with regard to any renovation, construction anticipated.
Homolgate – to express agreement with, or approval of, something, esp. To confirm officially
HVAC – short for Heating, Ventilation and Air Conditioning.
KAIROS – Canadian Ecumenical Justice Initiative – unites eleven churches and religious organizations in faithful action for ecological justice and human rights.
Leading with Care – a Presbyterian Church in Canada standard required for all its buildings existing and to be built, to ensure the safety of church members and employees. This includes such things as windows in doors.
LEED – Leadership in Energy Efficiency and Environmental Design – a rating system (Silver, Gold and Platinum) used to encourage architects, designers, contractors and clients to perform their work with sustainable design in mind.
Lien Holdback – a sum of money withheld from payments to the contractor, and held in trust by the Owner, to pay directly to subcontractors who have not been paid by the general contractor. Lien legislation describing the requirements and the process, is provinicial, and does not apply to all Provinces.
Lump Sum – payment of a specific amount versus a percentage of overall construction costs, generally to consultants
MOEE – Ministry of Environment and Energy (Ontario)
OAA – Ontario Association of Architects; licensing body for the profession in Ontario
Operating costs – Those costs incurred after the project is complete: the day to day expenses involved in the operation and management of the building (electricity, roof repairs, etc.)
Production Drawings/Phase – see Construction/Contract Drawings
Program – the thoughtful wish list of the client, indicating uses of areas, and specific products desired
Quantity Surveyor – an individual trained in ascertaining the cost of a project from the detailed drawings and specifications: the basis for a final budget and cost estimate. In Canada, it is more common to use the term “Cost Estimator”
RAIC – Royal Architectural Institute of Canada: a national body of licensed architects. It is not a requirement of an architect to be a member of the RAIC to practice.
Schematic Phase – A stage of the design process in which the general appearance and layout of the project are determined by the design team and approved by the owner.
Section – a plan shown as if taking a slice through the building, showing the interrelationship of all floors, walls, roof and basement
Shop Drawings – detailed drawings prepared by the manufacturer of selected products prior to fabriaction or ordering. The review of shop darwings by the Architect and / or engineers offers a final look for compliance with contract documents and coordination issues.
Specifications – the written description of the project, the materials, the time line, the management of the construction site, the identity of materials and products to be used, giving manufacturer, model number, colour, any detail that would identify the specific product the client requires; also the standards to be achieved as in concrete strength, window glazing, coats of paint, etc. and the manner of application or construction where applicable.
Survey – legal survey, geotechnical (soils), etc.
Sustainable Design – taking care in the design about the use of natural resources and designing buildings to use less heat, electricity, artificial lights, etc.
Tendering – also referred to as “Bidding”. The process by which interested parties (contractors , builders) offer to do the work as described in the contract documents for a firm price. This may be

done by an open bid (open to anyone qualified to submit a price), or prequalified, or invited, (open to to pre-selected contractors). The tendering process is often referred to as "going out for tender"

11. Frequently Asked Questions

ASK US – WE'RE HERE TO HELP
We encourage you to ask questions about your project to assist you in your journey.
We will endeavour to respond to questions submitted through this portal as volunteer committee time permits.
If your question is urgent, please contact the secretary directly.

- FAQ "Are all architects the same?"
- FAQ "Are all builders the same?"
- FAQ "We are adding a lift to our church. Do we require an architect to be involved?"
- FAQ: "We need more room in our church for outside groups and want to provide for disabled access. Who do we have to consult first? Do we have to ask permission of the National Church? of Presbytery? Or can we just form a committee and go ahead talking with an architect about designing the work?"

12. Contact

By Mail:
The Secretary
Committee On Church Architecture
The Presbyterian Church in Canada
50 Wynford Drive
Toronto, ON M3C 1J7

By Phone:
Telephone: 416-441-1111 ext 223 or
1-800-619-7301

By Email:
dmuir@presbyterian.ca and identify COCA in the subject line