



**SCHEDULE OF RECOMMENDED FEES**

**TO BE CHARGED FOR**

**SPECIALIZED ENGINEERING**

**PROJECTS AND SERVICES**

**IN THE BUILDING FIELD**

**January 2009**

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## 1. FOREWORD

Engineering and geoscience services are those services provided by a person conducting the “practice of professional engineering” or the “practice of professional geoscience” as defined in *The Engineering and Geoscience Professions Act*, including such works or processes requiring the skilled application of the principles of mathematics, physics, mechanics, aeronautics, hydraulics, electricity, chemistry or geology in their development and attainment; and includes such reporting, advising, valuing, measuring for, laying out, designing, directing, constructing or inspecting by any person under the general supervision of a professional engineer or professional geoscientist. The role played by an engineer or geoscientist in managing the undertaking of a project or work of construction, often referred to as “Project Management”, is also recognized in the above definition. The role of “Prime Consultant”, whereby the professional member manages the work of sub-consultants and specialists, is often part of project management although it may be recognized as a separate task.

A professional engineer or geoscientist who provides consulting services shall perform the services on a professional fee basis. This document provides guidelines for engineers providing their specialized expertise in the area of building services, including when engaged in the role of “Prime Consultant” to building projects and when engaged to provide engineering services to the “Prime Consultant” on a building project. This schedule of fees is authorized by the Consulting Engineers of Saskatchewan and establishes suggested fees for the services enumerated. The fee guidelines presented herein replace the former “Scale 2B” of the 1995 Guidelines, although the name “Scale 2B” has been retained because of its acceptance within the building trades field.

At the time that the previous fee schedules were being reviewed in 2003, it was felt that that the fees in general were too low relative to the current cost of doing business, the complexity of the project should be identified and an appropriate fee be assigned, and that the basis of the fee structure created inequities when the client was GST tax exempt. During the course of the revision process, the cost of construction increased and with that the net value of a percentage fee also increased. As such, the original percentages were retained, but the thresholds were increased to reflect the current cost of construction. The schedule has been expanded to address the complexity of design required for various types of construction. To address the GST issues, the percentage fee has been increased by 0.5% and the fee based on the “before GST” tax cost of construction.

Through the course of 2007, APEGS and CES mutually agreed that the maintenance of a recommended consulting fee document was more appropriately performed by CES. APEGS is the licensing and regulatory body for the engineering and geoscience professions. It was agreed that CES as the representative of consulting firms should have custody of the recommended fees for consulting engineering.

In proposing the following guidelines, it is the CES’ position that in the end, the fee agreed upon by a Consultant and Client is based upon a clear understanding of the project scope, agreed upon terms of reference, and a proper consideration of risk associated in successfully completing the project. CES recognizes that when both the Client and Consultant view the fee as fair and proper, this ensures that proper professional practice is undertaken in completing the project. In the end, both parties recognize and obtain fair value.

Both engineers and geoscientists may use this document, since CES recognizes that both types of members share similar principles of professional practice. Therefore, the determining factors as to rates charged by

an engineer or geoscientist are: the level of specialist skill, the amount of experience, and the relative value of the service offered.

User of this document should note that the word “fee” as used in this document refers to the **net fee payable** to the professional engineer or professional geoscientist. This definition recognizes circumstances where the practitioner may work as a sub-consultant to another professional who is the prime consultant on a work of engineering or geoscience.

Further information regarding fees in general or with respect to specific cases may be secured from the office of Consulting Engineers of Saskatchewan, Suite 12, 2010 7<sup>th</sup> Avenue, Regina S4R 1C2.

*On behalf of the Consulting Engineers of Saskatchewan  
Consulting Fees Guidelines Revision Task Group  
Specialized Engineering Projects and Services in the Building Field*

*Grant Dawson, P. Eng.  
Task Group Chair*

*May 2008*

*General Guidelines For Fees Charged by Professional Engineers and Geoscientists in the Building Field  
January 2009*

## **2. ACKNOWLEDGEMENTS**

This update of the “Building Fees Guidelines” is a co-operative effort of the Board of Directors and member firms of the Consulting Engineers of Saskatchewan.

The document supersedes previous versions prepared by the Association of Professional Engineers and Geoscientists of Saskatchewan (“APEGS”), the Consulting Engineers of Saskatchewan (“CES”), and the Saskatchewan Construction Panel (“SCP”). The structure and general principles of past versions is retained in this new version. The excellent and thorough work of APEGS and its volunteers in preparing past versions of this document is acknowledged.

Special thanks and acknowledgements are due to the members of the Task Group, these being Grant Dawson, P. Eng., Willem de Lint, and to all members of the Saskatchewan Construction Panel (“SCP”), the Association of Professional Engineers and Geoscientists of Saskatchewan (“APEGS”), the Saskatchewan Architects Association (“SAA”), and the CES 2007/08 CES Board of Directors.

The Association would also like to thank the volunteers who reviewed the first draft of this document. Their comments and suggestions contributed to its overall usefulness.

### 3. INTRODUCTION

{tc \l1 "INTRODUCTION}

This document presents a Schedule of Fees recommended to provide an equitable basis for the remuneration for professional engineering services, whether provided as a sole practitioner, in partnership, or in an incorporated practice. The fees noted herein are suggested only and are considered to be commensurate with the provision of competent and responsible professional engineering services.

For the purposes of this schedule, the following definitions apply:

<i>Client</i>	The Consultant's client.
<i>Consultant</i>	The party contracting with the Client to provide professional engineering services.
<i>Contractor</i>	The party contracting with the Client for the provision of labour, materials and equipment for the execution and quality control of the work.
<i>Cost of Construction</i>	The final contract price, including the cost of any additions or change orders, for construction of an engineering work including taxes (GST / PST).
<i>Fee</i>	The <b>net fee payable</b> to the professional engineer or professional geoscientist.
<i>Owner</i>	The person or persons who will own the work or works upon completion of the contract between the client and the contractor.
<i>Practice of Professional Engineering</i>	Any kind of planning, designing, composing, measuring, evaluating, inspecting, advising, reporting, directing or supervising, or managing any of the foregoing, that requires the application of engineering principles and that concerns the safeguarding of life, health, property, economic interests, the public interest or the environment.
<i>Professional Member</i>	A person or persons providing professional engineering services.
<i>Professional Practice</i>	The set of generally accepted ethical and business practices, apart from a member's specific technical skills, that invest a member with the requirements to provide professional engineering services to the public.
<i>Project Construction Value</i>	The final cost of constructing the work that the engineering fee is based upon. The Project construction value includes the original

construction contract price, the cost of any additional work or change orders issued through the course of the work, the cost of any equipment designed by the consultant but purchased outside the contract, PST, but not GST.

***Written Agreement***

The legal contract between the client and consultant that sets forth as a minimum the scope of work, schedule of execution, basis of the fees, and payment conditions.

**SCALE 2 B: Recommended Minimum Fee Schedule for Basic Prime Consulting Services for Buildings**

Project Complexity	Description of Facility	Project Construction Value (Dollars)*		
		Project Value \$\$.5mil - \$1mil	For the Next \$1mil to \$5mil	In Excess of \$5mil
<i>Non Complex</i>	<b>Public</b> Storage and Warehousing,	8.5%	7.5%	6.5%
	<b>Private</b> Garages, Pre-Engineered, Parking Lots			
<i>Standard</i>	<b>Health Care</b> Personal Care Homes, Clinics Community Hospitals Long Term Care	9.5%	8.5%	7.5%
	<b>Education</b> Elementary, High Schools			
	<b>Community</b> Libraries, Stadiums, Community Centres, Recreation Facilities and Arenas, City and Town Halls, Fire and Police Stations, Casinos, Churches, Cemetery Chapels			
	<b>Public &amp; Private</b> Office Buildings, Parking Garages Malls, Theatres, Banks, Hotels and Motels, Bus and Rail Stations, Airport Facilities, Retail, Armed Forces			
	<b>Residential</b> Multiple Unit Residential, Semi-Detached Row Housing, Typical			
<i>Complex</i>	<b>Health Care</b> District Hospitals, Integrated Facilities, Diagnostic and Treatment	10.5%	9.5%	8.5%
	<b>Education</b> Specialized Teaching Facilities			
	<b>Community</b> Pools, Museums, Crematoriums, Spas, Court Houses, Performing and Visual Arts			
	<b>Research</b> Educational Laboratory			
	<b>Data</b> Telecommunications, Broadcasting Call Centers, Computer Facilities			
	<b>Process</b> Equipment Repair, Energy Production			
<i>Very Complex</i>	<b>Health Care</b> Provincial Hospitals, Regional Hospitals	11.5%	10.5%	9.5%
	<b>Research</b> Scientific, Laboratory, Chemical, Education Research			
	<b>Residential</b> Custom Single Family Homes			
	<b>Ownership**</b> Joint Use Facilities			

\* See Scale 2B – User Notes

\*\* See Scale 2B – User Notes

## Scale 2B User Notes

1. PST is included in the calculation of fees. GST is excluded in the calculation of fees.
2. \*Project Construction Value includes Provincial Sales Tax for calculation of percentage fees to consultant. (GST is accounted for in the percentage fee).
3. Descriptions are for Major Project Use. Where multiple uses are contemplated, a best fit or blended rate is recommended.
4. For smaller projects less than \$500,000 use of hourly rate or fixed fee structures may be more appropriate.
5. Use of a fixed fee structure is acceptable provided fee is representative of the work required.
6. Fees are earned on an 'as designed basis'. Where work is designed but does not proceed, fee is applicable at representative rate for the designed work to the completion level attained. Fee is normally apportioned as follows:

Schematic Design	15%
Design Development	10%
Construction Contract Documents	50%
Project Tendering Phase	5%
Construction Contract Administration	20%
7. For projects involving renovations, fees are to be multiplied by 140% for renovation portion.
8. Fees for contemplated changes to a project following completion of the design package are to be considered on the same basis as identified fee for project.
9. \*\*Ownership acknowledges complex nature of when project governance model involves multiple owner groups.
10. Projects involving repeat designs for the same client should be calculated with a royalty concept. Basic recommended royalty structure, first project at applicable rates, next projects at 50% of rates plus separate fees for variations from first project. Required changes are normally completed based on hourly rate structures.
11. Disbursements are extra to the rates described, chargeable at cost plus 10% for administrative burden. (Reader's note – previously 5%)
12. Recommended standard consultant/client agreements are available from Association of Canadian Engineering Companies (ACEC), Royal Architecture Institute of Canada (RAIC) and Canadian Construction Documents Committee (CCDC).
13. Refer to other sections of documents for definition of standard and special or additional services.

14. Where project alternative designs are requested by the owner, design costs associated with development of the alternative(s) are paid at the rate appropriate to the design portion of a project. Not all alternative designs require the same level of design input leading to the requirement for negotiations on fee related to the development of the alternatives required.
15. Prime Consultants normally retain a portion of sub consultant's fees for project co-ordination purposes. While 20% of the sub consultant's fee is considered normal practice, actual retained fee should be negotiated in advance to reflect representative project co-ordination requirements.
16. Many fee options are available including, but not limited to, contractual agreements whereby the client retains the sub-consultants directly based on per-diem or percentage fee basis.
17. Fees for projects less than \$500,000 to be negotiated with the client.
18. For projects of \$1 million to \$5 million value, the fee is calculated as the sum of the higher percentage based on the first \$1 million of project construction value, plus the lower percentage for the remaining project construction value in excess of \$1 million dollars. For projects in excess of \$5 million, the fee is calculated as the sum of the higher percentage based on the first \$1 million of project construction value, plus the lower percentage for the next \$4 million of project construction value, plus the lowest percentage for the remaining project construction value in excess of \$5 million dollars.

#### 4. PERFORMANCE STANDARDS

##### PERFORMANCE STANDARDS }

###### General

These “Performance Standards” define the scope of services to be provided by a Consultant when retained by a Client for the design and general administration during construction of a complete building project. This means that the Consultant is the prime consultant responsible to the Client for the co-ordination of the project.

The Consultant acts as the coordinator of the total building project. Scope of service is normally negotiated with the client with an understanding of *fair fee for fair service*. Fee percentages shown in Scale 2B have been established with an understanding of certain expectations related to standard levels of service. Often projects require variations in service, usually related to extra requirements for a project. Fees for these services are normally negotiated separately and should be consistent with the level of effort required to achieve the required service outcome. The following table (Table 3A) provides a general summary of standard service earned in accordance with Scale 2B separated into standard service phase definitions. Additional or optional services common to the design industry are listed to identify specifically that these services are not considered standard service and require separate negotiation of associated fee.

Interpretation of normal deliverables related to development of a building construction contract should be guided by Table 3A. Normal project sequencing is described as follows. These requirements are noted for all consultant participants, delivered by the group normally charged with the responsibility based on definition of trade scope.

**TABLE 3A  
SERVICE DELIVERY**

<b>Project Inception</b>	<b>Project Assessment</b>	<b>Concept Approval</b>	<b>Development Permit</b>	<b>Building Permit</b>	<b>Award of Construction Contract</b>	<b>Substantial Performance Of Construction</b>
<b>1.0 Predesign</b>	<b>2.0 Schematic Design</b>	<b>3.0 Design Development/ Preliminary Design</b>	<b>4.0 Construction Documents</b>	<b>5.0 Bidding or Negotiating/Tender</b>	<b>6.0 Construction Contract Administration</b>	<b>7.0 Post-Construction</b>
<p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Facility Programming</li> <li><input type="checkbox"/> Space Relationships, Flow Diagrams</li> <li><input type="checkbox"/> Project Development Scheduling</li> <li><input type="checkbox"/> Project Budgeting</li> <li><input type="checkbox"/> Life Cycle Cost Studies</li> <li><input type="checkbox"/> Economic Feasibility Studies</li> <li><input type="checkbox"/> Agency Consulting/Review Approval</li> <li><input type="checkbox"/> Site Selection Analysis &amp; Utilization</li> <li><input type="checkbox"/> Environmental Studies</li> <li><input type="checkbox"/> Energy Studies</li> <li><input type="checkbox"/> Existing Facilities Survey</li> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Services Related to Business Case Development</li> <li><input type="checkbox"/> Presentations</li> <li><input type="checkbox"/> Marketing Studies</li> <li><input type="checkbox"/> Project Financing</li> <li><input type="checkbox"/> Special Studies</li> <li><input type="checkbox"/> Re-Zoning Assistance</li> <li><input type="checkbox"/> Project Promotion</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (15% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client-Supplied Data Co-ordination</li> <li><input type="checkbox"/> Program and Budget Evaluation</li> <li><input type="checkbox"/> Review of Alternate Design Approaches</li> <li><input type="checkbox"/> Schematic Design Drawings and Documents</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Interior Design Concepts</li> <li><input type="checkbox"/> Agency Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Special Studies such as Future Facilities or Environmental Impact</li> <li><input type="checkbox"/> Special Submissions of Promotional Presentations</li> <li><input type="checkbox"/> Special Models or Perspectives</li> <li><input type="checkbox"/> Project Management</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (10% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Design Co-ordination</li> <li><input type="checkbox"/> Design Development Drawings and Documents</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interior Design Development</li> <li><input type="checkbox"/> Special Studies/Reports such as Planning Tenant or Rental Spaces</li> <li><input type="checkbox"/> Promotional Presentation</li> <li><input type="checkbox"/> Models or Perspectives</li> <li><input type="checkbox"/> Project Management</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (50% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Project Co-ordination</li> <li><input type="checkbox"/> Construction Documents (Working Drawings Form of Contract and Specifications)</li> <li><input type="checkbox"/> Document Checking and Co-ordination</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Interior Construction Documents</li> <li><input type="checkbox"/> Alternate Bid Details and Special Bid Documents</li> <li><input type="checkbox"/> Project Management</li> <li><input type="checkbox"/> Multi-Phase Packaging</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (5% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Project Co-ordination</li> <li><input type="checkbox"/> Issue Bidding Documents</li> <li><input type="checkbox"/> Issue Addenda</li> <li><input type="checkbox"/> Bid Evaluation</li> <li><input type="checkbox"/> Construction Contract</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Separate Bids or Negotiated Bids</li> <li><input type="checkbox"/> Services Related to Bidders' Proposals</li> <li><input type="checkbox"/> Project Management</li> <li><input type="checkbox"/> Multi-Phase Tendering</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (20% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Construction Inspection and Review</li> <li><input type="checkbox"/> Progress Reports/Evaluation</li> <li><input type="checkbox"/> Process Certificates for Payment</li> <li><input type="checkbox"/> Interpretation of Contract Documents</li> <li><input type="checkbox"/> Shop Drawing/Product Data/Sample Review</li> <li><input type="checkbox"/> Development of Contemplated Change Notices and Change Orders, Site Instructions</li> <li><input type="checkbox"/> Substantial Performance Report and Certification</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Resident Supervision</li> <li><input type="checkbox"/> Project Management</li> <li><input type="checkbox"/> Promotional Material</li> <li><input type="checkbox"/> Record (As-Built) Drawings</li> <li><input type="checkbox"/> Detailed Commissioning</li> </ul>	<p><b><u>BASIC SERVICES</u></b> (0% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Project Inspection</li> <li><input type="checkbox"/> Deficiency Assessment</li> <li><input type="checkbox"/> Instructions for Correction of Deficiencies</li> <li><input type="checkbox"/> Review of Warranties</li> <li><input type="checkbox"/> Total Performance Inspection and Certification</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Sub Consultant Co-Ordination</li> <li><input type="checkbox"/> Start-Up Assistance</li> </ul> <p><b><u>OPTIONAL SERVICES*</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Detailed Commissioning</li> <li><input type="checkbox"/> Services Provided After Total Performance</li> <li><input type="checkbox"/> Non-Building Equipment Selection</li> <li><input type="checkbox"/> Building Analysis and Reports</li> <li><input type="checkbox"/> Services Related to Alterations and Demolition</li> <li><input type="checkbox"/> Life Cycle Cost Monitoring</li> <li><input type="checkbox"/> Environmental Monitoring</li> <li><input type="checkbox"/> Project Management</li> </ul>

Optional Services\*: Services are considered to be extra to normal expectations and require separate negotiation.

## **5. SPECIFIC PRIME CONSULTANT DUTIES**

1. Negotiate the scope of professional services, compensation and terms of payment with other consultants where applicable.
2. Prepare a time schedule based upon the Client's program for the project in agreement with the Client and other consultants where applicable.
3. Obtain from the Client, or arrange for the performance of surveys, sub-surface and soil investigations and obtaining of other necessary data.
4. Arrange for all project conferences with the Client and maintain co-ordination on all project matters.
5. Establish and co-ordinate design standards with concurrence of other consultants where applicable, and co-ordinate statements of probable construction costs.
6. Where construction is involved:
  - (a) Prepare and arrange for the printing, publication and distribution of the construction contract documents.
  - (b) Advise the Client on construction contract procedures, compile a list of bidders, and aid in negotiations with the selected contractor.
  - (c) Perform general administration during construction.
  - (d) Prepare a completion report with the assistance of other consultants, where applicable, and recommend acceptance of the work.

## **6. DESIGN SERVICES ALL CONSULTANTS**

The services listed are the normal services required by the Client and are usually performed on a percentage fee basis noted as Scale 2B.

### **1. Schematic Design and Design Development**

These services consist of the preparation and submission of sketch plans, outline specifications, preliminary estimates of the project costs and schedules for the completion of the work.

The Consultant's services usually include the following:

- (a) Obtaining the Client's instructions regarding functional, aesthetic and cost requirements.
- (b) Reviewing the site survey, inspect the site and consider existing conditions such as topography access, drainage, and availability of sewer, water, and other utilities on the design of the project. Arrange to have the necessary soil testing carried out on behalf of the Client.
- (c) Checking applicable codes, regulations and restrictions, insurance requirements, and other factors affecting the design of the project.
- (d) Developing preliminary sketches and outline specifications as outlined in the detailed design standards.
- (e) Providing information on the essential elements of the project including basic materials, finishes and basic structural, electrical and mechanical systems compatible with the preliminary sketches and specifications.
- (f) When required, prepare a preliminary site plan to show site grading, road elevations and service connections of public utilities to the building services with respect to siting and establishing floor elevation of new buildings.
- (g) Obtaining the Client's approval of preliminary design and outline specifications.
- (h) When required at this stage, obtaining approval or assist in obtaining approval of the design from authorities having jurisdiction.
- (i) Providing the Client with a preliminary statement of the construction cost and schedule for the completion of the design and construction.

### **2. Construction Documents and Project Tendering all Consultants**

The Consultant normally shall provide the following as deliverables for construction documents:

- (a) After preliminary sketch drawings have been approved and can be considered as “frozen”, prepare contract drawings, specifications and documents that contain specific instructions as to how the project is to be constructed. Contract Documents including drawings and specifications shall be consistent with project requirements, capturing concepts of technical construction requirements, form of contract between the owner and the contractor(s), description of contractual issues and related issues.

- (b) Consult with the Client and obtain approval of any additions and deletions during the design stage and advise of any change in costs arising from these changes.
- (c) Provide as many sets of drawings and specifications as required for tendering, construction, approvals and permits. Fifteen sets of documents are considered the normal maximum for standard service delivery relationships.
- (d) Assist in obtaining formal approval from the authorities having jurisdiction. Any relevant fees are disbursements chargeable to the Client.
- (e) Provide the Client with a revised statement of construction cost estimate.
- (f) Assist in arrangement of tender call. Receive tenders on behalf of the Client or attend and assist at the opening of tenders.
- (g) Analyze and evaluate tenders, review substitutions and alternatives offered and check necessary price adjustments. Ensure receipt of requisite documents, certificates, agreement to bond, etc.
- (h) Make recommendations regarding award of contract having regard to lowest tender price, savings to be achieved by alternative methods of substitution of materials, time of completion, and capabilities of contractor and subcontractors bidding.
- (i) Revisions to achieve alternate design schemes are not considered to be standard service. Where revisions are required to meet construction cost objectives established at project inception, consideration must be given to where extra construction cost originated from. Generally, the consultant group is responsible to deliver design statements consistent with project intent. Construction costs established through fair market tendering procedures are not under the control of the consultant team. Therefore, cost reduction revisions require separate negotiation of fee, identified as extra service to a standard design services contract.

### 3. Construction Contract Administration all Consultants

This consists of office and field functions during the construction period following the award of contract. Services provided by the Consultant normally include:

- (a) Assisting in preparation and execution of contract documents between Client and Contractor.
- (b) Issuing supplementary details and instructions during the construction period, as required.
- (c) Reviewing shop drawings, equipment lists, and samples submitted to the degree necessary to satisfy the Consultant that the Contractor's work is in compliance with the design requirements.
- (d) Providing the Client, when requested, with copies of all relevant correspondence affecting construction and costs.
- (e) Approving the construction schedule proposed by the Contractor, and advising as to the methods and sequence of work, with regard to the Client's operations and other contracts.
- (f) Checking and approving charges for additions or deletions and issue applicable change orders.
- (g) Recommending the withholding of payment for faulty or incomplete work.

- (h) Examining and transmitting to Client all guarantees, warranties, bonds, etc.

*Normal Site Administrative Functions include:*

- (a) Making periodic visits to the site during construction to ascertain that the work is being executed in reasonable conformity with plans and specifications.
- (b) Checking and certifying Contractor's application for progress payments. Estimate completed work in place and materials on site for payment according to the terms of contract.
- (c) Arranging for the testing and inspection of materials and work by an inspections and testing company. Where the contract calls for such testing and inspection, the cost of this work is a disbursement chargeable to the Client.
- (d) Attending regular site meetings to assist in the co-ordination of the work of various trades, and keeping a check on the scheduling of the work.
- (e) Arranging and performing final inspection of finished project, preparing a list of deficiencies and when these have been rectified, issue final certificate of acceptance.

#### 4. Resident Staff Provided by the Consultant

For some projects, the Consultant will recommend the provision of resident engineering services during construction. This involves the placing of engineering inspection and layout staff on the project to provide continuous service. Charges are made for this service on an hourly basis plus the cost of related disbursements. Hourly rate charges to be in accordance with the "Schedule of Recommended Fees to be Charged for General Engineering and Geoscience Projects and Services" – item 4.1.

A clear written agreement should exist with the Client detailing the extent of such resident services. This service normally includes:

1. Checking Contractor's line and grade.
2. Ensuring that all work will satisfy the intent of the design and will conform substantially with plans and specifications.
3. Arranging for, or carrying out, all necessary testing and inspection of material and equipment installed.
4. Investigating, reporting, and advising on unusual circumstances which may arise during construction.
5. Final inspection at the conclusion of the construction contract and at the end of the maintenance period.
6. Obtaining field information for the modification of contract drawings to show the work as built.
7. Preparing special progress certificates and final certificates for subsidy payments, grants, or rebates.

## 5. Other Specialist Consulting Engineering Services

Although most of the professional services the Consultant renders on a building project fall under the foregoing headings other requirements do arise. Optional services have been listed in Table 3A illustrating types of service normally considered additional to standard service delivery arrangements. The consultant and the owner should be guided by the philosophy that if the service is not listed, then the issue should be addressed from a deliverable and required fee perspective. Separate negotiation for fixed fee or percentage fee related to these services should be guided by the associated equivalent hourly rate charges note in “Schedule of Recommended Fees to be Charged for General Engineering and Geoscience Projects and Services” – item 4.1.

## **7. SUB CONSULTANTS DELIVERABLES**

As with the Prime Consultant, deliverables are common to a large degree. Table 3B illustrates the deliverables normal to a sub-consultant relationship, with optional services identified.

**TABLE 3B**

**SERVICE DELIVERY  
SUB CONSULTANT**

<b>Project Inception</b>	<b>Project Assessment</b>	<b>Concept Approval</b>	<b>Development Permit</b>	<b>Building Permit</b>	<b>Award of Construction Contract</b>	<b>Substantial Performance Of Construction</b>
<b>1.0 Predesign</b>	<b>2.0 Schematic Design</b>	<b>3.0 Design Development/ Preliminary Design</b>	<b>4.0 Construction Documents</b>	<b>5.0 Bidding or Negotiating/Tender</b>	<b>6.0 Construction Contract Administration</b>	<b>7.0 Post-Construction</b>
<p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Project Development Scheduling</li> <li><input type="checkbox"/> Project Budgeting</li> <li><input type="checkbox"/> Life Cycle Cost Studies</li> <li><input type="checkbox"/> Economic Feasibility Studies</li> <li><input type="checkbox"/> Agency Consulting/Review Approval</li> <li><input type="checkbox"/> Site Selection Analysis &amp; Utilization</li> <li><input type="checkbox"/> Environmental Studies</li> <li><input type="checkbox"/> Energy Studies</li> <li><input type="checkbox"/> Existing Facilities Survey</li> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Services Related to Business Case Development</li> <li><input type="checkbox"/> Presentations</li> <li><input type="checkbox"/> Marketing Studies</li> <li><input type="checkbox"/> Project Financing</li> <li><input type="checkbox"/> Special Studies</li> <li><input type="checkbox"/> Re-Zoning Assistance</li> <li><input type="checkbox"/> Legal Survey</li> <li><input type="checkbox"/> Geotechnical Analysis</li> </ul>	<p><b>BASIC SERVICES</b> (15% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client-Supplied Data Co-ordination</li> <li><input type="checkbox"/> Program and Budget Evaluation</li> <li><input type="checkbox"/> Review of Alternate Design Approaches</li> <li><input type="checkbox"/> Schematic Design Drawings and Documents</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Special Studies such as Future Facilities or Environmental Impact</li> </ul>	<p><b>BASIC SERVICES</b> (10% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Design Co-ordination</li> <li><input type="checkbox"/> Design Development Drawings and Documents</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Special Studies/Reports</li> <li><input type="checkbox"/> Quality Surveys</li> <li><input type="checkbox"/> Energy Studies</li> <li><input type="checkbox"/> Services Related to Business Case Development</li> </ul>	<p><b>BASIC SERVICES</b> (50% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Construction Documents (Working Drawings Form of Contract and Specifications)</li> <li><input type="checkbox"/> Statement of Probable Construction Costs</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Alternate Bid Details and Special Bid Documents</li> <li><input type="checkbox"/> Multi-Phase Packaging</li> <li><input type="checkbox"/> Quality Surveys</li> </ul>	<p><b>BASIC SERVICES</b> (5% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Client Supplied Data Co-ordination</li> <li><input type="checkbox"/> Issue Bidding Documents</li> <li><input type="checkbox"/> Issue Addenda</li> <li><input type="checkbox"/> Bid Evaluation</li> <li><input type="checkbox"/> Client Consultation</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Separate Bids or Negotiated Bids</li> <li><input type="checkbox"/> Services Related to Bidders' Proposals</li> <li><input type="checkbox"/> Multi-Phase Tendering</li> </ul>	<p><b>BASIC SERVICES</b> (20% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Construction Inspection and Review</li> <li><input type="checkbox"/> Progress Reports/Evaluation</li> <li><input type="checkbox"/> Process Certificates for Payment</li> <li><input type="checkbox"/> Interpretation of Contract Documents</li> <li><input type="checkbox"/> Shop Drawing/Product Data/Sample Review</li> <li><input type="checkbox"/> Development of Contemplated Change Notices and Change Orders, Site Instructions</li> <li><input type="checkbox"/> Substantial Performance Report and Certification</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Agency Consultation</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Resident Supervision</li> <li><input type="checkbox"/> Promotional Material</li> <li><input type="checkbox"/> Record (As-Built) Drawings</li> <li><input type="checkbox"/> Detailed Commissioning</li> <li><input type="checkbox"/> Detailed Cost Accounting</li> </ul>	<p><b>BASIC SERVICES</b> (0% of Basic Fees)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Project Inspection</li> <li><input type="checkbox"/> Deficiency Assessment</li> <li><input type="checkbox"/> Instructions for Correction of Deficiencies</li> <li><input type="checkbox"/> Review of Warranties</li> <li><input type="checkbox"/> Total Performance Inspection and Certification</li> <li><input type="checkbox"/> Client Consultation</li> <li><input type="checkbox"/> Start-Up Assistance</li> </ul> <p><b>OPTIONAL SERVICES*</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Detailed Commissioning</li> <li><input type="checkbox"/> Services Provided After Total Performance</li> <li><input type="checkbox"/> Non-Building Equipment Selection</li> <li><input type="checkbox"/> Building Analysis and Reports</li> <li><input type="checkbox"/> Services Related to Alterations and Demolition</li> <li><input type="checkbox"/> Life Cycle Cost Monitoring</li> <li><input type="checkbox"/> Environmental Monitoring</li> <li><input type="checkbox"/> Systems Performance Review</li> </ul>

Optional Services\*: Services are considered to be extra to normal expectations and require separate negotiation