



Chapter 1:

ISC – BC REGION CAPITAL PROGRAM

A Practical Guide To Capital Projects | 1 of 6



A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre

Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351
Facsimile: 604-775-7149
Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	v
Table of Contents	vi
Glossary of Abbreviations	viii
Definitions.....	xi

Indigenous Services Canada BC Regional Capital Program

Introduction	1
1.1 Overview of BC Region Capital Facilities and Maintenance Program (CFMP).....	2
1.2 Regional Capital Facilities and Maintenance Program Funding Sources	4
1.2.1 A-Base Funding	4
1.2.2 First Nations Water and Wastewater Enhanced Program [FNWWEP].....	4
1.2.3 Education Infrastructure Fund [EIF].....	4
1.2.4 First Nations Infrastructure Fund [FNIF]	5
1.3 Regional Capital Funding Distribution	7
1.4 The Capital Project Funding Cycle	8
1.5 Capital Project Review Process	10
1.6 Project Environmental Review Process (ERP)	15
1.7 The Capital Project Approval Process Sequence	16
1.8 Capital Project Funding Process and Disbursement Process Sequence	20

Appendices

1: Community Infrastructure Directorate, Structure, Functions and Activities.	25
2: Checklists for Submission Reviews	
2A: Feasibility Stage Funding Application	30
2B: Feasibility Stage Technical Review.....	31
2C: Design Stage Funding Application	32
2D: Design Stage Technical Review	33
2E: Construction Stage Funding Application.....	34
2F: Post Construction Stage Technical Review.....	35
3: Risk Assessment Tool [RAT] Sample	37

Appendices Cont.

4: Geographic Zone [Remoteness] Classifications.....	39
5: CFM Program Record Document [CPRD] -Sample.....	41
6: Contributing Funding Information.....	43
7: Capital Project Funding Approval and Funding Disbursement Sequences	45

Figures

1: Regional Capital Funding Distribution	6
2: Capital Project Funding Cycle	9
3: Capital Project Approval Process	16
4: Work-flow for Capital Project Approval Process.....	19

Tables

1: Standard Cost Thresholds.....	12
----------------------------------	----

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEPE	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
FNIIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organisational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit (with Funding Services)
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act CEEA2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subtrades, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subtrade contractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations which identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning , budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures, prescribed in the environmental review process, were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's discretion. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - protect and maintain existing assets with an emphasis on health and safety;
 - mitigate health and safety risks through new and existing assets;
 - address water and sewer project backlogs;
 - include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organisations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).



Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post Construction Stage of a Capital Project

Appendix



Indigenous Services Canada BC Regional Capital Program

An overview of the BC Region Indigenous Services Canada Capital Program including a step-by-step description of the project approval process.

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision making for the successful implementation of capital projects.

The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

Funding processes related to other components of the capital facilities and maintenance program (CFMP) program such as schools, housing and operation and maintenance funding are covered in other documents.

The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle – feasibility, design, construction and post construction. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

The reader should:

1. Ensure that the various documents appended to the guide are current, including those available on ISC's web page.
2. Understand that if a conflict exists between this guide and Federal statutes, codes and standards, the latter will govern.

1.1 Overview of BC Region Capital Facilities and Maintenance Program (CFMP)

The Capital Facilities and Maintenance Program [CFMP] is administered by the Community Infrastructure Directorate [CID] from the BC Regional Office in Vancouver. The directorate units include Infrastructure Development, Capital Programs, Strategic Initiatives Unit, Specialist Services and Geomatics and Planning. The organizational structure of CID with associated functions and activities is shown in [*Appendix 1: Community Infrastructure Directorate, Structure, Functions and Activities.*](#)

The CFMP can be separated into the categories shown below from A to E.

A Practical Guide to Capital Projects is exclusively focused on the first category [i.e Infrastructure Development] providing necessary information to obtain funding to develop community infrastructure facilities. The categories following Infrastructure Development are provided for information, but are not specifically detailed in the Practical Guide to Capital Projects. The additional practical guides referenced plus additional manuals and guidelines can be found on the ISC website.

- A. Infrastructure Development** — Funding for the following community infrastructure facilities which include:
- Water supply, storage, treatment and distribution
 - Sewage collection, treatment and disposal;
 - Solid waste collection and disposal;
 - Electrical power generation and distribution;
 - Transportation [roads, bridges] and drainage;
 - Subdivision development;
 - Fire protection [fire trucks, fire halls, fire equipment];
 - Community buildings [Note that community buildings have an abbreviated funding process -please contact the Capital Management Officer];
 - Flood and erosion protection [structural mitigation];
 - Connectivity networks
- B. Operation and Maintenance of Infrastructure and Facilities** — Funding to assist First Nations with the operation and maintenance of community facilities. *See A Practical Guide to Operations and Maintenance for further information.*
- C. Municipal Type Service Agreements (MTSA)** — Funding to subsidize the cost of purchasing municipal services such as fire suppression, water supply, wastewater treatment and solid waste collection/ disposal from neighbouring communities or private contractors. *See A Practical Guide to O&M for further information.*
- D. Housing Construction and Renovation** — Funding to supplement the cost of on-reserve new housing construction and renovations to existing homes. Subsidy funding is also available from the New Approach for Housing Support [NAHS] initiative to plan, renovate, and build houses. *See A Practical Guide to Housing for further information.*
- E. Planning and Acquisition of Education Assets and Facilities** — Funding for the construction of on-reserve school and teacherage facilities. *See A Practical Guide to School Projects for further information.*

1.2 Regional Capital Facilities and Maintenance Program Funding Sources

1.2.1 A-Base Funding

A-base funding is a recurring, annual allocation received by ISC from the Treasury Board at the beginning of each budget period for the ongoing delivery of existing programs. The A-base budget is based on the previous years spending plus adjustments and a 2% escalator.

1.2.2 First Nations Water and Wastewater Enhanced Program [FNWWEPE]

FNWWEPE funding is targeted funding provided on a specific allocation basis to ISC to assist First Nations with providing improved water and wastewater services to their communities. This type of funding will have a fixed term duration and must be renewed by the Treasury Board at the end of the term. This funding must be spent in support of water and wastewater initiatives such as capital projects, improved operations and maintenance of water and wastewater systems, operator training and public health activities.

1.2.3 Education Infrastructure Fund [EIF]

Education funding is targeted funding provided on a specific allocation basis to ISC to build and renovate schools to create and maintain quality learning environments for First Nations' students on-reserve. Targeted dollars such as Budget 2016 and Budget 2017 are managed centrally by ISC Headquarters and allocated on a national priority basis.

1.2.4 First Nations Infrastructure Fund [FNIF]

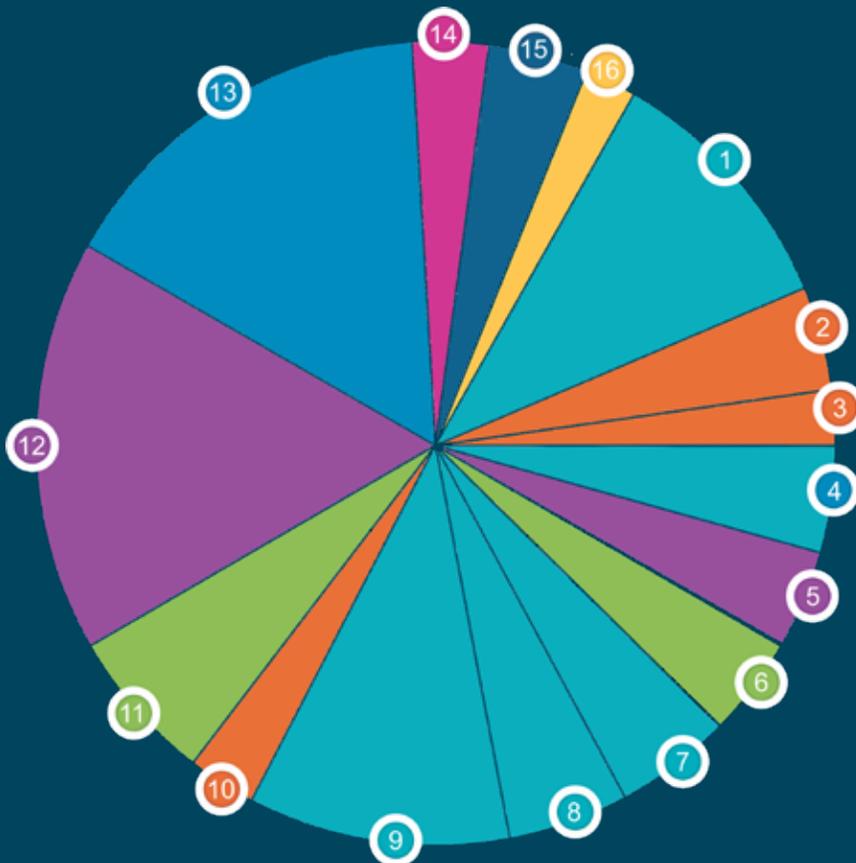
FNIF funding is targeted funding provided on a specific allocation basis to ISC to improve and increase the development of public infrastructure not addressed in the other funding regimes. Most FNIF funds are managed on a national basis. Regions receive a FNIF component matching the Regional Gas Tax allocation. FNIF provides funding to be expended in eight project categories:

- Planning and skills development
- Solid waste management
- Roads and bridges
- Fire protection
- Energy systems
- Connectivity
- Disaster mitigation

Figure 1: Regional Capital Funding Distribution

2017-2018 Planned Capital Funding

1	Other Infrastructure	\$16,916,800
2	Housing	\$8,629,177
3	New Approach Housing Subsidies	\$4,693,409
4	Water & Wastewater	\$6,755,769
5	Education Facilities	\$4,755,396
6	Flood & Erosion Protection	\$4,636,472
7	FNF (Budget 2016) Cultural & Recreational	\$6,743,144
8	FNIF (Budget 2016) Fundamental Infrastructure	\$6,096,500
9	FNIF (Budget 2016) Energy, Sustainability & Connectivity	\$22,860,840
10	Housing (Budget 2016)	\$4,55,400
11	Solid Waste (Budget 2016)	\$12,618,500
12	Education Facilities (Budget 2015)	\$33,355,356
13	Water & Wastewater (Budget 2016)	\$31,092,143
14	Block Housing	\$5,596,147
15	Block Minor Capital	\$8,394,221
16	ACRS	\$3,052,777



1.3 Regional Capital Funding Distribution

The pie chart on the facing page shows, as an example only, the breakdown of how the funds were allocated in fiscal year 2017 -2018. The breakdowns and their respective amounts will vary from year to year as they are subject to Parliament appropriation.

Regional funding assigned to the Community Infrastructure Directorate to support the Capital Facilities and Maintenance program is generally distributed to First Nations within the following funding categories [where applicable]:

- Block funding agreements with First Nations
- Infrastructure operations and maintenance
- Municipal-type service agreements [MTSA]
- School operations and maintenance
- Capital projects
- Housing construction and renovation

The funding available for capital projects is then further subdivided to assign funding budgets to specific project types considering the following criteria:

- Health and safety impacts
- High health risks [eg. water and wastewater systems]
- Maintaining the usefulness of existing assets
- Targeted funding availability
- Housing subsidy demands

Project type funding budgets are listed below. See the above Allocation Pie Chart for a visual depiction of regional funding distribution. Water and wastewater projects generally are allocated a large portion of available regional funding because they are high risk, have significant health and safety impacts and have available targeted funding.

- Water and wastewater
- Education Facilities
- Fire Protection
- Electrification
- Solid Waste
- Roads and Bridges
- Housing [including New Approach for Housing Support]
- Subdivisions

FNIF projects are compiled on a regional basis into the eight project types listed above in Section 1.2.4 and sent to Ottawa for funding consideration on a national basis. Projects not funded from the national list may be subsequently funded from regional project funding budgets sourced by the FNIF regional allocation or A-base regional allocation. Community planning initiatives managed by the Community Development Directorate [eg. CCP's] are allocated approximately 30% of the annual, regional FNIF funding allocation.

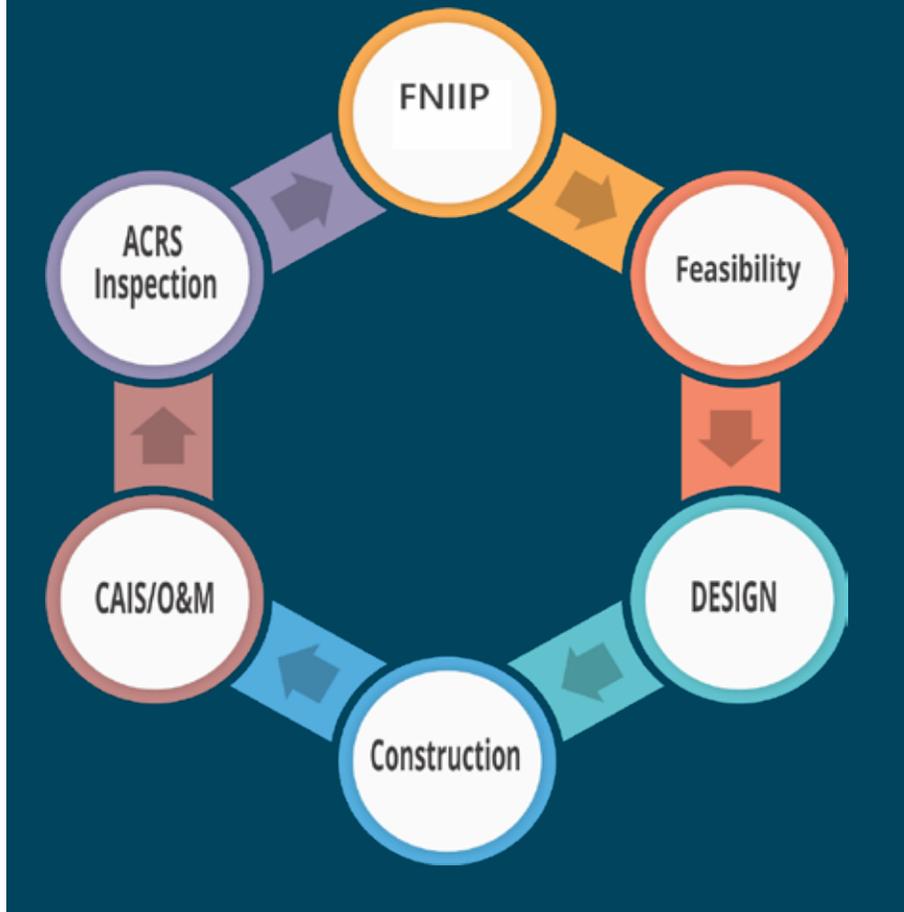
1.4 The Capital Project Funding Cycle

Capital projects identified for funding on the Regional First Nation Infrastructure Investment Plan [RFNIIP] will begin, or will have already started, a project implementation process. More information on RFNIIP will be provided in Chapter 2, Section 2.6.

Project implementation generally conforms to a capital project funding cycle consisting of four distinct stages:

- Feasibility Stage
- Design Stage
- Construction Stage
- Post-Construction Stage

Figure 2: Capital Project Funding Cycle



Funding will can be provided by ISC for all four project stages. Each stage will require a separate funding application (generally three applications are required for a typical project) except post-construction stage funding will be included in the construction stage funding application.

Chapters 3 through 6 describe funding application requirements, expected results, project stage deliverables and the reviews to be completed by ISC for each of the four stages. In general, ISC funding will be available in the same order as the project cycle and only on the satisfactory completion of the preceding stage. Successful completion of one stage will not necessarily lead to funding for the next stage. Each stage will be processed according to the merits of the funding application and in accordance with ISC policies and directives.

1.5 Capital Project Review Process

ISC reviews capital projects for the following reasons:

- To confirm that capital program funding authorities Treasury Board conditions associated with the transfer of funds to First Nations have been met;
- To ensure funding budgets are spent cost effectively to provide maximum benefits to First Nation project proponents and to maximize available regional funding;
- To confirm that the proposed capital project meets the mutually agreed scope of work;
- To provide input from other First Nations experience regarding project operational issues;
- To assign project priority rankings;
- To address environmental review requirements.

Capital project reviews are carried out by a Capital Management Officer [CMO – Capital Programs unit] and a Senior Engineer [SE – Infrastructure Development unit]. The CMO review scope is primarily administrative and financial and the SE review scope is primarily technical. [See Appendix 2: Checklists for Project Submission Reviews](#) for project items which will be considered in the scope of the technical review.

The CMO is checking:

- Submission completeness;
- Budgetary and scheduling consistency with the RFNIIP;

The SE is checking for:

- Consistency in project scope;
- Conformance to applicable guidelines;
- Operational issues;
- Project costs (including the project Operation & Maintenance funding requirement);
- Project scheduling;

- Project implementation process;
- Environmental factors.

During the project review process and depending on the project stage, the SE is also generating the following information:

- Project priority ranking number
- Environmental assessment documents
- Project risk factors. For projects over \$1.5M, a Risk Assessment Tool [RAT] is required to tabulate project risk factors and their impacts. Risk mitigation strategies must be developed for all risk factors identified as medium or high risk. [See Appendix 3: Risk Assessment Tool \[RAT\] – Sample](#) for a typical risk assessment document.

The length of time required for a capital project review will depend upon the complexity of the project and completeness of the project submission information. The target duration for an initial capital project review is within sixty days of receiving project documentation provided the project is on the RFNIIP and planned for funding in the next three years. Projects over \$15M which require approval from Ottawa will be excluded from this review schedule.

Project approval levels [i.e., required organizational signatures] depend on the ISC funding contribution amount, project risk rating [using the Risk Assessment Tool (RAT) completed by the ISC engineer] and comparison to standard cost thresholds. Refer to the workflow chart in Section 1.7 for project approval levels. Projects which require SADM-Ottawa approval will need additional time [generally two months minimum] for necessary signatures.

Standard cost thresholds for water and wastewater systems [and schools] have been analyzed to match levels of investment with project approval levels. Exceeding the cost thresholds will require additional project approvals. The standard cost thresholds are based on total project costs in relation to costs per water or wastewater connection or to community population. The cost thresholds increase with a higher remoteness (zone) classification. See [Appendix 4: Geographic Zone \[Remoteness\] Classification](#) for definitions of zone classifications.

Cost thresholds for water/wastewater systems and schools are as follows:

Table 1: Standard Cost Thresholds

Zone	Schools	Schools	Water & Wastewater	Water & Wastewater
	\$/m ²	\$/student	\$/connection	\$/capita
1	3,521	25,000	44,000	17,639
2	3,521	25,000	50,600	20,285
3	4,064	50,000	59,400	23,819
4	5,080	70,000	84,480	33,867

For school projects:

- Cost thresholds applicable to School projects has two criteria, and either one of them, not both, requiring to be met for school projects' signing authority to remain at the regional level.
- Ratio of building cost vs TEC - from 65% to 75%.
- Soft Costs vs TEC – from 10% to 15% of construction cost.
- Site Development for the new schools is limited to 10% of the TEC. For schools with a number of students ranging from 50 to 100, Site Development could represent up to 20% of the TEC, and for schools with fewer students than 50 it would be allowed to represent up to 30% of the TEC.
- Fit up costs is limited to 4% of the TEC.

For Water and Wastewater Projects:

- Standard cost thresholds for Water and Wastewater projects has two criteria, and either one of them, not both, requiring to be met for Water and Wastewater projects' signing authority to remain at the regional level. For small communities in Zones 3 and 4 with fewer connections than 50 it would be allowed to apply up to 20% flexibility to amount.
- Ratio of building cost vs TEC - from 65% to 75%.
- Soft Costs vs TEC – from 10% to 15% of construction cost.

Completing a project review process with the necessary project approvals means the project is now eligible for funding. If the project is on the RFNIIP, funding will generally have been reserved for that project in the applicable fiscal year. Factors such as timing within the fiscal year, budget allocation reductions and audit results will impact project funding.

Discussions between the First Nation, the First Nation's professional services consultant and ISC during the planning of a project will generally result in time savings during project stages and a finished project which will meet the objectives of the First Nation.

Review times can be reduced by:

- A common understanding of the scope of work between the First Nation, the professional services consultant and ISC before starting the work. Developing an agreed-upon Terms of Reference to identify project expectations at the outset will assist in this process;
- Considering operational issues based on the experiences of other First Nations with similar projects;
- Maintaining relative consistency in project costs. Significant increases in project costs may change the best option to be implemented;
- Using ISC design guideline checklists for Water and Wastewater projects.

ISC's review process can also be streamlined if a First Nations' engineering consultant sufficiently demonstrates that they have undertaken an internal senior level review of the project design that would be consistent with the Organisational Quality Management [OQM] program currently being initiated by the Engineers and Geo-scientists of BC. ISC design guideline checklists can be incorporated into this process, often by including this requirement in the Terms of Reference. A list of OQM certified consultants is available on the Engineers and Geoscientists BC website, www.egbc.ca.

During the project review process, documents will be managed by the CMO in collaboration with the SE and with assistance from funding administrators. Tombstone project information, financial information and project approvals will be entered into a one-page CFM Program Record Document [CPRD]. Key components of the CPRD are Total Project Costs,

Funding Previously Approved and Funding Requested. This document will accompany a funding application through the review and approval process and will be submitted to the appropriate organizational project approval levels for sign-off depending on the stage, size, risk and cost threshold of the project. See [Appendix 5: CFM Program Record Document \[CPRD\] – Sample.](#)

Project funding will result in an amendment to the Aboriginal Recipient Funding Agreement [ARFA] requiring First Nation and ISC signatures. Funding specifics will determine whether the funding type will be SET, FIXED or FLEX. See [Appendix 6: Contribution Funding Information.](#)

1.6 Project Environmental Review Process (ERP)

Environmental decisions will be tracked by the Integrated Environmental Management System which was launched in April 2014.

All ISC funded projects must follow an environmental review process to address the potential for environmental effects which could negatively impact a First Nation. Generally, larger and more complex projects require a higher level of environmental analysis. See numerous environmental documents in Appendix 6: Environmental Review Process.

Capital projects require a scoping report at the feasibility stage to outline potential environmental effects. Minimal environmental effects with suitable mitigation measures will require a project description and the project will then be labelled a minor project with no further environmental analysis required. A Minor Projects List has been developed to simplify this process.

Potential significant environmental effects identified in the scoping report will require a more detailed comprehensive study report which will result in a Simple Environmental Review Report managed by the SE or a Detailed Environmental Review Report managed by an environmental specialist.

1.7 The Capital Project Approval Process Sequence

The capital project funding allocation process is a systematic routing of a First Nation capital project funding application from receipt at the ISC office to the allocation of funding to the First Nation.

Generally, the process can be divided into three main components:

1. Project Approval [Process Steps 1 to 9] [described below];
2. Funding Approval [Process Steps 10 to 12] [[Appendix 7](#)]
3. Funding Disbursement [Process Steps 13 to 18] [[Appendix 7](#)]

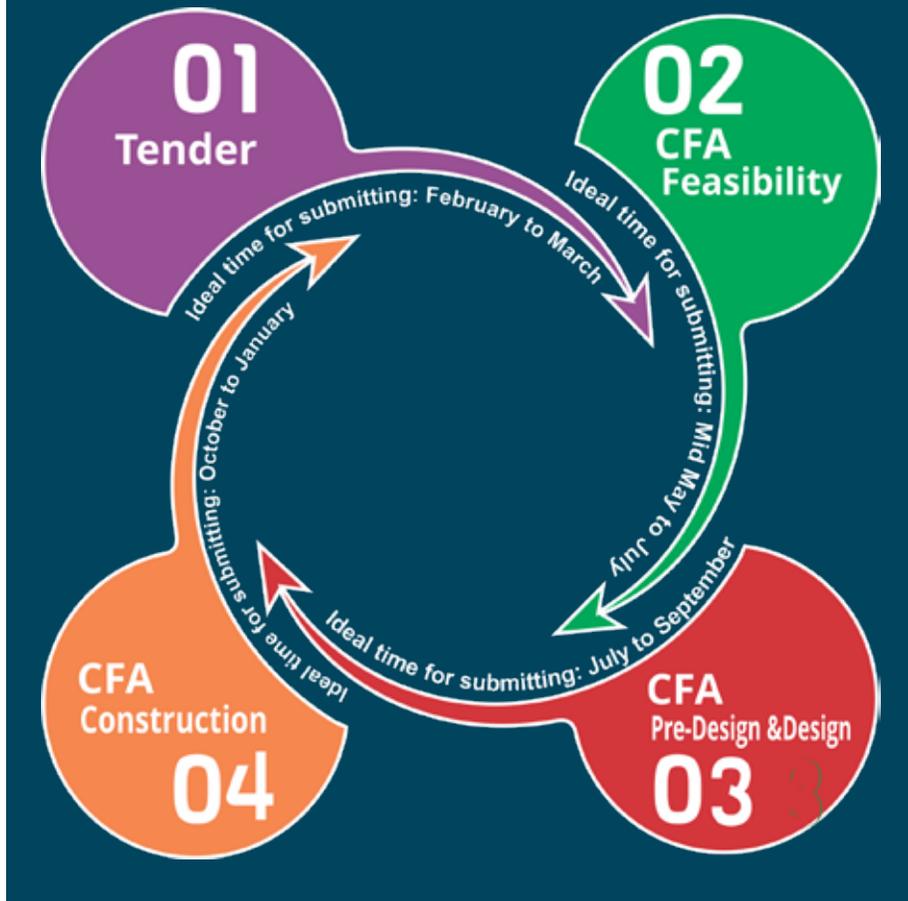
The process steps specifically address project funding applications. However, First Nations will also send in project submissions such as technical reports, progress reports or completion reports which require technical input, but are not requesting a funding allocation. Process Steps 1 to 5 of the described process will apply when only a technical review is required.

Process Step 1 – First Nation Capital Project Funding Application Delivered to ISC

Project submissions including funding applications and technical reports are to be sent by mail to your ISC Capital Management Officer [CMO]. If you plan to email them an electronic copy, please send an email to the ISC email inbox address below, to provide preliminary notice to ISC that First Nation documentation is being mailed. An e-mail auto-response will provide notification that ISC has received your advance notice. If you do not receive an auto-response, please contact your Capital Management Officer [CMO]. Sending in your documentation by mail is still required after the email notification: ISC.CapitalProjectsBC-Projetsd'immobilisationsCB.ISC@canada.ca. Capital project progress reports and completion reports should be sent to the GCIMS email address.

Funding applications for projects identified on the RFNIIP should be sent in to coincide with the planned fiscal funding schedule.

Figure 3: Capital Project Approval Process



Construction stage projects scheduled for construction on the RFNIIP should be sent to ISC in November of the previous fiscal year.

Figure 3 shows a suggested time of the year to send your funding application per stage of capital projects.

Process Step 2 – Funding Application Entered into Document Management System

Project documents [hard copy] received by ISC addressed to the CMO will be entered into the Comprehensive Integrated Document Management System [CIDMS]. The regional office of Central Records receives all mail addressed to the BC Region Office. They record the receipt of the First

Nation's capital project funding application and forward the document to the appropriate Capital Management Officer.

A funding administrator in Community Infrastructure checks the email notification inbox on a daily basis and notifies the CMO that project documentation is expected.

Process Steps 3 & 4 – Capital Management Officer Receives and Reviews the Funding Application

The CMO completes an initial review to ensure that the project is identified in the RFNIIP and that application requirements are complete and valid for the applicable stage of the project. Where required documents are missing or should some clarification be required, the First Nation will be contacted.

For new projects, the CMO enters the project information into the Integrated Capital Management System [ICMS] [replaces CPMS] and a project number (ICMS number) is assigned. This number will be the reference number for tracking the project through its project cycle to completion. Where the application relates to a capital project already existing in ICMS, the application will be appropriately noted in ICMS.

The CMO will initiate a CFM Program Review Document [CPRD], populate tombstone information, proposed project priority ranking and financial details and then send the CPRD and the project file to an assigned ISC engineer.

Process Step 5 – Technical Review by the Senior Engineers

Engineers complete a technical review of the funding application or technical report. The CPRD is used by the engineers to document that the funding application meets requirements. The project priority ranking is confirmed. An environmental assessment and project checklist are processed according to the project stage. Review comments will be provided to the First Nation if applicable and meetings will be set up with the First Nation to discuss the project if required.

The reader should:

Deemed “eligible for funding” does not mean the project will be funded but rather that the project will be advanced to Banking Day for funding consideration.

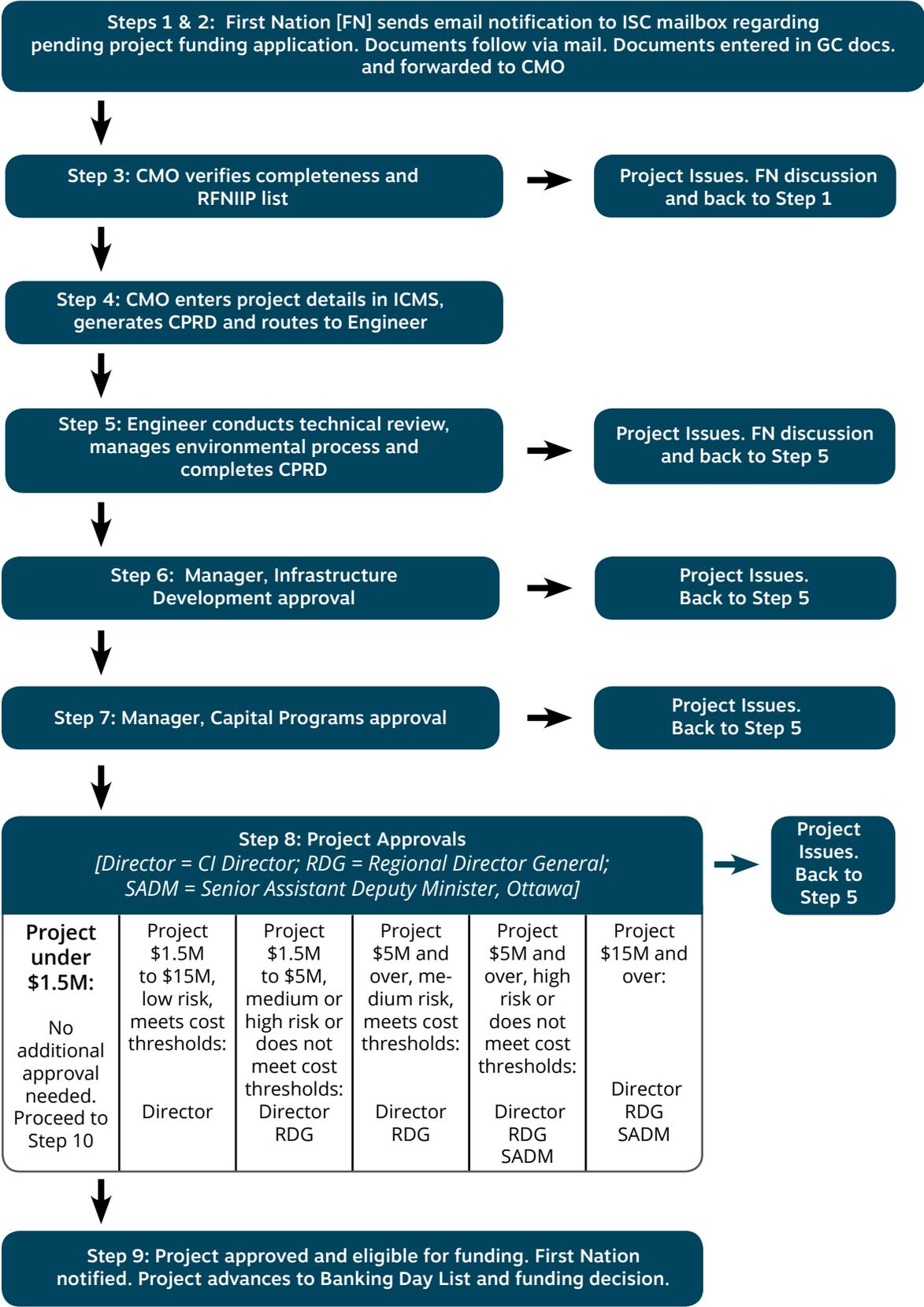
Process Step 6 to Process Step 9 – Project Approvals and Eligibility for Funding

The CPRD is forwarded to the Manager, Infrastructure Development and then to the Manager, Capital Programs for approval. An environmental assessment will be included for construction stage funding approval. A Risk Assessment Tool [RAT] will be required for projects greater than \$1.5M. A Regional Director General (RDG) decision note will be required when approval is required. A Submission for Approval form is required for Senior Assistant Deputy Minister (SADM) approval.

For ISC project costs greater than \$15 million, the project must be approved by the National Operations Committee in Ottawa and signed off by the Senior Assistant Deputy Minister [SADM] – Regional Operations.

The CMO will notify the First Nation if and when the project is deemed eligible for funding. Subject to the appropriate project approval, the ICMS record for the project is edited to indicate the date of project approval.

Figure 4: Work-flow for Capital Project Approval Process



1.8 Capital Project Funding Process and Disbursement Process Sequence

Projects deemed eligible for funding are compiled into a list called the Banking Day List which tabulates projects, project types [eg. water/wastewater, roads, community buildings, schools, housing], funding requested, priority ranking numbers and FNIIP status.

The Banking Day Committee includes representatives from Community Infrastructure, Resource Services Unit [RSU] and Funding Services Operations. The committee's function is to distribute the available regional funding budgets to capital projects based on their priority ranking and eligibility. The Banking Day occurs monthly, generally on the third Thursday of each month.

The amount of funding available for distribution varies on a monthly basis. Generally, only the highest priority eligible projects will receive funding with the balance of the eligible projects remaining on the Banking Day list for future consideration.

Projects which are selected for funding will then go through a disbursement process which requires a modification to their funding agreement. Funding type [fixed, set or flex], reporting dates, cash flow and acceptance signatures must all be finalized by the CMO and agreement administrators before the funds will be deposited in a First Nation's bank account.

Refer to [Appendix 7](#) for the specific funding and disbursement process steps.

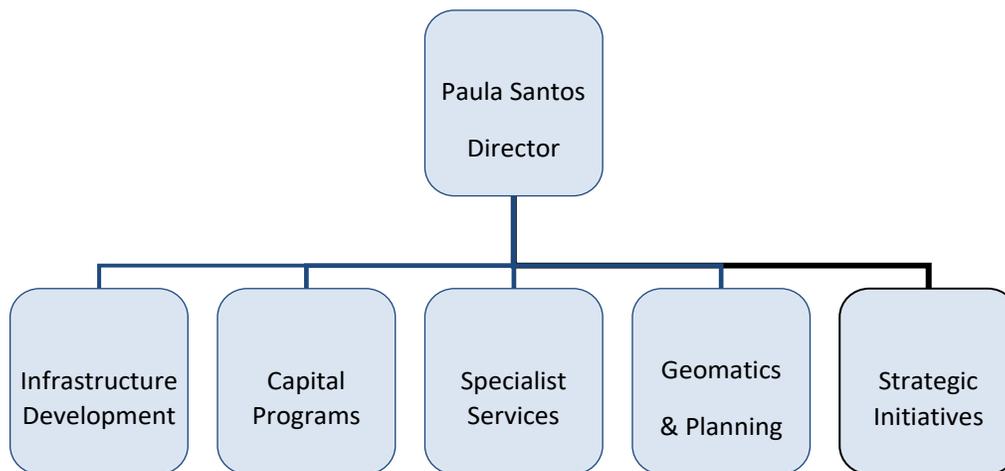


Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1: Community Infrastructure Directorate, Structure, Functions and Activities.

Community Infrastructure in the BC Region is organized in five units:



Infrastructure Development

Manager: Nathalie Lapierre

Functions and Activities:

- Engages First Nations in developing infrastructure projects
- Processes First Nations infrastructure project approvals including Education Infrastructure projects
- Manages project environmental assessment processes
- Provides technical advice and support for addressing project implementation issues
- Implements the regional dam and water license devolution program
- Manages the regional structural mitigation program
- Implements capacity building initiatives for infrastructure management

Capital Programs

Manager: Heather Leong

Functions and Activities:

- Manages the regional Capital & Facilities Maintenance (CFM) Budget
- Collaborates with First Nations to develop First Nations Infrastructure Investment Plans (FNIIPs)
- Manages housing and infrastructure project files, cash flows, and reporting
- Collaborates with Funding Services Directorate on funding agreements requirements and audit reviews for CFM program
- Processes Ministerial Loan Guarantees for housing projects
- Processes Land Encumbrance checks for capital and housing projects
- Works on infrastructure and housing policy initiatives
- Provides information and feedback to HQ related to the renewal of CFM program policy, process and reporting.
- Supports First Nations' capacity building in housing and infrastructure project planning, including coordinating training workshops
- ISC lead on consultative committees such as the Aboriginal Capital Committee

Specialist Services

Manager: Ananthan Suppiah

Functions and Activities:

- Implements the First Nations Water and Wastewater Enhanced Plan (FNWWEP)
- Coordinates water and wastewater operator training and certification
- Manages the Safe Water Operations Program (SWOP)
- Manages the Annual Performance Inspections (API) of water systems
- Supports technical reviews of urgent operations and maintenance (O&M) funding requests
- Manages the Contaminated Sites Management Program

- Coordinates the Electrification Program
- Manages the regional Fuel Tank Program
- Manages the Solid Waste Program
- Supports capacity building in asset management, dams, renewable energy, solid waste, drinking water and wastewater

Geomatics & Planning

Manager: Nicole Benchimol

Functions and Activities:

- Manage information on community infrastructure assets and calculate the funding needed to operate and maintain them.
- Inspect the condition of infrastructure assets to assist First Nations in managing and maintaining their infrastructure.
- Support First Nations with training and mentorship to support the development of effective municipal services agreements for water, sewer, fire protection, 9-1-1, garbage collection and other infrastructure services.
- Manages the Circuit Rider Training Program (CRTP)
- Support First Nations with training to enhance their capacity to manage public works functions in their communities.
- Manage the relationship with Tribal Council Technical Units.
- Provide GIS and mapping to support the analysis and planning of the infrastructure program.
- Provide GIS and mapping services to support Treaties and Aboriginal Government (TAG).

Strategic Initiatives

Manager: Rick Sabiston

Functions and Activities:

Fire/Connectivity

- Manages the relationship with the First Nations Emergency Services Society (FNESS) on Fire Services.
- Develop and implement the BC Region Fire Protection Strategy
- Provide tools & Capacity
- Training & mentoring with provincial and municipal etc.
- Lead role with managing the Connectivity projects
- Develop pilots for alternative delivery

Housing

- Develop workplan for follow-up with FN's housing plans
- Reshaping delivery of housing support
- Develop delivery and monitoring regimes for Housing Budget 2016/17/18 beyond
- Mentor/Network
- CMHC & Partners
- Sustainability
- Alternative construction options
- Monitoring and reporting trends
- Develop pilots for alternative delivery

Schools/Cultural Facilities/Additions to Reserves

- Develop process and ongoing assessment for support of School projects
- Review format, data info needs and processing for SPRFs
- Liaise with FN's and LED regarding community expansion ATR's process
- Cultural Facilities policy to be determined
- Develop pilots for alternative delivery

Appendix 2: Checklists for Submission Reviews at Feasibility, Design, Acquisition/Construction and Post Construction Stages

Appendix 2A : Feasibility Stage Funding Application

Appendix 2B: Feasibility Stage Technical Review

Appendix 2C: design Stage Funding Application

Appendix 2D: Design Stage Technical Review

Appendix 2E: Construction Stage Funding Application

Appendix 2F: Post Construction Stage Technical Review

Appendix 2A : Feasibility Stage Funding Application

Checklist for Feasibility Stage Funding Application**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description and Rationale	_____	_____	_____
CDP/ PDP Reference	_____	_____	_____
Environmental Assessment of Field Investigations Activities	_____	_____	_____
Project Implementation Plan & Schedule	_____	_____	_____
Terms of Reference (ToR)	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate including proposal from Environmental Subconsultant to complete Environmental Scoping Report and IEMS Environmental Review-Project Description Form	_____	_____	_____
Class 'D' Project Cost Estimate	_____	_____	_____
Cash Flow	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

Appendix 2B: Feasibility Stage Technical Review

Checklist for Feasibility Stage Technical Review**

Project Name _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
Feasibility Study	_____	_____	_____
• Filed in Technical Library – <i>GCdocs#</i> _____	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Option Analysis	_____	_____	_____
Preferred Option Recommended	_____	_____	_____
Land Requirements Identified	_____	_____	_____
O&M Capacity Assessment	_____	_____	_____
Subconsultant Reports	_____	_____	_____
IEMS Environmental Review-Project Description Form supplemented by an Environment Assessment Scoping Report	_____	_____	_____
Phase 1 Environmental Site Assessment (ESA) Report – for Subdivision Projects Only	_____	_____	_____
Pre-design Research Identified	_____	_____	_____
Regulatory Impact/ Permits Identified	_____	_____	_____
<small>(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, timber permit assessment, gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit) Note: Timber Permit is not required if First Nation has their own forestry land code under the First Nation Land Management Act.</small>			
Land Encumbrance Check	_____	_____	_____
Project Schedule	_____	_____	_____
Project Construction Process	_____	_____	_____
Class ‘C’ Capital Cost Estimate	_____	_____	_____
Class ‘D’ O&M Cost Estimate	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

Appendix 2C: design Stage Funding Application

Checklist for Design Stage Funding Application**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Project Implementation Plan/ Schedule	_____	_____	_____
Feasibility Study	_____	_____	_____
• Filed in Technical Library – <i>GCdocs#</i> _____	_____	_____	_____
Land Encumbrance Check	_____	_____	_____
Start IEMS Simple Environmental Review or Detailed Environmental Review Form	_____	_____	_____
Fee for completing an Environmental Assessment Study Report (if required)	_____	_____	_____
Required Permits Identified	_____	_____	_____
• Timber Description	_____	_____	_____
• Other Permits	_____	_____	_____
(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit, etc.)			
Project Construction Process	_____	_____	_____
• Initial Const. Mgmt. Best Practices	_____	_____	_____
O&M Capacity Assessment	_____	_____	_____
• Cost Estimate for O&M Manual	_____	_____	_____
• Cost Estimate for O&M Plan	_____	_____	_____
Comments by other Regulatory Agencies	_____	_____	_____
• Environment Canada	_____	_____	_____
• Fisheries Canada (DFO)	_____	_____	_____
• Others _____	_____	_____	_____
(FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)			
Terms of Reference for Consultant Services	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate	_____	_____	_____
Class 'C' Total Project Cost Estimate	_____	_____	_____
Cash Flow	_____	_____	_____
Funding Submission/ DAR	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____
***Confirm Consultan's SOW for WTP & WWTP: Complete Design Guideline Checklist	_____	_____	_____
CI Technical Reviewer: _____			
Date: _____			

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 2D: Design Stage Technical Review

Checklist for Design Stage Technical Review**

Pre-design/ Pilot Study/ Preliminary Design Phase Final Design Phase

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
Project Description & Rationale	_____	_____	_____
Preliminary/ Final Design Report (signed & sealed)	_____	_____	_____
• Preliminary Design Investigation Details	_____	_____	_____
• Preliminary/ Final Design Report (signed & sealed)	_____	_____	_____
• Preliminary/ Final Design Drawings (signed & sealed)	_____	_____	_____
• Outline/ Final Specifications (signed & sealed)	_____	_____	_____
• Tender Documents (signed & sealed)	_____	_____	_____
• Land Encumbrance Check	_____	_____	_____
• Right-of-ways Identified/ Confirmed	_____	_____	_____
• Environment Assessment Study Report	_____	_____	_____
• Complete IEMS Simple Environmental Review or Detailed Environmental Review Form	_____	_____	_____
• Required Permits Identified/ Confirmed	_____	_____	_____
• Timber Description	_____	_____	_____
• Other Permits _____ <small>(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit, etc.)</small>	_____	_____	_____
• Comments by other Regulatory Agencies	_____	_____	_____
• Environment Canada	_____	_____	_____
• Fisheries Canada	_____	_____	_____
• Others _____ <small>(FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)</small>	_____	_____	_____
• For ***WTP & WWTPs:	_____	_____	_____
• Complete Design Guideline Checklist	_____	_____	_____
• Commissioning Plan	_____	_____	_____
• Draft O&M Manual	_____	_____	_____
• O&M Training Plan	_____	_____	_____
• Project Schedule	_____	_____	_____
• Class ' <u>B/ A</u> ' Total Project Cost Estimate	_____	_____	_____
• Cash ' <u> </u> ' O&M Cost Estimate	_____	_____	_____
• Project Construction Process	_____	_____	_____
• Const. Mgmt. Business Plan	_____	_____	_____
• Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 2E: Construction Stage Funding Application

Checklist for Acquisition/ Construction Stage Funding Application**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Project Implementation Plan/ Schedule	_____	_____	_____
Final Design Information	_____	_____	_____
• Final Design Drawings (signed & sealed)	_____	_____	_____
• Final Specifications (signed & sealed)	_____	_____	_____
• Final Design Report (signed & sealed)	_____	_____	_____
Filed in Technical Library - <i>GCdocs#</i> _____	_____	_____	_____
• Tender Documents (signed & sealed)	_____	_____	_____
• Class 'A' Total Capital Cost Estimate	_____	_____	_____
• Cash Flow Projection	_____	_____	_____
• ISC to review and sign-off IEMS - Simple or Detailed Environmental Review Form	_____	_____	_____
• Land Encumbrance Check	_____	_____	_____
• Right-of-ways Identified/ Confirmed	_____	_____	_____
• Required Permits	_____	_____	_____
• Draft Timber Permit	_____	_____	_____
• Other Draft Permits _____	_____	_____	_____
(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit)			
• Comments by other Regulatory Agencies	_____	_____	_____
(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)			
• Class 'A' O&M Cost Estimate	_____	_____	_____
• For ***WTP & WWTPs only	_____	_____	_____
• Complete Design Guideline Checklist	_____	_____	_____
• Commissioning Plan	_____	_____	_____
• Draft O&M Manual	_____	_____	_____
• Draft Emergency Response Plan (ERP)	_____	_____	_____
• Draft Maintenance Management Plan	_____	_____	_____
• O&M Training Plan	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate	_____	_____	_____
Project Construction Process	_____	_____	_____
• Final Construction Mgmt. Business Plan	_____	_____	_____
Funding Submission/ PAR for Construction	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer. Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 2F: Post Construction Stage Technical Review

Checklist for Post Construction Stage Technical Review**

Project Name: _____
 CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Acceptance	_____	_____	_____
First Nation Certificate of Completion	_____	_____	_____
Project Expenditure Accounting	_____	_____	_____
• Final Project Costs	_____	_____	_____
• Budget Comparison	_____	_____	_____
• Funding Comparison	_____	_____	_____
CAIS Forms (signed and sealed)	_____	_____	_____
Completion Report	_____	_____	_____
• Project Implementation History	_____	_____	_____
• Project Participants	_____	_____	_____
• Project Milestones	_____	_____	_____
• Field Inspection Report	_____	_____	_____
• Inspection and all Test Results	_____	_____	_____
• Colour Photographs	_____	_____	_____
• For ***WTP & WWTPs Only:	_____	_____	_____
• Commissioning Reports	_____	_____	_____
• O&M Manual (both digital & hardcopy)	_____	_____	_____
• Emergency Response Plan	_____	_____	_____
• Copy of SCADA programing	_____	_____	_____
• Copy of program of the PLC	_____	_____	_____
• Maintenance Management Plan	_____	_____	_____
• Warranty Final Inspection Process	_____	_____	_____
• NBC Schedules 'A', 'B' and 'C'	_____	_____	_____
• Fire Commissioner's Final Inspection (by a third party Fire Protection Engineer or a Fire Inspector from local jurisdiction)	_____	_____	_____
• Fuel Tank Registration(if fuel tank installed during project)	_____	_____	_____
• Record Drawing Prints (signed & sealed) (11"x17" in completion report, and full sized prints)	_____	_____	_____
• Digital Record Drawings (Electronically Sealed Full Size pdf/A verified by Notarius platform)	_____	_____	_____
• Legal Survey Plan	_____	_____	_____
• Registered (ideally)	_____	_____	_____
• Copies of Permits: _____	_____	_____	_____
<small>(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, timber permit, gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit)</small>			
• Sealed Professional Certification	_____	_____	_____
Completion Report filed to Technical Library - <i>GCdocs#</i> _____	_____	_____	_____
Letter from First Nation confirming receipt of O&M Manual, Commissioning Report, Completion Report & Record Drawings	_____	_____	_____

CI Technical Reviewer: _____
 Date: _____

** Checklists are for the use of CI Technical Reviewer.
 Information listed may not all be required or additional information may be required.
 *** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 3: Risk Assessment Tool [RAT] Sample

Major Capital Project Risk Assessment Tool

Overall Project Risk Assessment and Risk Mitigation Plan

Date:

First Nation Name:

Region:

Project Name:

Project No:

Total ANWC Funding:

Funding spent to date:

Project Percent Risk: % **Low Risk** As of:

Contingency for risk: \$000

To enter values for Risk in Column E, scroll down to Explanatory Notes at Row 55

For Tab 4, use the suggested weights provided in Column H on this spreadsheet.

Note: Regions may amend Column H but must justify and document the amendment.

Risk Score = Unadjusted Percent Risk (UPR) = (Sum (Risk x WTmax) + 10) / (Sum (Riskmax x WTmax))

Percent Risk = Adjusted Percent Risk (APR) = (UPR x (Sum (Riskmax x WTmax) / Sum (Riskmax x WTmax)))

To enter Percent Risk, scroll down to Explanatory Notes at Row 56

Project Risk Elements	Risk Rating (R/R)	Unadjusted Percent Risk (UPR)	Adjusted Percent Risk (APR)	Risk Level	Description of Potential Risks	Suggested Risk Mitigation Strategy	Risk Cost (\$,000,000)	Risk Rating	Risk Rating	Risk Expiry Date (YYYY-MM-DD)
1 General Assessment (Community Capacity)	0	0	0	Low Risk	The community was assigned a General Assessment score of 0 pursuant to the General Assessment Workbook.	No action required, continue to monitor.	0	0	0	2016-11-27
2 Consultant/ Contractor Capacity (Project Management)	0	0	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the management of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	0	2016-11-27
3 Consultant/ Contractor Capacity (Design)	0	0	0	Low Risk	The Consulting Group / Contractor has demonstrated a consistent level of expertise in the design of similar projects with a minimum of 20 years of senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	0	2016-11-27
4 Consultant/ Contractor Capacity (Construction)	0	0	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the construction of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	0	2016-11-27
5 Environmental	0	0	0	Low Risk	There is minimal Environment value to the project site and the project would have minimal impact to the surrounding environment.	No action required, continue to monitor.	0	0	0	2016-11-27
6 Remediation	0	0	0	Low Risk	Project site is easily accessible all year.	No action required.	0	0	0	2016-11-27
7 Project Scope	0	0	0	Low Risk	Project Designs are completed and the project is ready to proceed to construction.	No action required.	0	0	0	2016-11-27
8 Project Duration	0	0	0	Low Risk	Project can be constructed within 6 months.	No action required, continue to monitor.	0	0	0	2016-11-27
9 Project Complexity	0	0	0	Low Risk	The project is typical and matches the expertise of the project team.	No action required, continue to monitor.	0	0	0	2016-11-27
10 Funding Limit	0	0	0	Low Risk	Total Project value less than 25 million or not likely to exceed \$10 Million.	No action required, continue to monitor.	0	0	0	2016-11-27
11 Funding Suspension	0	0	0	Low Risk	Community regularly completes necessary reports on-time and the community has no other ongoing projects.	No action required, continue to monitor.	0	0	0	2016-11-27
12 Cost Sharing	0	0	0	Low Risk	There is no cost sharing from the community.	No action required.	0	0	0	2016-11-27
Risk Score = 0.0						Total contingency for risk expressed in dollars:	0.00			

Appendix 4: Geographic Zone [Remoteness] Classifications

Geographical zone classifications consider remoteness, distance to service centres and road access types. There are four zones with the following descriptions:

Zone 1 -

First Nation is located within 50 km of the nearest service centre by year-round access. Material prices are competitive. Delivery time and charges are either non-existent or nominal. Skilled labour is plentiful and productive.

Zone 2 -

First Nation is located between 50 km and 350 km from the nearest service centre by year-round access. Material prices are not as competitive [only one supplier]. Transportation time and costs are significant. Only semi-skilled or unskilled labour is available. Skilled labour must be housed or compensated for travel.

Zone 3 -

First Nation is located over 350 km from the nearest service centre by year-round access. Material prices are excessive. Skilled or semi-skilled labour must be imported or housed on-site.

Zone 4 -

First Nation has no year-round access to the nearest service centre and as a result has a higher cost of transportation.

Note: A given site does not have to meet every criterion in order to be included in a given category.

Appendix 5: CFM Program Record Document [CPRD] -Sample

 Government of Canada Gouvernement du Canada		VAN-E 4965-band#- UNC
CFM PROGRAM RECORD DOCUMENT Indigenous Services Canada British Columbia Region		
Recipient Name:	#N/A	Reserve No & Name:
Project ICMS #:	CPM S #:	#N/A
Project Name:		STAGE
Category:		Feasibility:
Budget:	A-BASE	Design:
Major/Minor:	Minor	Construction:
ICM S Budget:	#N/A	Post Construction:
ICM S F/A:	#N/A	Stage Status:
GCIM S Project Code:		PRIORITY & RISK
Total Estimated Cost (FNIIP):		BC Region:
Total Planned INAC Funding (FNIIP):		National:
Total Funded to Date:		PRF:
FUNDING LIMITS to APPROVE:		
This Stage:	Allocation	Contingency
This Stage Limit:	\$0	
Stage Limits:		
Stage Funded to Date:	\$0	\$0
Funding Required Now:		
Funding Required Future Year(s):	\$0	\$0
Remaining in Stage Limits:	\$0	\$0
Total Limit including this stage:		
Total Funding Limit Remaining:	\$0	
CAPITAL NOTES & SIGN OFFS		
Funding Application supported by CMO/Officer: #N/A		
AGREEMENT		
Agreement Type		
FY Start		
Current Year	Yr	0 of 0
REVIEW		
Environmental Assessment	Yes	No N/A
LOSS		No
Design Standards		No
Cost Effectiveness		Yes
Implementation Plan		No
Documentation		No
TECHNICAL NOTES & SIGN OFFS		
Enter notes. Include "Funding application supported by [name of Engineer]"		
Funding Application Supported by Engineer: #N/A		
FALSE		

Appendix 6: Contributing Funding Information

1 / General Information

Snapshot – AANDC Contribution Funding Approaches

Funding Authority Type Overview					
Funding Types	GRANT	CONTRIBUTION			
		SET	Aboriginal Recipients		
Descriptions	Specific eligibility criteria and an application	Where performance conditions specified in the funding agreement are set.	Where a contribution can be based on a predetermined annual estimate of the funding required by a recipient to achieve the objectives of the transfer payment.	Where a program is expected to require a two or more year relationship with a recipient to achieve objectives can be funded under a multi-year funding agreement and the recipient has demonstrated capacity to manage transfer payments.	Where a number of programs are expected to require a five or more year relationship with the recipient to achieve objectives can be funded under a single multi-year funding agreement and the recipient has demonstrated capacity to manage transfer payments.
	Reallocation of funds	No reallocation permitted.	No reallocation permitted.	No reallocation permitted.	Recipients are able to reallocate funds amongst program-specified cost categories.	Recipients are able to reallocate funds amongst the programs in the block and adjust the relative priority of programs to address changing circumstances and the recipient's priorities.
Duration	Can be multi-year			2 or more years	5 or more years
Reporting	Annual financial statements along with program operational and financial reports throughout the year.				Annual financial statements and annual program operational and financial reports.
Accountability	Primary accountability is to DIAND and to community members for delivery of programs and services in accordance with terms and conditions of the agreement.				

1 / General Information

Funding Authority Type Overview					
Funding Types	GRANT	CONTRIBUTION			
		SET	Aboriginal Recipients		
Unexpended Funding (Surpluses)	May be recovered if recipient is no longer eligible.	Unexpended funding must be reimbursed. No retention of unexpended funds and no carry forward into the next fiscal year.	Unexpended funding must be reimbursed, except . . . Recipients may retain unexpended funds remaining at the end of a Fiscal Year provided the delivery requirements set out in the funding agreement are fulfilled and the recipient uses the unexpended funding in the next Fiscal Year for: i) purposes consistent with the program, services, or activity for which funding was provided; or ii) any other purposes set out in a plan submitted to and accepted by the Department and iii) recipient reports the expenditures as required by the Reporting Guide.	Unexpended funding must be reimbursed, except . . . Recipients are able, during the period of the project or the funding agreement, to retain unexpended funds remaining at the end of each Fiscal Year for use in the next fiscal year to further achieve results toward the program objective. Unexpended funds remaining at the earlier of the end of the project or the expiry of the agreement are recoverable.	Unexpended funding must be reimbursed, except . . . Recipients may retain unexpended funds remaining at the expiry of the funding agreement provided that the delivery standards set out in the funding agreement are fulfilled and the recipient agrees to use the unexpended funds for: i) purposes consistent with any one of the programs, services or activities for which Block funding was provided; or ii) any other purpose set out in a plan submitted to and accepted by the Department, and the recipient reports the expenditures as required by the Reporting Guide.

Appendix 7: Capital Project Funding Approval and Funding Disbursement Sequences

Capital Project Funding Approval Sequence [Steps continue from Capital Project Approval Sequence in Chapter 1, Section 1.7]

Step 10 – Projects are compiled on Banking Day List by Resource Services Unit for Banking Day meeting.

Step 11 – Banking Day committee meets to make funding decisions based on whether they are planned for funding this fiscal year, their priority ranking and available funds.

Step 12 - Notice of project funding decisions are forwarded to the appropriate CMO for funding implementation and notification to the First Nation.

Capital Project Funding Disbursement Sequence [Steps continue from Capital Project Funding Approval Sequence above]

Step 13 –CMO determines funding type, cash flow requirements and reporting dates and sends information to Funding Services agreement administrators.

Step 14 - Funding Services Agreement administrators generate funding agreement amendments which are sent to First Nations for consideration and signature.

Step 15 – Returned, signed agreement amendments are then signed by DISC Corporate Services and Director, Funding Services.

Step 16 – Project funding per month as per stipulated cash flows in the amendments are in the sent to the Director, Community Infrastructure for approval.

Step 17 – Funding requisitions are sent to Public Services Procurement Canada [PSPC] for allocation.

Step 18 – PSCP deposits funds in First Nation bank accounts.



Chapter 2:

THE IDENTIFICATION OF A CAPITAL PROJECT

A Practical Guide To Capital Projects | 2 of 6



A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre

Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351

Facsimile: 604-775-7149

Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	v
Table of Contents	vi
Glossary of Abbreviations	viii
Definitions.....	xii

The Identification Of A Capital Project

Introduction	1
2.1 Capital Project Identification	2
2.2	3
2.3 Infrastructure System Assessment.....	4
2.4 Capital Project Planning	5
2.5 First Nations Infrastructure Investment Plan (FNIIP)	7
2.6 Regional First Nation Infrastructure Investment Plan (RFNIIP).....	8
2.7 Project Implementation.....	11
2.7.1 Project Leader	11
2.7.2 Hiring a Project Manager	12
2.7.3 Hiring a Professional Services Consultant (Engineer or Architect)	15
2.7.4 Hiring a General Construction Contractor.....	18
2.7.5 Hiring a Construction Manager	18
2.7.6 Band Administration Fees.....	20
2.7.7 Project Contingencies	20

APPENDICES

1: First Nation Infrastructure Investment Plan	25
1A: Cost Estimates - Definitions	27
1B: FNIIP Frequently Asked Questions 2017-2018	29
1C: ISC 2015 Letter to First Nations with FNIIP Information.....	37
1D: FNIP Annual Update Process - Schematic	41

Table of Contents

Appendices Cont.

2: BC Region Priority Ranking Tables	43
2A: Infrastructure Priority Ranking Table.....	45
2B: Subdivision Ranking Table.....	53
2C: Priority Ranking Framework - Water	55
2D: Priority Ranking Framework wastewater.....	57
3: Access to Additional Capital Guidelines for Block-Funded Recipients	59
4: Project Implementation.....	69
4A: Guidelines for Hiring an Independent Project Manager	71
4B: DISC Guidelines for First Nations Engaging a Consultant	77
4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings	81
4D: ISC Sample Professional Services Contract [CN2 Template]	83
4E: Advice on Hiring a Professional Engineer or Professional Geoscientist	85
5: Sample Terms of Reference	103
5A: Terms of Reference - Feasibility Study [Sample]	105
5B: Terms of Reference - Design Stage [Sample].....	113
5C: Terms of Reference - Construction and Post-Construction Stage [Sample].....	123
6: Band Administration Fees.....	137

Figures

Figure 5: FNIP Annual Update Process - Schematic.....	9
---	---

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEP	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
FNIIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organisational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit (with Funding Services)
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act CEAA2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subcontractors, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subcontractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations which identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning, budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures, prescribed in the environmental review process, were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's discretion. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - Protect and maintain existing assets with an emphasis on health and safety;
 - Mitigate health and safety risks through new and existing assets;
 - Address water and sewer project backlogs;
 - Include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organisations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).

Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post Construction Stage of a Capital Project

Appendix

The Identification of a Capital Project

An overview of the BC Region Indigenous Services Canada Capital Program including a step-by-step description of the project approval process.

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision-making for the successful implementation of capital projects.

The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

Funding processes related to other components of the Capital Facilities and Maintenance Program (CFMP) program such as for schools, housing and operation and maintenance are covered in other documents.

The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle – feasibility, design, construction and post construction stages. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

Prior to the feasibility stage, there are formal or informal processes which generally generate community infrastructure development initiatives to improve the functioning of community infrastructure systems. These initiatives could originate from informal observations and opinions or from more formal community meetings or planning documents.

Identifying the concept of a capital project is not specifically funded by ISC although information contributing to this process such as ACRS reports, specific studies and community planning exercises are often funded by ISC.

This chapter focuses on topics which can contribute to the identification and subsequent processing of a capital project.

2.1 Capital Project Identification

Project identification is the process where the potential need for a capital project is identified in order to respond to specific community goals and objectives.

A capital project may be identified to:

- Construct new community infrastructure facilities to support community growth;
- Increase the capacity of existing community infrastructure facilities to support community growth;
- Upgrade existing community infrastructure facilities to address potential infrastructure system failures due to deteriorating facility conditions (i.e. too old; high usage; maintenance issues)
- Upgrade existing community infrastructure facilities to meet new standards (e.g., upgraded water quality standards).

The reader should:

Note that funding for developing a comprehensive community plan for a First Nation community is available from community

2.2 Comprehensive Community Planning

Comprehensive Community Planning (CCP) enables a community to determine a vision for the future, integrate and link community objectives, and establish community projects and programs that reflect a long-term view of community development. This planning process will consider the sustainable development of all aspects of community development including infrastructure expansion, economic initiatives, land utilization and resource usage. The resulting development direction would be consistent with the community's social and cultural goals embracing educational, health and governance objectives.

Please refer to *The CCP Handbook: Comprehensive Community Planning for First Nations in British Columbia* for more information on developing a CCP at <http://www.aadnc-aandc.gc.ca/eng/1100100021966/1100100021970>.

The implementation of community objectives generated in a CCP exercise will often result in the requirement for new or enhanced community infrastructure. There is a logical transition from community objectives to infrastructure planning to the identification of infrastructure projects. A planning document, sometimes called a Community Development Plan (CDP), is often generated to establish a structured approach to this transition.

2.3 Infrastructure System Assessment

The process of identifying infrastructure projects which support basic community development objectives can be facilitated by considering the following sources of information:

- Asset Condition Reporting System (ACRS) Reports: asset condition reports generated once every three years assessing the specific condition of infrastructure system components within the framework of their service life.
- Annual Performance Inspection (API) Reports: water and wastewater system assessment reports completed on an annual basis;
- Infrastructure Planning Assessments: assessments evaluating the capacity of existing infrastructure systems (e.g., water; wastewater; transportation; electrical; communications) within the framework of future community objectives and growth;
- Special Studies: studies such as the “National Assessment of Water and Wastewater Systems in First Nations Communities 2009-2011” and “Flood and Erosion Damage Mitigation Plan, Stage 1” (circa 2000-2001) assessing the specific performance of existing infrastructure components;
- Maintenance Management Planning: systematic analysis of the life-cycle of infrastructure system components resulting in a formalized plan for component replacement;
- Circuit Rider Reports: infrastructure system component assessments and recommendations resulting from circuit rider visits;
- Operational Requirements: infrastructure system performance obtained from the regular, operational experience of system operators (e.g., frequency of watermain breaks or number of sewage pump station failures);
- Community Feedback: infrastructure system information provided by system customers to be considered when assessing infrastructure reliability.

2.4 Capital Project Planning

Capital projects generally progress along a timeline which moves from identifying an infrastructure need generated during the planning processes to starting a feasibility study to specifically examine options and alternative to address the infrastructure need.

Planning for capital projects identified during Comprehensive Community Plans (CCP), Community Development Plans (CDP) and infrastructure system assessments should be structured into a long range implementation plan with a duration of minimum five years and preferably ten years. Longer planning periods (up to 20 years), often labeled “future”, are not uncommon. A common term to use for this extended plan is a Long Term Capital Plan (LTCP).

All capital projects potentially considered by a community should be listed in a capital project plan regardless of the funding sources. However, please recognize that ISC has limited sources of funding available to financially support all the projects listed, and, other funding partners may need to be involved. Some projects may be continually moved to future years and some projects may be considered “emergency” to be implemented as soon as possible. Some projects may be eventually removed from the capital project list because they are no longer relevant. The availability of a capital project list will enable a community to understand their community infrastructure priorities, to focus on implementing critical projects and to be able to effectively react to changes in available funding.

Criteria to be considered when developing a listing of capital projects include:

- Project priority: how important is the project to the future of the community and how is the project interconnected with the priority of other projects i.e., does this project need to be implemented before other projects can proceed;
- Project complexity: how much time needs to be invested in developing the project. Larger projects tend to be more complex and require more planning time to develop in order to maximize benefits to the community;

- Project Cost: for larger cost projects, First Nations are encouraged to discuss with their CMO the available financial resources at ISC;
- Project Logistics: significant project particulars (e.g., land procurement) need to be assessed for project scheduling impacts;
- Project Environmental Impacts: mitigative measures to minimize environmental impacts need to be developed;
- Project Resources Required: community leadership resources need to be available to provide direction to project development.

The listing of projects should schedule projects into proposed implementation years, considering the preceding criteria and available financial resources. Most projects should be scheduled over approximately three years to move through the planning/feasibility/design/construction process, but some larger, more complex projects requiring significant financial resources and leadership resources may need to be scheduled over a much longer time frame.

2.5 First Nations Infrastructure Investment Plan (FNIIP)

The Long Term Capital Plan (LTCP) listing all identified community capital projects will include specific projects that are eligible for ISC funding. For ISC funding consideration, these projects need to be submitted to ISC on an annual basis in a format labeled “First Nations Infrastructure Investment Plan – Annual Report, DCI #460674.”

The FNIIP will contain a rolling five-year projection of community capital projects proposed for implementation and listed according to the project name, funding required and cash flow per future fiscal years.

An effective way to generate a FNIIP is to start with the previous year’s FNIIP. Include projects already started which were not completed in the stage currently underway (specifically construction), projects that are ready to move ahead which did not get implemented and projects previously scheduled for implementation in the upcoming FNIIP year.

All First Nation projects potentially utilizing ISC funding should be listed including ACRS projects (Group 2 and Group 3) identified from ACRS reports and school projects. Potential First Nations Infrastructure Fund (FNIF) projects should also be listed.

Newly identified projects require cost estimates to complete the project and cash flow information. Generally Class D ballpark estimates would be sufficient for feasibility stage funding information. ISC technical staff can assist with providing cost estimating information. See [*Appendix 1A: Cost Estimates – Definitions.*](#)

Projects and implementation schedules should be regularly revised in the FNIIP in accordance with actual project development. First Nations may revise the FNIIP capital plan project listing to add projects or delete projects as community priorities change. In some cases, projects which were at the feasibility stage may be deleted because they were found to be “not feasible” or other subsequent options were considered more beneficial to community development.

Capital Management Officers and Senior Engineers are available to assist First Nations with the identification of community capital projects and the transition of projects into the ISC capital project approval process. See [Appendix 1B: FNIIIP Frequently Asked Questions 2017-2018](#) and [Appendix 1C: ISC 2015 Letter to First Nations with FNIIIP Information](#).

2.6 Regional First Nation Infrastructure Investment Plan (RFNIIIP)

Annual FNIIIP updates from all BC First Nations will form the basis for the ISC Regional FNIIIP (RFNIIIP). See [Appendix 1D: FNIIIP Annual Update Process – Schematic](#) for an overview of the RFNIIIP process.

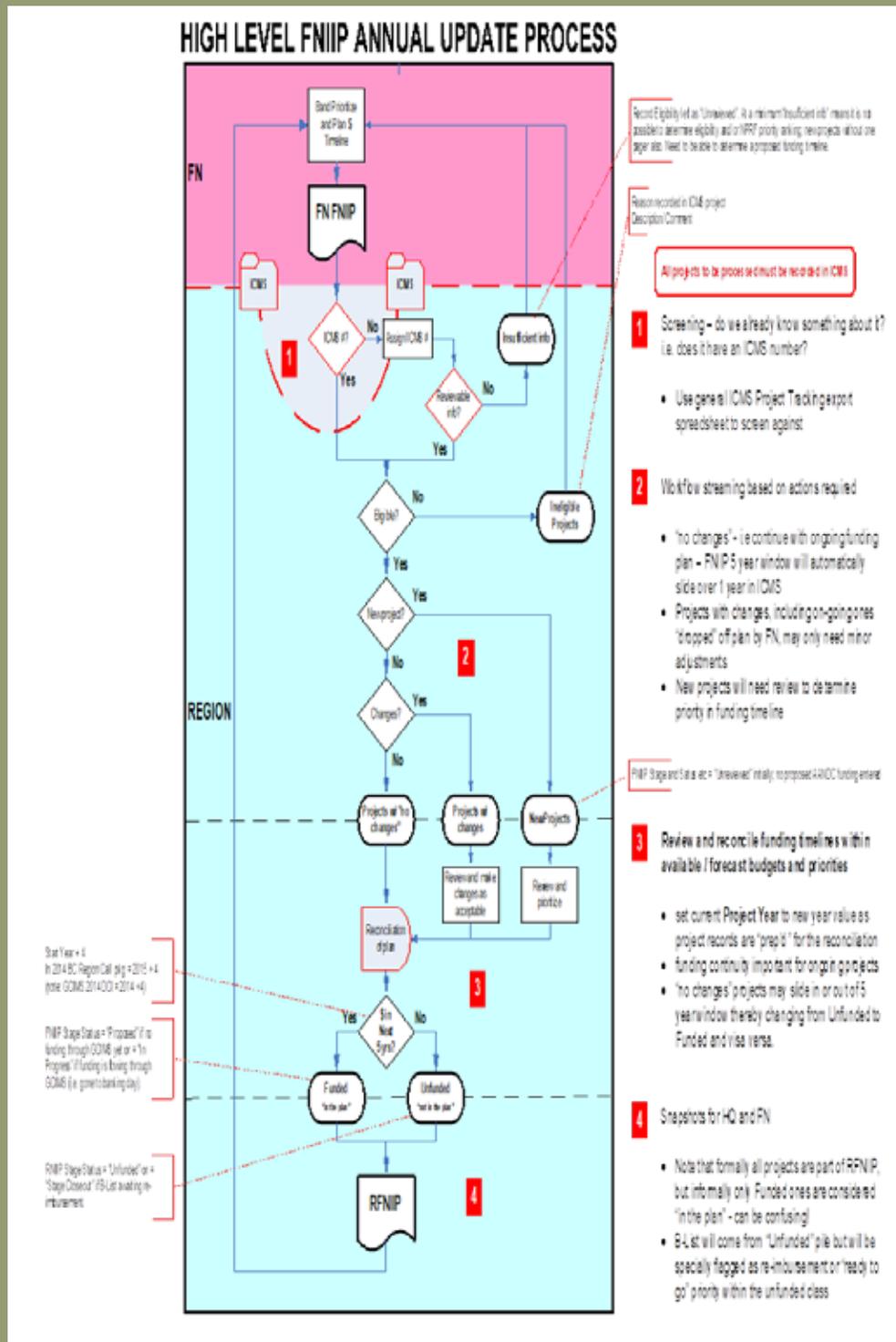
To generate the RFNIIIP, all submitted FNIIIP projects will be assigned ICMS numbers and assessed for funding eligibility. One-page summaries of new FNIIIP projects are requested to assist in categorizing the project. Projects must meet funding criteria stipulated in the Level of Service Standards and the Transfer Payment Agreement with Treasury Board.

Projects meeting funding criteria are assigned anticipated priority ranking numbers. See [Appendix 2: BC Region Priority Ranking Tables used for determining priority ranking numbers](#). A project is aligned with the closest project description and matching priority ranking number in the priority ranking table. Because of the large number of regional water and wastewater projects, these categories have been further subdivided using an additional priority ranking process.

In general, the priority ranking tables are structured to prioritize projects in the following order:

- Health and safety issues;
- Maintenance of existing community facilities to extend their service life;
- Water and wastewater systems;
- Sustainable community infrastructure (eg. electrification, roads, education, community facilities).

Figure 5: FNIP Annual Update Process - Schematic



All projects are then ranked in order of priority within each budget type (e.g., water, wastewater, roads, etc.), using the priority ranking numbers and the budget available for that project type determines the number of projects which will be funded. (See Section 1.3 Regional Capital Funding Distribution.)

Although the project priority ranking criteria and the associated regional budgets are the primary focus of project selection, projects which incorporate partnerships and cost-sharing with other funding sources, will be selection factors. Halt list and audit issues will also be factored in project selection.

Block-funded First Nations will need to follow the additional criteria listed in the document *Access to Additional Capital Guidelines for Block-funded Recipients* in order receive additional funding for identified projects. See [Appendix 3: Access to Additional Capital Guidelines for Block-Funded Recipients.](#)

After Regional Director approval of the RFNIIP, First Nation communities will be notified about project funding available for that fiscal year. Appropriate funding applications to access the funding allocation will then be required. See Chapters 3, 4 & 5 for information on the preparation of funding applications.

The RFNIIP and the associated annual regional ISC budget may result in no initial funding available for specific capital projects identified in a community's FNIIIP. Generally, projects focusing on health and safety (e.g., water and wastewater) will have high project priority ranking numbers and will utilize most of the regional budget.

First Nations are encouraged to continue communicating with their CMO/SE regarding implementing community priority projects and advancing future years projects not included in the initial RFNIIP in case additional financial resources become available later in the year.

2.7 Project Implementation

2.7.1 Project Leader

The development of a project requires communication connections between the First Nation's administration representing the community and the professionals engaged to implement the project delivery process. A project leader employed by the First Nation's administration should be assigned to serve as the single point of communication to facilitate and coordinate ongoing project issues and circumstances between the administration and the project professionals. Generally, the project leader's primary contact would be the assigned project manager. The project leader could be the band manager, the capital works officer or a council member. Typical project leader functions would be:

1. Confirming project objectives as the project develops;
2. Providing information at council meetings and band administration meetings;
3. Liaising with First Nations maintenance staff;
4. Providing community project information;
5. Organizing project presentations at community meetings;
6. Arranging project team meeting rooms;
7. Organizing road and facility closures;
8. Facilitating invoice payments.

2.7.2 Hiring a Project Manager

All significant projects will have a project manager. A project manager is an experienced individual, familiar with technical and logistical project processes, who is tasked with providing overall direction and coordination for the development of a capital project. In general, the project manager is responsible for ensuring a capital project:

- Meets project objectives;
- Stays on schedule;
- Stays on budget.

First Nations administrations may not have appropriately qualified available personnel on-staff who are sufficiently familiar with project management processes and have the time to function as a project manager. Engaging professional project management services as required is a viable and effective option.

If a client has engaged a professional services consultant (engineering or architectural firm), that firm will identify a qualified project manager from their company when submitting a proposal to provide project professional services.

As an alternative, a First Nation may choose to engage an independent project manager not associated with the engineering and design professionals working on the project. The person or firm engaged would have proven, suitable project management qualifications which match the size and complexity of the project. Some reasons for this project implementation strategy would be:

- Directly responsible to the First Nation;
- Focus on the project objectives of the First Nation;
- Focus on facilitating project implementation between First Nations and ISC including managing the coordination of funding documentation;
- Independent budget and schedule scrutiny;
- Overall financial control and direction for all aspects of the project.

Typically an independent project manager would complete the following tasks:

- Project planning, implementation and monitoring;
- Consultant selection services;
- Consultant and construction management services.

A project manager may be hired at any stage of the capital project cycle. Hiring a project manager at the beginning of a project is recommended, because a proposal for hiring a project manager is often included in a feasibility stage funding application.

A First Nation may also consider using their professional services consultant to undertake project management functions during the feasibility stage, then hiring an independent project manager when moving into the design stage. First Nations must clearly communicate their intentions for project management services when soliciting proposals from professional services consultants.

ISC will generally provide funding to hire an independent project manager for infrastructure projects with an ISC funding contribution greater than \$500.0K, and for building projects with an ISC funding contribution greater than \$1.5M. ISC's policy is to require an independent project manager for any school projects over \$2M. Individual projects can be combined to reach these project dollar thresholds.

The maximum, eligible funding allowance for combined project management and local project coordination functions is 3% of the project construction cost. Funding from ISC will be based on a project management proposal identifying duties, experience and fees. Project management funding will not automatically be set at 3%. Hiring an independent project manager will reduce the project management effort and associated fees charged by a professional services consultant.

One of ISC's objectives to provide discrete funding for an independent project manager is to streamline the funding schedule. The project manager can focus on the coordination and development of project

documentation required to obtain funding and allow the design consultants to focus on technical development.

Project managers can be sole practitioners (i.e. their own project management firm) or solicited from larger firms with project management expertise. Engineering or architectural firms can provide independent project management services with a clear understanding not to provide design services. A list of potential project managers to be considered can be generated by the following processes:

- Relying on past experience hiring a project manager for another project;
- Talking with other First Nations who have hired project managers;
- Talking with other groups who have hired project managers;
- Communicating with ISC Community Infrastructure representatives;
- Checking internet or other media information sources;
- Checking with professional associations.

Engaging a project manager can be accomplished using a comparative process where a number of project management firms (usually between three and five) are solicited to submit comparative proposals through a request for proposal (RFP) process. A comparative proposal process would require the development of a written Terms of Reference (TOR) so that all proposals would be based on the same expected requirements. In selected situations, a sole source process where only one project management firm is invited to submit a proposal can be considered. A written TOR would also be helpful in establishing mutual expectations for a sole source proposal.

See [Appendix 4](#) for a TOR for Project Implementation of Hiring Professionals: [Appendix 4A: Guidelines for Hiring an Independent Project Manager](#); [Appendix 4B: Procedures for Engaging a Consultant on a CFM Capital Project](#); [Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings](#); [Appendix 4D: Sample Professional Services Contract \(CN2 Template\)](#) and [Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist](#).

Project management firms and their associated proposals would be assessed by generally using the following criteria, which can be amended depending on the circumstances. A spreadsheet is generally used if several persons are assessing the proposals. The project management firms can be contacted to clarify their proposals.

- Experience of the project management company (may be a sole practitioner);
- Experience of the project manager to be assigned to the project (may be a sole practitioner);
- Experience working with First Nations communities;
- Experience with similar projects;
- Demonstrated understanding of project complexity and requirements;
- Availability of services;
- Cost of services.

The assessment of firms and proposals is intended to select a project management firm which can work with the First Nation to provide the required project management services. Modifications can be made to the proposal with a possible fee revision to result in a mutually acceptable and understandable statement of work which can form the basis for a signed contract between the First Nation and the project management firm.

2.7.3 Hiring a Professional Services Consultant (Engineer or Architect)

Infrastructure and facilities projects (including buildings) will normally require a professional services consultant to provide technical direction for the duration of the project from feasibility studies to the completion report and through the warranty period. A successful project will result from engaging a consultant with the following attributes:

- Ability to understand the expectation of their clients;
- Ability to communicate with their clients in a meaningful and substantial manner;

- Understanding of project factors and project complexity;
- Experience with implementing similar projects;
- Ability to meet project schedules.

Hiring a professional services consultant will be similar to the process for hiring a project manager. A list of potential consultant firms can be generated by the following processes:

- Relying on past experience hiring consultants for other projects;
- Talking with other First Nations who have hired consultants;
- Talking with other groups who have hired consultants;
- Communicating with ISC Community Infrastructure representatives;
- Checking Internet or other media information sources.

Engaging a consultant can be accomplished using a comparative process where a number of consulting firms (usually between three and five) are solicited to submit comparative proposals through a request for proposal (RFP) process. A comparative proposal process would require the development of a written Terms of Reference (TOR) so all proposals would be based on the same expected requirements. In selected situations, a sole source process where only one consulting firm is invited to submit a proposal can be considered. A written TOR would also be helpful in establishing mutual expectations for a sole source proposal.

See [Appendix 5: Sample Terms of Reference.](#)

Consulting firms and their associated proposals would be assessed by generally using the following criteria (which can be amended depending on circumstances). A spreadsheet is generally used if several persons are assessing the proposals. The consulting firms can be contacted to clarify their proposals.

- Experience of the consulting firm;
- Experience of the personnel to be assigned to the project;
- Experience working with First Nations communities;
- Experience with similar projects;
- Demonstrated understanding of project complexity;
- Availability of services;
- Cost of services.

See [*Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings*](#) for a sample spreadsheet for assessing proposals.

The assessment of firms and proposals is intended to select a consulting firm which can work with the First Nations to provide the required technical services. Modifications can be made to the proposal with a possible fee revision to result in a mutually acceptable and understandable statement of work which can form the basis for a signed contract between the First Nation and the consulting firm.

The Engineers and Geoscientists BC has developed a formal, quality control regime entitled Organizational Quality Management (OQM) which prescribes processes and procedures to promote company attention to quality control when providing professional services. Engineering firms in BC who have become OQM certified are listed on the following website (<https://www.egbc.ca/>).

ISC requires consulting proposals to indicate how design quality assurance initiatives similar to the OQM process and consistent with ISC design guidelines will be incorporated throughout the technical development of the project. Outcomes, such as greater clarity on project development, mutual understanding of design expectations and increased assurance of project quality are expected.

Reference documents:

[Appendix 4B: Procedures for Engaging a Consultant on a CFM Capital Project;](#)
[Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings.](#) *[Appendix 4D: Sample Professional Services Contract \(CN2 Template\)](#)* *[Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist \(excerpt from EGBC Website\).](#)*

2.7.4 Hiring a General Construction Contractor

A general construction contractor will arrange all project activities to result in a complete project which meets the objectives of the First Nation. The general contractor is responsible for coordinating all construction trades, procuring all materials, transporting them to the project site and providing the necessary equipment to finish the project within a prescribed time frame. The general contractor assumes all risks (e.g., increasing material costs; equipment breakdowns) and is also responsible for any workmanship defects within a one-year warranty period.

The value of work being completed will determine the procurement strategy for hiring a general construction contractor. Obtaining a construction quote from a single contractor is permissible for construction contracts less than \$100.0K. For construction contracts between \$100.0K and \$500.0K, construction quotes must be obtained from a minimum of three qualified contractors. For construction contracts over \$500.0K, projects must be publicly tendered. The project manager will provide appropriate direction for implementing a public tender process and will have access to standardized construction contracts. Signed construction contracts are required for all construction values.

2.7.5 Hiring a Construction Manager

As an alternative to hiring a general construction contractor, the First Nation can choose to hire a qualified, professional construction manager to directly manage the project construction process. This arrangement essentially results in the First Nation becoming the construction

contractor. The project elements of a project are usually separated on a trade-by-trade basis which are implemented using competitively awarded tender processes for each trade or by utilizing the First Nation's own employment forces. The First Nations assumes responsibility for risks during construction (e.g., increasing material costs, own equipment breakdowns), for managing their work force and for paying all accounts and billings. The completion schedule is determined by the performance efficiency of each trade and the First Nation guarantees the quality of the final product (rather than a general contractor's warranty).

A construction management business plan is to be submitted to ISC for approval with the design stage funding application and a refined plan is to be submitted with the construction stage funding application. A construction management evaluation team (CMET) with equal representation from the proponent First Nation and ISC will review each business plan submission.

A professional construction manager is hired in a process similar to hiring a project manager or a professional services consultant. A list of prospective construction managers are identified, proposals are requested and assessed and a contract is signed. Generally the construction manager is hired before the design stage begins in order to provide construction logistics advice while the project design is being developed.

For more information on construction management, go to DISC's Website Reference Information Access Instructions for the CFM Program - Project Information - Policies and Directives - Operational Parameters for the Review and Evaluation of Construction Management Policies.

2.7.6 Band Administration Fees

The First Nation has the overall responsibility for the expenditure of funds for the delivery of a capital project. ISC will allocate funds to support administrative activities directly linked to the implementation of a capital project in accordance with a fee calculation formula based on the project cost. See [*Appendix 6: Band Administration Fees*](#).

2.7.7 Project Contingencies

Contingency amounts can be applied according to established percentages (generally 10%) for design stage estimating and construction stage project approval. Contingencies at construction stage can be reset from design stage contingencies based on updated construction costs generated upon the completion of design (i.e., pre-tender costs Class A).

Contingency amounts will not be incorporated into the funding limit at feasibility and design stages unless identified for specific circumstances.



Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1:

Appendix 1A : Cost Estimates - Definitions

Appendix 1B: FNIIP Frequently Asked Questions

Appendix 1C: ISC 2017 Letter to First Nations with FNIIP Information

Appendix 1D: FNIIP Annual Update Process - Schematic

Appendix 1A: Cost Estimates - Definitions

Class “A” Cost Estimate

A Class “A” estimate is based on a quantity take off from the final drawings and specifications. It is used to evaluate tenders and it may also be used as the tool for controlling the construction of a project. A Class “A” estimate is always done at the completion of the design and specifications. It forms the basis for funding submissions for construction/acquisition of the project.

Class “B” Cost Estimate

A Class “B” cost estimate is prepared after the completion of site reviews and studies, and after the development of preliminary designs that show and define all major systems. Class “B” cost estimates are required at the completion of the preliminary design page.

Class “C” Cost Estimate

A Class “C” cost estimate is prepared with limited site information, based on probable conditions affecting the site. It represents the summation of the estimated costs for all known components of the project. It is used for project planning, establishing a more specific definition of project requirements, and for obtaining preliminary project approval. A Class “C” cost estimate is produced at the end of a project Feasibility Study and is generally used to support a funding request for Design.

Class “D” Cost Estimate

This is a “ball park” or “order of magnitude” figure used for preliminary consideration of the proposed project. A Class “D” cost estimate is based on the broad requirements for the project with little or no site information. The figure can be obtained from previous similar projects, or from Capital Specialists and District Engineers who may have estimates on a file from recent projects in other communities. A Class “D” cost estimate is generally used to support a funding request for Feasibility Study.

Appendix 1B: FNIIP Frequently Asked Questions 2017-2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Community Infrastructure, BC Region

BC First Nations Infrastructure Investment Plan (FNIIP) 2017-2018

Frequently Asked Questions

What is the FNIIP?

The FNIIP is a national Department of Services Canada (DISC) initiative designed to apply a consistent approach to short and medium term planning and budget forecasting. The FNIIP is a useful tool to support First Nations' infrastructure and housing planning process, and allows DISC to better forecast infrastructure budget pressures.

First Nations' FNIIPs is due on October 16.

What's New?

FNIIP Submission Deadline: The National deadline for the FNIIP is September 30 and is reflected in GCIMS with this date. However, BC Region will be keeping the October 16 due date for 2017-2018 to allow BC Region to work with First Nations to fully review and scope projects.

New Email Address: BC Region has been reviewing the capital project approval process with a focus on reducing turn-around times and enhancing the consistency of file review comments. One of the ways to achieve this is by implementing a centralized email address to accept and process capital projects and information.

First Nations are asked to use this new email address to submit their capital project

applications and supporting documents:

aadnc.projetsdimmobilisationscb-capitalprojectsbc.aandc@canada.ca

Budget 2016: Highlights can be found:

<https://www.canada.ca/en/indigenous-services-canada.html>

Budget 2017: Information will be available on:

<https://www.canada.ca/en/indigenous-services-canada.html>

Who will use the FNIIP?

First Nations use their FNIIP to plan their annual and medium-term capital investments in community infrastructure projects, and have a clearer expectation of when DISC funding may be available to support the projects in their capital projects program.

DISC BC Region uses the FNIIPs to set regional priorities and to focus attention on moving these priority projects forward.

BC Region provides a prioritized Regional First Nations Infrastructure Investment Plan (Regional FNIIP) to National Headquarters (NHQ) for consideration of national budget pressures and priorities. NHQ then creates a National First Nations Infrastructure Investment Plan (National FNIIP) and conducts quarterly reviews of Regional FNIIP and National FNIIP to monitor capital program progress.

There is now a greater reliance on the FNIIP to determine project selection for new funding investments. First Nations are encouraged to fully participate in submitting their FNIIPs on time to ensure consideration for funding.

Why is the FNIIP required every year?

The annual FNIIP provides an opportunity for Chief and Council to review their capital program each year, and add, change or remove planned capital projects to address the changing needs of their community. It is a mechanism to identify First Nations' changing priorities and work with their Capital Management Officers at DISC

to develop action plans to address community objectives. The FNIIP is a national reporting requirement. First Nations are encouraged to submit their FNIIPs annually to ensure continued eligibility to receive capital and housing project funding.

What happened to my Budget 2016 project application(s)?

BC Region received more applications than available funding for various asset categories during the Budget 2016 call processes. All applications were logged and consolidated for Headquarters for review and selection. For those projects that did not receive funding in either 2016-2017 or 2017-2018, the applications did provide important information on infrastructure needs and related financial requirements for the coming years.

In the event additional funding becomes available and eligibility criteria is determined, your Capital Management Officer can work with you to assess completeness of the applications and prioritize these projects within your FNIIP.

What types of projects are funded on the FNIIP?

The major categories for capital projects on the FNIIP are:

- Water and Wastewater
- Housing
- Education Facilities
- Roads and Bridges
- Flood and Erosion
- Electrification
- Dams
- Solid Waste Disposal
- Fire Protection
- Community Buildings
- Subdivisions

Will all the projects on the FNIIP be funded?

BC Region annually receives funding requests for approximately \$750 million dollars for almost 1,800 projects. The demand exceeds the budget by a factor of nearly 5 times. The region works with each recipient to prioritize projects to address community, regional and national requirements within the available annual budget. Other priority projects will be planned over the next five (5) years, however, these are subject to change based on annual budget allocations and emerging priorities.

How are FNIIP projects prioritized?

Projects are prioritized based on the Capital Project Priority Ranking tables, as listed in “A Practical Guide to Capital Projects” and are prioritized in descending rank order as follows:

- Mitigation of health and safety risks through existing and new assets;
- Protection and maintenance of the life cycles of existing assets, emphasizing health and safety;
- Addressing the backlog of water and sewage systems projects;
- Investment in sustainable communities (e.g., housing, electrification, roads, education, and community facilities).

Canada’s priority has been to support clean drinking water and the CFM program will continue to address high health and safety water and wastewater projects.

What projects are listed in the FNIIP and Regional FNIIP?

A complete list of projects in our Integrated Capital Management System (ICMS), which includes non-completed projects from the Capital Project Management System (CPMS) are included on this year’s FNIIP. Capital Management Officers will be working with you to determine the status of these projects; whether projects are missing reporting requirements and can be closed; or re-initiated for next year’s FNIIP submission.

If your projects are not listed in the Regional FNIIP, additional information can be provided to the regional office for review and possible inclusion into the 5 year

plan. A one-pager project information template has been included in the approved FNIIP package to assist First Nations in providing more information for next year's submission.

Are Block funded, Treaty, and Self-government First Nations required to submit a FNIIP?

All First Nations in BC who wish to access capital funds are required to submit a FNIIP listing capital projects for their community. Block funded First Nations must demonstrate how their block funds are allocated towards high priority health and safety projects before projects that meet DISC regional priorities are considered for additional capital funding. Access to additional capital funding for Treaty and Self-governing First Nations will be determined by the terms of their Financial Transfer Agreements or Fiscal Financing Agreements.

How does the FNIIP relate to Comprehensive Community Planning (CCP)?

Comprehensive Community Planning (CCP) is a holistic process that enables a community to build a roadmap to sustainability, self-sufficiency and enhanced governance capacity. The CCP addresses key planning areas, all of which are interrelated and interdependent, including governance, land and resources, health, culture, social issues, economy, and infrastructure development.

The CCP defines overall community goals and objectives and can act as a guide to assist communities in preparing the FNIIP. The FNIIP complements the CCP process by allowing communities to plan infrastructure development projects in greater detail than might otherwise be done through the development of a CCP alone, easing the transition from planning to implementation of prioritized capital projects.

What steps are required to advance projects listed on the FNIIP?

DISC BC Region will review all First Nations' FNIIP submissions and develop a comprehensive list of regional infrastructure and housing projects eligible for funding consideration. This information will be communicated to each First Nation identifying infrastructure and housing projects that are eligible for funding based on their FNIIP submissions.

In order to access funding for infrastructure and housing projects, First Nations **must still make project submissions** to DISC, following the processes listed in:

- “*A Practical Guide to Capital Projects*” for infrastructure projects;
- “*Practical Guide for Housing – How to Access Housing Subsidies*” for the Housing Subsidy program or;
- “*New Approach for Housing Support*” application for applying to Stream 1, 2 or 3 of the NAHS.

Funding allocations will be based on actual costs identified in the approved funding submissions. Capital Management Officers and Senior Engineers will actively work with First Nations to support the efficient delivery of infrastructure and housing projects and, if applicable, make necessary adjustments to the Regional FNIIP.

Can I switch Capital Projects listed on Regional FNIIP?

The intent of the FNIIP is to identify First Nations priority projects in the short to medium term. An infrastructure or housing project listed in the Regional FNIIP can be replaced with another project. However, the new project will be assessed against all other Regional FNIIP priority items in the category. New projects should be listed in the annual FNIIP submission which is also an opportunity for First Nations to review and change, if necessary, their planned capital and housing projects.

Are there other sources of funding besides DISC?

First Nations are encouraged to look at other government departments and agencies for funding opportunities, as well as provincial and public, private partnerships. Where applicable, First Nations can leverage funds through alternative financing mechanisms.

Where additional funding is being used in a project, the additional source of funding should be identified in your FNIIP.

Who do I contact if I have questions regarding my FNIIP or Regional FNIIP?

Capital Management Officers are available to meet with you and your capital team to support and advice on the preparation of your FNIIP. Please contact your Capital Management Officer at 1-800-665-9320 (toll-free) for additional information.

Internet Links

A Practical Guide to Capital Projects:

New version will be coming soon.

A Practical Guide to Housing – How to Access Housing Subsidies

www.aadnc-INAC.gc.ca/DAM/DAM-INTER-BC/STAGING/texte-text/hsggdepdf_1366333709177_eng.pdf

New Approach for Housing Support:

www.aadnc-aandc.gc.ca/eng/1460572397817/1460572439929

Appendix 1C: ISC 2015 Letter to First Nations with FNIIP Information

September 11, 2017

Our file – Notre référence
VAN-E 4300-530 UNC

Chief and Council
Moricetown - 530
205 Beaver Road
Smithers, BC V0J 2N1

Dear Chief and Council:

RE: First Nations Infrastructure Investment Plans (FNIIP):
- Approved Projects for 2017-18 FNIIP
- Call Package for 2018-19 FNIIP

This letter is to inform you of the status of projects proposed in the 2017-18 First Nation Infrastructure Investment Plan (FNIIP) for your First Nation, and to notify you regarding the Call for 2018-2019 FNIIP submissions.

Attached in Annex A is the list of projects selected from your 2017-18 FNIIP submission that BC Region will consider funding over the next five years, subject to confirming project implementation timelines and available INAC funding.

Attached in Annex B is the Call Package for the 2018-19 FNIIP submission. Please note that 2018-19 FNIIPs must be submitted to INAC BC Region by **October 16, 2017**.

Due to the national selection process for the Budget 2016 – Year 2 initiative, the confirmation of the 2017-18 FNIIP projects was considerably delayed, and I acknowledge this has likely created difficulties for your infrastructure planning. We have heard your comments requesting more timely feedback from us on your FNIIP and capital project requests, and we are working toward doing that.

Should you have any questions about your 2017-2018 FNIIP, or the upcoming 2018-2019 FNIIP submission, please contact your Capital Management Officer.

Canada

- 2 -

I wish you success with your infrastructure planning.

Sincerely,

A handwritten signature in black ink that reads "Paula Santos". The signature is written in a cursive, flowing style.

Paula Santos, P.Eng.
Director, Community Infrastructure
British Columbia Region

c.c.: Catherine Lappe, Regional Director General, BC Region
Band Manager / Administrator
Capital Management Officers

Encl: Annex A: 2017-18 FNIIP and Budget Summary
Annex B: 2018-19 FNIIP Call Package
Frequently Asked Questions (FAQs)

Annex A

(see attached ANNEX A 2017-2018 FNIIP.pdf file)

Projects that are being considered within the 5 year FNIIP:

In some cases, your projects are already underway or fully funded and your capital staff has been working with the BC Region INAC Community Infrastructure directorate to progress these projects to completion. For projects that do not yet have a project submission, your INAC Capital Management Officer will be working with you to initiate the project or next stage.

The “planned” estimates in the FNIIP are an estimate for proposed projects and should not be relied upon to assume INAC’s actual funding commitment. Estimated project costs will be adjusted to accurately reflect actual costs as each stage is approved and completed.

Other Projects that were submitted:

We have also included a complete list of projects in our Integrated Capital Management System (ICMS), which includes housing and older or incomplete projects. INAC Capital Management Officers will be working with you to determine the status of these projects; whether projects are missing reporting requirements and can be closed; or re-initiated for next year’s FNIIP submission.

Annex B

2018-2019 FNIIP Submission

The 2018-2019 FNIIP submission is due on **October 16, 2017**. We encourage you to update your FNIIP as Budget 2017 funding, **including housing projects**, may be allocated based on your plan. The attached ANNEX B 2018-2019 FNIIP.XLSX file is pre-populated with the Annex A data to facilitate your update. Consider providing updates for the following situations:

- i. Existing projects that have changed costs or timeframes
- ii. Changes to funding timelines of listed projects
- iii. New projects which have emerged for your community
- iv. Housing projects

Also attached is a one-pager information sheet, which can provide additional project information that will help INAC prioritize your project.

Please email your submission in Excel format (DCI: 460674 – 2017/2018) to BC Region by Monday, October 16, 2017 to: **BCREPORTS@aandc-aadnc.gc.ca**

INAC remains committed to the provision of safe drinking water and wastewater services in First Nation communities. While the current year FNIIP has a focus on water and wastewater projects, BC Region will be working with you to identify eligible projects in other infrastructure categories, including housing.

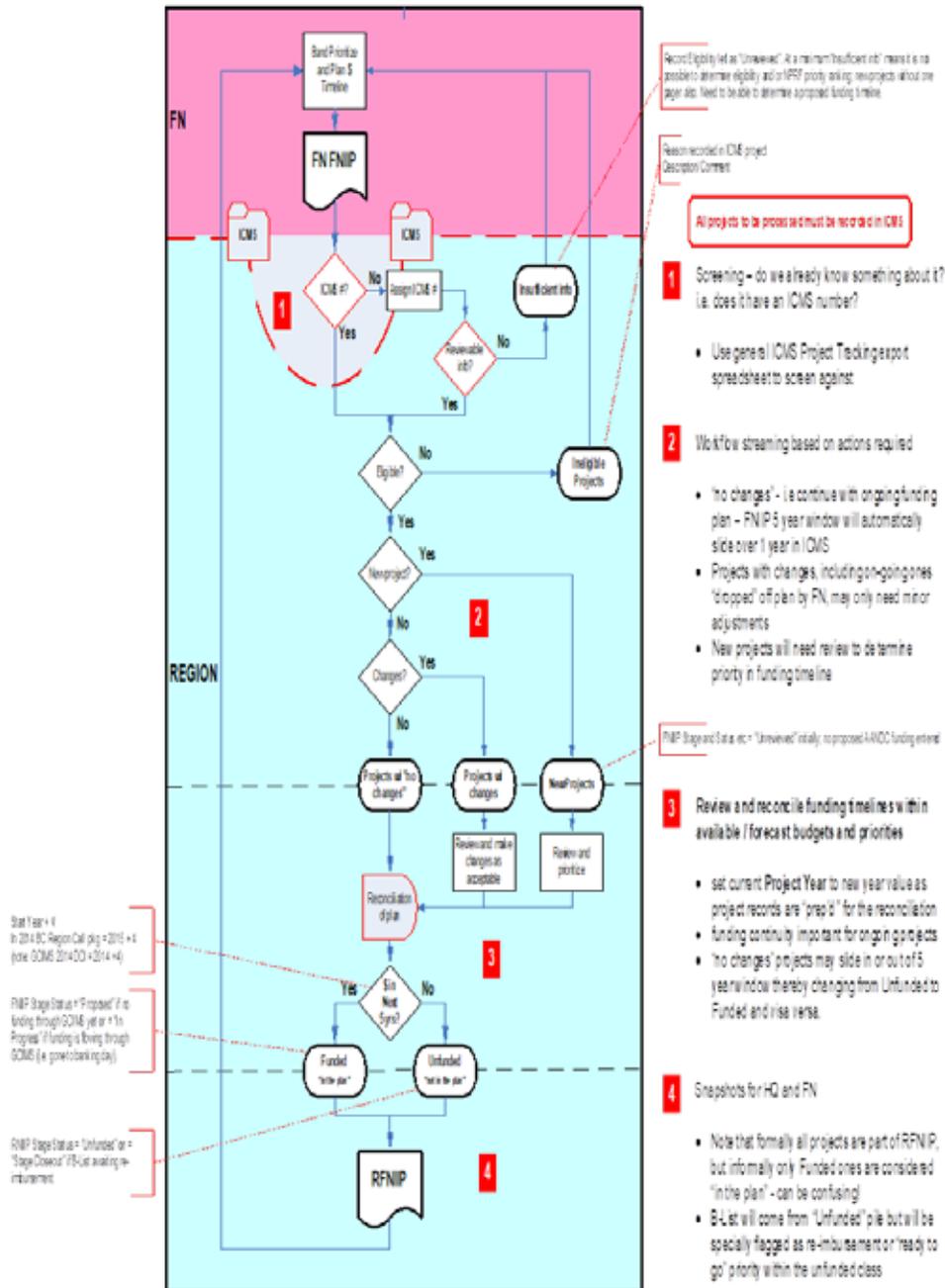
The Protocol for INAC Funded Infrastructure

The Protocol for INAC Funded Infrastructure (PIFI) applies to all projects requiring INAC funding. The PIFI is an omnibus protocol that is referenced in all new funding agreements. The primary intent of the PIFI is to list all policy and procedure guidelines, standards and legislation that may be applicable to the implementation of capital projects. Detailed information on the PIFI can be found at: <https://www.aadnc-aandc.gc.ca/eng/1409148994545/1409149023055>.

Also attached is the 2017-2018 Budget Summary for this year's FNIIP projects, as well as Frequently Asked Questions (FAQs) to assist you in completing your FNIIP update and implementing your projects within the Capital Project Approval Process.

Appendix 1D: FNIP Annual Update Process - Schematic

HIGH LEVEL FNIP ANNUAL UPDATE PROCESS



Appendix 2: BC Region Priority Ranking Tables

Appendix 2A: Infrastructure Priority Ranking Table

Appendix 2B: Subdivision Priority Ranking Table

Appendix 2C – Priority Ranking Framework – Water

Appendix 2D – Priority Ranking Framework – Wastewater

Appendix 2A: Infrastructure Priority Ranking Table

STRUCTURAL MITIGATION PROJECT EVALUATION			
Ref	Category	Input Information	Comments and Observations
A1	<u>Probability / Frequency of the Potential Event</u>	1 in <input type="text"/> year	potential frequency of the proposed event, 1 in 5 years; 1 in 10 years; 1 in 25 years; 1 in 50 years; 1 in 100 years; 1:200 year; etc.
Summary of Potential Community Buildings & Infrastructure Impacted if an Event were to Occur			
B1	Elementary School	Square Area of Building <input type="text"/> sq-m Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	School floor area frame and foundation will not likely be damaged anticipated depth of flood at structure
B2 (a)	Secondary School	Square Area of Building <input type="text"/> sq-m Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	School floor area frame and foundation will not likely be damaged anticipated depth of flood at structure
B2 (b)	Combined Elementary and Secondary School	Square Area of Building <input type="text"/> sq-m Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	School floor area frame and foundation will not likely be damaged anticipated depth of flood at structure
B3 (a)	Water Distribution System Impacts	cost of annual O&M on this reserve <input type="text"/> percent of overall watermain that is to be impacted <input type="text"/> % Length of watermain completely damaged <input type="text"/> linear Metres	anticipated percent of serviced area that is flooded
B3 (b)	Water Treatment Plant - Number of People Served	Water Treatment Facility Chlorination or Full Treatment Plant <input type="text"/> people Estimated Capital Value <input type="text"/> Chr / Full Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	type of water treatment Estimated Based on Population being Served frame and foundation will not likely be damaged anticipated depth of flood at structure
B3 (c)	Miscellaneous Water Infrastructure Impacts	Estimated value of Impacted Structures <input type="text"/> Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	prv station, well head controls, etc. frame and foundation will not likely be damaged anticipated depth of flood at structure
B4 (a)	Waste Water Collection System Impacts	cost of annual O&M on this reserve <input type="text"/> percent of overall sewer system that is to be impacted <input type="text"/> % Length of sewer completely damaged <input type="text"/> linear Metres	need to flush waste water sewer system etc. anticipated percent of serviced area that is flooded
B4 (b)	Waste Water Treatment Plant - No. of People Served	Sewage lagoon impacts <input type="text"/> people Estimated Capital Value <input type="text"/> (yes or no) Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	Estimated Based on Population being Served anticipated depth of flood at structure
B4 (c)	Waste Water Septic Tanks	Number of Septic Tanks & Fields <input type="text"/> Number of Septic Tanks / Field Completely Damaged <input type="text"/> Number of Septic Tanks / Fields inundated <input type="text"/>	number of individual septic tanks fields impacted
B4 (d)	Miscellaneous Waste Water Infrastructure Impacts	Estimated value of Impacted Structures <input type="text"/> Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	sewage lift station, back-up generator, etc. frame and foundation will not likely be damaged anticipated depth of flood at structure
B5	Fire halls	Square Area of Building <input type="text"/> sq-m Completely Damaged <input type="text"/> (yes or no) Estimated Depth of Flood Damage <input type="text"/> m	floor area of the impacted building frame and foundation will not likely be damaged anticipated depth of flood at structure
B6	Community Buildings	Total Square Area of damaged Buildings <input type="text"/> sq-m Buildings Completely Damaged <input type="text"/> (yes or no) Estimated Average Depth of Flood Damage <input type="text"/> m	Floor area of Community Buildings impacted frame and foundation will not likely be damaged anticipated depth of flood at structure

Summary of Potential Community Buildings & Infrastructure Impacted if an Event were to Occur		
B7 Housing	Number of Homes Impacted	<input type="text"/>
	Number of Buildings Completely Damaged	<input type="text"/>
	Estimated Average Depth of Flood Damage	<input type="text"/> m
		number of homes completed damaged by an event
		anticipated average depth of flooding around homes
B8 Roadway Structures	cost of annual O&M on this reserve	<input type="text"/>
	percent of overall roadway that is to be impacted	<input type="text"/> %
	Length of roadway completely damaged	<input type="text"/> linear Metres
		will require cleaning of roads after an event
		anticipated percent of serviced area that is flooded
		section of road potentially washed out
B9 Access Bridge	Estimated cost of damages to Impacted Structure	<input type="text"/>
		culvert crossing, bridge, or structural headwalls
B10 Electrical Power Generation Station	Estimated cost of damages to Impacted Structure	<input type="text"/>
		transformers, generators, etc.
B11 Fuel Tank Farm	Estimated cost of damages to Impacted Structure	<input type="text"/>
		refueling depot for school buses, marine boats, community generators
Other		
B12	Estimated cost of damages to Impacted Structure	<input type="text"/>
B13	Estimated cost of damages to Impacted Structure	<input type="text"/>
B14	Estimated cost of damages to Impacted Structure	<input type="text"/>
		identify items
		group costs if more then 3
Summary of Community, People and Environmental Impacts if an Event were to Occur		
C1 Total Number of people on reserve	<input type="text"/> people	total population ##; enter ## living on-reserve
C2 Number of people Directly Impacted by Event	<input type="text"/> people	Enter ## people directly impacted by anticipated event
C3 Percentage of people affected by loss of assets	<input type="text"/> %	
C4 Environmental Risk (High / Medium / Low/ None)	<input type="text"/>	<input type="text"/>
C5 Remoteness Index	Zone <input type="text"/>	
C6 Project Stage (Feasibility / Design / Construction)	<input type="text"/>	
Cost Sharing Opportunities		
D1 Band Contribution to Total Estimated Project Costs	<input type="text"/>	
D2 Contribution from other Third Party	<input type="text"/>	identify third party
D3 Deadline to Recover Contribution from Third Party	<input type="text"/> Months	how long is funding available from third party
F1 Has the Region Included the project within the 5yr FNIP	<input type="text"/> (yes or no)	

Priority Ranking Framework - Energy Systems

A. Improving Health, Safety and Wellbeing

- A1 - Population on-reserve expected to benefit directly
- A2 - Population outside of reserve expected to benefit from project
- A3 - Community wellbeing index
- A2 - Project enables other core community infrastructure

B - Cleaner and Healthier Environment

A
s
s
e
s
s
m
e
n
t

- B1 - Community is identified as one of the 40 diesel-dependent First Nations
- B2 - Project expected to substantially reduce GHG emissions / air pollution and/or improve air quality
- B3 - Project expected to result in significant energy cost savings or contribute to energy independence for the community

C - Enhancing collaboration

- C1 - Benefit for First Nations communities from the project
- C2 - Project part of broader regional or horizontal government initiative

D - Leveraging other sources of funding

- D1 - Contribution from third party such as private sector, other government

E - Other Considerations

- E1 - Project specific - state of project readiness

F. Region Recommendation

- F1 - Region recommends project?
- F2 - Own Source Revenue?
- F3 - Is asset required on urgent basis?

G. INFORMATION

- G1- Recipient standing/ management capacity - ability to manage funding agreements per GA score
- G2- Recipient is a Self Gov/ Modern Treaty (received funding in Settlement)

Priority Ranking Framework - Schools

A. Condition of Existing Facility

- A1 Condition rating
- A2 Residual life cycle (years of service life remaining)

B. Overcrowding

- B1 School gross area (existing vs. required)
- B2 Facility consolidation (consolidated vs distributed)
- B3 Site gross area (existing vs. required)
- B4 Percent temporary structures (portables) vs. permanent

C. Accessibility to Off-Reserve Schools

- C1 Nearby off-reserve schools (see Explanatory Notes)

D. Design

- D1 Grades required
- D2 Amenities (existing vs. required)
special needs room, computer room, gym, science room.

E. Cost Efficiency Opportunities?

- E1 Own-source revenues
- E2 Third-party contribution
- E3 Expiry date to use 3rd-party funding?
- E4 Project can be aggregated (bundled)
- E5 Other - see *Explanatory Notes*

F. Region Recommendation

- F1 Region recommends project?
Provide justification for yes OR no answer

Priority Ranking Framework - Roads & Bridges

A. Improving Health, Safety and Wellbeing

- A1 - Population on-reserve expected to benefit directly
- A2 - Members living outside of reserve expected to benefit from project
- A3 - Community wellbeing index
- A4- Remoteness
- A5 - Community has alternative routes / roads / bridge connections

B. Cleaner and Healthier Environment

- B1 - Project has environmental protection elements

C - Enhancing collaboration

- C1 - Benefit for First Nations communities from the project
- C2 - Number of other stakeholders, other than FN, engaged in the project
- C3 - Project part of broader regional or horizontal government initiative

D. Leveraging other sources of funding

- D1 - Band contribution as percentage of total cost
- D2 - Contribution from third party such as private sector, other government
- D3 - Deadline to recover contribution from a third party source
- D4 - Project approval must be fast-tracked to secure funding offered by an external partner (time limit to third party funding availability)

E. Other Considerations

- E1 - Asset management - condition of existing asset
- E2 - State of project readiness
- E-3 Does another project depend on this project to move forward

F. Special considerations

- F1 - Has the Region identified this project as a high priority ?
- F2 - Has the project received previous FNIF funding
- F3 - Does the project leverage existing provincial/ municipal roads or bridges infrastructure?

G. INFORMATION

- G1- Recipient standing/management capacity - ability to manage funding agreements per GA score
- G2- Recipient is a Self Gov/Modern Treaty (received funding in Settlement)

Priority Ranking Framework - Cultural & Recreational Facilities

A. Improving Health, Safety and Wellbeing

- A1 - Population on-reserve expected to benefit directly
- A2 - Members living outside of reserve expected to benefit from project
- A3- Youth population on reserve expected to benefit directly from project
- A4 - Community wellbeing index
- A5 - Remoteness
- A6 - Project identifies cultural and recreational facility

B - Cleaner and Healthier Environment

- B1 - Project has environmental elements (e.g. gardens, trees, etc.)

C - Enhancing collaboration

- C1 - Benefit for First Nations communities from the project
- C2 - Number of other stakeholders, other than FN, engaged in the project
- C3- Project part of a broader regional or horizontal government initiative

D - Leveraging other sources of funding

- D1 - Band contribution as percentage of total cost
- D2 - Contribution from third party such as private sector, other government
- D3 - Deadline to recover contribution from a third party source
- D4 - Project approval must be fast-tracked to secure funding offered by an external partner (time limit to third party funding availability)

E - Other Considerations

- E1 - State of project readiness

F. Special considerations

- F1 - Has the Region identified this project as a high priority
Provide justification for yes OR no answer
- F2 - Has the project received prior C&R funding?
Provide justification for yes OR no answer
- F3 - Does the Community have existing cultural and recreational
Provide justification for yes OR no answer
- F4 - Does the project leverage existing cultural and recreational
Provide justification for yes OR no answer

G. INFORMATION

- G1- Recipient standing/management capacity - ability to manage funding agreements per GA score
- G2- Recipient is a Self Gov/ Modern Treaty (received funding in Settlement)

Priority Ranking Framework - Connectivity

A. Improving Health, Safety and Wellbeing

- S
P
E
C
I
F
I
C
- A1 - Population on-reserve expected to benefit directly
 - A2- Project enables other community infrastructure
 - A3 - Community has existing connectivity infrastructure
 - A4 - Project has multi-use application (e.g., Band governance, community / youth programs)
 - A5 - Project leverages existing regional / provincial/ territorial connectivity infrastructure

C - Enhancing collaboration

- C1 - Benefit for First Nations communities from the project
- C2 - Project part of broader regional or horizontal government initiative

D - Leveraging other sources of funding

- D1 - Contribution from third party such as private sector, other government

E - Other Considerations

- E1 - Project specific - state of project readiness
- E2 - Project specific - Remoteness
- E3 - Recipient standing/management capacity - ability to manage funding agreements per GA score

F. Special Considerations

- F1 - Region recommends project?
Provide justification for yes OR no answer
- F2 - Own Source Revenue?
Provide justification for yes OR no answer
- F3 - Is asset required on urgent basis?
Provide justification for yes OR no answer

G. INFORMATION

- G1- Recipient standing/ management capacity - ability to manage funding agreements per GA score
- G2- Recipient is a Self Gov/ Modern Treaty (received funding in Settlement)

Priority Ranking Framework - Fire Protection

A. Improving Health, Safety and Wellbeing

- A1 - Population on-reserve expected to benefit directly
- A2 - Community wellbeing index
- A3 - Remoteness
- A4 - How many residences will this project serve?

B - Cleaner and Healthier Environment

- B1 - Project has environmental elements

C - Enhancing collaboration

- C1 - Benefit for First Nations communities from the project
- C2 - Number of other stakeholders, other than FN, engaged in the project
- C3 - Project part of broader regional or horizontal government initiative

D - Leveraging other sources of funding

- D1 - Band contribution as percentage of total cost
- D2 - Contribution from third party such as private sector, other government
- D3 - Deadline to recover contribution from a third party source
- D4 - Project approval must be fast-tracked to secure funding offered by an external partner (time limit to third party funding availability)

E - Other Considerations

- E1 - State of project readiness

F. Special Considerations

- F1- Does this project align with LOSS tiers? If yes which Tiers
- F2 - Has the region identified this project as a high priority?
- F3 - Has the community received previous FNIF Fire Protection Funding?
If yes, which Tier? I, II, or III?
Provide justification for yes OR no answer
- F4 - What is the state of:
 - F4 (a) Community Fire Hall? (New, Good, Fair, Poor, None)
 - F4 (b) Community Fire Trucks? (New, Good, Fair, Poor, None)
- For Tier II and Tier III only
- F5 - Does the community have a Municipal-Type Service Agreement (MTSA) for fire related services?
- F6 - Does the community have a fire service assessment?
- For Tier III only
- F7 - Does the community have a capital investment plan?
- F8 - Does the community have a maintenance management plan for the fire fighting assets and equipment, with appropriate operation and maintenance of assets?

Appendix 2B: Subdivision Ranking Table

SUBDIVISION RANKING CRITERIA

Category No.	Category Name
1	Number of Band-Owned Serviced Lots
	Ranking Value
2	Avg. Number of First Nations Occupants per House
	Ranking Value
3	Written Description Impact on First Nation Community
	Ranking Value
4	Housing Applications (# of Units Required)
	Ranking Value
5	% of Project that is Multifamily
	Ranking Value
6	Time Schedule
	Ranking Value
7	Population Growth Trend Annual Growth (%)
	Ranking Value
8	Remoteness Index
	Ranking Value
9	Months per Year Available for Construction
	Ranking Value
10	Financial Viability
	Ranking Value

Appendix 2C: Priority Ranking Framework - Water

FNIPP DRINKING WATER PROJECTS PRIORITY RANKING FRAMEWORK

A. Project Type		
	A-1	Type of Project
B. Health & Environmental		
	B-1	Water Quality Issues
	B-2	Will prop project eliminate HC-recommended, cap related long term DWA?
	B-3	Can current system provide HC recommended minimum flow?
	B-4	Demand vs centralized decentralized system capacity.
	B-5	Project is an emergency & must be fast tracked to protect human health.
	B-6	Current Design Risk Score from recent inspection.
C. Asset Management		
	C-1	Expected Change in overall risk score
	C-2	Asset Condition
	C-3	Existing O & M Rating
	C-4	Best Practices
D. Band Management		
	D-1	Band General Assessment per GA Score
	D-2	Management of primary Operator capacity
	D-3	Management of Back-up Operator capacity
	D-4	Operator Training
	D-5	Band in CRTP or ISC Satisfied if not in CRTP
E. Financial		
	E-1	Own Source Revenues Contribution
	E-2	Cost Effective Option Selected + Supported by ISC
	E-3	Remoteness
	E-4	Service Pop Effected by Project
F. Other		
	F-1	Project must be fast tracked for securing funds
	F-2	Project Readiness

Appendix 2D: Priority Ranking Framework wastewater

FNIPP WASTEWATER PROJECTS PRIORITY RANKING FRAMEWORK

A. Project Type		
	A-1	Type of Project
B. Health & Safety		
	B-1	Effluent quality issues?
	B-2	Risk related to non-compliance with WSERs or other applicable federal/ provincial regulations
	B-3	System has received federal/ provincial/ territorial order or fine?
	B-4	Demand vs. system capacity
	B-5	Project is urgent and must be fast-tracked in order to protect human health?
	B-6	Current design risk score from most recent inspection
C. Asset Management		
	C-1	Expected Change in overall risk score
	C-2	Asset Condition
	C-3	Existing O & M Rating
	C-4	Demonstrated adoption of best practices or BCR to do so
D. Management		
	D-1	Ability to manage funding agreements per GA score
	D-2	Management of primary operator capacity
	D-3	Backup operation capacity
	D-4	Operator Training Plan
	D-5	Band currently participates in CRTP/has committed in writing/is not required to
E. Financial		
	E-1	Cost sharing contribution from band, third-party, or both?
	E-2	Own-Source Revenues - Band will collect user fees for wastewater services?
	E-3	Band has committed in writing to selecting the most cost-effective w/ww servicing alternative.
	E-4	Project approval must be fast-tracked to take secure funding offered by an external partner.
F. Other		
	F-1	Service population affected by proposed project
	F-2	Remoteness
	F-3	State of project readiness

Appendix 3: Access to Additional Capital Guidelines for Block-Funded Recipients



Indigenous Services
Canada

Services aux
Autochtones Canada

Department of Indigenous Services Canada– BC Region

September 2012

TABLE OF CONTENTS

Preface

1.0 General.

2.0 The Block Contribution Funding Program

2.1 Definitions

2.2 Expenditures Against Aggregate Block Funding

2.3 Audit Reporting

2.4 Unexpended Block Funding

3.0 Eligible Uses of Core Capital Allocation

3.1 Capital Expenditures

3.2 Housing Expenditures

3.3 Cost Sharing Projects

4.0 Ineligible Uses of Core Capital Allocation

4.1 Reallocation to Other Programs

4.2 Reallocation Outside of Loss

4.3 Reallocation to Low Priority Projects

5.0 Eligible Sectors of Additional Regional Capital

5.1 Targeted Programs / New Initiatives

5.2 Additional Capital (A-Base)

5.3 Housing

5.4 Social Housing

5.5 O&M

6.0 How to Apply for Additional Capital Funding

6.1 Application Process

6.2 Core Capital Expenditure Compliance.

7.0 Reimbursement

BLOCK CONTRIBUTION FUNDED RECIPIENTS - Access to Additional Capital

1.0 General:

First Nations (FN) and Tribal Councils (TC) entering into funding agreements with block contribution funding are provided with Capital Facilities and Maintenance (CFM) Program funding as set by Aboriginal Affairs & Northern Development Canada (AANDC) for the purposes of supporting housing and infrastructure capital projects. The process includes a core capital allocation to be provided to each block-funded recipient in the first year of their funding agreement. An escalation factor is then applied to set the amount of funding to be provided throughout subsequent years of the agreement. In principle, each recipient may elect to spend their annual block based on their assessment of their community needs.

Prior to the commencement of a given fiscal year, each block-funded recipient submits a First Nation Infrastructure Investment Plan (FNIIP) detailing their anticipated capital budget funding requirements, in accordance with their agreement. The plan must detail, by project, the proposed utilization of all core capital allocation provided. Once all core capital allocation has been notionally exhausted, any unfunded projects remaining could be considered for additional AANDC funding, depending on priority.

AANDC incorporates both a Regional and National priority ranking frameworks for all capital projects. High health and safety projects are ranked first by AANDC, followed by asset preservation projects, and finally, by growth projects. Project priority is an essential element of any funding eligibility.

NOTE: the ability of BC Region to provide any funding to an Aboriginal recipient is always contingent on the priority of all projects at hand, and the availability of funds from within the BC Region Capital budget through annual appropriations.

2.0 The Block Contribution Funding Program:

2.1 Definitions:

“Block contribution agreement”: is an option for providing transfer payments to Aboriginal recipients where the recipient has met certain assessment criterion and where a number of transfer payment programs that require a five or more year relationship with the recipient to achieve objectives can be funded under a single multi-year agreement.

“Core capital allocation”: defined as a set amount of funding allocated for capital and housing infrastructure that is calculated by formula, using funds drawn from the Regional A-base allotment (which excludes targeted capital programs and regional initiatives). This allocation is set at the first year the recipient enters into a block funding agreement.

“Core O&M allocation”: defined as a set amount of funding calculated by formula, derived from the assets registered in the BC Region capital asset inventory, as set in the first year the recipient enters into a block funding agreement.

“Additional funding”: defined as project based funding derived from the BC Region FNIP and BC Region Banking Day processes which would supplement a block-funded First Nation’s core capital allocation.

“Health & safety”: high priority projects ranked at 20 or above pursuant to the BC Region Priority Ranking Framework.

2.2 Expenditures Against Aggregate Block Funding:

Block-funded Recipients are currently able to reallocate funds among various AANDC programs within their block contribution funding and they have the ability to adjust the relative priority of programs to address changing circumstances and the recipient’s evolving priorities.

2.3 Audit Reporting:

All capital expenditures are subject to annual audited statements, as well as operational and financial reporting requirements throughout each fiscal year. A separate schedule outlining the expenditure of the core capital allocation is required.

2.4 Unexpended Block Funding

Any unexpended block funding may be carried forward at the end of each fiscal year, and remains with the block funded First Nation at the expiry of the funding agreement for one fiscal year. The obligations and objectives set out in the funding agreement must be met, and the recipient must agree to use the unexpended funds for purposes consistent with the program's objectives, or for any other AANDC funded program as agreed to by AANDC. Further information may be found within individual First Nation's funding agreement.

3.0 Eligible uses of Core Capital Allocation to Qualify for Additional Infrastructure Funding:

First Nations must first use their core capital allocation to meet the obligations and objectives set out in the funding agreement, and the recipient must agree to use the funds for purposes consistent with the program's objectives, or for any other AANDC funded program as agreed to by AANDC. For the purpose of accessing additional infrastructure funding from AANDC's A-base funding, First Nations must use at least 80% of their core capital allocation on the following eligible uses:

3.1 Capital Expenditures

1. ACRS Group 2 Expenditures: Once every 3 years, assets are inspected through the Asset Condition Reporting System (ACRS) process to ensure regular maintenance is achieved. ACRS group 2 type major repairs or component replacements are identified and block funded First Nations are expected to use their core capital to fund these projects, except for school assets.
2. Expenditures on priority health and safety projects: priority projects ranked 20 and above, as per the Regional Priority Framework
3. Expenditures on education facilities (K4-12): minor capital expenditures for repairs and upgrades to eligible school facilities, where the Nominal Roll is 10 or more full-time equivalent students

3.2 Housing Subsidy Expenditures

4. Section 95 Housing: Social housing allocations receiving operating grants from CMHC
5. New Housing Construction: Band or Individual housing subsidies for members

6. Housing renovations subsidies to resolve urgent health and safety issues. Additional information may be requested.
7. Housing planning and strategy development (i.e., policy development, by-law development, etc)

3.3 Operations and Maintenance Expenditures

First Nations who have used their entire core O&M funding to meet the obligations and objectives set out in the funding agreement for maintaining assets may also spend additional core capital on the following uses:

8. Maintenance Management Planning: planning tools and strategies to improve asset maintenance and preservation.
9. Urgent health and safety O&M: urgent repairs to community infrastructure assets.

4.0 Ineligible uses of Core Capital Allocation to Access Additional Infrastructure Funding

4.1 First Nations who reallocate more than 20% of their core capital to another AANDC program would not be eligible to access additional regional capital.

4.2 First Nations who reallocate core capital to projects outside of AANDC level of service standards (LOSS) projects would not be eligible to access additional regional capital.

4.3 First Nations who reallocate more than 20% of their core capital to low priority projects would not be eligible to access additional regional capital

5.0 Eligible Sectors of Additional Regional Infrastructure Funding:

5.1 Targeted Programs:

Block funded recipients may be eligible for targeted funding depending on the terms and conditions of the targeted program and regional policies. For example, recipients will need to substantiate that they have expended their core capital allocation on projects in compliance with both Regional and National priority ranking frameworks in order to access FNWWAP funding.

5.2 Additional Capital (A-Base) Funding:

Block funded recipients may be eligible for additional funding from the Regional A-Base if they can substantiate that they have expended their core capital allocation on projects in compliance with both Regional and National priority ranking frameworks.

5.3 Housing

Block funded recipients may be eligible for additional funding from the Regional A-Base for health and safety housing projects only.

5.4 SOCIAL HOUSING

Block funded recipients are not eligible for additional A-base funding for social housing.

5.5 O&M (Operation & Maintenance):

Block funded recipients may be eligible for additional A-base funding for urgent O&M costs related to emergency water/wastewater plant repairs, and/or school repairs, based on substantiation of need.

6.0 How to Apply for Additional Capital Funding**6.1 Application Process (Infrastructure & Housing):**

1. Submission of annual FNIP from the recipient in the accepted format listing all current and “new” projects that will require capital funding.
2. Listing of all projects to be funded from the core capital allocation
3. Determination of the amount of annual core capital allocation and any other sources of funding, if applicable, that will be applied to selected Capital projects.
4. Notation of any projects that will require additional AANDC funding.

6.2 Core Capital Expenditure Compliance:

AANDC will review annual audited statements for years in which additional capital was received by the First Nations to ensure that the core capital allocation was expended

as specified in the FNIP submitted for that specific audit year. If actual expenditures do not match the FNIP, the First Nation will not be eligible for additional capital in the following fiscal year and thereafter until audit expenditures subscribe to the eligible uses identified above.

6.2.1 Compliance process example

A. FN submits current year FNIP (2013-14), meets eligible criteria for additional capital, receives additional capital (in 2013-14)

B. FN submits (2013-14) audit in 2014-15 fiscal year, does not demonstrate they expended their 2013-14 core capital on projects listed in 2013-14 FNIP.

C. FN is not eligible for additional capital until they have demonstrated the completion of projects as listed in their FNIPs.

7.0 Reimbursement:

If the block funded recipient has an eligible priority capital project, and the region does not have the funding to proceed within a specified year, the FN may consider bridge financing that project for potential funding reimbursement in some future year. Such requests would only be considered if the priority of those projects exceeded the priority of all other year-end funding requests.

Appendix 4: Project Implementation

Appendix 4A: Guidelines for Hiring an Independent Project Manager

Appendix 4B: ISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

Appendix 4D: DISC Sample Professional Services Contract [CN2 Template]

Appendix 4A: Guidelines for Hiring an Independent Project Manager

1.0 Introduction

An independent project manager provides project management services without being directly associated with the consulting firms providing planning, design and construction services. The person hired to perform the duties must have suitable technical and professional qualifications matching the size and complexity of the project. Usually the project manager is either a registered architect or professional engineer with over five years experience in construction project management and has experience successfully managing similar projects. The project manager may be a sole practitioner or may work for a project management company. The project manager is often involved with a project from start to completion, but can also be engaged only during the design or construction stages of a project.

Hiring an independent project manager is often the first significant step to implement a large project. The three main tasks associated with hiring a project manager if using a multiple proposal call are:

- Preparing a terms of reference [TOR] setting out expected roles and responsibilities for the proposed project manager;
- Sending out requests for proposals [RFP] to selected project management firms;
- Evaluating received proposals against pre-determined criteria.

Where a First Nation has established a successful working relationship with an architectural or engineering consultant, they may consider using this consultant to provide project management services until the completion of the Feasibility Stage and defer hiring an independent project manager until the beginning of the Design Stage.

An independent project manager should be at arm's length from the project consultant designers. An independent project manager is an advocate for the First Nation and should not be in collaboration with the design consultant.

Hiring the right person to be the project manager can result in a successful project that:

1. Meets the project objectives of the First Nation;
2. Stays on schedule;
3. Stays on budget.

2. Duties of a Project Manager

The duties of the Project Manager fall under three major headings and involve the following:

2.1 Implementation, Planning, and Project Monitoring

- confirming the project definition and First Nation requirements;
- establishing the project team, roles, and responsibilities;
- establishing lines of communication with all parties throughout the life of the project;
- generating a project strategy for carrying out the project and for developing the project work activities;
- preparing a detailed project schedule;
- monitoring project progress against the schedule and making revisions where necessary;
- preparing the various project submissions for funding approval;
- maintaining project records and files;
- reporting on the status of the project to the First Nation administration and/or Chief and Council;
- evaluating the scope, time, cost, and quality implications of the project and any changes.

2.2 Consultant Services Selection

- writing the terms of reference [TOR] to request proposals;
- determining consultant selection criteria;
- selecting a team to choose a consultant;
- recommending approval for award of contract to the successful consultant and negotiating the terms of the consulting agreement.

2.3 Consultant and Construction Contract Management Services

- providing advice and recommendations on project procurement options [eg. public or invited tender, or construction management in accordance with the First Nation's approved tendering policy];
- ensuring compliance with the terms of the consultant and construction contracts;
- checking and dealing the First Nation's responsibilities for insurance;
- issuing change orders;
- resolving claims and disputes;
- assessing the value of work completed;
- reviewing progress claims and authorizing payments;
- reporting on construction deficiencies to the consultant and contractor and making recommendations for corrective action;
- obtaining final reports, record drawings, warranties, manuals, and completion certificates;
- recommending final payment based on the satisfactory completion of the contract requirements;
- evaluating the consultant and the contractor.

3. Terms of Reference for Hiring an Independent Project Manager

If a First Nation has already established a successful relationship with an individual or firm and does not wish to seek competitive proposals for the position, the terms of reference used to hire a project manager can be relatively brief and informal. However, as a minimum they should set out the duties of the project manager, as described above, and also include:

- Description of specific project management services required [including duration of services];
- Specifying minimum qualifications (e.g. the project manager must be either a professional engineer or a registered architect licensed to practice in British Columbia, the minimum number of years of experience, etc.);
- Providing any relevant project information [eg. reports or studies] or special or unusual project issues that will be helpful to the individual or firm submitting a proposal;

- Listing members of the First Nation project team;
- Identifying a proposed schedule;
- Specifying the terms of payment and cost control.

4. Requesting Proposals

Prospective project managers asked to submit proposals should provide information under the following headings. If a First Nation has established a successful relationship with an individual or firm and is proceeding on a sole source basis, the following information should still be submitted to the First Nation in a proposal for services.

- names and related experience of staff to be part of the project team;
- a work plan outline;
- anticipated project schedule;
- proposed fees

For more complex projects, additional information should be provided regarding:

- understanding of the project;
- work plan and associated work activities;
- references;
- project staffing plans;
- staff résumés;

5.0 Evaluating Proposals

Criteria normally used to evaluate proposals are as follows. Weights are often assigned to the criteria to establish a comparative level of criteria importance. Cost of services is generally not weighted as a primary criteria. In comparing proposals, the quality of the services and the experience of the personnel are considered the key criteria.

- Understanding of the project;
- Scope of services, work plan, and schedule;
- Management of the provided services;
- Consultant team;

- Qualifications and experience of the firm;
- Cost of services.

6.0 Project Management Fees Provided by DISC

Fees requested for project management are part of the project approval process and will be reviewed along with project submissions. The maximum allowable fee for the combined total of project management and local project coordination is 3% of the construction cost. Disbursements would be additional expenses. Fees which are considered eligible for reimbursement may be much less than 3% and will be based on the size of the project and the services provided as detailed in the submitted project management proposal.

If an independent project management is engaged for the feasibility stage, an initial proposal for project management services only for the feasibility stage can often simplify the process by eliminating the uncertainty to forecast future project costs and complexity. Project management fees can be reviewed and revised through all project development stages.

Appendix 4B: DISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Purpose:

This document provides parameters for First Nations to procure a consultant to provide professional consulting services for the development and implementation of capital projects funded by the DISC Capital Facilities and Maintenance Program [CFMP].

General:

The following procedures are recommended when engaging a consultant:

1. Written Terms of Reference [TOR] to define the assignment;
2. First Nation acceptance of a written proposal from the consultant which includes assignment deliverables, schedules and fees;
3. Written, standard contract signed by the First Nation and the consultant which includes dispute mechanisms and termination clauses and directly references the written proposal submitted by the consultant;
4. Confirmation of consultant personnel who will work on the assignment;
5. On-going process for monitoring schedule and costs [written].

Engaging a consultant without the written acceptance of a documented proposal to define the scope of the assignment and to determine a schedule and fees is actively discouraged. Verbal communication and a handshake are not considered to be in the best interests of meeting mutual expectations and an ongoing professional relationship.

A proposal submitted from a professional consultant can be subsequently revised based on mutual discussions between the First Nation and the consultant before becoming part of the contract. There may be a revision in fees due to proposal revisions.

Definitions:

Terms of Reference [TOR]: A description of the assignment to be completed by a professional consultant. A TOR can be verbal, but is almost always written to document a common understanding of the assignment.

Proposal: A written response to a TOR from a professional consultant identifying how the assignment will be carried out to achieve the specific project objectives. The proposal will generally include experience of the firm, personnel to be assigned to the project, work processes to be completed, a proposed schedule and proposed fees.

Request for Proposal [RFP]: An invitation to a number of professional consultants [or one professional consultant in selected cases] to submit a proposal in response to a written TOR. A set of criteria which will be used to evaluate the firms submitting proposals should be included with the RFP.

Total DISC Project Cost [TIPC]: All DISC costs for all stages including contingencies as applicable.

Minor Projects: Estimated TIPC < \$1.5M

Major Projects: Estimated TIPC > \$1.5M

Consultant Selection:

The process for selecting a consultant will be influenced by the factors listed. A larger, more complex project will generally result in a longer and more stringent selection process.

- Complexity of the project
- Size of the project
- Expected consultant costs
- Previous working relationship with a consultant
- Expertise of a consultant
- Availability of consultant to assign time and resources to the project.

Consultant selection will generally follow one of two processes:

1. Multiple source selection – numerous consultants [generally 3 to 5] are solicited to submit proposals to complete the assignment. The proposals received are comparatively assessed to award the contract to the professional consultant with the “best value” proposal which meets the objectives of the TOR;
2. Sole source selection – one consultant is solicited to submit a proposal to complete the assignment.

Consultant Costs:

The Association of Professional Engineers and Geoscientists in B.C. [APEGBC] and the Architectural Institute of BC [AIBC] publish guidelines for determining professional fees. Professional costs can include project management fees, design fees, subconsultant fees and expenses/disbursements. Fees for large value projects are generally considered on a % basis while small value projects generally are costed on an hourly basis.

Procurement Guidelines:

1. Feasibility Stage Professional Services

Procurement of professional consultants for any value of project can be a sole source selection or a multiple source selection;

2. Design Stage Professional Services

Procurement of professional consultants should be in accordance with the criteria listed below. Unless specifically required in the feasibility stage contract [not usual and not recommended], there is no obligation for a First Nation to engage the feasibility stage consultant for design stage professional services.

- Minor Projects: Multiple source selection or sole source selection;
- Major Projects: Multiple source selection is the recommended approach.

3. Construction Stage Professional Services

Engaging the design stage consultant based on a sole source selection to provide construction stage professional services is highly recommended.

If there is a working relationship issue between the First Nation and the design stage consultant and the procurement of another professional consultant is required at this stage, procurement of a professional consultant for any value of project can be multiple source selection or a sole source selection.

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

PROPOSAL EVALUATION -				
Evaluator:	Date:			
Rating Factor:	Excellent	9 to 10 = Item is addressed in a fashion that is clearly superior.		
	Good	7 to 8 = Item is addressed in completeness, is well defined and documented - no faults, weaknesses, or deficiencies that would affect		
	Fair	5 to 6 = Item is addressed in a clear and relatively complete fashion (minor uncertainties or weaknesses may be noted).		
	Below Avg.	3 to 4 = Item is addressed, though details may be lacking or deficiencies may exist that might limit the success of the project.		
	Poor	1 to 2 = Item is poorly addressed through insufficient documentation, or proposal does not meet required standards for skills or det-		
	Unacceptable	0 = Item is not addressed in proposal or is addressed in a clearly unacceptable fashion.		
CATEGORY	Rating	Weight	Score	Totals
1. Understanding of Project Scope and Objectives [Weighted Max. Score = 20]				
1. Appreciation of Project Complexity		0.4		
2. Analysis of Project Goals		0.4		
3. Identification of Special Issues		0.4		
4. Emphasis on Site Visit/Meetings with Nuxalk Nation and Adjacent Neighbour		0.4		
5. Presentation/Clarity		0.4		
6. Completeness (Meet the proposal requirements/checklist)				
2. Proposed Work Plan and Schedule/ Project Management [Weighted Max. Score = 30]				
1. Organization of Team		0.5		
2. Project Methodology		0.5		
3. Work Plan		0.4		
4. Schedule Management		0.4		
5. Budget Management		0.4		
6. Communications / Local Liason		0.4		
7. Risk Management		0.4		
3. Experience and Qualification of team members [Weighted Max. Score = 25]				
1. Technical Experience of General Consulting Firm(s) /Team Members		0.5		
2. Technical Experience of Assigned Personnel / Subconsultant(s) for Collection Systems		0.3		
3. Technical Experience of Assigned Personnel / Subconsultant(s) for WW Treatment Systems		0.3		
4. Technical Experience of Assigned Personnel / Subconsultant(s) for Ground Disposal Systems		0.3		
5. Technical Experience of Assigned Personnel / Subconsultant(s) for Outfalls		0.3		
6. Knowledge of General Consulting Firm on Federal, Provincial Regulatory Requirements		0.4		
7. References/Past Client Experiences of the Consultant or Team Members/NonFNs/Client Feedback		0.4		
4. Experience of Team Members on Similar Projects [Weighted Max. Score = 15]				
1. Past Experience with FNs/INAC Projects and Processes		0.5		
2. Past Experience on Similar Projects		0.5		
3. References / First Nations Client Experience / INAC Feed Back		0.5		
5. Dedicated Hours and Allocation for Most Appropriated Use [Weighted Max. Score = 20]				
1. Hours for Site Work (investigation) Justified		0.4		
2. Hours for Meeting Justified		0.4		
3. Hours for Report Writing Justified		0.4		
4. Hours for Traveling Justified		0.4		
5. Hours for Project Management Justified		0.4		
6. Proposed Costs are reasonable and Cost Effective [Weighted Max. Score = 10]				
1. Cost on Technical Works Justified		0.2		
2. Cost on Travel Justified		0.2		
3. Cost on Administration Justified		0.2		
4. Cost on Project Management Justified		0.2		
5. Overall Cost Effectiveness		0.2		
7. Cost in Comparison with Other Proposals [Weighted Max. Score = 15]				
(The lowest cost = 15. Second lowest cost = 14, 3rd lowest cost = 13 ...)				
PROPOSAL RATING [MAX. SCORE = 135]				

Appendix 4D: ISC Sample Professional Services Contract [CN2 Template]

The document **CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting:

<https://www.sac-isc.gc.ca/eng/1493133359279/1533649821050>

Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist [excerpt from APEGBC Website]

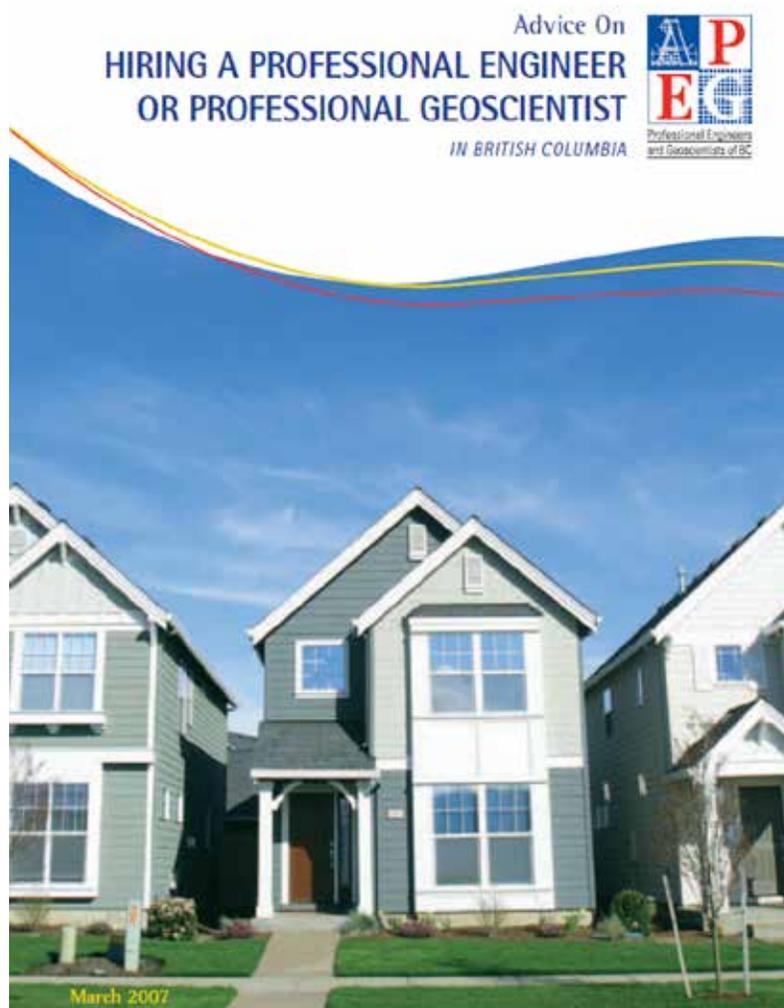




TABLE OF CONTENTS

Introduction	2
Who Should Read this Consumer Guide?	2
APEGBC – Who We Are and What We Do	3
What Types of Projects May Require an Engineer?	4
What Types of Projects May Require a Geoscientist?	4
Before Starting Your Project	5
What is Required of the Professional?	6
Understanding the Role of the Professional	7
Relationship Between You, the Professional, and the Contractor	8
Selecting a Professional	9
The Contract	11
During and Post-Construction	12
What If There is a Problem?	13
Resources	15

APEGBC gratefully acknowledges the assistance of the Consulting Engineers of BC in the preparation of the Guide.



Introduction

This Guide is intended to help you:

- Determine if your project requires the services of a professional engineer or professional geoscientist (a “Professional”)
- Understand what APEGBC can do for you
- Find out if the prospective engineer or geoscientist is licensed to practice in BC
- Avoid problems by highlighting useful tips for selecting, hiring and working with a Professional
- Determine how to deal with problems that may arise

Who Should Read this Consumer Guide?

This Guide addresses the typical homeowner project and contains general information. It may not be appropriate for all projects that require the services of a Professional. The advice and information in this publication is not suitable for large, complex and/or commercial projects. **APEGBC assumes no responsibility for any consequences arising from the use of the information contained in this guide.**

For more detailed information or for larger, more complex and/or commercial projects, we recommend you consult the Management of Buildings Project Manual (Please note that all websites are provided at the end of this publication).



You should carefully review this guide PRIOR TO hiring a Professional. Careful selection of the professional best suited to your project, and clear communication in the beginning, is the foundation of a successful project.



APEGBC – Who We Are and What We Do

The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is responsible for the licensing and conduct of professional engineers and professional geoscientists (Professionals). The primary duty of APEGBC is to protect the public by regulating the practices of professional engineering and professional geoscience in the province. APEGBC's powers and functions are described in its governing legislation: the *Engineers and Geoscientists Act* and the Bylaws of the Association, which include a Code of Ethics.

The Act, Bylaws and Code of Ethics are available online at www.apeg.bc.ca, and will be referred to from time to time in this publication.

What APEGBC Can Do:

- Help you determine if a person is licensed as a Professional in BC and the Professional's area of expertise via the searchable member directory available online
- Advise you regarding a Professional's disciplinary history
- Investigate complaints regarding a Professional's conduct, as provided in the Act and the Bylaws

What APEGBC Does Not Do:

APEGBC only regulates individuals, not businesses.

- Provide information on firms or help you to pick a firm or Professional
- Resolve issues with contractors on your behalf
- Resolve issues regarding your contract or negotiations
- Demand performance or action of a Professional



What Types of Projects May Require an Engineer?

Here is a partial list of typical building projects and upgrades where a professional engineer may be required:

- Foundations
- Excavations
- Grading plans
- Drainage
- Retaining walls
- Structural design including beams and trusses
- Drinking water, storm water and sewage system design
- Additions to existing buildings
- Pollution and contamination concerns
- Slope stability concerns

What Types of Projects May Require a Geoscientist?

The practice of professional geoscience includes the investigation of geological conditions.

For more information on geoscience and the work undertaken by professional geoscientists, see APEGBC's website: www.apeg.bc.ca.

Here is a partial list of projects where a professional geoscientist may be required:

- Foundation investigations
- Grading plans
- Groundwater and drainage investigations
- Slope stability investigations
- Flood and debris hazard assessments
- Pollution/contamination investigations
- Assistance with archaeological investigations

There is some overlap between the services provided by engineering geologists and geotechnical engineers. However, only engineers can provide design services.



Before Starting Your Project

- Get in contact with your local municipal or regional building/permit and planning departments to determine whether your project requires the services of a Professional. These departments have knowledge about local conditions and will be able to advise you on whether permits or other documents are required before your project can proceed.
- Only consider hiring professionals with the appropriate experience and training for your project; different types of engineering and geoscience can be very specialized.
- Use APEGBC's searchable member directory to help determine whether you are dealing with a registered member of the Association, and also what kind of engineering or geoscience the person practices: www.apeg.bc.ca/members/search.html.
- Consider if the expertise of a Professional may benefit your project, even if a Professional is not required by law.
- Know your **RESPONSIBILITIES** as well as your **RIGHTS**.





What is Required of the Professional?

Adherence to the Code of Ethics of the Association

All members of APEGBC must comply with the Code of Ethics. If your project requires the services of a professional engineer, the following are required:

The BC Building Code applies everywhere in British Columbia except the City of Vancouver.

In the City of Vancouver, the Vancouver Building Bylaw governs.

Letters of Assurance

A Letter of Assurance is a form signed and sealed by a professional engineer who accepts responsibility for the design and field review of the project. These forms are legal documents based on the authority of the BC Building Code (BCBC) or the Vancouver Building Bylaw (VBB).

Field Reviews

Field reviews are a requirement under Letters of Assurance and APEGBC's "Quality Management" bylaw (Bylaw 14(b)), and must be undertaken by professionals during construction. A field review typically consists of site visits during construction to confirm design assumptions and observe quality and progress of the elements designed by the professional engineer. The engineer must also prepare site visit reports outlining observations and deficiencies in the work and bring them to the attention of the contractor's site representative.

A concept review of the structural design of your project may be required, though there are exemptions for simple structures.

The City of Vancouver also carries out structural audit reviews on selected projects within the City of Vancouver.

Note: You need to confirm with the local authority or the government agency overseeing your project what it requires from the Professional.



Understanding the Role of the Professional

While only a professional engineer or geoscientist can legally provide engineering or geoscience services, work may be performed by other members of the Association, or by other individuals acting under the “direct supervision” of a Professional. The legislation that governs the professions states that any person can assist in the performance of any professional service or work described in the “practice of professional engineering” or “practice of professional geoscience” definitions so long as that work is directly supervised by a Professional.

The duties and obligations of the Professional should be established by a contract between the client and the Professional.

Typically, engineers-in-training (EITs) or Geoscientists in training (GITs), technologists and technicians carry out work under the direct supervision of a Professional.



Professionals are neither required nor expected to be on-site at all times. Letters of Assurance require the engineer to conduct sufficient field reviews in order to confirm that the project (or parts of the project the engineer is responsible for) substantially complies with the engineer’s drawings and the appropriate Building Code. There is no specified level of inspection – the standard varies depending on the nature of the project.

A Professional may **not** be qualified to perform certain aspects of a project. In such a circumstance, the Professional **must** refuse to do such work, but will typically engage or recommend a Professional with the required expertise.



Relationship Between You, the Professional, and the Contractor

If your project is complex or large enough that it requires the services of a Professional, chances are that you will also have to engage the services of a contractor.

If the contractor hires the Professional, it is important to note that any disagreement between you and the contractor may affect the services provided by the Professional, which can lead to significant delay of your project.



If you did not hire the Professional directly, the person is not reporting to you and it is not grounds for a complaint of unprofessional conduct if the Professional stops work at the instruction of his/her client, the contractor.

To maintain the most control over your project, hire the Professional and the contractor directly and separately.



Selecting a Professional

There are several sources that can aid you in selecting the Professional you require, including:

- Asking friends and family for referrals
- Asking your contractor for referrals
- Contacting the Consulting Engineers of BC
- Phone Book
- Internet

The Consulting Engineers of BC has information on selecting a professional engineer at: www.cebc.org/selecting.html.

Best Practices

The Consulting Engineers of BC (CEBC) has information on selecting a professional engineer at www.cebc.org/selecting. There are steps that you can and should take before you hire a Professional so that your project proceeds in a safe and timely manner. APEGBC recommends that professionals be selected based on qualifications rather than on price alone.

Deciding on the parameters of your project sooner, rather than later, can help you to avoid problems down the road – including disagreements with those you have hired. Below are some suggested “best practices” to take into account when considering hiring a Professional.

It is important to recognize that costs associated with home improvements or projects are generally never fixed.

Before hiring a Professional, consider:

- What is the scope of your project?
- What do you hope to accomplish?
- How much are you willing to spend?
- Do you have to take into account any time constraints?
- What portion(s) of your project require a Professional?



Selecting a Professional cont'd

When Discussing Your Project With a Professional:

- Take notes and listen carefully
- Ask for references and follow up
- Determine whether the Professional has undertaken similar work in the past
- Ask whether the Professional believes a permit may be required to undertake the project
- Ask for a written proposal and a copy of the Professional's standard contract
- Ask about the costs associated with the project – What could increase or decrease the costs?
- Ask about the fees for all phases of the project
- Request a copy of the Professional's Certificate of Insurance





The Contract

A written contract helps to protect you and the Professional if problems arise.

The contract should include:

- Description of work to be carried out
- Description of compensation, and the timing and method of payment
- Contact information
- Description of the procedures governing additional services (for example, requiring all work order changes to be in writing and initialled by both parties or by agreeing that work-order changes may be approved verbally with written follow-up confirmation)
- Description of the procedure to be used by either party to terminate the contract

APEGBC Bylaw 17 requires members to disclose in writing whether or not they have insurance and whether that insurance is applicable to the services in question.

Don't be afraid to ask questions! Make sure you feel confident about the Professional you are hiring *before* you sign any agreement.

The contract may also include:

- Who is responsible for paying for other people's services
- What other charges may be involved and who will pay them
- Who will obtain necessary permits, approvals, etc.
- The starting and completion dates - but keep in mind that unanticipated delays can occur
- Ownership or custody of the project documents

A standard form contract is available through the Association of Consulting Engineers of Canada (ACEC) website, www.acec.ca



During and Post-Construction

- Keep records of the project such as a log or calendar
- Keep copies of written agreements and correspondence
- Keep copies of bills, invoices and cancelled cheques
- Keep copies of plans, permits and reports
- Keep copies of municipal inspection reports
- Keep copies of lien notices, if applicable

A builders' lien may be filed against your property as security for unpaid fees.

APEGBC publishes a number of professional practice guidelines, each particular to a field of engineering. These guidelines outline project organization, responsibilities and expectations for professional practice. There is a section devoted to the responsibilities of various participants in a project, including responsibilities of the owner. These responsibilities include cooperation with the Professional regarding the establishment of a realistic schedule for the provision of services. The guidelines are available at: www.apeg.bc.ca/library/practiceguidelines.html.





What If There is a Problem?

Most problems between a client and a Professional arise from communication issues. The scope of services, the quality of services and the timeliness of those services can lead to misunderstandings.

Meet with the Professional to Discuss Problems

If you encounter a problem (i.e., poor communication, unsure of what is going on, rising costs, etc.), the first step is to set up a meeting with the Professional and discuss your concerns.

When meeting, be sure to:

- List specific concerns or deviations from your agreement
- Present records of the problem
- Request specific action
- Allow time for a response

Peer Review

You may wish to arrange, at your own expense, an independent review of the services performed. This review would be undertaken by another Professional and typically encompasses a review of drawings, calculations and plans that have been prepared.

Dispute Resolution

If you cannot solve the problem on your own, you may wish to hire a lawyer who can act on your behalf to resolve the matter or, if necessary, pursue the matter in court.

Claims up to \$25,000 can be dealt with in Small Claims Court. Most contractual disputes are best dealt with through the court system. APEGBC can investigate the underlying reasons for the dispute to see if they warrant disciplinary action. Similarly, negligence and incompetence are more often dealt with through the courts alone unless the errors or omissions are significant enough to constitute unprofessional conduct.

The BC Court Services website has information on how to file in Small Claims Court (not exceeding \$25,000).



What If There is a Problem cont'd

The complaint procedure and a flowchart are on the APEGBC website.

When to Contact APEGBC

APEGBC can investigate allegations of:

- A breach of the Act, Bylaws or Code of Ethics
- Negligence or incompetence
- Fraud, deceit or misrepresentation

APEGBC will not force the Professional to take any particular action. Our mandate and role is to investigate conduct and where warranted, bring disciplinary action against the Professional.

Do your homework. When preparing a complaint for submission to APEGBC, describe the problem and what you have done to try and resolve it. List facts in chronological order and provide as much detail as possible; keeping a log or calendar will make this much easier. Submit copies of plans, reports and any other documents you have that are related to your project and that can be of use to the Association in assessing your complaint. Also, identify any other individuals who have knowledge of the problem, including city or municipality employees and contractors.

The investigation of complaints can be a lengthy process. The more clear and complete the complaint, the easier it is to investigate.



Resources

- Association of Consulting Engineers of Canada website: www.acec.ca
- Association of Professional Engineers of BC website: www.apeg.bc.ca
- BC Building Projects Committee, Management of Building Projects: An Industry Practice Manual, First Edition (see also www.bcprojectsmannual.com)
- BC Court Services website: www.ag.gov.bc.ca/courts
- BC Dispute Resolution Office website: www.ag.gov.bc.ca/dro
- BC Supreme Court Self-Help Centre website: www.supremecourtselfhelp.bc.ca
- Canadian Council of Professional Geoscientists website: www.ccpge.ca
- City of Vancouver Bulletin 2000-064-BU Structural Audit Reviews:
www.city.vancouver.bc.ca/commsvcs/licandinsp/bulletins/2000/2000-064.pdf
- City of Vancouver Emergency Preparedness website: www.city.vancouver.bc.ca/corpsvcs/emerg
- City of Vancouver general information regarding License and Inspection Bulletins:
www.city.vancouver.bc.ca/commsvcs/licandinsp
- City of Vancouver website: www.vancouver.ca
- Consulting Engineers of BC website: www.cebc.org
- Courts of British Columbia website: www.courts.gov.bc.ca
- Engineers Canada website: www.engineerscanada.ca
- Get It In Writing website (Hiring a Contractor): www.hiringcontractor.com
- Government of BC Building Policy Branch website: www.housing.gov.bc.ca/building
- Government of BC Housing Policy Branch website: www.housing.gov.bc.ca/housing
- Government of Canada Public Safety website: www.safecanada.ca
- Guide to the Letters of Assurance in the BC Building Code:
www.housing.gov.bc.ca/building/guidelo1.html
- Links to websites for most municipalities and regional districts in BC
www.civicnet.bc.ca/siteengine/ActivePage.asp?PageID=88
- McLachlin, Wallace and Grant, The Canadian Law of Architecture and Engineering, Second Edition (Toronto and Vancouver: Butterworths, 1994)
- Provincial Emergency Program website: www.pep.bc.ca

Appendix 5: Sample Terms of Reference

Appendix 5A: Terms of Reference - Feasibility Study

Appendix 5B: Terms of Reference - Design Stage [Sample]

Appendix 5C: Terms of Reference - Construction and Post-Construction stage [Sample]

Appendix 5A: Terms of Reference - Feasibility Study [Sample]

SAMPLE TERMS OF REFERENCE FOR A FEASIBILITY STUDY

Table of Contents

1.0	Introduction	1
2.0	Objective	1
3.0	Definitions	1
4.0	Scope of Work	3
5.0	Requirements	5
6.0	Proposals	6
7.0	Schedule	6
8.0	Terms of Payment and Cost Control	7
9.	Contract Agreement	7

1.0 INTRODUCTION

This section is intended to provide a description of the community, its location and site specific knowledge. Any and all background information specific to the study issues should be provided, including such things as maps, engineering reports, studies, observations, etc.

Projects should be derived from either the First Nations Comprehensive Community Plan, Community Development Plan, Physical Development Plan, or based on a need to improve or replace existing infrastructure.

2.0 OBJECTIVE

A clear and precise description of the objective(s) that need to be met should be identified in this section. Any and all options that should be reviewed are to be identified.

3.0 DEFINITIONS:

3.1 **Qualified Consultant** means a firm of:

- Professional Engineers registered with the Association of Professional
- Engineers and Geoscientists of British Columbia
- Professional Planners registered with the Planning Institute of British Columbia
- Professional Architects registered the Architects Institute of British Columbia.

3.2 **Design Guidelines** – Indigenous Affairs and Northern Development (DISC) have published design guidelines for water systems, wastewater systems, and road works. These publications serve as guides in the design and preparation of plans and specifications.

3.3 **Level of Service Standards** (LOSS) identify levels of service that may be funded from within existing budgets and from DISC programs priorities of health, safety, and education. These standards essentially set limits on development which in turn affect the capital planning process.

3.4 Life Cycle Cost is a mathematical procedure which describes the life costs (e.g., construction, operations, maintenance, major maintenance, and disposal) of an asset in terms of a rolled up current dollar amount which reflects the effects of monetary interest and price inflation. A life cycle cost analysis provides a hypothetical method of comparing competing options on the basis of which one makes better economic sense in terms of total costs.

3.5 Class “D” Cost Estimate is a preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client’s broad requirements. This overall cost estimate may be derived from lump sum or unit costs as identified in the construction cost manual for a similar project. It may be used to obtain approval in principle and for discussion purposes.

3.6 Class “C” Cost Estimate is prepared with limited site information and is based on probable conditions affecting the project. It represents the summation of all identifiable project component costs. It is used for program planning, establishing a more specific definition of client needs, and to obtain approval in principle.

3.7 Community Development Plan deals with:

- Social-economic development for the community;
- planned land use and type of future development.

3.8 Physical Development Plan deals with:

- planned community physical services such as water, sewer, roads, utilities, etcetera, required to meet the development proposals of the Community Development Plan
- other planned community services and facilities such as, but not limited to, recreation facilities, education facilities and health care facilities.
- the provision of a short term capital plan, usually 5 years to guide the community capital development.

3.9 Feasibility Study:

- identifies options that can be implemented to meet project requirements;
- examines the options in terms of engineering and economic feasibility;
- recommends a preferred option.

3.10 **Project Team** consists of members that will participate in guiding the consultant engaged for the Feasibility Study to ensure that all essential elements of the project are considered and met. The team may include:

- Project Leader
- Project Manager
- Chief Administrator/Band Manager
- Councillor in charge of public works
- Public Works Maintenance Officer
- DISC Capital Management Officer
- DISC Engineer

4.0 SCOPE OF WORK

The work of this contract comprises, but is not necessarily limited to, the following:

4.1 Review all existing relevant information including aerial photographs, topographic mapping, reports, plans, designs, as-built drawings, and other information.

4.2 Visit the site and meet with site representatives to become acquainted with site conditions and concerns of the bands, including population expansion, future demands on services, potential land acquisitions, existing land encumbrances, and other relevant design parameters.

4.3 Review the First Nation's development and capital plans to determine if the conclusions and recommendations are still valid.

4.4 Prepare at least three conceptual layout options of the proposed works for the band's review. These layouts must be tied into existing legal survey controls.

Site planning must take into account community growth patterns and service demands and shall include an assessment of all undeveloped areas with the communities for potential housing and community building sites.

The advantages and disadvantages of each conceptual layout option and its suitability shall be examined in terms of:

- level of service,
- climatic conditions,
- Class “D” life cycle costs,
- land encumbrance,
- land usage,
- environmental impacts
- acceptability to the band membership
- other factors the consultant considers relevant.

The consultant should make a recommendation as to the preferred conceptual layout option and must obtain approval from the First Nation representatives for the chosen option before proceeding further.

4.5 Upon selection of the preferred conceptual layout option, the consultant shall undertake studies to address land suitability topics such as:

- foundations,
- drainage,
- frost penetration,
- ground water conditions,
- wastewater disposal,
- road construction,
- erosion protection,
- flood control,
- other topics the consultant considers relevant.

4.6 Prepare an environmental scoping study to outline any environmental impacts anticipated for the completed project.

4.7 Prepare a feasibility study that includes:

- project description
- project justification
- discussion of existing facilities,
- proposed level of standards to be met,
- conceptual designs for all conceptual layout options along with Class “D” life cycle cost estimates,
- Class “C” life cycle cost estimate for the preferred conceptual layout option,
- an environmental assessment outline report identifying any potential impacts and mitigation requirements for the duration of the project and at completion,
- all studies,
- where studies were not completed, identify assumptions with respect to soils, existing services, expansion plans, etc.

Sufficient copies should be prepared for distribution to the project team.

Two copies of the study [paper copy and pdf format] should be forwarded to DISC for their review requirements.

5.0 REQUIREMENTS:

5.1 The **cost estimates** shall include allowances for construction, engineering, and contingencies. The construction cost estimates shall indicate approximate quantities and unit costs. When evaluating alternative designs the consultant shall bear in mind the objective of minimizing capital cost, and annual operation and maintenance costs.

5.2 All correspondence shall be addressed to the Project Leader or the Project Manager.

5.3 Subdivision planning and infrastructure development should conform to the various guidelines, legislation, codes, standards, codes of good practice.

5.4 The consultant shall review, arrange for and carry out any field surveys, pump tests, soils investigations and testing required to ensure the technical feasibility of proposed works.

5.5 The consultant shall apply to his own professional stamp or seal and signature to identify his professional responsibility.

5.6 All drawings shall be prepared in metric units and include the band logo.

6.0 PROPOSALS:

6.1 The consultant shall submit 6 copies of a proposal to the Project Leader or the Project Manager for the work stipulated under these Terms of Reference which shall include a:

- proposed methodology;
- time schedule for project completion;
- personnel list including the principal in charge;
- a list of relevant project experience;
- a list of all sub consultants and their company resumes;
- fee list with breakdown of tasks and associated costs

7.0 SCHEDULE:

7.1 The work stipulated under these Terms of Reference shall commence within two weeks of notice of award.

7.2 The work stipulated in the original contract shall be completed by:

_____ (Date)

8.0 TERMS OF PAYMENT AND COST CONTROL:

8.1 Payments will be based on the contract.

8.2 The consultant will on a monthly (or other approved) interval submit an invoice detailing the services performed over the billing period.

8.3 No payment will be made toward the cost of work incurred to remedy errors or omissions for which the consultant is responsible.

8.4 If at any time during the progress of the work the consultant considers his contract fee will be exceeded, either by some unforeseen event or change in the terms by the band he shall immediately provide the Project Leader/Project Manager with the complete details.

8.5 At no time shall the contract fee be exceeded prior to written approval

9.0 CONTRACT AGREEMENT:

The consultant will be commissioned to the work by a duly authorized contract Agreement with the band.

Appendix 5B: Terms of Reference – Design Stage [Sample]

TERMS OF REFERENCE PROVISION OF ENGINEERING SERVICES PRELIMINARY AND DETAILED DESIGN STAGE OF MUNICIPAL WORKS FOR THE

[Insert Name]

TABLE OF CONTENTS

1. Introduction
2. Background
3. Objectives
4. Project Team
5. Scope of Work
6. Execution
7. Terms of Payment

1.0 INTRODUCTION

[Insert Band Name] seeks the provision of engineering services for the preliminary and detailed design including the development of drawings, specifications and tender documents for [insert project name].

The Consultant will adopt a team approach in working together with [Insert Band Name] representatives as well as Indigenous and Northern Affairs Canada (DISC) staff to develop the preliminary and detailed design.

2.0 BACKGROUND

[Insert project description and background]

3.0 OBJECTIVES

The objective of this contract is to provide all planning and engineering services required for preliminary and detailed design of the above mention project.

[Elaborate and include project objectives]

4.0 PROJECT TEAM

4.1 Band

The Band refers to the [insert band name]. The contract for engineering services is between the Band and the Consultant. These Terms of Reference form part of the contract between the Band and Consultant.

4.2 Project Manager or Project Leader

The project manager/leader is a representative of the Band engaged to manage the contract between the Band and Consultant as well as the funding agreement between the Band and DISC.

4.3 Consultant

The Consultant is the individual, firm, or corporation identified in contract to complete the preliminary and detailed design.

4.4 DISC Engineer

The DISC engineer is a technical representative of DISC. The DISC engineer will review the preliminary design and detailed design for compliance with applicable standards, regulations and guidelines, sound engineering practice, operational and maintenance issues and overall cost.

5.0 SCOPE OF WORK

The scope of work includes but is not necessarily limited to the following:

5.1 Preliminary Design

5.1.1 Preliminary Design Report

The Preliminary Design Report shall contain the following information:

- a. Updated project description and project justification —any deviations to the project description and project justification stated in the previous feasibility study are to be identified and explained.
- b. Preliminary design investigations — Complete site investigations that are necessary for the detailed designs. These investigations may include but are not necessarily limited to:
 - » Geotechnical Investigation
 - » Site Survey
 - » Environmental Investigation
 - » Archaeological Assessment

The additional field investigation and research completed should include identifying the design concepts assessed, the investigation methodologies used, the results obtained, and the conclusions and recommendations determined.

- c. Preliminary design criteria — Provide a summary of the preliminary design criteria and calculations used in the design such as utility system demands, building loadings, treatment system capacities, populations and areas served, expected treatment quality parameters, applicable codes and standards and any other factors to be used in the design process. The DISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered.
- d. Cost estimate — Include a Class “B” cost estimate of all project costs from the feasibility stage to the post construction stage. Cost estimate definitions are described in Appendix 1 - Cost Estimates.
- e. Comments from Regulatory Agencies — Identify, contact, provide information and seek comments from regulatory agencies which are relevant to or may have an interest in the project. Include copies of any correspondence with regulatory agencies providing their review comments.

Depending on the type of project, the regulatory agencies may include:

- » First Nations Health Authority— drinking water, wastewater and solid waste disposal;
 - » Environment Canada — wastewater, solid waste disposal, Species at Risk issues;
 - » Fisheries and Oceans Canada —all works impacting fish bearing waters;
 - » Transport Canada — navigable waters;
 - » BC Ministry of Agriculture and Lands — lands management;
 - » BC Ministry of Environment — fish and wildlife;
 - » BC Ministry of Transportation— public road access, and works involving public roads.
- f. Land Encumbrance Confirmation—confirm the land tenure identified in the feasibility study. Land encumbrance issues, such as establishment of a right-of-ways, easements, utility permits, etc., need to be addressed.
 - g. Permits — identify any permits required for construction. Communications with the issuing authorities should be documented to indicate that the permits will be provided at the construction stage. Depending on the construction activities, permits may include timber permits, gravel extraction permits, solid waste disposal permits, highways permits, burning permits and provincial land tenure permits.

Timber permits and gravel extraction permits issued by DISC require significant processing time. Advance planning for obtaining these permits is recommended. Practical Guide to Capital Projects—Timber Permits provides additional details regarding the permit process and the associated environmental assessment requirements.

5.1.2 Preliminary Design Drawings and Outline Specifications

Provide sufficient detail to adequately describe the scope, limit, location and operation of the proposed project. For example, the preliminary drawings for a water treatment plant should include a site plan with the building location, inlet/outlet piping, site services, building floor plan, building sections and elevations, flow diagram, schematic piping and instrumentation diagrams, hydraulic grade line profile, and building equipment layout. Outline specifications are required to adequately describe work components.

5.1.3 Environmental Detailed Study

The Environmental Detailed Study details the environmental impacts, mitigation measures and monitoring requirements related to the construction and operation of the proposed works.

5.2 Final Design

5.2.1 Final Design Report

The Final Design Report shall contain the following information:

- a. Updated Project Description and Project Justification — any deviations to the project description and project rationale stated in the previous funding applications, the feasibility study and preliminary design reports are to be identified and explained.
- b. Design Criteria — summary of the final design criteria and calculations used in the project design, applicable codes and standards and any other salient factors used in the design process. The DISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered.
- c. Cost Estimate — include a Class “A” estimate of total project costs for all stages (feasibility to post construction) including a breakdown of

proposed funding to be provided by DISC and a description of any other funding sources. A contingency allowance of 10% of the estimated project construction cost is generally included in this estimate..

- d. Project Schedule — Include an updated schedule for the completion of the project with time durations provided for the tender period, contract award, construction and post construction phases.
- e. Commissioning Plan — Outlines the consultant’s proposed process to inspect, test and prepare the completed works for their intended operation throughout their design life. See the applicable design guidelines for commissioning requirements for specific projects. Including a training component for First Nations operator during the commissioning process is recommended.
- f. Draft Operation and Maintenance (O&M) Manual — Required to provide direction to potential operators for the operation and maintenance of a facility during construction and subsequent to facility completion before a finalized O&M manual is produced at project completion. Refer to the DISC design guidelines for water and wastewater for the contents expected in an O&M manual.
- g. O&M Training Plan — Provide a training plan for O&M operators that includes some level of training during project construction so that operators are prepared to safely and effectively operate and maintain the new project facilities upon project completion.
- h. O&M Cost Estimate —A Class “A” estimate of the O&M costs for the completed project is required along with a determination of funding available from DISC and other First Nation revenues. For major assets such as water treatment plants, wastewater treatment plants and schools, the estimated O&M funding required to operate and maintain the facility (until programmed DISC O&M funding is available through a funding arrangement) is to be determined, and this amount is to be included in the total project costs.
- i. Land Encumbrance Check — Provide a current land encumbrance check if the previous check has exceeded the one year validity period. Agreements for constructing on non-band lands must be documented. Where any proposed works encroach on privately held (non-band, certificate of possession) lands, a legal right-of-way will be required to ensure the First Nation’s right of access to the lands for the purpose of constructing, operating and maintaining the works.
- j. Permits — include finalized permits or draft permits/authorizations (DFO) in sufficient detail to be readily finalized should the project proceed to the construction stage.
- k. Comments from Regulatory Agencies — include copies of correspondence from applicable regulatory agencies. Any conditions applied by these regulatory agencies are to be incorporated into the design to the approval of the agencies prior to the project proceeding to the construction stage.

5.2.2 Final Design Drawings, Specifications and Tender Documents

Final design drawings, specifications and tender documents must be complete and have sufficient detail for a contractor to bid on the project and construct the project strictly in accordance with the specified requirements.

All required environmental mitigation measures should be clearly identified in the design drawings and specifications. All drawings and specifications must be signed and sealed by a professional registered to practice in BC.

5.2.3 Environmental Detailed Study (Finalized)

Submitted with any required amendments to incorporate mitigation measures into the project final design.

6.0 EXECUTION

6.1 Project Implementation

6.1.1 Review the existing documents, reports, drawings, and correspondents relevant to the project.

6.1.2 Visit the site and meet with First Nation representatives to become acquainted with site conditions and the concerns of the Band, including population expansion, future demands on services, potential land acquisitions, existing land encumbrances and other relevant design parameters.

6.1.3 Carry out all required field survey work and investigations.

6.1.4 Complete the preliminary and detailed design work in conformance with applicable guidelines, standards and regulations including:

- DISC Design Guidelines for Water Works in BC Region,
- DISC Design Guidelines for Wastewater Systems in B.C. Region
- DISC Design Guidelines for Road Works in B.C. Region,

6.1.5 Consult with Band to select appropriate service level for the project. Refer to DISC Level of Service Standard (LOSS) publications to identify the level of service that will be funded by DISC and consult with the band to determine if they are willing to fund a higher level of service.

6.1.6 The preliminary and detailed design stage of the capital project will be divided into two phases:

- Preliminary Design Phase
- Detailed Design Phase

The deliverables for each phase will be submitted in draft form for review and comments prior to proceeding to the next phase. The Project Manager or Project Leader will consult with the Band and forward the deliverables to DISC for comments following each phase. The consultant shall respond to all comments prior to finalizing the deliverables.

6.2 Deliverables

	Deliverable	Format	Reviewer
Preliminary Design Phase	Preliminary Design Report <ul style="list-style-type: none"> • Project Description & Justification • Preliminary Design Investigation • Preliminary Design Criteria • Class “B” Cost Estimate • Land Encumbrance Check • Permits and Comment from Regulatory Agencies 	One paper and one digital - signed and sealed	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Preliminary Design Drawings and Outline Specifications	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Environmental Assessment Study Report	One paper and one digital - signed	First Nations and DISC Project Engineer
Detailed Design Phase	Final Design Report <ul style="list-style-type: none"> • Project Description & Rational • Design Criteria • Class “A” Cost Estimate • Schedule • Commissioning Plan • Draft O&M Plan • Class “A” O&M Cost Estimate • O&M Training Plan • Land Encumbrance Check • Permits and Comment from Regulatory Agencies 	One paper and one digital - signed and sealed	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Environmental Detailed Study (Finalized)	One paper and one digital - signed	First Nations and DISC Project Engineer
	Tender Documents and Specifications	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Design Drawings	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)

6.3 Schedule

Time is of the essence.

The work stipulated in these Terms of Reference shall commence within 2 weeks of notice of award.

The work stipulated in these Terms of Reference shall be completed by [completion date].

6.4 Project Cost Control

The consultant is responsible for managing the overall cost of the project. If at any time the scope of the project is changed resulting from unforeseen design constraints or requests to modify the design which will affect the overall cost of the project or the O&M cost, the consultant shall immediately notify the Project Manager/Leader and provide an explanation and updated cost estimated.

7.0 TERMS OF PAYMENT

7.1 Payments will be based on the contract.

7.2 The Consultant will on a monthly (or other approved) interval, submit an invoice detailing the services performed. Invoices shall show the hours charged by each person for each task and the hourly rate. Back-up for these items, or itemized receipt, shall be provided with every invoice. The proportions of hours spent by team members on tasks shall generally conform to the proposal.

7.3 The Consultant's proposal shall include an allowance for meetings, discussions, and responding to review comments.

7.4 No payment will be made on the cost of work incurred to remedy errors or omissions for which the Consultant is responsible.

7.5 If at any time during the progress of the work, the Consultant considers that the cost figure outlined in the contract will be exceeded, either by some unforeseen event or change in the Terms of Reference, he shall immediately provide the Project Manager with complete details. AT NO TIME SHALL THE CONTRACT FEE (i.e. the ceiling cost figure) BE EXCEEDED WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE PROJECT MANAGER OR PROJECT LEADER.

Appendix 5C: Terms of Reference - Construction and Post-Construction Stage [Sample]

NOTES REGARDING THE USE OF THIS “STANDARD” TERMS OF REFERENCE:

The square brackets and contents inside square brackets should be deleted and replaced with the required information.

This Terms of Reference is intended for use on band managed projects for the planning and design of new development areas.

TERMS OF REFERENCE PROVISION OF ENGINEERING SERVICES FOR TENDERING, CONSTRUCTION STAGE AND POST-CONSTRUCTION STAGE OF MUNICIPAL WORKS FOR THE

[Insert Name]

TABLE OF CONTENTS

1. Introduction
2. Background
3. Objectives
4. Project Team
5. Scope of Work
6. Execution
7. Terms of Payment

1.0 INTRODUCTION

[Insert Band Name] seeks the provision of engineering services during the tendering, construction stage and post-construction stage for the [insert project name].

The Consultant will adopt a team approach in working together with [Insert Band Name] representatives, prospective bidders/contractor; and Indigenous and Northern Affairs Canada (DISC) staff.

2.0 BACKGROUND

[Insert project description and background]

3.0 OBJECTIVES

The objective of this contract is to provide all engineering services required during the tendering, construction stage and post-construction stage of the above mentioned project.

[Elaborate including project objectives]

4.0 PROJECT TEAM

4.1 Band

The Band refers to the [insert band name]. The contract for engineering services is between the Band and the Consultant. These Terms of Reference form part of the contractual agreement between the Band and Consultant.

4.2 Project Manager or Project Leader

The project manager or project leader is a representative of the Band engaged to manage the contract between the Band and consultant and between the Band and contractor as well as the funding agreement between the Band and DISC.

4.3 Consultant

The consultant is the individual, firm, or corporation identified in contact to provide the services stipulated in these Terms of Reference.

4.4 DISC Engineer

The DISC engineer is a technical representative of DISC. The DISC engineer will monitor the progress of the project and review contingency release and cost overrun applications and the completion report.

5.0 SCOPE OF WORK

The scope of work includes but is not necessarily limited to the following:

5.1 Tender Administration

5.1.1 Administer all works related to the tender call, including:

- Preparing tender documents, specifications and drawings
- Advertising
- Reply to queries and preparing addendums
- Arranging a site inspection by interested bidders if deemed necessary
- Witnessing the tender opening.

5.1.2 Review and assess tenders and make recommendations for award. Prepare a summary of the tenders received, a tender analysis, a recommendation for contract award and submit a copy of the executed contract. The tender analysis is to compare the recommended bid against the Class "A" cost estimate and provide an explanation for any variances exceeding 15%. Should the lowest tender exceed the allocated DISC funding level, a substantiated request for additional funding should be submitted. In some cases where funding is limited, an assessment of options to reduce the scope of work may be required.

5.2 Construction Services

5.2.1 Provide the services of a Field Reviewer (FR), who is a Professional Engineer, to be responsible for assurance of the works in all material respects to design and construction standards. The FR should make regular site visits, until completion of the works. The FR may or may not be the Engineer of Record (EOR).

5.2.2 Provide a resident inspector to inspect, monitor, measure, and test the Contractor's work on a full time basis until completion of the work to assure that construction works substantially comply in all material respects to design and construction standards. The resident inspector may or may not be the Field Reviewer or a Professional Engineer. Where the resident inspector is not a Professional Engineer, direct supervision by the FR should provide specific instructions on what to observe, check, confirm, test, record and report. Where engineering judgement or decisions is required the inspector must refer back to the FR. The FR may call on the Engineer of Record to address the issue.

5.2.3 Check and certify the Contractor's progress claims for the purpose of recommending payment;

5.2.4 Provide a liaison between the Contractor, the Band, and others (e.g. B.C. Hydro, B.C. Tel, Water Rights, DISC etc.).

5.2.5 Resolve conflicts that may arise between parties during construction.

5.2.6 Ensure that all required approvals have been obtained.

5.2.7 Arrange for such services as concrete testing, soils testing and analysis, and other services that the Consultant deems necessary.

5.2.8 Arrange for environmental monitoring and/or archaeological monitoring as deemed necessary.

5.2.9 Prepare interim and final completion/performance certificates.

5.3 Environmental Monitor

If required, provide an environmental monitor as recommended by the Environmental Detailed Study and/or as required by permits, approvals, regulation and/or guidelines. The environmental monitor shall be a scientist or engineer specializing in the environment.

5.4 Archaeological Monitor

If required, provide an archaeological monitor as recommended by the Archaeological Assessment Study and/or as required by Band's archaeological policy.

5.5 Permits and Approvals

Obtain any permits and approvals from regulatory agencies that were not finalized as part of the design stage.

5.6 Project Meeting

Arrange a preconstruction meeting, monthly progress meetings, and a project completion meeting between the Contractor, First Nations representatives and Consultant.

5.7 Builders Lien Act and Certificate of Completion

The Consultant shall act as the Payment Certifier for the head contractor with reference to the Builders Lien Act.

5.8 Commissioning

If required, manage the commissioning of the project and provide additional start-up services as outlined in the Commissioning Plan included in the design stage deliverables.

5.9 Training

If required, provide training as outlined in the Draft Training Plan included in the design stage deliverables.

5.10 Legal Survey

Provide the services of a Land Surveyor commissioned by the Association of British Columbia Land Surveyors to complete a legal survey of the project area and register the survey plan.

5.11 Documentation

5.11.1 Daily Inspection Reports

The resident inspector shall prepare daily inspection reports. The report shall include for that day:

- Work completed
- Inspection test completed
- Contractors equipment and crew working on site
- Material delivered to site
- Weather and temperature
- Changes to Contract
- Record of force account work
- Visitors to site
- Discussion with contractor and/or other relevant agencies
- Coloured photos

5.11.2 Project Meeting Minutes

Prepare minutes of any project meetings between the First Nations representatives, Consultant and Contractor and submitted to all parties involved in the meeting.

5.11.3 Change Orders and Force Account Work

All change orders and force account work shall be approved by the Project Manager or Project Leader. Prepare submissions for change orders and force account work approval. The submissions should include a detailed description of the necessity for such work, the quantities involved, the Consultant's estimate, and the Contractor's quote.

5.11.4 Progress Estimates and Budget Tracking

The consultant shall prepare Progress Estimates, within 5 days after the end of the calendar month for the purpose of:

- Evaluating the contractor's progress claim and issuing Payment Certificates; and
- Tracking and updating the project budget.

The Progress Estimate shall set out as of the end of the last day of the proceeding month:

- a. The total value of the Work completed and the materials and products incorporated into the Work
- b. Total quantity or percentage completed for each payment item
- c. Holdback amounts if any
- d. Total amount owing by the Band to the Contractor

In addition to the amount set out in the proceeding month the Progress Estimate shall also include the previous Progress Estimate amounts and the projected contract value. The projected contract value shall include all change orders and force account work whether approved or foreseen. The projected contract value shall be tracked for budget purposes.

5.11.5 Project Schedule Updates

The tender and contract documents shall require the contractor to submit a project schedule with the Form of Tender and to update the schedule if changes occur. The schedule shall show all major and critical tasks and the critical path of the project. The consultant shall monitor the progress of the project relative to the schedule. If the consultant observes the contractor falling behind schedule or if changes occur to the contract which will extend the contract, the consultant shall request an updated schedule with an explanation for the delays. All schedule update shall be forwarded to the Project Manager or Project Leader with explanation.

5.11.6 Contingency allowance release (if required)

Assist the First Nation in preparing documentation to request the release of a portion or all of any contingency allowance that has been approved and held by DISC.

5.11.7 Cost overrun application (if required)

Assist the First Nation in preparing documentation to may request additional project funding above the approved total project cost.

5.12 Completion Report

Completion report to be submitted on letter size paper, bound in a three ring binder. Prints of reduced drawings are to be stamped and sealed and bound into the binder. The completion report is to include:

5.12.1 Project Expenditure Accounting

All final project expenditures including all First Nation, consultant and contractor expenses as applicable must be reconciled by the First Nation. This reconciliation must match the project expenditure accounting which will be detailed in the First Nation financial audit report.

The final project costs are to be broken down according to the various elements of the project and are to be compared to the Class "A" estimates and to the approved requests for DISC project funding. Any significant variances are to be explained. The final costs are to include the costs of planning, design, project management, construction (include final contractor payment certificate complete with all change orders), professional services during construction and completion reporting. Any surplus funding shall be identified.

Consult with the Band in preparation of the project expenditure accounting.

5.12.2 Capital Asset Inventory System (CAIS) Forms

Completed and seal the CAIS forms. The Project Manager will forward the forms to chief councillor for signature, as required for each new community asset. The forms are also to identify any existing assets that were deleted by the new project. See DISC's A Practical Guide to Capital Projects, BC Region, Appendix 15 for blank CAIS forms.

5.12.3 Project Implementation History

- a. Description of the project including why the project was necessary and the option selected to resolve the problem;
- b. Project construction (or procurement) process (e.g.: public tender, construction management);
- c. The construction contract award process and rationale including a comparison of the costs from all bidders;
- d. The number of construction contracts in the project complete with a description of the contracts;
- e. A project synopsis describing problems or outstanding issues, areas of special interest, variances from the original project scope complete with their justification, project scheduling challenges, project deficiencies;
- f. Consultant summary of construction costs including budgets, variances and change order history;
- g. A description of any training programs implemented including the duration of training and number of personnel trained;

5.12.4 Project Participants Listing

During the duration of the project including the project team members, the project manager and/or project management firm, the design professional(s), the construction inspector(s) and contractors.

5.12.5 Project Milestones Chronological Listing

Dates of design completion, project approval, funding approval, contract award, construction start, substantial completion date, final completion date, start and end of warranty period, and completion reporting submission date.

5.12.6 Project Documentation (as applicable)

- a. Field inspection reports as prepared by the project professionals' inspectors during construction;
- b. Inspection test results for any materials and installation testing conducted during construction;
- c. Colour photographs to document the project history from start to finish;
- d. Commissioning report(s) for the final inspection, testing, set-up and start-up of systems and controls;
- e. National Building Code Schedules "A", "B" and "C" for building projects

- f. Fuel tank registration;
- g. A complete set of reduced record drawing prints. The Record Drawings are annotated, signed and sealed as follows: “These Record Drawings accurately record all significant design changes known to me, having exercised due diligence in monitoring construction of the work, and the design as represented by these Record Drawings substantially conforms with the design intent.”
- h. One complete set of digital record drawings in Adobe Acrobat (.pdf) format;
- i. DISC Design Guidelines for Water and Wastewater Systems outline the requirements for the development of O&M Manuals. See Appendix 16 for location of these guidelines;
- j. Copy of the posted legal survey plan. In that legal registration of the survey plan may not be available for some time after project completion, a copy of the “ready for registration” plan that has been submitted for registration is acceptable. The registered plan is to ensure that all community assets are legally protected for the use, operation and maintenance by the First Nation;
- k. Copies of all permits and authorizations (DFO) issued;
- l. Mitigation Measures Compliance Form – sign-off form documenting environmental compliance during construction for projects where a Detailed Environmental Review was required. This form may also be required at DISC’s discretion for projects where a Simple Environmental Review was required. See Appendix 11G for a copy of this form.
- m. A signed, sealed and dated professional certification statement by a qualified professional architect/engineer that should read: “I hereby give assurance that all constructed works in this project have been completed in general accordance with the record drawings, the project specifications and the general codes and standards, that all required testing has been carried out in accordance with the specifications, applicable codes and standards and generally accepted procedures and that required environmental mitigation measures identified in the project have been implemented.”

Note:

The completion report will be forwarded to DISC by the Band to meet the reporting requirements of the funding agreement. In addition to the documentation prepared by the consultant the Band will need to provide following documentation:

First Nation Letter of Acceptance — states chief and council's acceptance of the completed project and confirmation of final costs (including First Nation, consultant and contractor costs as applicable). The letter is to be signed by authorized personnel, usually the chief administrator or band manager, and should be addressed to the First Nation's assigned capital specialist.

Certificate of Completion — is to be completed by the First Nation's authorized project manager and attached to the letter of acceptance. DISC's A Practical Guide to Capital Projects, BC Region Appendix 13 includes a sample Certificate of Completion for Capital Project form from the First Nations National Reporting Guide.

6.0 EXECUTION

Deliverable	Format	Reviewer
Tender Document, Specification and Drawings	2 hard copies bound for First Nation Bound hard copies as Required by Tenderers	First Nation Representatives
Contract Documents	3 hard copies bound -signed and sealed	First Nation Representatives
Daily Site Inspection Reports and Inspection Test Results	1 copy - Email, Fax, or Hardcopy	First Nation Representatives
Schedule Updates	As required 1 copy - Email and hard copy	First Nation Representatives
Payment Certificates and Progress Estimates	Monthly 1 copy - Email and hard copy	First Nation Representatives
Completion Report <ul style="list-style-type: none"> • Project Expenditure Accounting • CAIS forms • Project Implementation History • Project Participants List • Project Milestones • Chronological List • Site Inspection Reports • Inspection Test Results • Colour Photographs • Commissioning Report • National Building Code Schedules • Fire Commissioner's Final Inspection Letter • Signed and Sealed Record Drawings • Record Drawings PDF Format • O&M Manual • Copies of Permits and Authorizations • Posted Legal Survey Plan • Professional Certification Statement 	One paper copy and one digital - signed and sealed	First Nation Representatives Management Officer and DISC Engineer.

6.1 Implementation

The Consultant shall execute all tasks stipulated in these Terms of Reference scope of work in a timely manner.

6.2 Deliverables

6.3 Schedule

Time is of the essence.

The work stipulated in these Terms of Reference, starting with the call for tenders and preparation of tender documents, shall commence within 1 weeks of notice of award.

The consultant is responsible for tracking the progress of the project.

6.4 Project Cost Control

The consultant is responsible for managing the overall cost of the project. If at any time the scope of the project is changed resulting from unforeseen circumstances or requests to modify the design, which will affect the overall cost of the project or O&M cost, the constant shall immediately notify the Project Manager or Project Leader and provide an explanation and updated cost estimated.

7.0 TERMS OF PAYMENT

7.1 Payments will be based on the contract.

7.2 The Consultant will on a monthly (or other approved) interval, submit an invoice detailing the services performed. Invoices shall show the hours charged by each person for each task, and the hourly rate. Back-up for these items, or itemized receipt, shall be provided with every invoice. The proportion of hours spent by team members on tasks shall generally conform to the proposal. The hourly rate shall be identical to the rate quoted in the proposal.

7.3 The Consultant's proposal shall include an allowance for meetings, discussions, and responding to review comments.

7.4 No payment will be made on the cost of work incurred to remedy errors or omissions for which the Consultant is responsible.

7.5 If at any time during the progress of the work, the Consultant considers that the cost figure outlined in the contract will be exceeded, either by some unforeseen event or change in the Terms of Reference, he shall immediately provide the Project Manager with complete details. AT NO TIME SHALL THE CONTRACT FEE (i.e. the ceiling cost figure) BE EXCEEDED WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE PROJECT MANAGER.

Appendix 6: Band Administration Fees

Band Administration Fee Policy **B.C. Region**

Band Administration Fees - Purpose

The First Nation has the overall responsibility for the delivery of capital projects.

Functions included in this responsibility are:

1. Review and signing funding agreements;
2. Review and signing consultant and construction contracts;
3. Payment of consultant and construction invoices;
4. Funding accounting and audit reconciliation;
5. Providing on-site project team meeting rooms;
6. Costs for First Nation representatives to attend project meetings;
7. Providing community project information [current and historical];
8. Reporting on project progress to the membership;
9. Accepting the final project.

To support these activities, INAC will pay administration fees commensurate with capital project value. The administration fee will be a direct link between the implementation of a capital project and the services provided by the Band and its administration during project implementation.

Band Administration Fee Calculation

The amount paid for Band administration services will be determined in accordance with the following table listing fees corresponding to the cost of a specific project stage [feasibility, design or construction] as identified in a mutually agreed, applicable funding application. Additional funding requirements in a specific stage will warrant additional administration fees in accordance with the table. ACRS projects will be included in this policy but housing administration will not be included. The Band administration fee is inclusive of all project administrative disbursements expended by the First Nation.

Policy Transition

This policy will be applicable to capital projects progressing to the next stage of project implementation. Projects already funded for a specific project stage will not be eligible to receive retroactive administration fees under this policy. Projects with a current funding application not yet approved for funding will have the opportunity to revise their funding request to include Band administration fees.

BAND ADMINISTRATION FEE CALCULATION

PROJECT STAGE COST	BAND ADMINISTRATION FEE PERCENTAGE CALCULATION	BAND ADMINISTRATION MAXIMUM FEE
\$5,000 - \$100,000	2.5 % of project stage cost	\$2,500
\$100,000 - \$250,000	\$2,500 on first \$100,000 and 2.0% on next \$150,000	\$5,500
\$250,000 - \$500,000	\$5,500 on first \$250,000 and 2.0% on next \$250,000	\$10,500
\$500,000 - \$750,000	\$10,500 on first \$500,000 and 1.75% on next \$250,000	\$14,875
\$750,000 - \$1,000,000	\$14,875 on first \$750,000 and 1.5% on next \$250,000	\$18,625
\$1,000,000 - \$7,500,000	\$18,625 on first \$1,000,000 and 1.0 % on next \$6,500,000	\$83,625
Over \$7,500,000	\$85,000	\$85,000

1655760 vs.4 – June 3, 2011



Chapter 3:

THE FEASIBILITY STAGE OF A CAPITAL PROJECT

A Practical Guide To Capital Projects | 3 of 6

A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre
Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351
Facsimile: 604-775-7149
Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	v
Table of Contents	vi
Glossary of Abbreviations	viii
Definitions.....	xi

The Feasibility Stage of a Capital Project

Introduction	1
3.1 Feasibility Stage Funding Application(FAR)	4
3.2 Feasibility Approval Request (FAR) Review	8
3.2.1 Capital Management Officer	8
3.2.2 Engineer Review.....	8
3.3 Feasibility Stage Funding Application Process at ISC.....	11
3.4 Feasibility Stage Deliverables	12
3.5 Feasibility Stage Analysis by First Nations	17
3.6 Feasibility Stage Deliverable Review by ISC.....	20
3.6.1 Capital Management Officer	20
3.6.2 Engineer Review.....	20
3.7 Feasibility Stage Final Processing by ISC.....	22

Appendices

1: Feasibility Approval Request (FAR)	27
2: ISC Environmental Review Process Summary	35
2B: Generic Terms of Reference for Environmental Assessment	39
2C: Projects Environmental Assessment Scoping Report.....	45
3: Cost Estimates - Definitions	49
4: Project Implementation | Hiring Professionals	51
4A: Guidelines for Hiring an Independent Project Manager	53
4B: ISC Guidelines for First Nations Engaging a Consultant on a Capital Project	59
4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings	63
4D: ISC Sample Professional Services Contract [CN2 Template].....	65
4E: Advice on Hiring a Professional Engineer or Professional Geoscientist	67

Appendices Cont.

5: Terms of Reference - Feasibility Study [Sample]	85
6 : Feasibility Stage Funding Application checklist.....	93
7: Capital Projects Report DCI #460671	95
8: Land Status Report Request Information	99
9: Permits and Authorizations	103
9A : Permit and Authorization Information.....	105
9B: ISC Timber Permit Information [for non-FNLM Bands].....	107
10: Feasibility Stage Technical Review	137

Figures

1: Feasibility Stage	2
----------------------------	---

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEP	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
NFNIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organisational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit (with Funding Services)
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act. CEA2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes, or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subcontractors, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subcontractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations which identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning, budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures, prescribed in the environmental review process, were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's ISCRETION. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - Protect and maintain existing assets with an emphasis on health and safety;
 - Mitigate health and safety risks through new and existing assets;
 - Address water and sewer project backlogs;
 - Include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organisations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs.

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).

Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post Construction Stage of a Capital Project

Appendix

The Identification of a Capital Project

An overview of the BC Region Indigenous Services Canada Capital Program including a step-by-step description of the project approval process.

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision making for the successful implementation of capital projects.

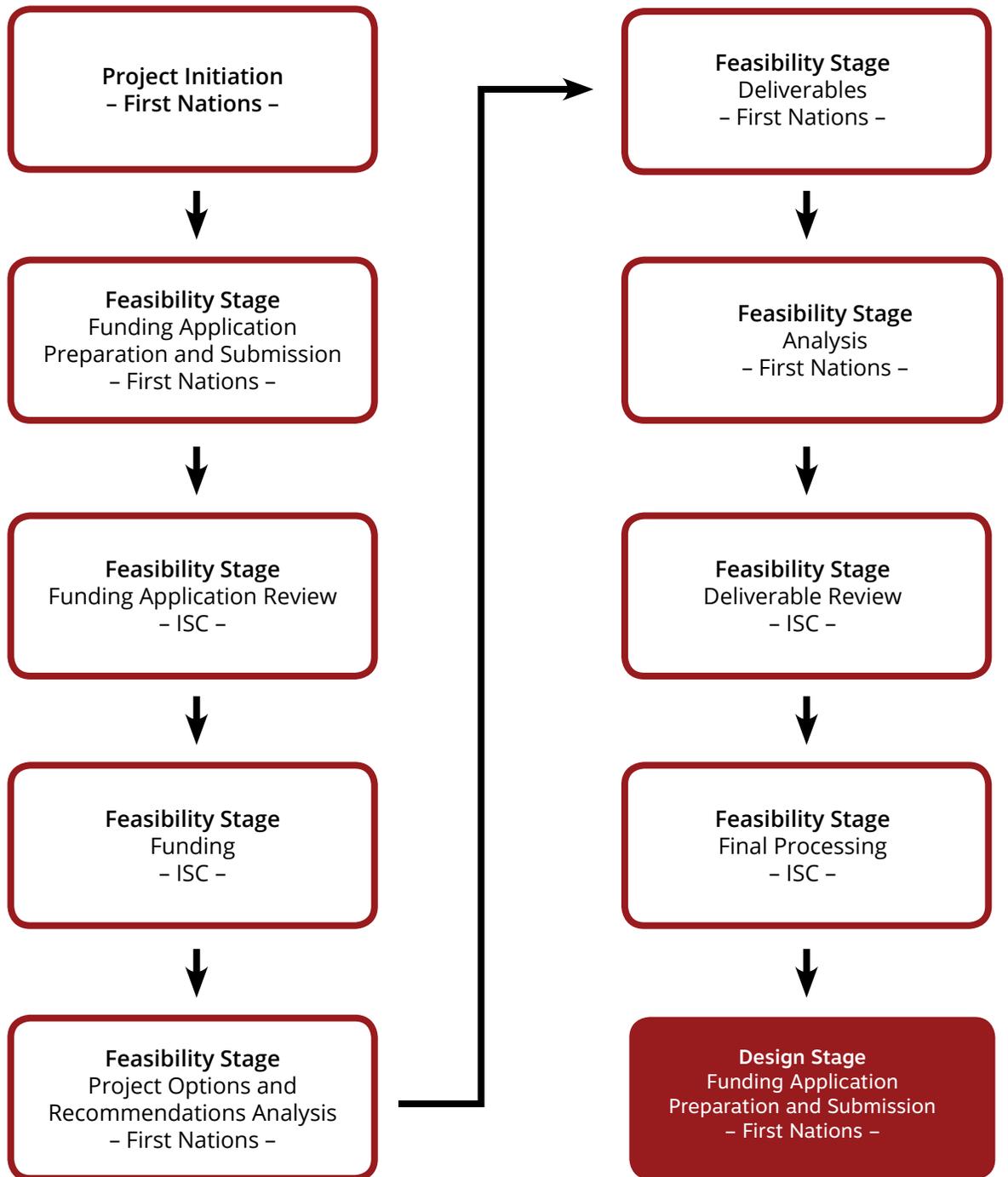
The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

Funding processes related to other components of the capital facilities and maintenance program (CFMP) program such as schools, housing and operation and maintenance funding are covered in other documents.

The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle – feasibility, design, construction and post construction. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

Figure 1 The Feasibility Stage of a Capital Project



The feasibility stage examines all technically sound and economically viable options available to achieve the objectives of a capital project and provides the planning information required for the project to move ahead to subsequent stages.

After the First Nation has identified the need for a capital project through a project identification process (see Chapter 2) and the project has been identified in the RFNIIP for implementation, the feasibility stage will determine the most appropriate strategy for moving ahead with the project which will maximize benefits to the community and meet ISC program funding requirements.

The feasibility stage will gather all the information required to determine project priority, viability and cost effectiveness. This stage details the available options for addressing the project objectives, investigates site issues impacting the options, weighs the advantages and disadvantages of each option, assesses the cost effectiveness of each option, determines whether the options meet ISC program funding requirements and recommends a preferred option.

Generally, after the First Nation has reviewed and agreed with the findings of the feasibility stage, the feasibility stage deliverables will be sent to ISC accompanied by a funding application for design stage funding (DAR). However, in some cases, additional feasibility stage investigations may be required to provide additional information required to make a final recommended option decision before progressing to the design stage. In other cases, based on the feasibility stage investigations and analysis, the First Nation may decide the available options are not consistent with their community vision and may choose not to proceed with the project in its current concept.

In specific situations, the project cycle can omit the feasibility stage. This may occur in cases where there are smaller projects with obvious solutions or where sufficient detail is provided in other documentation such as a community development plan or a physical development plan. An example would be minor upgrades to existing infrastructure assets. Capital Management Officers and Senior Engineers can provide advice and assistance to First Nations to evaluate the need for a feasibility study.

3.1 Feasibility Stage Funding Application(FAR)

To initiate ISC funding for a proposed feasibility study, a feasibility stage funding application labelled a Feasibility Approval Request (FAR) is required for all capital projects (except Group 2 ACRS projects, O&M projects, FNIF projects and clearly defined smaller projects). The amount of information provided in the FAR is intended to match the size and complexity of the project. Generating a FAR will likely be the first step in a systematic progression leading to a Design Approval Request (DAR) and then to a Project Approval Request for Construction (PAR). See [Appendix 1: Feasibility Approval Request \(FAR\)](#) for guidance on completing a FAR.

The FAR can be prepared by the First Nation with the assistance of the Capital Management Officer or the ISC Engineer, by an independent project manager hired by the First Nation, by tribal council technical staff or by a professional consultant engaged by the First Nation to assist with developing the project. Submission of a FAR formally triggers the feasibility stage funding request.

The FAR summarizes the funding request and contains the following sections:

- First Nation's Approval Signature - indicates First Nation project concurrence with FAR scope of work and project implementation process;
- Executive Summary — one page project summary with funding requirements table;
- Project Identification — project description with project justification explaining why the study is needed. Some project justification examples to be expanded are:
 - » Water supply is inadequate due to quality problems
 - » Wastewater pumping station cannot meet pumping demands
- Feasibility Study Scope of Work— description of feasibility study objectives;
- Project Management Framework — proposed First Nation project

management plan including process for engaging a project leader, independent project manager (if applicable) and professional consultant services. The experience of the project team must reflect the size and complexity of the project;

- Environmental Assessment Process — primary objectives of the environmental assessment scoping report. The requirement for an archaeological assessment should be considered. See [Appendix 2: Environmental Review Process](#);
- Financial Information — proposed feasibility stage costs for professional consultant services (including feasibility study fees, environmental fees and project management fees) and band administration fees.

A Total Estimated Cost (TEC) for the project (Class D) is also required. Where the total project cost is not known, the ISC project engineer can assist the First Nation in generating an estimate. See: [Appendix 3: Cost Estimates — Definitions](#).

- Project Schedule — proposed schedule with milestone dates and responsibilities.

The FAR appendices will include the following items (as applicable):

- A. Project Manager or Construction Manager Information (if applicable)** — If the First Nation is hiring an independent project manager or a construction manager (or both), terms of reference (as applicable) and proposals to provide the appropriate services are required. See Section 2.7.2 Hiring a Project Manager, Section 2.7.5, Hiring a Construction Manager and Appendix 9: Project Implementation;
- B. Terms of Reference (TOR) for Consultant Services** — stipulates the professional consultant services expected by the First Nation. This document defines the scope of the project, the required technical standards, the expected completion schedule and the contractual requirements.

The TOR must clearly identify that all applicable feasibility stage deliverables (described in Section 4 of this chapter) must be completed by the consultant. See [Section 2.7.3 Hiring a Professional Services Consultant](#) and [Appendix 4: Project Implementation / Hiring Professionals](#) for information on hiring a consultant and a sample contract.

Note:

Inviting several consultants to submit proposals in response to the TOR is recommended. This competitive process will help the First Nation select the most qualified firm at the best value. The Capital Management Officer and Senior Engineer can assist the First Nation in determining evaluation criteria for multiple proposal reviews and will participate in the proposal review process if requested.

In some cases for smaller, less complex projects, a written TOR may not be needed if the First Nation has already chosen a consultant. Project TOR can be verbally communicated to the consultant who will subsequently generate a Proposal for Consultant Services which must specifically address the First Nation's expectations.

See [*Appendix 5: Terms of Reference — Feasibility Study \(Sample\)*](#) for assistance when creating a project TOR. The Capital Management Officer and Project Engineer can also assist First Nations in the development of a project specific TOR.

- C. Proposal for Consultant Services** — provides the written response submitted by a consultant to the First Nation's request for professional services. The TOR will be used by the consultant to determine the contents of the proposal. The proposal must clearly identify a scope of work and all associated costs to produce all the feasibility stage deliverables identified in Section 3.9 of this chapter.

The proposal will also provide information concerning:

- The qualifications and experience of the consultant company;
- The qualifications and experience of the consultant personnel specifically assigned to the project;
- The proposed strategies, activities and tasks the consultant will use to complete the feasibility stage;
- The expected schedule for completion of the feasibility stage deliverables;
- The requested fees and disbursements (travel, photocopying, etc.) to complete the assignment.

The consultant fee schedule must detail the hourly rates charged by each consultant team member, the number of hours and associated cost estimate for each task to be performed and an estimate of disbursement costs. Where sub-consultants (eg. geotechnical, environmental) will be performing tasks for the prime consultant, their task-specific proposals with time and costing information are to be included in the overall project proposal.

If a number of consultants were invited to submit proposals, only the proposal selected by the First Nation needs to be submitted to ISC.

For relevant support guidelines and templates, see: [Appendix 4B: Procedures for Engaging a Consultant on a CFM Capital Project](#); [Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings](#); [Appendix 4D: Sample Professional Services Contract \(CN2 Template\)](#) and [Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist \(excerpt from EGBC Website\)](#).

Note:

The document *CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities* provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting.

3.2 Feasibility Approval Request (FAR) Review

3.2.1 Capital Management Officer

The Capital Management Officer will review the FAR to confirm the proposed project is on the RFNIIP. The review will also consider application completeness and will evaluate the project description and the project rationale to confirm the proposed project conforms to current funding policies and program directions. Any deficiencies in the funding application will be communicated to the First Nation in writing.

Assuming the funding application meets the appropriate criteria, the Capital Management Officer will generate and populate a CFM Program Record Document (CPRD) and will then forward the CPRD and project information to the Senior Engineer for technical review.

3.2.2 Engineer Review

The technical review will consider whether the proposed scope of work provides value for the First Nation and ISC, meets the project objectives and is appropriate, functional and cost effective. Discussions and meetings with the ISC Engineer and the Capital Management Officer may be

required to confirm project scope and direction. Written communication may be generated to clarify issues.

The FAR technical review will include:

- Evaluating the project description and project justification to assess the technical validity of the proposed project. The evaluation will include assessing how the proposed study generally complies with other capital planning information available for the First Nation (e.g., First Nation community development planning), with previous technical studies completed for the community, with current asset inspection/evaluation reports and population statistics and with the ISC engineer's knowledge of the community;
- Evaluating the project management plan to assess appropriate management procedures are in place to implement the project through the feasibility stage.
- Reviewing the Terms of Reference and the Proposal for Consultant Services to determine if the proposed scope of work will adequately examine all applicable options, provide recommendations and will generate all the required information (including environmental information) to proceed with the project. The review will include assessing that:
 - » The proposed scope of work is sufficient to produce technically sound recommendations that meet all capital program requirements;
 - » All applicable feasibility stage deliverables identified in Section 3.9 of this chapter will be produced;
 - » The consulting firm is qualified;
 - » The identified project team has the necessary qualifications and experience;
 - » The professional fees are reasonably within accepted guidelines;
 - » The proposed schedule is realistic.
- Evaluating the project management plan to assess appropriate management procedures are in place to implement the project through the feasibility stage (eg. project leader, project manager, schedule control, budget control, funding availability);
- Confirming that the Class "D" total project cost estimate is reasonable;

- Comparing the FAR to the Feasibility Stage Funding Application checklist. See [Appendix 6](#). The checklist may be useful to the First Nation as a quick guide to help verify the FAR is complete;
- Using the information provided in the funding application to confirm generate a the previously assigned project priority ranking number;
- Inserting required information on to the CPRD form and forwarding for approvals.

Note:

ISC Design Guidelines provide both content and formatting requirements for water, wastewater and road projects reports. See ISC's website information for the CFM Program — Project Information — Policies and Directives.

3.3 Feasibility Stage Funding Application Process at ISC

The Capital Management Officer or Senior Engineer will contact the First Nation regarding the status of the funding application within 60 days.

If the funding application meets the necessary requirements, the Capital Management Officer will process the project for funding eligibility. Refer to Chapter 1 for Banking Day procedures and the funding of projects.

If project funding is received by the First Nation, appropriate reporting by the First Nations as specified in the funding agreement amendment must be processed to stay off the Halt List. See [*Appendix 7: Capital Projects Report Data Collection Instrument \(DCI\) #460671*](#).

3.4 Feasibility Stage Deliverables

Upon completion of the feasibility stage investigations by their consultant, a First Nation will receive project deliverables as determined by the terms of reference and the proposal for consultant services. The deliverables received from your consultant will generally consist of the following documents:

- Feasibility Study;
- Environmental Assessment Scoping Report;
- Subdivisions Only — Phase 1 Environmental Site Assessment (ESA) Report;
- Administrative Reporting.

The feasibility study will provide the required information to the First Nation to make decisions on whether the project should proceed, should be terminated, or whether more information and more options should be investigated.

The feasibility study should be submitted as a paper copy and as a PDF file. Letter size and 11" × 17" sketch plans and drawings are preferred, but full-sized drawings folded in drawing sleeves in the binder are also acceptable.

A. Feasibility Study includes the following information:

- Project Justification — documents the level of research, field investigation and analysis completed to justify the need for the project. The analysis must include a comparison with ISC Level of Service Standards and Design Guidelines. See ISC's website to locate these documents.
- Option Analysis — documents that all cost effective and technically appropriate solution options have been assessed. Research, field investigations, calculations and analysis completed for each option should be detailed. The analysis of options is to consider planning and land use, environmental issues, land requirements, Class "D" capital and O&M costs, level of service standards, ISC design guidelines, impacts of proposed new development on existing infrastructure and other applicable factors. A life cycle cost analysis is required for each appropriate option to determine the

long term cost implications. Reduction in O&M complexity must be thoroughly considered.

The advantages and disadvantages of each option is required to help formulate conclusions. The level of effort required to evaluate options can vary significantly depending on the complexities of a project. Prior consultations and discussions between the First Nation, their consultant, the Capital Management Officer and the Senior Engineer are highly recommended to help focus the evaluation of options.

ISC's website information on the CFM Program — Project Information - Policies and Directives provides links to ISC design guidelines for water system, wastewater system and road projects. The guidelines provide detailed information regarding specific research and field investigation requirements required for assessing options.

- Preferred Option — documents the comparison of options used to support the conclusions and the recommendation of a preferred option. The conclusions and recommendation must be technically sound, cost effective and must meet all relevant guidelines, policies, standards, codes, laws and regulations. See ISC's website information for the CFM Program — Project Information — Policies and Directives — Protocol for ISC Funded Infrastructure (PIFI).

The preferred option must be clearly illustrated by conceptual drawings, diagrams, calculations and other relevant technical information. Capital and O&M costs must be provided at a Class C level. See [*Appendix 3: Cost Estimates — Definitions.*](#)

Detailed substantiation is required if the “least cost” option is not recommended or if the preferred option exceeds ISC's Level of Service Standards. Cost sharing for the higher standard is to be identified. The interpretation of LOSS can be difficult for some projects and First Nations are encouraged to contact their Capital Management Officer and Senior Engineer for any clarifications required.

- Sub-consultant Investigations — Summarize the conclusions and recommendations of completed sub-consultant reports (eg. geotechnical, hydrogeological, environmental, archaeological). Include copies of these reports in the feasibility study appendix.
- Land Requirements — all lands required for the preferred option are to be identified and confirmed as available for project

Note:

First Nations with their own forestry land code under the First Nations Land Management Act do not need to provide a timber permit assessment.

development. The physical features, future expansion potential and land ownership are to be described. A land encumbrance check is required to confirm access to any First Nation lands impacted by the recommended option. Land requirements off-reserve must be thoroughly investigated to determine availability. ISC is required to provide consultation opportunities to other First Nations for utilizing off-reserve land that might be subject to established or potential aboriginal or treaty rights. See [*Appendix 8: Land Status Report Request Information.*](#)

- Additional Field Investigations and Research — all additional field investigations and/or research that will be carried out during the design stage are to be itemized and the scope of work identified. If no additional work is required prior to initiating the design, this should be clearly stated. ISC design guidelines for water system, wastewater system and road projects provide detailed information regarding specific research and field investigation requirements required for design stage activities.
- Regulatory Impacts — potential regulatory impacts or permit requirements that may be identified by federal, provincial or municipal jurisdictions are identified and a plan is provided for addressing the impacts in the design stage. Should a regulatory impact have a potentially significant influence on the successful completion of the project, the relevant jurisdictions should be consulted and their comments included in the feasibility study. See [*Appendix 9A: Permit and Authorization Information.*](#)

Regulatory jurisdictions that may be involved at this stage include:

- Environment Canada — wastewater and solid waste disposal;
- Fisheries and Oceans Canada — all works impacting fish bearing waters;
- Transport Canada — navigable waters;
- BC Ministry of Agriculture and Lands — land management;
- BC Ministry of Environment — fish and wildlife;

- BC Ministry of Transportation — public road access, works involving public roads;
- Local municipalities —extension of municipal services;
- Timber Permit Assessment — a statement is required in the feasibility study to document if a timber permit is required. See [*Appendix 9B: ISC Timber Permit Information \(for non-FNLM First Nations\)*](#);
- Operation and Maintenance — outlines the operation and maintenance activities expected for the preferred option and includes an assessment of the First Nation’s capacity to safely and effectively operate and maintain the proposed works. Indicates additional resources and/or training required to reduce any gaps in the First Nation’s capacity. All potential sources of O&M funding and/or supplementary funding from a First Nation’s internal resources are to be identified;
- Project Construction (or Procurement) Process — the proposed implementation process to physically construct the proposed project is to be identified in the Feasibility Study. In most typical circumstances, a general contracting process is utilized where a call for bids (tenders) from construction companies is requested. Generally, the lowest bid will be awarded the contract to construct the project in accordance with the drawings and specifications issued by the First Nation. In some cases, a construction management process is utilized which will require additional information to be submitted. In using this process, an initial construction management business plan will need to be completed at the beginning of the design stage;
- Project Schedule — submit a proposed project schedule to implement the preferred option through to the post construction stage. Estimate the time required to complete each succeeding stage of the project. Any events that may impact the project schedule should be identified.

See ISC’s website information on the CFM Program — Project Information —Best Practices for Construction Contracting and Project Information — Policies and Directives for information Tendering Policy on Federally Funded Capital Projects for First Nations on Reserve, Framework to Guide the Development of a First Nation Tendering Policy and Operational Parameters for the Review and Evaluation of Construction Management Projects.

- B. Environmental Assessment Scoping Report** — Submitted as a stand-alone document and as a separate PDF file. The report summarizes the project description, the environmental setting, any significant environmental issues and any completed environmental assessment investigations. Identify any environmental investigations planned for the design stage. Project complexity, especially with respect to biological impacts, will determine if an environmental specialist consultant is required during the design stage. Potential archaeological impacts will determine if an archaeological specialist is required. The conclusions and recommendations of the Environmental Assessment Scoping Report are to be summarized in the main body of the Feasibility Study. See [Appendix 2: Environmental Review Process](#).
- C. Phase 1 Environmental Site Assessment (ESA) Report** — Generated for subdivision projects and submitted as a separately bound, stand-alone document and as a separate PDF file. The contents of this report must subscribe to the requirements of Canadian Standards Association (CSA) Z768 01. The report should be kept accessible at the First Nation office to fulfill environmental requirements for future house construction subsidy requests in the proposed subdivision.
- D. First Nations Administrative Reporting during Feasibility Stage is to include:**
- Capital Project Progress Reporting — Reporting on project progress in accordance with the schedule identified in the agreement amendment is an ISC funding requirement and failure to report results in a funding halt. See [Appendix 7: Capital Projects Report DCI #460671](#);
 - Expenditure accounting from the First Nation — compares project expenditures to the funding received for the feasibility stage. Expenditure breakdowns should correspond to the approved funding request. Note that project final accounting will be compared to the First Nations annual financial audit report;
 - Capital Project Request for Override — required if the project feasibility stage has justifiably taken longer than one year to complete. Substantiation for the delay of the project must be identified on the request. Failure to report results in a funding halt.

3.5 Feasibility Stage Analysis by First Nations

The following questions should have been answered upon completion of the feasibility stage. The First Nation should examine the conclusions and recommendations of the feasibility stage and be satisfied that the information provided addresses the following project decisions and subsequent project activities.

Question 1: Has a comprehensive option analysis been completed?

Has the problem has been thoroughly studied and have applicable, potential options been identified and assessed?

Question 2: Has a preferred option been recommended?

Has the preferred option that best meets the needs of the community been presented and is this option justified by the conclusions of the options analysis?

Question 3: Have the required cost estimates and project schedule been provided?

Is there sufficient preliminary information to plan long range capital project activities which also need to be coordinated with the First Nation's long term capital plan?

Question 4: Have land requirements been identified?

Has the required land tenure information been determined so that land management activities associated with the project can be planned? Have consultation requirements with other jurisdictions, including other First Nations (Duty to Consult) regarding off-Reserve lands, been identified ?

Question 5: Have the potential regulatory impacts of the preferred option been identified?

Is there sufficient information so discussions with regulatory agencies can be initiated and design and construction stage activities requiring permits can be planned?

Question 6: Have operation and maintenance impacts been assessed?

Has sufficient O&M information been provided so O&M budgets can be planned and operator training requirements can be identified? Are operators and circuit riders aware of the O&M impacts of the various options being considered?

Question 7: Have all additional investigations been identified?

Have design stage research and field investigations been identified so obtaining the required design information can be planned?

Question 8: Have all potential environmental concerns been identified?

Have project environmental impacts on the community been identified so that potential environmental impacts and mitigation measures can be planned?

Question 9: Have community employment and economic opportunities been discussed ?

Have contracts, local arrangements and employment resources been discussed to provide local employment and economic opportunities ?

Based on the analysis of the feasibility information and assuming there is agreement with the project information, project decisions and project impacts, the First Nation will send the feasibility stage deliverables to the Capital Management Officer, generally accompanied by an application for design stage funding.

However, if the First Nation's decision-making process on whether to proceed with the project requires more time, the feasibility stage deliverables can be sent to the Capital Management Officer without an application for design stage funding. ISC will then mark off the feasibility stage of the project as complete in the Grants and Contributions Information Management System (GCIMS) to address ISC project reporting requirements and avoid project completion Halt List issues.

In some cases, the First Nation will complete the analysis of the feasibility stage and decide not to proceed with the project because, for example, timing issues or because the recommendations of the feasibility stage do not fit in with the community's long term development plan. The feasibility stage deliverables should then be sent to ISC along with written notification that the First Nation does not want to proceed with the project. ISC will then mark off the project as complete in GCIMS and any future FNIP will not include the project.

3.6 Feasibility Stage Deliverable Review by ISC

Feasibility stage deliverables received by ISC will be reviewed within sixty days of hard copy receipt. The review process will include an initial completeness check by the capital management officer and a subsequent technical review by the ISC engineer.

3.6.1 Capital Management Officer

The Capital Management Officer will review the feasibility stage deliverables to confirm that all required deliverables have been received. The feasibility stage information and the preferred option will be assessed to determine general conformance to ISC program requirements, and the package will then be sent to the Project Engineer for technical evaluation.

If all feasibility stage deliverables are not complete, the Capital Management Officer will request additional information from the First Nation in writing.

3.6.2 Engineer Review

Engineers will review the deliverables to confirm that the proposed project meets the project objectives and fully addresses the work program identified in the original terms of reference and the consultant's proposal for services. Any deficiencies will be communicated to the First Nation.

The feasibility stage deliverable review by the Engineer will include:

- Evaluating the recommended option, supporting analysis and the associated field investigations and research. The conclusions and recommendations must be technically sound, cost effective and must meet all relevant guidelines, policies, standards, codes, laws and regulations (PIFI);
- Verifying that ISC's Level of Service Standards (LOSS) for the proposed project will be met. Should they be exceeded, any justification and/or cost sharing alternatives that are provided will be evaluated;

- Confirming that land entitlement issues will not negatively impact the development of the preferred option;
- Reviewing any permit requirements including the timber permit analysis (if applicable) and the identification of other regulatory agencies that may be involved;
- Reviewing the operation and maintenance activities outline and any additional First Nations resources required for ongoing operation and maintenance;
- Reviewing the additional field investigations and/or research required for the design stage;
- Reviewing the proposed project schedule for implementing the recommended option;
- Confirming that the project cost estimates are reasonable;
- Re-evaluating the previously determined project priority ranking;
- Managing the environmental assessment process by reviewing the Environmental Assessment Scoping Report to evaluate the environmental setting and environmental impacts. If the environmental impacts and associated mitigation measures are considered low risk, then the project will be labeled a “Minor” project and no further environmental studies are required. If more detailed environmental analysis is required, an environmental assessment study report will be required during the design stage.

Should the scoping report identify significant impacts to the environment, the engineer may recommend that additional environmental assessment studies be completed prior to the project continuing to the design stage. Where it does not appear possible to adequately minimize the impacts through mitigation processes or compensation plans, the project will not be supported to continue to the design stage;

- For subdivision projects only, reviewing the Phase 1 Environmental Site Assessment report to evaluate any historical site contamination issues that may impact the project.
- Comparing the feasibility stage deliverables to the Feasibility Stage Technical Review checklist. See [Appendix 10](#). The checklist may be useful to the First Nation as a quick guide to help verify the deliverable package is complete.

3.7 Feasibility Stage Final Processing by ISC

Subsequent to the project technical evaluation, project progress will be as follows:

- If the feasibility stage deliverables provide the necessary information to determine the future direction of the project are complete and no additional feasibility stage information is required, the First Nation will be notified and GCIMS will be updated to show this stage of the project is complete;
- If an application for design stage funding (DAR) was received with the feasibility stage deliverables and no additional feasibility stage information is required, then the process moves into design stage funding as described in Chapter 4.
- If an application for design stage funding (DAR) was not received with the feasibility stage deliverables and no additional feasibility stage information is required, then the First Nation will be contacted to ISCuss a proposed schedule for submitting a DAR;
- If additional feasibility stage information is required, the First Nation will be requested to provide the additional information. If the additional information was not included in the originally accepted and funded Proposal for Professional Consultant Services, then additional funding can be requested.



Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1: Feasibility Approval Request (FAR)

INDIGENOUS SERVICES CANADA FEASIBILITY APPROVAL REQUEST (FAR) for INFRASTRUCTURE PROJECTS [BC REGION]

Date: MM/DD/YYYY

Project Information

Project Name: _____
 Project Number (ICMS/CPMS): _____
 Funding Requested _____

First Nation Information

Band Number: _____
 First Nation: _____
 Reserve: _____
 Chief: _____
 Band Administrator: _____
 Band Project Leader: _____

Regional Information

Region: _____
 Project Capital Mgmt. Officer: _____
 Project Engineer _____

Date Submitted for DISC Approval: _____
 Submitted To: _____
 Submitted By: _____

APPROVAL SIGNATURES

First Nation Approvals

Chief (or person authorized by C&C)

Date

ISC Regional Approvals

ISC Regional Engineer /Technical Officer

Date

ISC Regional Manager (Infrastructure Development)

Date

ISC Regional Manager [Capital Programs]

Date

Executive Summary

The Executive Summary [max. one page] should include the following items:

- Brief project description;
- Brief project justification
- Funding requested for feasibility stage consistent with RFNIIP
- Project Total Estimated Cost [including engineering and contingencies] required to complete project with yearly cash breakdown (use table below)

Projected Yearly Cash Flows – Feasibility, Design and Construction				
	Year 1	Year 2	Year 3	Total
A-Base				
Targeted Funds				
Other DISC				
Total DISC Funding				
FN Funding				
Other Funding Source #1				
Other Funding Source #2				
Total Non-DISC Funding				
Total Estimated Cost (TEC)				

Notes:

1. If there are more than two other funding sources, then add the appropriate number of rows for the funding sources.
2. If the project will be completed in more than three years, add additional columns for the additional years. If the project will be completed in one year, use only one column.

Table of Contents

Project Information

First Nation Information

Regional Information

APPROVAL SIGNATURES

Executive Summary

Table of Contents

1.0 Project Identification

1.1 Project Description

1.2 Project Justification

2.0 Feasibility Study Scope of Work

3.0 Project Management Framework

3.1 First Nation Project Management Plan

3.2 Professional Consultant Services

4.0 Environmental Risk Process

5.0 Financial Information

5.1 Project Costs

5.1.1 Feasibility Costs

5.1.2 Total Estimated Project Construction Cost

6.0 Project Schedule

Appendices

1.0 Project Identification

1.1 Project Description

- Describe the proposed project scope of work
- Describe existing facilities or systems [if applicable]

1.2 Project Justification

- Provide a project justification to explain why the study is needed
- Describe the process for identifying the project [eg. ACRS reports, repair records, ,Infrastructure Master Plan, etc.]

2.0 Feasibility Study Scope of Work

- Describe the process for generating options to address the needs of the First Nation including the collection of information and the requirement for supplemental studies or investigations;
- Describe the process for generating a recommended option;
- Identify efforts to investigate land requirements, permits and approvals potentially required and possible cost-sharing opportunities;
- Identify any unique factors materially affecting the project (e.g. technical issues, timing of approvals, financial management plans, cost-sharing arrangements).

3.0 Project Management Framework

3.1 First Nation Project Management Plan

- Summarize the procedures for engaging the project implementation team
- Identify project team members and roles and responsibilities for providing project direction [eg. Band administrator, project leader, capital works manager, financial manager, etc.].
- Identify if an independent project manager will be hired [include Terms of Reference and proposal in Appendices, as applicable].

3.2 Professional Consultant Services

- Summarize process for engaging professional consultant services;
- Reference developed Terms of Reference [if applicable];
- Reference proposals from professional consultants. Proposals must clearly identify a scope of work and all associated costs to provide all the services and produce all the deliverables required during feasibility stage activities, The scope of work is to identify all tasks to be performed.

Proposals must also outline:

1. qualifications and experience of the consultant company
2. qualifications and experience of the consultant personnel specifically assigned to the project
3. proposed strategies, activities and tasks the consultant will use to provide the services;
4. expected schedule for project completion
5. consultant fee schedule detailing hourly rates charged by each consultant team member, the number of hours and associated cost estimate for each task to be performed and an estimate of disbursement costs. Where sub-consultants will be performing tasks for the prime consultant, their task-specific proposals with time and costing information are to be included in the overall project proposal.

4.0 Environmental Risk Process

- Briefly identify the main objectives of the Environmental Scoping Study;
- Identify any environmental studies and information required to assess environmental impacts;

5.0 Financial Information

5.1 Project Costs

5.1.1 Feasibility Costs

- Present a summary of the proposed feasibility costs including Band administration fees in a tabulated format. A detailed breakdown of the feasibility tasks and associated fees should be included in the consultant's proposal;
- Present an expected monthly cash flow for the feasibility work.

5.1.2 Total Estimated Project Construction Cost

- Identify total project construction cost [Class D] including contingency amount (typically 10%) and engineering amount

6.0 Project Schedule

- Provide an estimate for completion of each project milestone identified in the following table (as applicable):

Project Milestone	Completion Date	Responsibility*
Selection of Project Manager [if applicable]		First Nation
Selection of Consultant		First Nation
Feasibility Funding Submission (FAR)		First Nation
Feasibility Funding		DISC
Draft Feasibility Study Submission		Consultant
Environmental Scoping Study		Consultant
Draft Feasibility Study Review		DISC
Final Feasibility Study Submission		Consultant
Design Stage Funding Submission (DAR)		First Nation

*The responsibility will fall under one or more of the following: Indigenous Services Canada (ISC), First Nation (FN), Consultant

Appendices

1. Terms of Reference for independent Project Manager [if applicable];
2. Project Manager proposal [if applicable]
3. Terms of Reference for professional consultant services [if applicable];
4. Professional consultant services proposal for feasibility (including fee tabulation and schedule)

Appendix 2: Environmental Review

Appendix 2A: ISC Environmental Review Process Summary

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessment

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Appendix 2A: ISC Environmental Review Process Summary

All federally-funded projects must follow an Environmental Review Process [ERP] to ensure that no significant adverse environmental effects result from the implementation of a project. The objectives of the ERP are:

- predict the environment effects of a proposed project;
- identify measures to mitigate the effects;
- determine the significance of residual environmental effects and applicable mitigation measures;
- recommend follow-up programs to monitor impacts of environmental effects;
- fulfill the federal Duty to Consult with other Aboriginal interests regarding projects to be constructed on lands subject to treaty claims.

The level of environmental review should match the risk and likelihood of significant adverse effects associated with carrying out a project. Larger, more complex projects adjacent to water bodies or discharging into receiving waters would generally require a higher degree of environmental analysis.

The project environmental review process begins at the feasibility stage with an Environmental Scoping Study to outline potential issues. A project description form is initiated. If no significant issues are apparent that cannot be mitigated with standard procedures, the project is considered a minor project and considered “negligible environmental risk.” ISC has developed a “Minor Projects List” for identifying routine projects normally considered negligible environmental risk although any project may be elevated past the minor level for a more detailed assessment if conditions warrant. Renovations or upgrades are typical minor level projects. No further environmental information is required for a minor project.

If the Environmental Scoping Study identifies potentially significant environmental issues, the ISC engineer will request an Environmental Detailed Study to be completed during the design stage [usually at the pre-design phase]. Depending on the study results, the ISC engineer may classify the project as a low environmental risk requiring a “Simple Environmental Review Form”. The ISC engineer may request additional environmental information to confirm a low environmental risk rating.

Construction of a water treatment plant or a residential subdivision would be typical projects in the low risk category.

If the project is large or complex and the report indicates risks and potential effects are not readily known, the project will be referred to an ISC environmental specialist who will manage a more comprehensive evaluation of environmental effects and generate a “Detailed Environmental Review Form”. Projects requiring this form will require higher level approval authorities.

Depending on the scope of the environmental mitigation measures incorporated into the project, a Mitigation Measures Compliance Report may be required as part of the project completion reporting. This report is used to confirm that the mitigation measures prescribed in the environment review were incorporated into the project. This form is not required for projects that underwent a Minor Review. Projects that underwent a Simple Environmental Review may require this form at ISC’s discretion. Projects that underwent a Detailed Environmental Review will require form completion.

Environmental decisions will be tracked by the Integrated Environmental Management System [IEMS] which was launched in April, 2014.

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessments

The Generic Terms of Reference (TOR) presented here as an annotated table of contents provides the proponent with the guidelines in planning and conducting an environmental assessment.

Executive Summary

1. Introduction	<p>Provide contextual background information on the project and the proponent and project justification.</p> <p>1.1 Proponent Information</p> <p>1.2 Project Overview (including Title and Location)</p> <p>1.3 Regulatory Framework (e.g. Funding, Permits and/or Approvals)</p>
-----------------	---

<p>2. Project Description and scope of project</p>	<p>Provide a detailed project description. The project description should cover all aspects of the project including anticipated environmental impacts to the project. A detailed description will allow the RA(s) to scope the project components and activities appropriately.</p> <p>Note: For projects involving cutting of timber, the description must include the RPF's break down of volume/species (based upon a timber cruise) to be cut from the subject area and the proposed harvesting system.</p> <p>A detailed project description at the start of the project design phase clarifies potential interactions with the environmental and thereby reduces the risk that ISC or other RAs will require additional information to assess the project.</p> <p>Community Infrastructure Projects require a Scoping Report submitted during the feasibility stage of the project (Part 4).</p> <p>Identify all components that were scoped into the project including all necessary activities and with First Nation consultation early on in the development process.</p> <p>2.1 Project Background</p> <p>2.2 Location of project and mapping and study areas</p> <p>2.3 Project Facilities and associated infrastructure</p> <p>2.4 Construction activities</p> <p>2.5 Operations activities</p> <p>2.6 Decommissioning plans</p> <p>2.7 Alternative means of carrying out the project</p> <p>2.8 First Nations Consultation</p>
--	--

<p>3. Project Setting</p>	<p>Provide a detailed description of the existing environment in the project area including landscape, water bodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc). Indicate the areas affected by the project. Outline known environmentally significant historical uses and First Nations uses in the area of the project, if available. Develop and/or update the list of VECs in the project area.</p> <p>Identify all environmental components that were scoped into the assessment (i.e. Valued Ecosystem Components)</p> <p>3.1 Geophysical Environment</p> <p>3.2 Atmospheric Environment</p> <p>3.3 Aquatic Environment and Hydrology Surface Hydrology</p> <p>3.4 Terrestrial Environment, Wildlife, Species at Risk</p> <p>3.5 Land Use Setting</p> <p>3.6 Develop list of Valued Ecosystem Components</p> <p>3.7 Socio-economic Conditions</p> <p>3.8 First Nations Historical Use</p> <p>3.9 First Nations Interests and Involvement</p>
---------------------------	--

<p>4. Environmental Effects</p>	<p>Provide a narrative description of assessment approach and methodology used to conduct the EA. Note data sources and indicators used to consider the effects, and discuss mitigation and any residual effects of the project and whether those effects are significant or not.</p> <p>Summarize the results and recommendations of studies carried out as part of the EA (e.g. geotechnical studies, water quality investigations, SARA wildlife & habitat surveys, archaeological investigations, survey results, fisheries studies, etc).</p> <p>Describe the project/environment interactions</p> <p>Cumulative effects including past and foreseeable future developments (e.g. Phase II of a subdivision, Phase II of a commercial park) need to be addressed appropriately.</p> <p>Effects assessment may be summarized in an Interaction Matrix based on the VECs.</p> <p>4.1 Impact Assessment Methodology</p> <p>4.2 Construction Phase – Effects Assessment</p> <p>4.3 Operations and Maintenance Phase – Effects Assessment</p> <p>4.4 Decommissioning – Effects Assessment</p> <p>4.5 Socio-economic Effects on First Nations communities</p> <p>4.6 Accidents and Malfunctions</p> <p>4.7 Effects of the Environment on the Project</p> <p>4.8 Cumulative Effects</p>
---------------------------------	---

5. Mitigation	<p>Provide a narrative summary of how environmental effects will be mitigated and show how the mitigation measures have been included in the design implementation of the project. Applicable portions of the design and/or operation and maintenance information should be referenced in the EA report document to confirm that mitigation measures have been incorporated. Mitigation measures may also be used as conditions of the lease, permit and/or funding agreement, presented as a table of commitments.</p> <p>Where a project causes interactions with species at risk, specific mitigation measures must be identified. Mitigation strategies for species at risk are hierarchical with avoidance being preferred (e.g. timing, design/location change), followed by minimization through project modification or implementation under special conditions, and lastly, compensatory mitigation (e.g. replacement of lost habitat).</p> <p>A table of commitments and assurances may drafted and signed by the proponent to ensure that mitigation measures are incorporated and implemented in the final design and construction activities. This table must also be incorporated in the contractor's tender.</p> <p>5.1 Narrative Summary of Project Impacts and Mitigation Measures Table: See Sample Mitigation Table Template Appendix 2</p> <p>5.2 Summary of Commitments Table of Commitments and Assurances</p>
---------------	--

The EA provided for a project that involves cutting of timber, must include a Registered Professional Forester (RPF) breakdown of volume/species to be cut and a 1:5,000 Logging Plan map (LP map) signed and sealed by a RPF. The RPFs LP Map must be superimposed over the sub-division site (or development) map for that project; show the North arrow; the boundary of the reserve; the area in which timber will be cut; the method of harvesting (clear cut, selective or other); identify streams, wet lands, water bodies, archaeological sites, sensitive habitats or SARA Species or other SARA sites on the map, and identify on the map each mitigative measures specified for cutting of timber component of that project. The LP Map must identify who will ensure compliance on site with these mitigative measures during logging & how & when it will be done.

6. Permits/ Approvals, and, Correspondence with Other Government Departments	<p>Provide information on the status of required environmental permits and approvals necessary to undertake the project (e.g. rights of ways, fisheries authorization, navigable waters, sand and gravel and timber permits).</p> <p>When available include correspondence and/or preliminary comments by other government departments (e.g. DFO, EC, Parks Canada, Health Canada, B.C. Ministry of Water Land and Air Protection, BC Ministry of Sustainable Resource Management: Archaeology and Registry Services Branch etc.)</p>
7. Public Participation and Engagement	<p>Document strategies used to assess project input from the First Nation community and/or public. Identify concerns that were raised and how they were addressed and/or mitigated. For First Nations, this may be in the form of a letter from Chief and Council and/or a Band Council Resolution.</p>
8. Summary	<p>Provide a narrative summary of the environmental effects associated with the proposed project. Identify significance (not likely significant or significant). For significant impacts, summarize proposed mitigation strategies and how they will reduce environmental effects. Quantify wherever possible.</p> <p>Where follow-up is recommended, discuss planned follow-up activities. Include a table which shows VECs, project activities, environmental effects, mitigation measures, and reference to supporting documents. For VECs where impacts are found to be not likely significant ensure that justification is provided. Provide a recommendation regarding project viability based on environmental considerations</p> <p>8.1 Summary and Table</p> <p>8.2 Conclusion</p>
9. Appendices	<p>Attach any additional information including Supporting Documents, Other Permits or Approvals, Maps, Figures, Photos, etc</p>
10. Access	<p>It is Proponent's responsibility to obtain assured access to/ egress from the Indian Reserve for all phases of the Project including access to Certificate of Possession Holders' lands provided to ISC.</p>

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Although scoping is part of the EA process for all projects, an EA scoping report is only required for ISC Community Infrastructure Projects and where specifically directed by your ISC environmental or natural resources specialist for ISC Lands and Economic Development.

An EA scoping report is to be a stand alone document which includes the project description, environmental setting, significant environmental issues, valued ecosystem components (VECs), and completed and planned EA investigations. This report is completed during the feasibility stage of a CI Project and when directed by LED and will be used in the assessment of project viability. The following are to be addressed in the EA scoping report.

Introduction	Provide a summary description of the project including construction (site preparation, clearing, trees), operation, decommissioning, and other activities expected during the life of the project. Project proponent contact information including organization, name, mailing address, telephone number, and email address (if available) are required. Provide a list of information sources used.
Maps/Plans	Provide plans showing the geographical location of the project with latitude and longitude, the proposed location(s) of the project within the context of the Reserve and an overall preliminary plan for the project. Include environmentally significant features (e.g. water bodies, forests, significant elevation changes, species ranges, known habitats, etc.) Where appropriate and readily available, inclusion of First Nation nomenclature for place names, flora, fauna, etc. should be considered. Copies of topographic maps and aerial photos/mosaics should be provided where available.

<p>Environmental Setting</p>	<p>Provide a summary description of the existing environment in the project area including landscape, waterbodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc.). Indicate the areas potentially affected by the project. Outline known environmentally significant historical uses and develop a list of VECs for the project. Where multiple sites are being considered during the feasibility stage, environmental restrictions and impacts at each site must be considered and incorporated into the site selection process.</p> <p>Socio-economic conditions should be described if potentially impacted by environmental changes caused by the proposed project.</p>
<p>Environmental Effects</p>	<p>Indicate known and suspected environmental effects of the project on listed VECs</p> <p>Identify any cumulative effects that are anticipated on the basis of initially available information. Include effects likely to result from the project in combination with other pre-existing developments and/or in combination with developments that will be carried out as a direct result of this project.</p>

Studies / Investigation	<p>Describe the scope of work for the planned EA for all phases of the project. Document site assessments completed to date. Identify further investigations which are required to address situations where environmental effects are unknown or to determine appropriate mitigation activities.</p> <p>A determination must be made as to the likely presence of wildlife, birds, aquatic life, flora and/or habitat at risk in the project area. This determination must be made using relevant data base lists, range maps, local knowledge (where available), and other existing information on species known to occur in the project area. Where the range of a species at risk overlaps with the proposed project area, existing information sources must be checked and documented to determine whether actual or potential habitat or residences for these species are present.</p> <p>Example information sources include: the Conservation Data Centre (CDC) for rare element occurrence records, Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the Species at Risk Public Registry for recovery strategies, recovery teams, action plans and management strategies, and the Ministry of Sustainable Resource Management=s Species and Ecosystem Explorer.</p>
Public Consultation	<p>Document consultation with other government departments and agencies. Provide contact information. Outline any additional consultation planned with the community, public, or other government departments and agencies as part of the EA.</p>
Accessory Activities	<p>Accessory activities planned during the design stage must be assessed (e.g. geotechnical, surveys, etc.). Identify activities causing significant environmental impacts on VECs and outline mitigation measures that will be implemented. Note: Accessory activities planned during feasibility and associated mitigation measures must be summarized in the feasibility stage proposal</p>
.	

Appendix 3: Cost Estimates - Definitions

Class “A” Cost Estimate

A Class “A” estimate is based on a quantity take off from the final drawings and specifications. It is used to evaluate tenders and it may also be used as the tool for controlling the construction of a project. A Class “A” estimate is always done at the completion of the design and specifications. It forms the basis for funding submissions for construction/acquisition of the project.

Class “B” Cost Estimate

A Class “B” cost estimate is prepared after the completion of site reviews and studies, and after the development of preliminary designs that show and define all major systems. Class “B” cost estimates are required at the completion of the preliminary design page.

Class “C” Cost Estimate

A Class “C” cost estimate is prepared with limited site information, based on probable conditions affecting the site. It represents the summation of the estimated costs for all known components of the project. It is used for project planning, establishing a more specific definition of project requirements, and for obtaining preliminary project approval. A Class “C” cost estimate is produced at the end of a project Feasibility Study and is generally used to support a funding request for Design.

Class “D” Cost Estimate

This is a “ball park” or “order of magnitude” figure used for preliminary consideration of the proposed project. A Class “D” cost estimate is based on the broad requirements for the project with little or no site information. The figure can be obtained from previous similar projects, or from Capital Specialists and District Engineers who may have estimates on a file from recent projects in other communities. A Class “D” cost estimate is generally used to support a funding request for Feasibility Study.

Appendix 4: Project Implementation | Hiring Professionals

Appendix 4A: Guidelines for Hiring an Independent Project Manager

Appendix 4B: ISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

Appendix 4D: ISC Sample Professional Services Contract [CN2 Template]

Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist (excerpt from EGBC website)

Appendix 4A: Guidelines for Hiring an Independent Project Manager

1.0 Introduction

An independent project manager provides project management services without being directly associated with the consulting firms providing planning, design and construction services. The person hired to perform the duties must have suitable technical and professional qualifications matching the size and complexity of the project. Usually the project manager is either a registered architect or professional engineer with over five years experience in construction project management and has experience successfully managing similar projects. The project manager may be a sole practitioner or may work for a project management company. The project manager is often involved with a project from start to completion, but can also be engaged only during the design or construction stages of a project.

Hiring an independent project manager is often the first significant step to implement a large project. The three main tasks associated with hiring a project manager if using a multiple proposal call are:

- Preparing a terms of reference [TOR] setting out expected roles and responsibilities for the proposed project manager;
- Sending out requests for proposals [RFP] to selected project management firms;
- Evaluating received proposals against pre-determined criteria.

Where a First Nation has established a successful working relationship with an architectural or engineering consultant, they may consider using this consultant to provide project management services until the completion of the Feasibility Stage and defer hiring an independent project manager until the beginning of the Design Stage.

An independent project manager should be at arm's length from the project consultant designers. An independent project manager is an advocate for the First Nation and should not be in collaboration with the design consultant.

Hiring the right person to be the project manager can result in a successful project that:

1. Meets the project objectives of the First Nation;
2. Stays on schedule;
3. Stays on budget.

2. Duties of a Project Manager

The duties of the Project Manager fall under three major headings and involve the following:

2.1 Implementation, Planning, and Project Monitoring

- confirming the project definition and First Nation requirements;
- establishing the project team, roles, and responsibilities;
- establishing lines of communication with all parties throughout the life of the project;
- generating a project strategy for carrying out the project and for developing the project work activities;
- preparing a detailed project schedule;
- monitoring project progress against the schedule and making revisions where necessary;
- preparing the various project submissions for funding approval;
- maintaining project records and files;
- reporting on the status of the project to the First Nation administration and/or Chief and Council;
- evaluating the scope, time, cost, and quality implications of the project and any changes.

2.2 Consultant Services Selection

- writing the terms of reference [TOR] to request proposals;
- determining consultant selection criteria;
- selecting a team to choose a consultant;
- recommending approval for award of contract to the successful consultant and negotiating the terms of the consulting agreement.

2.3 Consultant and Construction Contract Management Services

- providing advice and recommendations on project procurement options [eg. public or invited tender, or construction management in accordance with the First Nation's approved tendering policy];
- ensuring compliance with the terms of the consultant and construction contracts;
- checking and dealing the First Nation's responsibilities for insurance;
- issuing change orders;
- resolving claims and disputes;
- assessing the value of work completed;
- reviewing progress claims and authorizing payments;
- reporting on construction deficiencies to the consultant and contractor and making recommendations for corrective action;
- obtaining final reports, record drawings, warranties, manuals, and completion certificates;
- recommending final payment based on the satisfactory completion of the contract requirements;
- evaluating the consultant and the contractor.

3. Terms of Reference for Hiring an Independent Project Manager

If a First Nation has already established a successful relationship with an individual or firm and does not wish to seek competitive proposals for the position, the terms of reference used to hire a project manager can be relatively brief and informal. However, as a minimum they should set out the duties of the project manager, as described above, and also include:

- Description of specific project management services required [including duration of services];
- Specifying minimum qualifications (e.g. the project manager must be either a professional engineer or a registered architect licensed to practice in British Columbia, the minimum number of years of experience, etc.);
- Providing any relevant project information [eg. reports or studies] or special or unusual project issues that will be helpful to the individual or firm submitting a proposal;

- Listing members of the First Nation project team;
- Identifying a proposed schedule;
- Specifying the terms of payment and cost control.

4. Requesting Proposals

Prospective project managers asked to submit proposals should provide information under the following headings. If a First Nation has established a successful relationship with an individual or firm and is proceeding on a sole source basis, the following information should still be submitted to the First Nation in a proposal for services.

- names and related experience of staff to be part of the project team;
- a work plan outline;
- anticipated project schedule;
- proposed fees

For more complex projects, additional information should be provided regarding:

- understanding of the project;
- work plan and associated work activities;
- references;
- project staffing plans;
- staff résumés;

5.0 Evaluating Proposals

Criteria normally used to evaluate proposals are as follows. Weights are often assigned to the criteria to establish a comparative level of criteria importance. Cost of services is generally not weighted as a primary criteria. In comparing proposals, the quality of the services and the experience of the personnel are considered the key criteria.

- Understanding of the project;
- Scope of services, work plan, and schedule;
- Management of the provided services;
- Consultant team;

- Qualifications and experience of the firm;
- Cost of services.

6.0 Project Management Fees Provided by DISC

Fees requested for project management are part of the project approval process and will be reviewed along with project submissions. The maximum allowable fee for the combined total of project management and local project coordination is 3% of the construction cost. Disbursements would be additional expenses. Fees which are considered eligible for reimbursement may be much less than 3% and will be based on the size of the project and the services provided as detailed in the submitted project management proposal.

If an independent project management is engaged for the feasibility stage, an initial proposal for project management services only for the feasibility stage can often simplify the process by eliminating the uncertainty to forecast future project costs and complexity. Project management fees can be reviewed and revised through all project development stages.

Appendix 4B: ISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Purpose:

This document provides parameters for First Nations to procure a consultant to provide professional consulting services for the development and implementation of capital projects funded by the DISC Capital Facilities and Maintenance Program [CFMP].

General:

The following procedures are recommended when engaging a consultant:

1. Written Terms of Reference [TOR] to define the assignment;
2. First Nation acceptance of a written proposal from the consultant which includes assignment deliverables, schedules and fees;
3. Written, standard contract signed by the First Nation and the consultant which includes dispute mechanisms and termination clauses and directly references the written proposal submitted by the consultant;
4. Confirmation of consultant personnel who will work on the assignment;
5. On-going process for monitoring schedule and costs [written].

Engaging a consultant without the written acceptance of a documented proposal to define the scope of the assignment and to determine a schedule and fees is actively discouraged. Verbal communication and a handshake are not considered to be in the best interests of meeting mutual expectations and an ongoing professional relationship.

A proposal submitted from a professional consultant can be subsequently revised based on mutual discussions between the First Nation and the consultant before becoming part of the contract. There may be a revision in fees due to proposal revisions.

Definitions:

Terms of Reference [TOR]: A description of the assignment to be completed by a professional consultant. A TOR can be verbal, but is almost always written to document a common understanding of the assignment.

Proposal: A written response to a TOR from a professional consultant identifying how the assignment will be carried out to achieve the specific project objectives. The proposal will generally include experience of the firm, personnel to be assigned to the project, work processes to be completed, a proposed schedule and proposed fees.

Request for Proposal [RFP]: An invitation to a number of professional consultants [or one professional consultant in selected cases] to submit a proposal in response to a written TOR. A set of criteria which will be used to evaluate the firms submitting proposals should be included with the RFP.

Total DISC Project Cost [TIPC]: All DISC costs for all stages including contingencies as applicable.

Minor Projects: Estimated TIPC < \$1.5M

Major Projects: Estimated TIPC > \$1.5M

Consultant Selection:

The process for selecting a consultant will be influenced by the factors listed. A larger, more complex project will generally result in a longer and more stringent selection process.

- Complexity of the project
- Size of the project
- Expected consultant costs
- Previous working relationship with a consultant
- Expertise of a consultant
- Availability of consultant to assign time and resources to the project.

Consultant selection will generally follow one of two processes:

1. Multiple source selection – numerous consultants [generally 3 to 5] are solicited to submit proposals to complete the assignment. The proposals received are comparatively assessed to award the contract to the professional consultant with the “best value” proposal which meets the objectives of the TOR;
2. Sole source selection – one consultant is solicited to submit a proposal to complete the assignment.

Consultant Costs:

The Association of Professional Engineers and Geoscientists in B.C. [APEGBC] and the Architectural Institute of BC [AIBC] publish guidelines for determining professional fees. Professional costs can include project management fees, design fees, subconsultant fees and expenses/disbursements. Fees for large value projects are generally considered on a % basis while small value projects generally are costed on an hourly basis.

Procurement Guidelines:

1. Feasibility Stage Professional Services

Procurement of professional consultants for any value of project can be a sole source selection or a multiple source selection;

2. Design Stage Professional Services

Procurement of professional consultants should be in accordance with the criteria listed below. Unless specifically required in the feasibility stage contract [not usual and not recommended], there is no obligation for a First Nation to engage the feasibility stage consultant for design stage professional services.

- Minor Projects: Multiple source selection or sole source selection;
- Major Projects: Multiple source selection is the recommended approach.

3. Construction Stage Professional Services

Engaging the design stage consultant based on a sole source selection to provide construction stage professional services is highly recommended.

If there is a working relationship issue between the First Nation and the design stage consultant and the procurement of another professional consultant is required at this stage, procurement of a professional consultant for any value of project can be multiple source selection or a sole source selection.

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

PROPOSAL EVALUATION -				
Evaluator:	Date:			
Rating Factor:	Excellent	9 to 10 = Item is addressed in a fashion that is clearly superior.		
	Good	7 to 8 = Item is addressed in completeness, is well defined and documented - no faults, weaknesses, or deficiencies that would affect		
	Fair	5 to 6 = Item is addressed in a clear and relatively complete fashion (minor uncertainties or weaknesses may be noted).		
	Below Avg.	3 to 4 = Item is addressed, though details may be lacking or deficiencies may exist that might limit the success of the project.		
	Poor	1 to 2 = Item is poorly addressed through insufficient documentation, or proposal does not meet required standards for skills or det-		
	Unacceptable	0 = Item is not addressed in proposal or is addressed in a clearly unacceptable fashion.		
CATEGORY	Rating	Weight	Score	Totals
1. Understanding of Project Scope and Objectives [Weighted Max. Score = 20]				
1. Appreciation of Project Complexity		0.4		
2. Analysis of Project Goals		0.4		
3. Identification of Special Issues		0.4		
4. Emphasis on Site Visit/Meetings with Nuxalk Nation and Adjacent Neighbour		0.4		
5. Presentation/Clarity		0.4		
6. Completeness (Meet the proposal requirements/checklist)				
2. Proposed Work Plan and Schedule/ Project Management [Weighted Max. Score = 30]				
1. Organization of Team		0.5		
2. Project Methodology		0.5		
3. Work Plan		0.4		
4. Schedule Management		0.4		
5. Budget Management		0.4		
6. Communications / Local Liason		0.4		
7. Risk Management		0.4		
3. Experience and Qualification of team members [Weighted Max. Score = 25]				
1. Technical Experience of General Consulting Firm[s] /Team Members		0.5		
2. Technical Experience of Assigned Personnel / Subconsultant(s) for Collection Systems		0.3		
3. Technical Experience of Assigned Personnel / Subconsultant(s) for WW Treatment Systems		0.3		
4. Technical Experience of Assigned Personnel / Subconsultant(s) for Ground Disposal Systems		0.3		
5. Technical Experience of Assigned Personnel / Subconsultant(s) for Outfalls		0.3		
6. Knowledge of General Consulting Firm on Federal, Provincial Regulatory Requirements		0.4		
7. References/Past Client Experiences of the Consultant or Team Members/NonFNs/Client Feedback		0.4		
4. Experience of Team Members on Similar Projects [Weighted Max. Score = 15]				
1. Past Experience with FNs/INAC Projects and Processes		0.5		
2. Past Experience on Similar Projects		0.5		
3. References / First Nations Client Experience / INAC Feed Back		0.5		
5. Dedicated Hours and Allocation for Most Appropriated Use [Weighted Max. Score = 20]				
1. Hours for Site Work (investigation) Justified		0.4		
2. Hours for Meeting Justified		0.4		
3. Hours for Report Writing Justified		0.4		
4. Hours for Traveling Justified		0.4		
5. Hours for Project Management Justified		0.4		
6. Proposed Costs are reasonable and Cost Effective [Weighted Max. Score = 10]				
1. Cost on Technical Works Justified		0.2		
2. Cost on Travel Justified		0.2		
3. Cost on Administration Justified		0.2		
4. Cost on Project Management Justified		0.2		
5. Overall Cost Effectiveness		0.2		
7. Cost in Comparison with Other Proposals [Weighted Max. Score = 15]				
(The lowest cost = 15. Second lowest cost = 14, 3rd lowest cost = 13 ...)				
PROPOSAL RATING [MAX. SCORE = 135]				

Appendix 4D: ISC Sample Professional Services Contract [CN2 Template]

The document **CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting:

<https://www.sac-isc.gc.ca/eng/1493133359279/1533649821050>

Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist [excerpt from APEGBC Website]

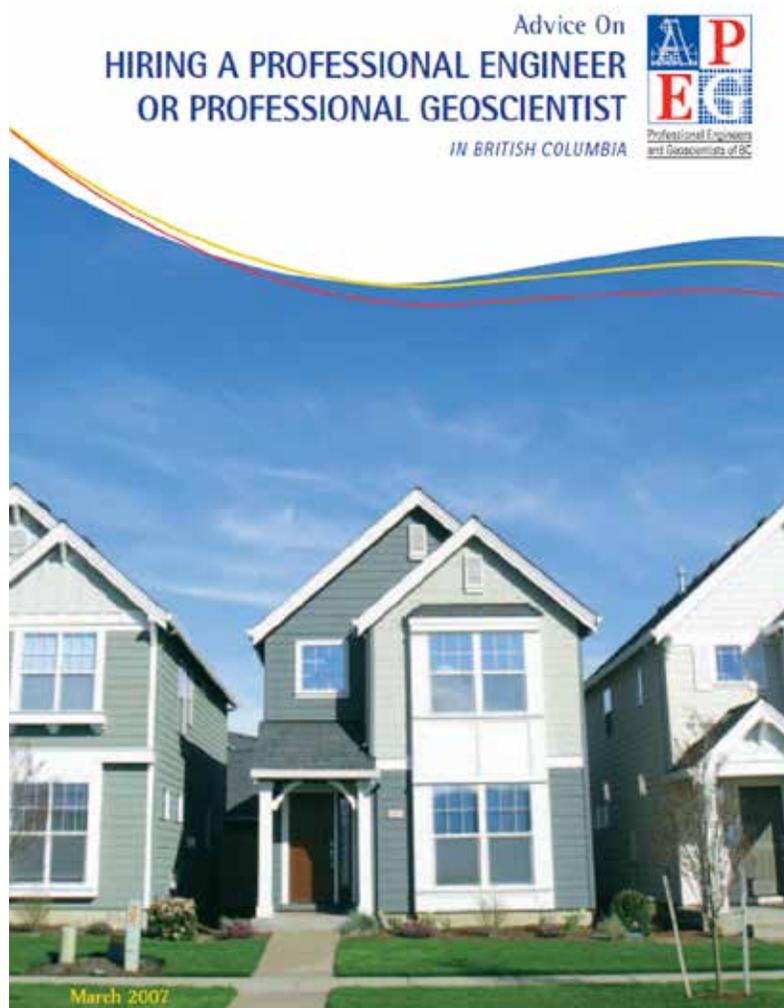




TABLE OF CONTENTS

Introduction	2
Who Should Read this Consumer Guide?	2
APEGBC – Who We Are and What We Do	3
What Types of Projects May Require an Engineer?	4
What Types of Projects May Require a Geoscientist?	4
Before Starting Your Project	5
What is Required of the Professional?	6
Understanding the Role of the Professional	7
Relationship Between You, the Professional, and the Contractor	8
Selecting a Professional	9
The Contract	11
During and Post-Construction	12
What If There is a Problem?	13
Resources	15

APEGBC gratefully acknowledges the assistance of the Consulting Engineers of BC in the preparation of the Guide.



Introduction

This Guide is intended to help you:

- Determine if your project requires the services of a professional engineer or professional geoscientist (a “Professional”)
- Understand what APEGBC can do for you
- Find out if the prospective engineer or geoscientist is licensed to practice in BC
- Avoid problems by highlighting useful tips for selecting, hiring and working with a Professional
- Determine how to deal with problems that may arise

Who Should Read this Consumer Guide?

This Guide addresses the typical homeowner project and contains general information. It may not be appropriate for all projects that require the services of a Professional. The advice and information in this publication is not suitable for large, complex and/or commercial projects. **APEGBC assumes no responsibility for any consequences arising from the use of the information contained in this guide.**

For more detailed information or for larger, more complex and/or commercial projects, we recommend you consult the Management of Buildings Project Manual (Please note that all websites are provided at the end of this publication).



You should carefully review this guide PRIOR TO hiring a Professional. Careful selection of the professional best suited to your project, and clear communication in the beginning, is the foundation of a successful project.



APEGBC – Who We Are and What We Do

The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is responsible for the licensing and conduct of professional engineers and professional geoscientists (Professionals). The primary duty of APEGBC is to protect the public by regulating the practices of professional engineering and professional geoscience in the province. APEGBC's powers and functions are described in its governing legislation: the *Engineers and Geoscientists Act* and the Bylaws of the Association, which include a Code of Ethics.

The Act, Bylaws and Code of Ethics are available online at www.apeg.bc.ca, and will be referred to from time to time in this publication.

What APEGBC Can Do:

- Help you determine if a person is licensed as a Professional in BC and the Professional's area of expertise via the searchable member directory available online
- Advise you regarding a Professional's disciplinary history
- Investigate complaints regarding a Professional's conduct, as provided in the Act and the Bylaws

What APEGBC Does Not Do:

APEGBC only regulates individuals, not businesses.

- Provide information on firms or help you to pick a firm or Professional
- Resolve issues with contractors on your behalf
- Resolve issues regarding your contract or negotiations
- Demand performance or action of a Professional



What Types of Projects May Require an Engineer?

Here is a partial list of typical building projects and upgrades where a professional engineer may be required:

- Foundations
- Excavations
- Grading plans
- Drainage
- Retaining walls
- Structural design including beams and trusses
- Drinking water, storm water and sewage system design
- Additions to existing buildings
- Pollution and contamination concerns
- Slope stability concerns

What Types of Projects May Require a Geoscientist?

The practice of professional geoscience includes the investigation of geological conditions.

For more information on geoscience and the work undertaken by professional geoscientists, see APEGBC's website: www.apeg.bc.ca.

Here is a partial list of projects where a professional geoscientist may be required:

- Foundation investigations
- Grading plans
- Groundwater and drainage investigations
- Slope stability investigations
- Flood and debris hazard assessments
- Pollution/contamination investigations
- Assistance with archaeological investigations

There is some overlap between the services provided by engineering geologists and geotechnical engineers. However, only engineers can provide design services.



Before Starting Your Project

- Get in contact with your local municipal or regional building/permit and planning departments to determine whether your project requires the services of a Professional. These departments have knowledge about local conditions and will be able to advise you on whether permits or other documents are required before your project can proceed.
- Only consider hiring professionals with the appropriate experience and training for your project; different types of engineering and geoscience can be very specialized.
- Use APEGBC's searchable member directory to help determine whether you are dealing with a registered member of the Association, and also what kind of engineering or geoscience the person practices: www.apeg.bc.ca/members/search.html.
- Consider if the expertise of a Professional may benefit your project, even if a Professional is not required by law.
- Know your **RESPONSIBILITIES** as well as your **RIGHTS**.





What is Required of the Professional?

Adherence to the Code of Ethics of the Association

All members of APEGBC must comply with the Code of Ethics. If your project requires the services of a professional engineer, the following are required:

The BC Building Code applies everywhere in British Columbia except the City of Vancouver.

In the City of Vancouver, the Vancouver Building Bylaw governs.

Letters of Assurance

A Letter of Assurance is a form signed and sealed by a professional engineer who accepts responsibility for the design and field review of the project. These forms are legal documents based on the authority of the BC Building Code (BCBC) or the Vancouver Building Bylaw (VBB).

Field Reviews

Field reviews are a requirement under Letters of Assurance and APEGBC's "Quality Management" bylaw (Bylaw 14(b)), and must be undertaken by professionals during construction. A field review typically consists of site visits during construction to confirm design assumptions and observe quality and progress of the elements designed by the professional engineer. The engineer must also prepare site visit reports outlining observations and deficiencies in the work and bring them to the attention of the contractor's site representative.

A concept review of the structural design of your project may be required, though there are exemptions for simple structures.

The City of Vancouver also carries out structural audit reviews on selected projects within the City of Vancouver.

Note: You need to confirm with the local authority or the government agency overseeing your project what it requires from the Professional.



Understanding the Role of the Professional

While only a professional engineer or geoscientist can legally provide engineering or geoscience services, work may be performed by other members of the Association, or by other individuals acting under the “direct supervision” of a Professional. The legislation that governs the professions states that any person can assist in the performance of any professional service or work described in the “practice of professional engineering” or “practice of professional geoscience” definitions so long as that work is directly supervised by a Professional.

The duties and obligations of the Professional should be established by a contract between the client and the Professional.

Typically, engineers-in-training (EITs) or Geoscientists in training (GITs), technologists and technicians carry out work under the direct supervision of a Professional.



Professionals are neither required nor expected to be on-site at all times. Letters of Assurance require the engineer to conduct sufficient field reviews in order to confirm that the project (or parts of the project the engineer is responsible for) substantially complies with the engineer’s drawings and the appropriate Building Code. There is no specified level of inspection – the standard varies depending on the nature of the project.

A Professional may **not** be qualified to perform certain aspects of a project. In such a circumstance, the Professional **must** refuse to do such work, but will typically engage or recommend a Professional with the required expertise.



Relationship Between You, the Professional, and the Contractor

If your project is complex or large enough that it requires the services of a Professional, chances are that you will also have to engage the services of a contractor.

If the contractor hires the Professional, it is important to note that any disagreement between you and the contractor may affect the services provided by the Professional, which can lead to significant delay of your project.



If you did not hire the Professional directly, the person is not reporting to you and it is not grounds for a complaint of unprofessional conduct if the Professional stops work at the instruction of his/her client, the contractor.

To maintain the most control over your project, hire the Professional and the contractor directly and separately.



Selecting a Professional

There are several sources that can aid you in selecting the Professional you require, including:

- Asking friends and family for referrals
- Asking your contractor for referrals
- Contacting the Consulting Engineers of BC
- Phone Book
- Internet

The Consulting Engineers of BC has information on selecting a professional engineer at: www.cebc.org/selecting.html.

Best Practices

The Consulting Engineers of BC (CEBC) has information on selecting a professional engineer at www.cebc.org/selecting. There are steps that you can and should take before you hire a Professional so that your project proceeds in a safe and timely manner. APEGBC recommends that professionals be selected based on qualifications rather than on price alone.

Deciding on the parameters of your project sooner, rather than later, can help you to avoid problems down the road – including disagreements with those you have hired. Below are some suggested “best practices” to take into account when considering hiring a Professional.

It is important to recognize that costs associated with home improvements or projects are generally never fixed.

Before hiring a Professional, consider:

- What is the scope of your project?
- What do you hope to accomplish?
- How much are you willing to spend?
- Do you have to take into account any time constraints?
- What portion(s) of your project require a Professional?



Selecting a Professional cont'd

When Discussing Your Project With a Professional:

- Take notes and listen carefully
- Ask for references and follow up
- Determine whether the Professional has undertaken similar work in the past
- Ask whether the Professional believes a permit may be required to undertake the project
- Ask for a written proposal and a copy of the Professional's standard contract
- Ask about the costs associated with the project – What could increase or decrease the costs?
- Ask about the fees for all phases of the project
- Request a copy of the Professional's Certificate of Insurance





The Contract

A written contract helps to protect you and the Professional if problems arise.

The contract should include:

- Description of work to be carried out
- Description of compensation, and the timing and method of payment
- Contact information
- Description of the procedures governing additional services (for example, requiring all work order changes to be in writing and initialled by both parties or by agreeing that work-order changes may be approved verbally with written follow-up confirmation)
- Description of the procedure to be used by either party to terminate the contract

APEGBC Bylaw 17 requires members to disclose in writing whether or not they have insurance and whether that insurance is applicable to the services in question.

Don't be afraid to ask questions! Make sure you feel confident about the Professional you are hiring *before* you sign any agreement.

The contract may also include:

- Who is responsible for paying for other people's services
- What other charges may be involved and who will pay them
- Who will obtain necessary permits, approvals, etc.
- The starting and completion dates - but keep in mind that unanticipated delays can occur
- Ownership or custody of the project documents

A standard form contract is available through the Association of Consulting Engineers of Canada (ACEC) website, www.acec.ca



During and Post-Construction

- Keep records of the project such as a log or calendar
- Keep copies of written agreements and correspondence
- Keep copies of bills, invoices and cancelled cheques
- Keep copies of plans, permits and reports
- Keep copies of municipal inspection reports
- Keep copies of lien notices, if applicable

A builders' lien may be filed against your property as security for unpaid fees.

APEGBC publishes a number of professional practice guidelines, each particular to a field of engineering. These guidelines outline project organization, responsibilities and expectations for professional practice. There is a section devoted to the responsibilities of various participants in a project, including responsibilities of the owner. These responsibilities include cooperation with the Professional regarding the establishment of a realistic schedule for the provision of services. The guidelines are available at: www.apeg.bc.ca/library/practiceguidelines.html.





What If There is a Problem?

Most problems between a client and a Professional arise from communication issues. The scope of services, the quality of services and the timeliness of those services can lead to misunderstandings.

Meet with the Professional to Discuss Problems

If you encounter a problem (i.e., poor communication, unsure of what is going on, rising costs, etc.), the first step is to set up a meeting with the Professional and discuss your concerns.

When meeting, be sure to:

- List specific concerns or deviations from your agreement
- Present records of the problem
- Request specific action
- Allow time for a response

Peer Review

You may wish to arrange, at your own expense, an independent review of the services performed. This review would be undertaken by another Professional and typically encompasses a review of drawings, calculations and plans that have been prepared.

Dispute Resolution

If you cannot solve the problem on your own, you may wish to hire a lawyer who can act on your behalf to resolve the matter or, if necessary, pursue the matter in court.

Claims up to \$25,000 can be dealt with in Small Claims Court. Most contractual disputes are best dealt with through the court system. APEGBC can investigate the underlying reasons for the dispute to see if they warrant disciplinary action. Similarly, negligence and incompetence are more often dealt with through the courts alone unless the errors or omissions are significant enough to constitute unprofessional conduct.

The BC Court Services website has information on how to file in Small Claims Court (not exceeding \$25,000).



What If There is a Problem cont'd

The complaint procedure and a flowchart are on the APEGBC website.

When to Contact APEGBC

APEGBC can investigate allegations of:

- A breach of the Act, Bylaws or Code of Ethics
- Negligence or incompetence
- Fraud, deceit or misrepresentation

APEGBC will not force the Professional to take any particular action. Our mandate and role is to investigate conduct and where warranted, bring disciplinary action against the Professional.

Do your homework. When preparing a complaint for submission to APEGBC, describe the problem and what you have done to try and resolve it. List facts in chronological order and provide as much detail as possible; keeping a log or calendar will make this much easier. Submit copies of plans, reports and any other documents you have that are related to your project and that can be of use to the Association in assessing your complaint. Also, identify any other individuals who have knowledge of the problem, including city or municipality employees and contractors.

The investigation of complaints can be a lengthy process. The more clear and complete the complaint, the easier it is to investigate.



Resources

- Association of Consulting Engineers of Canada website: www.acec.ca
- Association of Professional Engineers of BC website: www.apeg.bc.ca
- BC Building Projects Committee, Management of Building Projects: An Industry Practice Manual, First Edition (see also www.bcprojectsmannual.com)
- BC Court Services website: www.ag.gov.bc.ca/courts
- BC Dispute Resolution Office website: www.ag.gov.bc.ca/dro
- BC Supreme Court Self-Help Centre website: www.supremecourtselfhelp.bc.ca
- Canadian Council of Professional Geoscientists website: www.ccpge.ca
- City of Vancouver Bulletin 2000-064-BU Structural Audit Reviews:
www.city.vancouver.bc.ca/commsvcs/licandinsp/bulletins/2000/2000-064.pdf
- City of Vancouver Emergency Preparedness website: www.city.vancouver.bc.ca/corpsvcs/emerg
- City of Vancouver general information regarding License and Inspection Bulletins:
www.city.vancouver.bc.ca/commsvcs/licandinsp
- City of Vancouver website: www.vancouver.ca
- Consulting Engineers of BC website: www.cebc.org
- Courts of British Columbia website: www.courts.gov.bc.ca
- Engineers Canada website: www.engineerscanada.ca
- Get It In Writing website (Hiring a Contractor): www.hiringcontractor.com
- Government of BC Building Policy Branch website: www.housing.gov.bc.ca/building
- Government of BC Housing Policy Branch website: www.housing.gov.bc.ca/housing
- Government of Canada Public Safety website: www.safecanada.ca
- Guide to the Letters of Assurance in the BC Building Code:
www.housing.gov.bc.ca/building/guidelo1.html
- Links to websites for most municipalities and regional districts in BC
www.civicnet.bc.ca/siteengine/ActivePage.asp?PageID=88
- McLachlin, Wallace and Grant, The Canadian Law of Architecture and Engineering, Second Edition (Toronto and Vancouver: Butterworths, 1994)
- Provincial Emergency Program website: www.pep.bc.ca

Appendix 5: Terms of Reference - Feasibility Study [Sample]

SAMPLE TERMS OF REFERENCE FOR A FEASIBILITY STUDY

Table of Contents

1.0	Introduction	.....	1
2.0	Objective	.....	1
3.0	Definitions	.....	1
4.0	Scope of Work	.....	3
5.0	Requirements	.....	5
6.0	Proposals	.....	6
7.0	Schedule	.....	6
8.0	Terms of Payment and Cost Control	.....	7
9.	Contract Agreement	.....	7

1.0 INTRODUCTION

This section is intended to provide a description of the community, its location and site specific knowledge. Any and all background information specific to the study issues should be provided, including such things as maps, engineering reports, studies, observations, etc.

Projects should be derived from either the First Nations Comprehensive Community Plan, Community Development Plan, Physical Development Plan, or based on a need to improve or replace existing infrastructure.

2.0 OBJECTIVE

A clear and precise description of the objective(s) that need to be met should be identified in this section. Any and all options that should be reviewed are to be identified.

3.0 DEFINITIONS:

3.1 **Qualified Consultant** means a firm of:

- Professional Engineers registered with the Association of Professional
- Engineers and Geoscientists of British Columbia
- Professional Planners registered with the Planning Institute of British Columbia
- Professional Architects registered the Architects Institute of British Columbia.

3.2 **Design Guidelines** – Indigenous Affairs and Northern Development (ISC) have published design guidelines for water systems, wastewater systems, and road works. These publications serve as guides in the design and preparation of plans and specifications.

3.3 **Level of Service Standards** (LOSS) identify levels of service that may be funded from within existing budgets and from ISC programs priorities of health, safety, and education. These standards essentially set limits on development which in turn affect the capital planning process.

3.4 Life Cycle Cost is a mathematical procedure which describes the life costs (e.g., construction, operations, maintenance, major maintenance, and disposal) of an asset in terms of a rolled up current dollar amount which reflects the effects of monetary interest and price inflation. A life cycle cost analysis provides a hypothetical method of comparing competing options on the basis of which one makes better economic sense in terms of total costs.

3.5 Class “D” Cost Estimate is a preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client’s broad requirements. This overall cost estimate may be derived from lump sum or unit costs as identified in the construction cost manual for a similar project. It may be used to obtain approval in principle and for ISCussion purposes.

3.6 Class “C” Cost Estimate is prepared with limited site information and is based on probable conditions affecting the project. It represents the summation of all identifiable project component costs. It is used for program planning, establishing a more specific definition of client needs, and to obtain approval in principle.

3.7 Community Development Plan deals with:

- Social-economic development for the community;
- planned land use and type of future development.

3.8 Physical Development Plan deals with:

- planned community physical services such as water, sewer, roads, utilities, etcetera, required to meet the development proposals of the Community Development Plan
- other planned community services and facilities such as, but not limited to, recreation facilities, education facilities and health care facilities.
- the provision of a short term capital plan, usually 5 years to guide the community capital development.

3.9 Feasibility Study:

- identifies options that can be implemented to meet project requirements;
- examines the options in terms of engineering and economic feasibility;
- recommends a preferred option.

3.10 **Project Team** consists of members that will participate in guiding the consultant engaged for the Feasibility Study to ensure that all essential elements of the project are considered and met. The team may include:

- Project Leader
- Project Manager
- Chief Administrator/Band Manager
- Councillor in charge of public works
- Public Works Maintenance Officer
- ISC Capital Management Officer
- ISC Engineer

4.0 SCOPE OF WORK

The work of this contract comprises, but is not necessarily limited to, the following:

4.1 Review all existing relevant information including aerial photographs, topographic mapping, reports, plans, designs, as-built drawings, and other information.

4.2 Visit the site and meet with site representatives to become acquainted with site conditions and concerns of the bands, including population expansion, future demands on services, potential land acquisitions, existing land encumbrances, and other relevant design parameters.

4.3 Review the First Nation's development and capital plans to determine if the conclusions and recommendations are still valid.

4.4 Prepare at least three conceptual layout options of the proposed works for the band's review. These layouts must be tied into existing legal survey controls.

Site planning must take into account community growth patterns and service demands and shall include an assessment of all undeveloped areas with the communities for potential housing and community building sites.

The advantages and disadvantages of each conceptual layout option and its suitability shall be examined in terms of:

- level of service,
- climatic conditions,
- Class “D” life cycle costs,
- land encumbrance,
- land usage,
- environmental impacts
- acceptability to the band membership
- other factors the consultant considers relevant.

The consultant should make a recommendation as to the preferred conceptual layout option and must obtain approval from the First Nation representatives for the chosen option before proceeding further.

4.5 Upon selection of the preferred conceptual layout option, the consultant shall undertake studies to address land suitability topics such as:

- foundations,
- drainage,
- frost penetration,
- ground water conditions,
- wastewater disposal,
- road construction,
- erosion protection,
- flood control,
- other topics the consultant considers relevant.

4.6 Prepare an environmental scoping study to outline any environmental impacts anticipated for the completed project.

4.7 Prepare a feasibility study that includes:

- project description
- project justification
- Discussion of existing facilities,
- proposed level of standards to be met,
- conceptual designs for all conceptual layout options along with Class “D” life cycle cost estimates,
- Class “C” life cycle cost estimate for the preferred conceptual layout option,
- an environmental assessment outline report identifying any potential impacts and mitigation requirements for the duration of the project and at completion,
- all studies,
- where studies were not completed, identify assumptions with respect to soils, existing services, expansion plans, etc.

Sufficient copies should be prepared for distribution to the project team.

Two copies of the study [paper copy and pdf format] should be forwarded to ISC for their review requirements.

5.0 REQUIREMENTS:

5.1 The **cost estimates** shall include allowances for construction, engineering, and contingencies. The construction cost estimates shall indicate approximate quantities and unit costs. When evaluating alternative designs the consultant shall bear in mind the objective of minimizing capital cost, and annual operation and maintenance costs.

5.2 All correspondence shall be addressed to the Project Leader or the Project Manager.

5.3 Subdivision planning and infrastructure development should conform to the various guidelines, legislation, codes, standards, codes of good practice.

5.4 The consultant shall review, arrange for and carry out any field surveys, pump tests, soils investigations and testing required to ensure the technical feasibility of proposed works.

5.5 The consultant shall apply to his own professional stamp or seal and signature to identify his professional responsibility.

5.6 All drawings shall be prepared in metric units and include the band logo.

6.0 PROPOSALS:

6.1 The consultant shall submit 6 copies of a proposal to the Project Leader or the Project Manager for the work stipulated under these Terms of Reference which shall include a:

- proposed methodology;
- time schedule for project completion;
- personnel list including the principal in charge;
- a list of relevant project experience;
- a list of all sub consultants and their company resumes;
- fee list with breakdown of tasks and associated costs

7.0 SCHEDULE:

7.1 The work stipulated under these Terms of Reference shall commence within two weeks of notice of award.

7.2 The work stipulated in the original contract shall be completed by:

_____ (Date)

8.0 TERMS OF PAYMENT AND COST CONTROL:

8.1 Payments will be based on the contract.

8.2 The consultant will on a monthly (or other approved) interval submit an invoice detailing the services performed over the billing period.

8.3 No payment will be made toward the cost of work incurred to remedy errors or omissions for which the consultant is responsible.

8.4 If at any time during the progress of the work the consultant considers his contract fee will be exceeded, either by some unforeseen event or change in the terms by the band he shall immediately provide the Project Leader/Project Manager with the complete details.

8.5 At no time shall the contract fee be exceeded prior to written approval

9.0 CONTRACT AGREEMENT:

The consultant will be commissioned to the work by a duly authorized contract Agreement with the band.

Appendix 6 : Feasibility Stage Funding Application checklist

Checklist for Feasibility Stage Funding Application**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description and Rationale	_____	_____	_____
CDP/ PDP Reference	_____	_____	_____
Environmental Assessment of Field Investigations Activities	_____	_____	_____
Project Implementation Plan & Schedule	_____	_____	_____
Terms of Reference (ToR)	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate including proposal from Environmental Subconsultant to complete Environmental Scoping Report and IEMS Environmental Review-Project Description Form	_____	_____	_____
Class 'D' Project Cost Estimate	_____	_____	_____
Cash Flow	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

Appendix 7: Capital Projects Report DCI #460671

Certificate of Completion for Capital Projects

Check one:

Provisional (facility is being used for the intended purpose, with minor work remaining)

Final (all work is completed)

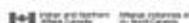
First Nation Name and Number	
Reserve Name and Number	
Project Number	Funding Arrangement Number
Project Title	
<p>Check all that apply:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All details of the project are resolved and there is no flaw, omission, uncompleted work, claim or outstanding payment. • The "As Constructed" plans are available. • Flaws, omissions, incomplete work, claims or outstanding payments exist, and an Action Plan and either a Substantial Completion Certificate or a Certificate of Occupancy are attached. • The construction complies with all requirements of all applicable codes, standards and INAC Funding Arrangement. <input type="checkbox"/> Official inspection report(s) or certificate(s) by qualified inspector(s) are attached. <p>List the reports or supporting documents attached: e.g.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fire commissioner (Human Resources Development Canada) <input type="checkbox"/> Environmental Licence (Provincial) <input type="checkbox"/> Health Canada (water, sewage, testing, etc.) <input type="checkbox"/> Worker's Compensation (Safety and Labour Conditions) <input type="checkbox"/> Survey and Soil Testing Reports, Concrete Testing Reports, etc. <input type="checkbox"/> Substantial Completion Certificate as per provincial legislation (e.g. <i>the Construction Lien Act</i>) <input type="checkbox"/> Certificate of Occupancy. <input type="checkbox"/> Operator's certification for water/sewage treatment plants <input type="checkbox"/> Environmental Mitigation Report, if required by Environmental Assessment. <p>_____</p> <p>_____</p> <p>_____</p>	

I hereby certify that all work has been completed in accordance with the Terms and Conditions set out in the Funding Agreement, and the Effective Project Approval; and that all specified codes and standards have been met.

Signature of Project Manager or Person Authorized by the Band Council:	Date:
Received by INAC:	Date:

DCI 460671 (2005-2006)

TPMS RR CODE: 0121



COMMUNITY INFRASTRUCTURE

COMMUNITY CAPITAL FACILITIES SERVICE DELIVERY (INCLUDING HOUSING) CAPITAL PROJECTS: CERTIFICATE OF COMPLETION FOR CAPITAL PROJECTS

Due Date: The certificate must be completed and submitted to the INAC regional office within 90 days after

1. a capital project is fully completed; or
2. a capital project is substantially completed and the facility is being used for the intended purpose

Instructions

- ▶ Indicate whether this is a provisional certificate or a final certificate, i.e. whether the project is 100% complete or is at the stage where it is being used for the intended purpose, with minor work remaining.
- ▶ Fill in the First Nation and Reserve information, the project title, project number and funding arrangement number.
- ▶ Check all boxes that apply.
- ▶ List the reports or supporting documents attached.
- ▶ The certificate has to be signed and dated by the project manager authorized by the First Nation's council.

First Nations are responsible for ensuring that all work is carried out according to the funding arrangement. If there are flaws in the work, incomplete work or work that has not been done according to the funding arrangement, then the First Nation has to negotiate with the contractor to ensure that everything is completed.

Prior to use, the facility has to be inspected to ensure that all work meets the technical specifications. For housing projects, a CMHC-approved inspector must inspect the house and a Health Canada inspector has to approve the septic system. For other projects, inspection must be done by a qualified professional inspector. Each inspector should provide a separate official inspection report to the First Nation, a copy of which must be attached to the Certificate of Completion.

Provisional Certificate of Completion

When a facility has been completed to the stage where it is safely being used for the intended purpose, but still has outstanding work, a *Substantial Completion Certificate* or a *Certificate of Occupancy* can be issued by the consultant and attached to the *Provisional Certificate of Completion*. This is with the condition that the outstanding work are completed within a reasonable time taking into account the weather conditions, availability of material and parts etc. A portion of project funding would be held back until 100% completion. In addition, at this stage, only partial O&M funding would be provided.

Final Certificate of Completion

In capital projects, there is usually a hold back amount of money imposed, sometimes known as a deficiency holdback, which is retained until the deficiencies have been rectified. For new facilities, there is also a warranty period that, depending on the circumstances, could commence once the substantial or construction completion certificate has been issued.

Upon the expiration of the warranty period, a final inspection is carried out and if all deficiencies have been rectified, the *Final Certificate of Completion* is issued. At this point, the project is fully turned over to the owner and the warranty of performance bond with the contractor is cancelled. Upon receipt of the *Final Certificate of Completion*, the asset enters full O&M phase.

OVERVIEW

The Operation and Maintenance of the Infrastructure Program is one component of INAC's strategic objective to assist First Nations to build healthy and sustainable communities. The objective of the program is to provide funding to assist First Nations to acquire, construct, operate and maintain basic community facilities and services such as water and sewage, roads, electrification, schools, community buildings and fire protection. The program ensures that these facilities and community services meet recognized standards and are comparable to the services provided to nearby communities by provincial and municipal governments.

Certificate of Completion on Capital Projects

A Certificate of Completion showing that a capital project is finished must be completed at the end of every capital project. This is required before funding for operation and maintenance can be provided. The Certificate of Completion should be filed with the overall project completion report within six months of project completion. It must be signed by the project manager after inspection by a CMHC-approved building inspector (for housing projects) or by another qualified inspection authority (for public buildings or facilities where public health and safety are involved). Inspection reports or certificates by these authorities should be attached to the completion certificate.

Appendix 8: Land Status Report Request Information

TIPS TO SPEED UP YOUR ENCUMBRANCE CHECK / LAND STATUS REPORT REQUEST

(for housing and infrastructure/capital projects)

NOTE: If your issues revolve around a **transfer of land, an allotment of land, or a subdivision of a lot**, then please forward your request to your **Land Transaction Officer** at Indian and Northern Affairs Canada. If it is for a purpose pertaining to a lease, permit, license or the like, then your request should be forwarded to your **Land Management & Leasing Officer** at the department. Land encumbrance checks for social housing, ministerial guarantees, individual loans, capital projects, infrastructure, and the like, should be submitted to myself. Please see below for address, phone and fax.

NOTE: At the end of this letter is a Table (Schedule A) giving some examples of projects that reflect the kind of encumbrance checks / land status reports that fall under my jurisdiction. If you are unsure who you should forward your request to, contact the Land Management & Leasing Officer, or the Land Transaction Officer for the applicable band, or myself.

PLEASE ENSURE THAT THE FOLLOWING GUIDELINES FOR SUBMISSION OF A REQUEST ARE FORWARDED TO ANY CONTRACTED OUTSIDE PARTY WHICH MAY BE REQUESTING THE CHECK ON THE BANDS BEHALF.

ALSO, PLEASE ENSURE THAT ANYONE IN YOUR OFFICE WHO MAY INQUIRE ABOUT SUCH MATTERS IS ISSUED A COPY OF THESE GUIDELINES.

When you are going to submit a request for an encumbrance check / land status report there are a number of things that should be included in your situation. Often when pertinent information is not included in the request the result is confusion, or a delay in the processing of your request. So here are some handy tips and suggestions for you to consider when you are submitting your request which will help the system process your request as smoothly and quickly as possible:

- 1.) Always include the Band Name, Reserve Name, and Reserve Number.
Example: Squamish Band, Capilano I.R. No.5
- 2.) Always state the purpose of the request for the encumbrance check.
Example: Social Housing, Ministerial Guarantee, Waterworks, Sewage Plant, Road Improvement, etc.
- 3.) If there is a legal survey plan (Canada Lands and Survey Records - CLSR Plan or Regional Survey British Columbia - RSBC Plan) of the area / lot you wish to have checked, please refer to the proper lot number and plan number as shown on the legal plan. If it is possible, also submit a copy (or portion thereof) of the plan being referenced, and identify the subject area on this copy.

- 4.) If there is not a legal survey plan of the subject area / lot proceed with consideration of points (a) through (f) as noted below.
- a) Using a map, or sketch, clearly identified the subject area on the map as accurately and neatly as possible.
 - b) Ensure that when the subject area has been identified, it can also be located in relation to the reserve land base as a whole.
 - c) On the map, or sketch, that is being used to identify the subject area (s), there should be no other areas, lots, etc, identified or singled out, other than the subject area(s). This is to ensure that the correct area is checked during the land status report / encumbrance check.
 - d) Unsurveyed lots / areas should be identified by cross-hatching (criss-crossing) the area. Highlighting, shading, or coloured pen is not an acceptable way of identifying the subject areas if we are to receive your request in the form of a copy of the original or in the form of a fax transmittal . These methods are only acceptable in the event that we receive the original request at our office; however, the cross-hatch method is preferable.
 - e) If the band has its own system of numbering lots within the reserve, and this numbering system does not correspond with legal survey plans, please do not use the bands numbering system to identify the subject lot / area (s). Instead use the cross-hatch method as outlined in item (d) above. This will avoid confusion and the possibility of mistaking a lot which has been identified using the Bands lot numbering system for lots which have been formally surveyed.
 - f) Always ensure that **NORTH** is identified on the map, or sketch, that you submit.
- 5) Avoid, if possible, references to home addresses, road names, street names, highway names, or locations of certain buildings, ie. Band office, churches, community centres etc. The reason for this is that our legal plans which we use as reference tools in the process of completing your requests do not identify these types of things. The plans that we use only make reference to legally surveyed lots, CLSR Plan numbers, RSBC Plan numbers, and the like.
- 6) If the request is for more than one reserve, please submit them as separate requests as they must be processed separately anyhow. Note that this will not slow the process down but rather will avoid confusion and unnecessary delays.
- 7) **PLEASE SUBMIT YOUR REQUEST ONCE ONLY.** It is advisable to ensure that if you fax in your request, then you mail in the original request thereafter, please mark on the faxed copy that you have sent the original in the mail to follow. Or you can choose to avoid this confusion by faxing only, or sending in the original only. This will help to avoid double logging of the same job. Try to avoid overlapping requests. If you have submitted a request previously and wish to verify if it has been received by our office. Overlapping, or repeated, requests only adds to the workload and slows down the process as a whole.

SCHEDULE A

The following table serves only as an example of the types of projects that fall within the jurisdiction of my position. As noted earlier, you may contact our office if you are unsure where to send your request for a land status report / land encumbrance check.

HOUSING	Band Administered Housing, Social Housing Allocations, Ministerial Guarantees, Individual Housing Loans.
WATER	Water Distribution Systems, Treatment & Filtration Facilities, Pump Houses, Construction & Improvements, etc.
TRANSPORTATION	Construction & Improvement, Sewage Systems, Drainage Issues, Sewage Treatment Facilities, Wastewater Disposal, etc.
SEWAGE AND SOLID WASTE	Construction & Improvement, Sewage Systems, Drainage Issues, Sewage Treatment Facilities, Wastewater Disposal, etc.
OTHER	Construction & Improvement, Schools, Band Offices, Daycares, Community Complexes, Flood & Erosion Control, etc.

If you have any questions, or concerns, with regards to encumbrance checks / land status reports, or anything contained within this information package, feel free to contact me directly. Phone, fax and address are below.

Sincerely,

Land Encumbrance Researcher

Appendix 9: Permits and Authorizations

Appendix 9A: Permit and Authorization Information

Appendix 9B: ISC Timber Permit Information [for non-FNLM Bands]

Appendix 9A : Permit and Authorization Information

Numerous permits and or authorizations may be required before capital projects can proceed.

A. Federal Government of Canada

The federal government has several agencies issuing permits or authorizations on First Nations lands:

1. Indigenous and Northern Affairs Canada [ISC]

ISC is responsible for the following permits for non-FNLM First Nations:

- Timber harvesting
- Gravel extraction
- Burning

Contact your Resource Officer at Lands and Economic Development (LED) on the process for obtaining these permits.

2. Fisheries and Oceans Canada (FOC)

Any activities that could impact fish, or fish habitat, may require a permit [authorization] from FOC. FOC can be contacted through their website www.dfo-mpo.gc.ca

3. Transport Canada [TC]

Activities that affect navigable waters may require a permit from Transport Canada. TC can be contacted through their website www.tc.gc.ca or through their Navigation Protection Program administrators.

B. First Nation Health Authority [FNHA]

FNHA is responsible for in-ground waste disposal fields associated with individual households. They can be contacted through one of their regional offices.

C. Province of British Columbia

The provincial government is responsible for issuing permits which may be required for:

- Hazardous waste generation
- Hazardous waste transportation
- Water use
- Water ISCharge
- Wastewater plant registration
- Road Access
- Logging

All provincial permits can be accessed through the Provincial “Front Counter” at www.frontcounter.gov.bc.ca or at 1-877-855-3222.

D. Municipal Governments

Municipal permits from cities, towns, or regional districts are very site specific and may or may not be required in your area. Contact the engineering department of your local municipal government. Local government may also provide free building inspections for electrical, plumbing or structural components both during construction and renovations.

If you are not within a municipality or regional district, the BC Safety Authority (BCSA) can perform inspections and issue permits on building safety including electrical installations. They can be reached at www.safetyauthority.ca

Appendix 9B: ISC Timber Permit Information [for non-FNLM Bands]

INDIGENOUS AND NORTHERN AFFAIRS CANADA

TIMBER PERMIT INFORMATION PACKAGE

CAUTIONARY NOTE:

INAC's TP Info package is in process of being updated by the department (Sheldon Gagne):

- To reflect the new name of our department; (through-out)
- To correct the flow chart to refer to requirement for a "BCR" ;
(*BCR= approval by FN of a harvesting proposal presented to it, by a Proponent*)
- To refer to "Environment & Climate Change Canada" (EC) through out ;
(instead of "Environment Canada");
- To modify TP info package (pg 16) under "Migratory Birds" to require the Registered Professional Biologist (RP Bio), to refer to EC's website (not pg 16 of INAC TP Info package), for information about : "Incidental Take"; "nesting calendars" ; AND ; for EC's advice & recommendations (for compliance with applicable statutory legislation).

DRAFT - REVISED JANUARY 2017

CIDMS 3524053 – MSWord Version

0

TABLE OF CONTENTS

<u>TABLE OF CONTENTS</u>	<u>PAGE 1</u>
<u>FLOWCHART SHOWING ROLES AND RESPONSIBILITIES</u>	<u>PAGE 3</u>
<u>PROCESS FOR ISSUING A TIMBER PERMIT ON RESERVE LANDS</u>	<u>PAGE 6</u>
<u>LOGGING PLAN</u>	<u>PAGE 10</u>
<u>ENVIRONMENTAL REVIEW</u>	<u>PAGE 13</u>
<u>ADDITIONAL CEAA 2012 INFORMATION</u>	<u>PAGE 19</u>
<u>SAMPLE VEC MITIGATION MEASURES TIMBER HARVESTING</u>	<u>PAGE 22</u>
<u>SAMPLE BAND COUNCIL RESOLUTION (BCR)</u>	<u>PAGE 24</u>

ROLES AND RESPONSIBILITIES

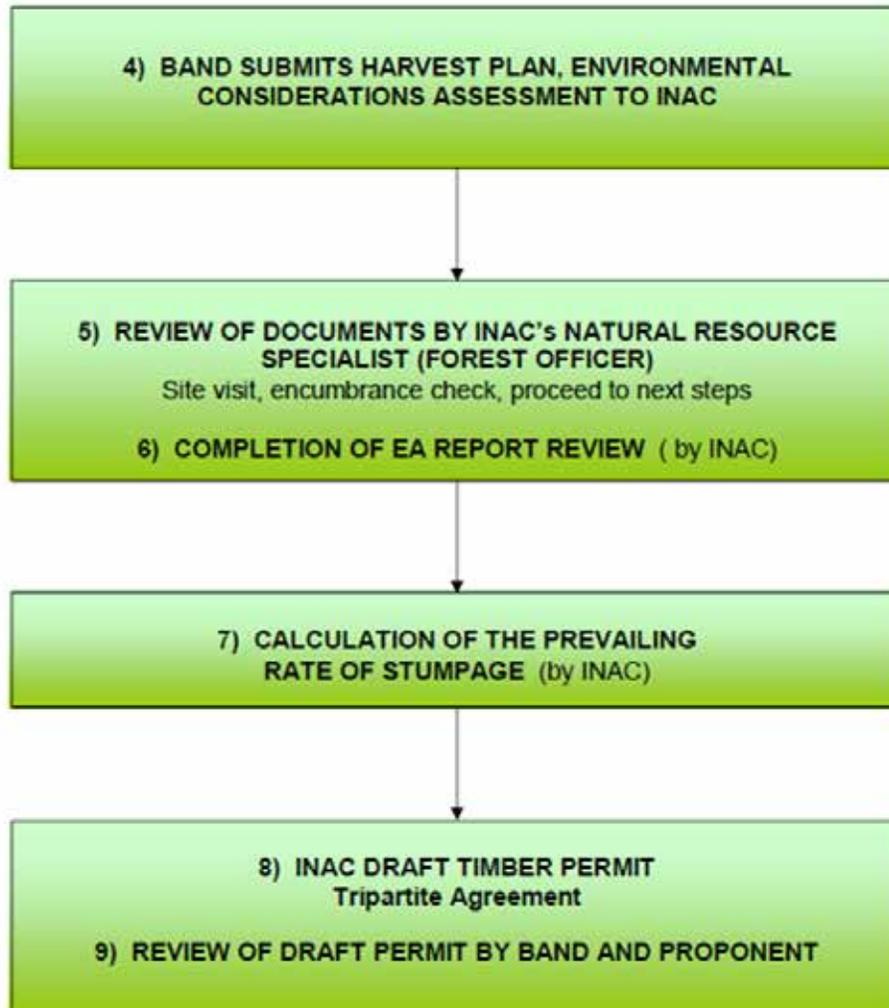
WHO	ACTION REQUIRED
◇ FIRST NATION	REQUESTS TIMBER PERMIT APPLICATION PACKAGE
◇ INAC	SENDS INFORMATION PACKAGE
◇ PROPONENT	SUBMITS LOGGING PLAN (LP), AND LOGGING PLAN MAP, ENVIRONMENTAL REVIEW (ER), SITE PLAN (SP) REPORT ON SPECIES AT RISK (SARA); AND OTHER APPLICABLE PROFESSIONAL REPORTS (AS NEEDED) GIVEN SITE CONSTRAINTS TO INAC SIGNED AND SEALED BY A REGISTERED PROFESSIONAL FORESTER OR OTHER PROFESSIONALS AS NEED BE.
◇ BAND COUNCIL	PROVIDES BCR ON HARVEST PROPOSAL
◇ INAC	REVIEW / REFERS / SEARCHES: REVIEWS APPLICATION WHICH INCLUDES (BUT IS NOT LIMITED TO): A SEARCH FOR ENCUMBRANCES AND FOR <u>TIMBER SURRENDERS</u> ; AND REFERRAL OF HARVESTING PROPOSAL, IF DEEMED NECESSARY (UNDER <u>CEAA 2012</u>) TO ENVIRONMENT CANADA AND DEPARTMENT OF FISHERIES AND OCEANS; AND OTHERS FOR COMMENT (IF APPLICABLE GIVEN SITE PROPOSED FOR HARVEST)
◇ INAC	COORDINATES SITE VISIT WITH BANDS FORESTER AND BAND OFFICERS
◇ INAC	COMPLETES ENVIRONMENTAL IMPACT DECISION IN ACCORDANCE WITH – <u>CEAA 2012</u>
◇ INAC	DRAFTS TIMBER PERMIT CHECKS STATUS OF TIMBER MARK; SETS PERFORMANCE BOND/SECURITY DEPOSIT AND DETERMINES DUES (STUMPAGE)
◇ BAND (PERMITTEE) / PURCHASER	REVIEWS TIMBER PERMIT PROVIDES INSURANCE CERTIFICATE WITH ADEQUATE COVERAGE AND SECURITY DEPOSIT
◇ INAC	APPLIES TO MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS FOR DESIGNATION OF SCALE SITE(S)
◇ BAND (PERMITEE) / PURCHASER / INAC	EXECUTES TIMBER PERMIT AND INAC DISTRIBUTES COPIES TO ALL PARTIES

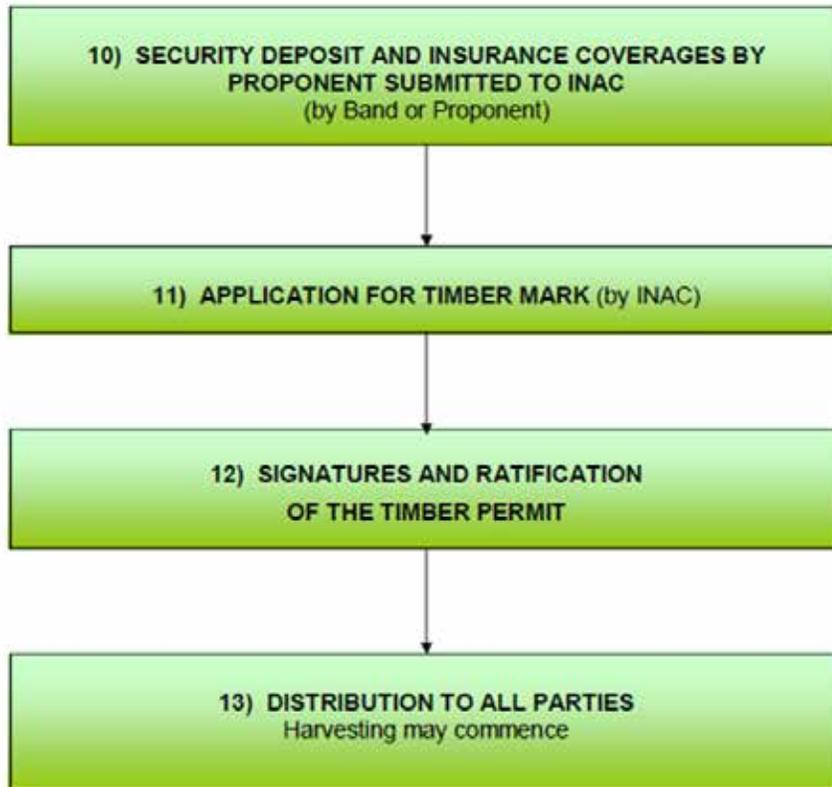
2

DRAFT – REVISED JANUARY 2017
 VANCOUVER#
 VANCOUVER#3524053 - v3

FLOW CHART FOR GRANTING OF A TIMBER PERMIT
(GOVERNED BY THE INDIAN ACT AND INDIAN TIMBER REGULATIONS)







PROCESS FOR ISSUING A TIMBER PERMIT FOR LOGGING ON RESERVE LANDS

1) The Proposed Harvest Plan:

A member or a group of band members or a corporation submits a request to the Band/First Nation Council to harvest band timber. They identify the reserve and the area on the reserve that they are proposing to harvest.

2) Band Council's Consent:

The council considers the proposal and either does or does not consent to the harvest and sale of the timber.

3) Band Council Resolution:

If consent is granted, the council assembles the required info on the Band Council Resolution (BCR) form (a sample of which is attached). The BCR should supply all the information which will be used in the preparation of the timber permit. This may include, but not limited to:

- which Band / First Nation or member or group of members will be the designated "Permittee",
- who will be the designated "Purchaser" of the timber (must not be a member of the Band),
- whether the timber will be exported or not,
- the species and approximate volume to be harvested,
- the stumpage rates if greater than the prevailing rates for each species and grade,
- whether a security deposit will be required, and
- the Band consents to the issuing of the timber permit.

A quorum of the Council (Chief included) ratifies the resolution and submits it to INAC for further processing.

4) Required Supplemental Information:

- a) Under the *Canadian Environmental Assessment Act 2012 (CEAA 2012)* the proponent must provide for a complete environmental assessment of the project. This involves identifying all potential environmental impacts and stating the proposed methods of mitigation. This has to be accompanied with the Site Plan/logging plan. **INAC will not proceed with the issuance of the timber**

6

permit until the environmental assessment is completed to the satisfaction of the INAC. A site visit will be conducted by the Natural Resource Officer to ensure all environmental assessment factors have been considered and addressed.

- b) A Site Plan must be completed by a registered professional forester and submitted to INAC whenever the area being harvested will continue to remain in timber production. The Site Plan must identify the exact location of the proposed cutblocks and roads, the standards units, stocking standards and soil disturbance limits.
- c) A comprehensive logging plan (LP) must be submitted to INAC. It should include a description of the area being logged, the methods and equipment being used, the season of the logging and a complete 1:5,000 scale logging plan and 1:20,000 scale overview maps. It should also identify any potential logging problems and environmental concerns.
- d) Any other information that would assist INAC in processing the timber permit. This would include written comments from interested third parties such as the Department of Fisheries and Oceans, Parks Canada, Forestry Canada, Environment Canada, Ministry of Forests, Lands and Natural Resource Operations and other interest groups.

5) Encumbrance Check:

The land encumbrance check is carried out using the Indian Lands Registry. The proponents of the project are promptly advised of any encumbrances and how, they might affect the project. If the Band/First Nation Council is aware of any registered land encumbrances they should report these encumbrances to INAC during the submission process.

6) Environmental Report:

An environmental report is compiled by a Registered Professional Forester, or Registered Biologist on the environmental considerations of the project. This will include a decision on the status of the project in terms of significant environmental concerns on Valued Ecosystem Components (VEC's) and the suggested mitigative measures to be incorporated in the project. The environmental report is reviewed in the field by INAC. INAC as the *Federal Authority* must make a decision that the project will not likely cause significant adverse environmental effects and approve the project. Or, decide the project will cause significant adverse environmental effects and reject the project. This decision must be made before a Timber Permit may be granted.

7) Determination of the Prevailing Rate of Stumpage:

INAC determines the prevailing stumpage rates in the given Forest District in which the timber is located. Note: trees on Reserve are considered a capital asset of the First Nation, and stumpage is deposited into the capital account of the First Nation.

8) Application for Timber Mark:

INAC makes all applications to the Ministry of Forests, Lands and Natural Resource Operations for the granting of registered timber marks for timber to be harvested on Reserve and for the granting of mark site designations.

9) Draft Timber Permit Tripartite Agreement (TPTA):

The TPTA will incorporate at least the following:

- The parties to the TPTA,
- Volume of timber to be harvested and sold,
- Location of the timber to be harvested detailed on 1:5000 scale map(s),
- Expiration of the permit (April 30th of the next year)
- Party responsible for the harvesting,
- Prevailing rates of stumpage for species and grades,
- Performance bonds, security deposits etc.,
- Utilization standards and harvesting practices,
- Environmental and non-timber values protection,
- A Permit Area Map (1:20,000 scale MFLNRO forest cover maps)
- CEEA/SARA Report(s)

10) Security Deposits:

One or more security instruments may be required pending the risk assessment by INAC. The security deposit is approximately 15% of the stumpage value of timber.

11) Insurance Certificate Required:

The party responsible for harvesting must provide appropriate insurance coverage for logging operations. Unless otherwise stated, General Comprehensive Liability insurance coverage must be for a minimum of 5 (five) million dollars. **Her Majesty**

8

in Right of Canada™ must also be named as an additional insured to the policy which shall be evidenced on the insurance certificate.

12) Ratification of the Timber Permit Tripartite Agreement

All signatures on Timber Permit documents have to be witnessed. At the discretion of the INAC representative, this may require witnessing by a notary public or Commissioner for taking affidavits in the province of BC. Factors to consider are the nature of the project, area to be harvested and availability of Commissioners.

13) Distribution to all parties:

When the Timber Permit has been granted by the Minister or his/her authorized representative of INAC, each party will be issued its own copy.

LOGGING PLAN

Purpose:

The intent of a logging plan is to provide the site specific detail necessary to ensure that harvesting operations achieve the standards and obligations stated in timber permits and higher level plans such as Management Working Plans.

Logging plans are just one document of a complete package of information that should be submitted to INAC for assessment, prior to the issuance of a timber permit. Part of this package will also include the environmental assessment (required under CEAA/SARA), silvicultural prescription, referral letters and optional documents such as cruise reports, appraisal calculations and heritage studies.

The Logging Plan must be consistent with and reflect the mitigative measures found within the ER and SARA Reports.

Components:

Information in logging plans should at a minimum include the following:

- 1) A 1:20,000 scale overview map of the project area and location of the proposed cut-block(s) along with the name of the Reserve or Lot and if applicable the name(s) of the individual land holding(s) such as Certificate of Possession (CP) or Cardex Holders .
- 2) An accurate 1: 5000 map illustrating:
 - block boundaries
 - new roads to be constructed
 - timber types
 - bridges, culverts
 - skidding/ yarding direction
 - north arrow
 - water courses, rivers, lakes (labelled and classified)
 - bridges, culverts and waterbars
 - established roads
 - landings
 - terrain features
 - elevations
 - buildings, camps
 - contour lines
 - forest cover information
 - area to be logged in colour with different colour for each harvesting method to be utilized
 - ensure that map legend identifies different colour schemes
 - RMZ's, RRZ's, buffer-zones, salmon streams, heritage sites, habitats requiring protection
 - All water courses, rivers, and lakes must be identified and classified on the logging plan and map (eg. W1 wetland, S3 stream, etc)

10

CIDMS 3524053 – MSWord Version

- the Riparian Reserve Zone (RRZ) and Riparian Management Zone (RMZ) for each water course, river, and lake must be clearly identified on the harvest /logging plan

Example of a Logging Plan Map:



- 3) A Summary of the block(s) to be harvested by area, volume by tree species, season, and silviculture system utilized should be incorporated into the logging plan map.

Example:

<u>Cutblock #</u>	<u>Area ha</u>	<u>Volume m3</u>	<u>Season</u>	<u>Species</u>	<u>Silvic System</u>
1a	12.5	4000	Summer	Fir	Clearcut
1b	5.6	2000	Summer	Pine	Selective
2a	33.0	7300	Winter	Spruce	Selective w Res

- 4) Provide details on the harvesting method(s) to be used including:
 - silviculture system ie. clearcut, selective, partial cut, selective with Reserves etc.
 - logging equipment utilized ie. skidder, highlead (cable based), horse etc
 - season (winter / summer or both)
 - rationale for opening size
 - direction of skidding relative to watercourses, roads etc

- 5) Provide information on post-logging treatment including:
 - slash disposal method, ie. burning
 - site preparation methods (trenched, mounds, burning, other)
 - **road, landing rehabilitation and deactivation plans**

- 6) Consideration for protection of other resource values such as:
 - heritage sites
 - fisheries
 - wildlife habitat (including any habitats protected by SARA)
 - community watersheds
 - recreation, traditional use sites
 - aesthetics and visual quality

- 7) Provide comments which may include logging production, contingency plans etc.

ENVIRONMENTAL REVIEW

BACKGROUND

STEP ONE

The first step involves the preliminary environmental assessment review by the proponent. This requires scoping of the project to determine the limits of the environmental review (ER) in terms of spatial (physical, biological and geographical factors) and temporal (time line factors) boundaries. As mentioned, it is very important that the ER begin as early into the planning process as possible. Scoping will focus analysis on the relevant issues and concerns.

During the scoping stage of the ER, it is important to:

- determine what undertakings and activities must be assessed as part of the project;
- determine what factors and issues need to be considered in the ER; and,
- determine the parties that should be involved in the project, their interests and concerns.

The scope of factors to be addressed in the ER should include:

- the environmental effects of the project, including cumulative impacts, malfunctions and accidents;
- the significance of the environmental effects;
- comments from other government agencies and interested parties;
- comments received from the public;
- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project; and,
- Compliance with the legislation governing Species at Risk that potentially inhabits the project areas which are protected under the federal *Species at Risk Act*.
- other matters relevant to the ER that may be required

During this step, scoping for the ER must be comprehensive, considering all the relevant factors associated with the project. As well, it is critical for the proponent to examine each phase of the proposed project in terms of the various linkages, their proximity to each other and their interdependence. For example, access to a cut block may involve the construction of a road through unstable terrain or harvesting of a block near a major highway may impact on visual qualities.

13

DRAFT – REVISED JANUARY 2017
 VANCOUVR#
 VANCOUVR#93524053 - v3

STEP TWO

Once the scoping is completed, the proponent can assess the environmental effects of a project. This **consists of three tasks**:

- description of the project;
- description of the existing environment; and
- identification of project-environment interactions.

The description of the project should include:

- geographic and site specific location(s) including detailed maps showing the project area and surrounding area which could be potentially impacted by the project ideally, for timber harvesting operations, 3 maps should be provided:
 1. a copy of the NTS 1:50,000 map showing the relevant reserve and project location on the reserve.
 2. a copy of a 1:20,000 overview map showing all proposed cut-blocks.
 3. a 1:5,000 harvest plan map showing site specific detail (MFLNRO forest cover maps should be utilized). A separate map showing silviculture activities may be submitted separate from the logging plan map.
- physical layout and design, silviculture system, harvesting system, block design rational;
- construction plans and schedules including roads, landings, bridges, culverts, sort yards, helicopter drop zones' camps, season of operation, etc; and
- operating plans and procedures, standard control and mitigation measures such as proper logging equipment, tree marking, terrain analysis, establishment of stream side buffer zones, etc.
- detailed cruise compilation showing all volumes/species in project area to be harvested. In exceptional circumstances the INAC - Natural Resources Officer may waive this requirement.

Secondly, the proponent is required to provide a detailed description of the key components of the existing environment. These are described as the Valued Ecosystem Components (VEC). The information on the VEC's must be relevant and reliable and based on site reconnaissance and office techniques. The VEC description must identify:

- relevant physical features and characteristics including landscape features such as terrain, slopes, aspect, elevation, lakes, rivers, streams, ground water, biogeoclimatic zone;
- ecological components and functions including soil quality and stability, habitats, fish and wildlife, vegetation, tree species composition;
- historic and present land and resource use;
- social factors including aboriginal heritage values, visual quality values recreational values and other non-timber values.

Please see the attached ER sample of VEC's that may be impacted during timber harvesting.

The third task in the preliminary ER is for the proponent to examine and evaluate the project environment interactions. Identifying the potential impacts should be done in the context of location, timing and interactions of the various project phases and the VEC's. Descriptions of these interactions should contain detailed information and include a statement on any cumulative effects. Any unresolved environmental and/or socio-economic impacts which may require further study should also be identified. Where a "not relevant" answer is given, justification for this response should be provided.

Other factors that should be taken into consideration include:

- effects on human health and safety;
- effects on socio-economic conditions;
- effects on physical and cultural heritage;
- effects on the current use of lands and resources for traditional purposes by First Nations.
- trans-boundary impacts (if applicable).

SPECIES AT RISK - SPECIFIC INFORMATION NOW REQUIRED FOR ALL INAC TIMBER PERMITS:

(Guidance to proponents in completing natural resource development plans, environmental assessments, and Species at Risk evaluations.)

With the introduction of the Species at Risk Act (SARA) by Environment Canada any forestry operation on Reserve Lands must now ensure that Species at Risk are protected. If logging is proposed, a solid management strategy is mandatory to protect endangered plant and animal communities and any of their habitats that may exist on Reserve Lands.

15

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

The following websites and information may be useful for practicing professionals when preparing their Logging Plan, Harvest Systems and Environmental Assessment of the area to meet the requirements of the SARA legislation.

Migratory Birds

The *Migratory Birds Convention Act (1994)* is legislation governing Migratory Birds which prohibits the taking or killing of migratory birds, their nests and eggs. It also prohibits the deposition of harmful substances in areas frequented by migratory birds. In order to assist proponents in complying with this legislation, the following measures should be considered:

- Vegetation clearing whenever possible should be done outside the general breeding bird season from April 1 to July 31. Where vegetation removal is required, areas where active migratory bird nests are located must be avoided or appropriate buffers put in place. Efforts should be made to minimize the extent of habitat fragmentation.
- Any areas identified as important habitat for migratory birds (i.e. breeding and/or foraging areas) should be avoided whenever possible.
- Environment Canada recommends that the proponent undertake a bird survey by a qualified Registered Professional Biologist prior to disturbance activities to determine the presence of any raptor, heron, or owl nests. In the event that activities are to take place around identified nests, the Ministry of Environment (BC) ***Environmental Objectives, Best Management Practices and Requirements for Land Developments (2001)*** should be consulted.
- The Canadian Wildlife Service, or the Ministry of Environment (BC), Wildlife Branch can also be contacted for assistance in determining possible mitigation and management options. An undisturbed buffer zone may be necessary to manage these nest sites.
- The Environmental Assessment for timber harvesting projects need to assess and identify any potential impacts to migratory birds or their habitats. If there are potential impacts to the migratory birds or their habitats, then the Environmental Assessment, Logging Plan & map and Site Plan must specify the mitigation measures and management plan to be followed for protection of migratory birds and their habitats. The said mitigation measures and management plan needs to be acceptable to the Canadian Wildlife Service branch of Environment Canada.

Species at Risk

The Species at Risk Act (SARA) was proclaimed in June 2003. Sections 33 and 58 of SARA came into force on June 1, 2004, thereby prohibiting the taking or possession of

16

DRAFT – REVISED JANUARY 2017
VANCOUVR#
VANCOUVR#3524053 - v3

listed species, and the damaging or destruction of their residences and/or critical habitat.

To determine the potential overlap and impact of timber harvesting activities on Species at Risk (SAR), the Environmental Assessment must include an assessment of the use and value of the area to wildlife species, including those that are listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as SAR. Such an assessment needs to include a database search and consultation with appropriate agencies needs to be conducted, followed by a field assessment by a qualified registered biologist. If the professional forester feels that a field assessment by a biologist is not required they should call the Canadian Wildlife Branch of Environment Canada to discuss the matter. After a decision from Environment Canada the Natural Resource Officer at INAC should be informed in writing of the decision. An evaluation of potential project impacts upon identified species and associated habitats must be conducted, and appropriate mitigation measures reviewed.

The Environmental Assessment must confirm that the relevant databases were searched to determine: a) the presence of any COSEWIC - listed species in or around the project area; and b) if any rare element occurrences have been documented for the area.

The Environmental Assessment must confirm that the relevant databases were searched to determine whether any species of concern are known or expected to use either the proposed project site or adjacent lands (within the zone of influence of the project). This search must include (but is not limited to):

- The main SARA website:

www.speciesatrisk.gc.ca/search/default_e.cfm

- The Conservation Data Center (CDC) database for any rare element occurrence records at:

<http://www.env.gov.bc.ca/cdc/>

- The Species At Risk Public Registry for Recovery Strategies, Action Plans, Species Accounts at:

<http://www.env.gov.bc.ca/wld/recoveryplans/rcvry1.htm>

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

17

- The Ministry of Environment's (BC)"*Species and Ecosystem Explorer*", and

<http://www.env.gov.bc.ca/atrisk/>

- Environment Canada's Species at Risk search tool

<http://www.speciesatrisk.gc.ca>

to determine if the ranges of any COSEWIC listed Species at Risk overlap with the site.

If the presence of SAR is identified within the project area, and/or is identified as being impacted by the timber harvesting project, then the RPF needs to consult with Environment Canada. The RPF's plans for addressing same needs to meet with Environment Canada's approval and be reflected in the Environmental Assessment, Logging Plan & map and Site Plan.

Foresters should also consult with regional habitat biologists if possible as they may be able to provide helpful information on certain endangered / threatened species in specific areas.

If the presence of a species at risk is identified within the project area, or is identified as being impacted prior to or during development activities, Environment Canada must be notified prior to the commencement of any further activities.

Mountain Pine Beetle Infestation Response

It should be recognized that beetle killed stands may offer suitable habitat for migratory birds and other endangered, threatened, or special concern species. Aggressive harvesting for the control of beetles can greatly reduce such habitat. When assessing the impacts of large scale beetle management activities, consideration should be given to the magnitude of the harvest, and its effect on critical habitat. If there is little reason to believe that migratory birds or species at risk are present in the area, or likely to use or rely on the habitat that remains following harvest, nothing more needs to be done. On the other hand, if the presence of such species is known or may reasonably be expected to occur in the area, and no alternate habitat exists in the vicinity, then habitat preservation measures should be identified.

18

**ADDITIONAL CEAA 2012 INFORMATION THAT MAY BE REQUIRED FOR INAC
TIMBER PERMITS****Water Quality**

Any fuel stored or used on this site is to be contained and transferred as required in a manner that minimizes the risk of accidental spillage of fuel into the marine environment and appropriate clean-up materials are to be kept on hand to allow clean-up of any spillage which may occur.

Power equipment used during the course of the work must be inspected daily by a competent individual for evidence of leaks of fuel, lubricants, hydraulic fluids or other potentially deleterious substances. If any evidence of leaks is detected, repairs shall be completed, or a leak-free replacement unit brought to the site prior to the continuation of on-site work.

A contingency plan must be provided which clearly sets out the procedures to be followed in the event of a spill occurring despite the best efforts of all concerned. This plan will need to be on site at a location where it can be readily referred to in the event of a spill, and all personnel need to be clearly advised of their respective responsibilities for implementing the necessary containment and clean up measures.

A Sediment and Management and appropriate Storm Water Management Plan (if applicable) must be provided which will ensure that silt-laden run off is not introduced into fish-bearing waters by any means, particularly during periods of high rainfall. This is especially important in connection with any road building and clear-cutting.

SEI Polygons (where applicable in coast and interior)

The Environmental Review, Logging Plan & map and Site Plan must identify any Sensitive Ecosystem Inventory Polygons (SEI Polygons) identified within the project area, and/or as being impacted by the timber harvesting project, and specify mitigative measures.

The mitigation measures for protection of the SEI Polygons need to meet with the approval of the Canadian Wildlife Service branch of Environment Canada.

STEP THREE

The third step consists of identifying, in detail, the mitigation measures which will be implemented to minimize any significant environmental effects, concerns and risks associated with the proposed project. **Mitigation means the elimination, reduction, or control of the adverse environmental effects of the project, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means.**

Mitigation measures should be part of the project design and defined in the harvest plan and/or SP submitted by the proponent. Proposed mitigation measures must be identified for each phase of the project; from planning and layout through to road building and harvesting and finally silviculture and deactivation. Mitigation measures will be refined as the ER (environmental review) progresses and the potential environmental effects become clearer.

The CEAA screening takes into consideration (at minimum) the following Valued Ecosystem Components or VEC's.

- Ground Water
- Surface Water
- Aquatic Biology
- Air Quality
- Land/Soil
- Flora (Vegetation)
- Fauna (Wildlife)
- Habitat
- Noise
- Special Places (ie. Cultural, Traditional, Historical, Scientific, Archaeological, Palaeontological)
- Health and Safety
- Socio-economic
- Recreational Resources

Forest Professionals must elaborate and provide greater detail on the VEC's they deem applicable to the project in order to ensure a well thought out forest/stand management plan. In certain instances INAC may ask the Forest Professional(s) to elaborate or provide greater detail in certain areas of their submission(s) if they feel information is lacking or if clarity is needed in a given area.

Please see the attached ER (Environmental Review) sample mitigation measures for timber harvesting activities.

INAC requires enough information on the potential significant environmental impacts as a result of the project and the proposed methods of mitigation so that a decision can be made on whether the project should proceed.

If the project is not likely to cause significant adverse environmental effects, considering appropriate mitigation measures, action may be taken that enables the project to proceed.

If the project is likely to cause significant adverse environmental effects, that cannot be justified, taking into account **appropriate mitigation measures**, it will not be permitted to proceed.

STEP FOUR

Once the ER Report is completed and submitted by the proponent, INAC will review it for completeness. Ideally, the ER Report should be submitted along with the Logging Plan, Logging Map and/or Silviculture Plan (SP) and any referral letters from third parties (DFO, MOE, MFLNRO, etc.) Proponents should be aware that INAC usually refers timber harvesting projects to relevant agencies and departments to review and provide comments. During the preparation of the harvesting proposal Proponents are encouraged to consult with relevant referral agencies. This may reduce the time required for formal reviewing of the project.

If the **preliminary ER Report is found to be satisfactory**, INAC will contact the proponent and/or band to set up an on-site visit.

Once the site visit is completed, INAC will make a CEAA Screening decision on the project. INAC will also complete the CEAA Screening and submit it to the CEAA Public Registry.

If the ER Report is found to be unsatisfactory INAC will return the report to the proponent for amendments.

STEP FIVE

At the conclusion of timber harvesting and clean up, a waste and residue and post harvest report signed and sealed by a RPF is required. This is to ensure that all provisions of the ER, SARA Report and Timber Permit have been met.

SAMPLE VEC MITIGATION MEASURES
TIMBER HARVESTING PROJECT

The following is an example of identified Valued Ecosystem Components (VEC) for various timber harvesting phases, and factors to consider for mitigation. This example is by no means an exhaustive listing of VECs and methods of mitigation and should only be used as a guide.

PROJECT PHASE: Timber Harvesting:

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
Water Courses	<ul style="list-style-type: none"> ➤ Specify appropriate stream side buffer zones along all watercourses (ie setbacks in metres) ➤ No cross-stream yarding for creeks, Maintain integrity of stream channel banks. ➤ Employ fall away/yard away techniques to keep logging debris out of stream channel ➤ Prevent destabilization of in-stream large organic debris ➤ Harvest when ground is frozen or dry
Fisheries	<ul style="list-style-type: none"> ➤ Conduct stream classification and outline basis for classification (S1, S3, S6 etc) ➤ Abide by guidelines specified by Fisheries and Oceans Canada ➤ Conduct operations to avoid conflicts with spawning periods ➤ Keep tops, limbs, logging debris, runoff, soil and other pollutants out of water
Fauna. Wildlife	<ul style="list-style-type: none"> ➤ Identify and protect wildlife habitat areas. Logging equipment must avoid riparian areas ➤ Consider local wildlife patterns
Land and soil. Erosion, degradation and slides	<ul style="list-style-type: none"> ➤ Utilize appropriate equipment and harvesting system ➤ Conduct terrain stability analysis to assist in block and road design ➤ Avoid gouging of soils, conserve soil organic matter ➤ Establish vegetative cover if soil conditions require stabilization ➤ Schedule logging when ground is dry or frozen ➤ Employ random skid trail patterns ➤ Yard uphill wherever possible to minimize convergence of erosion channels
Flora. Vegetation, Site productivity	<ul style="list-style-type: none"> ➤ Follow MFLNRO Regional guidelines and recommendations for specific ecosystems and sites ➤ Complete site-specific (SP) and implement a reforestation program and follow-up treatments ➤ Use appropriate silviculture system (specify system

22

DRAFT – REVISED JANUARY 2017

VANCOUVER#
VANCOUVER#3524053 - v3

TIMBER INFORMATION PACKAGE

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
	used)
	➤ Protect advanced regen and immature trees
	➤ Design cutblocks with windfirm edges
Shoreline and foreshore	➤ Establish and maintain windfirm shoreline buffer zone
	➤ Log dumps and boom areas must be to DFO and MOE standards
	➤ Boom yard operations must avoid conflicts with spawning periods
Noise	➤ Consider hours of work and proximity to residential areas
Traditional/heritage sites	➤ Consult with band, identify and protect as required
	➤ Mark and maintain buffer zone around all traditional/heritage sites
Visual Quality	➤ Log minimum area adjacent to public use area and revegetate as soon as possible
	➤ Consider block design and position in relation to viewscales
Air Quality	➤ Slash disposal by burning will be accomplished under the direction and permission of a MFLNRO burning permit.
	➤ Consider weather conditions with respect to smoke management
	➤ Do not burn in close proximity to residential areas
Health and Safety	➤ Follow WCB guidelines for each phase of the timber harvesting operation
	➤ Have workers trained and equipped to WCB standards

PROJECT PHASE: Access road and skid trail construction

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
Excessive site disturbance/slope quality	➤ Design, construct, maintain and de-activate roads and skid trails to current engineering standards
	➤ Utilize total-chance planning concept
	➤ Plan and construct roads to avoid areas with evidence of slope instability
	➤ Do not construct roads during extremely unfavourable soil moisture conditions
	➤ Construct roads and skid trails with appropriate equipment
	➤ Minimize width of right-of-way
	➤ Grass seed embankments
	➤ Minimize number of skid trails. Utilize random skidding pattern
	➤ Take advantage of stable benches, ridge tops and gentle slopes
	➤ Ditch and waterbar all roads and skid trails following logging operations

23

DRAFT – REVISED JANUARY 2017
 VANCOUVER#
 VANCOUVER#3524053 - v3

TIMBER INFORMATION PACKAGE

- Rehab roads and skid trails if no further use required

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

 Indian and Northern Affairs Canada
Affaires Indiennes et du Nord Canada

Chronogram no. - N° chronogramme
File reference no. - N° de référence au dossier

**BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE**

NOTE: The words "this Band Fund" ("ce Fonds") or "this trust" ("ce fiducier"), whichever is the case, must appear in all resolutions requesting expenditures from Band Funds.
NOTE: Les mots "ce fonds de notre bande" ("ce fonds") ou "ce fiducier" selon le cas doivent paraître dans toutes les résolutions portant sur des dépenses à partir des fonds des bandes.

The council of the Le conseil de	Date of duly convened meeting Date de l'assemblée dûment convoquée	<table border="1"> <tr> <td>Day</td> <td>Month</td> <td>Year</td> <td>Province</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Day	Month	Year	Province					Cash free balance - Solde disponible
			Day	Month	Year	Province					
Capital account Compte capital	Revenue account Compte revenu										

**DO HEREBY RESOLVE
DÉCIDE, PAR LES PRÉSENTES:**

- THAT a Timber Permit be granted in accordance with Section 5(2) of the Indian Timber Regulations.
- THAT the environmental impact review of the Harvest Plan be performed in accordance with the Canadian *Environmental Assessment Act (CEAA 2012)* and other applicable legislation.
- THAT _____ M³ of Cedar _____ M³ of Pine
 _____ M³ of Fir _____ M³ of Cypress
 _____ M³ of Hemlock _____ M³ of Cottonwood
 _____ M³ of Balsam _____ M³ of Maple
 _____ M³ of Spruce _____ M³ of Alder
 _____ M³ of Poplar _____ M³ of Birch
- Be harvested and sold from our Reserve(s) # _____ as indicated in the enclosed Harvest Plan.

- THAT the _____ Band / First Nation be designated as the "Permittee".
- THAT the _____ be designated as the "Purchaser".
- THAT stumpage be charged as per the rates identified in the Timber Permit; and the deposited in the _____ Band / First Nation Capital Trust Account. The stated stumpage shall be at minimum, equal the prevailing stumpage rates paid in the Forest District where the cutting permit is located for the given species and grade of timber.
- THAT an export levy of be charged in excess of stumpage for all species at rates consistent with the Provincial Ministry of Forest Lands and Natural Resources, and it be deposited in the _____ Band/ First Nation Capital Trust Account.

Outturn _____	_____ (Chair - Président)	_____ (Councilor - Conseiller)
_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)
_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)
_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)	_____ (Councilor - Conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVÉ AU MINISTÈRE			
Approvals - Approuvés Authority: Indian Act Section 8(1) or 8(2) or 8(3) or 8(4) or 8(5) or 8(6) or 8(7) or 8(8) or 8(9) or 8(10) or 8(11) or 8(12) or 8(13) or 8(14) or 8(15) or 8(16) or 8(17) or 8(18) or 8(19) or 8(20) or 8(21) or 8(22) or 8(23) or 8(24) or 8(25) or 8(26) or 8(27) or 8(28) or 8(29) or 8(30) or 8(31) or 8(32) or 8(33) or 8(34) or 8(35) or 8(36) or 8(37) or 8(38) or 8(39) or 8(40) or 8(41) or 8(42) or 8(43) or 8(44) or 8(45) or 8(46) or 8(47) or 8(48) or 8(49) or 8(50) or 8(51) or 8(52) or 8(53) or 8(54) or 8(55) or 8(56) or 8(57) or 8(58) or 8(59) or 8(60) or 8(61) or 8(62) or 8(63) or 8(64) or 8(65) or 8(66) or 8(67) or 8(68) or 8(69) or 8(70) or 8(71) or 8(72) or 8(73) or 8(74) or 8(75) or 8(76) or 8(77) or 8(78) or 8(79) or 8(80) or 8(81) or 8(82) or 8(83) or 8(84) or 8(85) or 8(86) or 8(87) or 8(88) or 8(89) or 8(90) or 8(91) or 8(92) or 8(93) or 8(94) or 8(95) or 8(96) or 8(97) or 8(98) or 8(99) or 8(100) or 8(101) or 8(102) or 8(103) or 8(104) or 8(105) or 8(106) or 8(107) or 8(108) or 8(109) or 8(110) or 8(111) or 8(112) or 8(113) or 8(114) or 8(115) or 8(116) or 8(117) or 8(118) or 8(119) or 8(120) or 8(121) or 8(122) or 8(123) or 8(124) or 8(125) or 8(126) or 8(127) or 8(128) or 8(129) or 8(130) or 8(131) or 8(132) or 8(133) or 8(134) or 8(135) or 8(136) or 8(137) or 8(138) or 8(139) or 8(140) or 8(141) or 8(142) or 8(143) or 8(144) or 8(145) or 8(146) or 8(147) or 8(148) or 8(149) or 8(150) or 8(151) or 8(152) or 8(153) or 8(154) or 8(155) or 8(156) or 8(157) or 8(158) or 8(159) or 8(160) or 8(161) or 8(162) or 8(163) or 8(164) or 8(165) or 8(166) or 8(167) or 8(168) or 8(169) or 8(170) or 8(171) or 8(172) or 8(173) or 8(174) or 8(175) or 8(176) or 8(177) or 8(178) or 8(179) or 8(180) or 8(181) or 8(182) or 8(183) or 8(184) or 8(185) or 8(186) or 8(187) or 8(188) or 8(189) or 8(190) or 8(191) or 8(192) or 8(193) or 8(194) or 8(195) or 8(196) or 8(197) or 8(198) or 8(199) or 8(200) or 8(201) or 8(202) or 8(203) or 8(204) or 8(205) or 8(206) or 8(207) or 8(208) or 8(209) or 8(210) or 8(211) or 8(212) or 8(213) or 8(214) or 8(215) or 8(216) or 8(217) or 8(218) or 8(219) or 8(220) or 8(221) or 8(222) or 8(223) or 8(224) or 8(225) or 8(226) or 8(227) or 8(228) or 8(229) or 8(230) or 8(231) or 8(232) or 8(233) or 8(234) or 8(235) or 8(236) or 8(237) or 8(238) or 8(239) or 8(240) or 8(241) or 8(242) or 8(243) or 8(244) or 8(245) or 8(246) or 8(247) or 8(248) or 8(249) or 8(250) or 8(251) or 8(252) or 8(253) or 8(254) or 8(255) or 8(256) or 8(257) or 8(258) or 8(259) or 8(260) or 8(261) or 8(262) or 8(263) or 8(264) or 8(265) or 8(266) or 8(267) or 8(268) or 8(269) or 8(270) or 8(271) or 8(272) or 8(273) or 8(274) or 8(275) or 8(276) or 8(277) or 8(278) or 8(279) or 8(280) or 8(281) or 8(282) or 8(283) or 8(284) or 8(285) or 8(286) or 8(287) or 8(288) or 8(289) or 8(290) or 8(291) or 8(292) or 8(293) or 8(294) or 8(295) or 8(296) or 8(297) or 8(298) or 8(299) or 8(300) or 8(301) or 8(302) or 8(303) or 8(304) or 8(305) or 8(306) or 8(307) or 8(308) or 8(309) or 8(310) or 8(311) or 8(312) or 8(313) or 8(314) or 8(315) or 8(316) or 8(317) or 8(318) or 8(319) or 8(320) or 8(321) or 8(322) or 8(323) or 8(324) or 8(325) or 8(326) or 8(327) or 8(328) or 8(329) or 8(330) or 8(331) or 8(332) or 8(333) or 8(334) or 8(335) or 8(336) or 8(337) or 8(338) or 8(339) or 8(340) or 8(341) or 8(342) or 8(343) or 8(344) or 8(345) or 8(346) or 8(347) or 8(348) or 8(349) or 8(350) or 8(351) or 8(352) or 8(353) or 8(354) or 8(355) or 8(356) or 8(357) or 8(358) or 8(359) or 8(360) or 8(361) or 8(362) or 8(363) or 8(364) or 8(365) or 8(366) or 8(367) or 8(368) or 8(369) or 8(370) or 8(371) or 8(372) or 8(373) or 8(374) or 8(375) or 8(376) or 8(377) or 8(378) or 8(379) or 8(380) or 8(381) or 8(382) or 8(383) or 8(384) or 8(385) or 8(386) or 8(387) or 8(388) or 8(389) or 8(390) or 8(391) or 8(392) or 8(393) or 8(394) or 8(395) or 8(396) or 8(397) or 8(398) or 8(399) or 8(400) or 8(401) or 8(402) or 8(403) or 8(404) or 8(405) or 8(406) or 8(407) or 8(408) or 8(409) or 8(410) or 8(411) or 8(412) or 8(413) or 8(414) or 8(415) or 8(416) or 8(417) or 8(418) or 8(419) or 8(420) or 8(421) or 8(422) or 8(423) or 8(424) or 8(425) or 8(426) or 8(427) or 8(428) or 8(429) or 8(430) or 8(431) or 8(432) or 8(433) or 8(434) or 8(435) or 8(436) or 8(437) or 8(438) or 8(439) or 8(440) or 8(441) or 8(442) or 8(443) or 8(444) or 8(445) or 8(446) or 8(447) or 8(448) or 8(449) or 8(450) or 8(451) or 8(452) or 8(453) or 8(454) or 8(455) or 8(456) or 8(457) or 8(458) or 8(459) or 8(460) or 8(461) or 8(462) or 8(463) or 8(464) or 8(465) or 8(466) or 8(467) or 8(468) or 8(469) or 8(470) or 8(471) or 8(472) or 8(473) or 8(474) or 8(475) or 8(476) or 8(477) or 8(478) or 8(479) or 8(480) or 8(481) or 8(482) or 8(483) or 8(484) or 8(485) or 8(486) or 8(487) or 8(488) or 8(489) or 8(490) or 8(491) or 8(492) or 8(493) or 8(494) or 8(495) or 8(496) or 8(497) or 8(498) or 8(499) or 8(500) or 8(501) or 8(502) or 8(503) or 8(504) or 8(505) or 8(506) or 8(507) or 8(508) or 8(509) or 8(510) or 8(511) or 8(512) or 8(513) or 8(514) or 8(515) or 8(516) or 8(517) or 8(518) or 8(519) or 8(520) or 8(521) or 8(522) or 8(523) or 8(524) or 8(525) or 8(526) or 8(527) or 8(528) or 8(529) or 8(530) or 8(531) or 8(532) or 8(533) or 8(534) or 8(535) or 8(536) or 8(537) or 8(538) or 8(539) or 8(540) or 8(541) or 8(542) or 8(543) or 8(544) or 8(545) or 8(546) or 8(547) or 8(548) or 8(549) or 8(550) or 8(551) or 8(552) or 8(553) or 8(554) or 8(555) or 8(556) or 8(557) or 8(558) or 8(559) or 8(560) or 8(561) or 8(562) or 8(563) or 8(564) or 8(565) or 8(566) or 8(567) or 8(568) or 8(569) or 8(570) or 8(571) or 8(572) or 8(573) or 8(574) or 8(575) or 8(576) or 8(577) or 8(578) or 8(579) or 8(580) or 8(581) or 8(582) or 8(583) or 8(584) or 8(585) or 8(586) or 8(587) or 8(588) or 8(589) or 8(590) or 8(591) or 8(592) or 8(593) or 8(594) or 8(595) or 8(596) or 8(597) or 8(598) or 8(599) or 8(600) or 8(601) or 8(602) or 8(603) or 8(604) or 8(605) or 8(606) or 8(607) or 8(608) or 8(609) or 8(610) or 8(611) or 8(612) or 8(613) or 8(614) or 8(615) or 8(616) or 8(617) or 8(618) or 8(619) or 8(620) or 8(621) or 8(622) or 8(623) or 8(624) or 8(625) or 8(626) or 8(627) or 8(628) or 8(629) or 8(630) or 8(631) or 8(632) or 8(633) or 8(634) or 8(635) or 8(636) or 8(637) or 8(638) or 8(639) or 8(640) or 8(641) or 8(642) or 8(643) or 8(644) or 8(645) or 8(646) or 8(647) or 8(648) or 8(649) or 8(650) or 8(651) or 8(652) or 8(653) or 8(654) or 8(655) or 8(656) or 8(657) or 8(658) or 8(659) or 8(660) or 8(661) or 8(662) or 8(663) or 8(664) or 8(665) or 8(666) or 8(667) or 8(668) or 8(669) or 8(670) or 8(671) or 8(672) or 8(673) or 8(674) or 8(675) or 8(676) or 8(677) or 8(678) or 8(679) or 8(680) or 8(681) or 8(682) or 8(683) or 8(684) or 8(685) or 8(686) or 8(687) or 8(688) or 8(689) or 8(690) or 8(691) or 8(692) or 8(693) or 8(694) or 8(695) or 8(696) or 8(697) or 8(698) or 8(699) or 8(700) or 8(701) or 8(702) or 8(703) or 8(704) or 8(705) or 8(706) or 8(707) or 8(708) or 8(709) or 8(710) or 8(711) or 8(712) or 8(713) or 8(714) or 8(715) or 8(716) or 8(717) or 8(718) or 8(719) or 8(720) or 8(721) or 8(722) or 8(723) or 8(724) or 8(725) or 8(726) or 8(727) or 8(728) or 8(729) or 8(730) or 8(731) or 8(732) or 8(733) or 8(734) or 8(735) or 8(736) or 8(737) or 8(738) or 8(739) or 8(740) or 8(741) or 8(742) or 8(743) or 8(744) or 8(745) or 8(746) or 8(747) or 8(748) or 8(749) or 8(750) or 8(751) or 8(752) or 8(753) or 8(754) or 8(755) or 8(756) or 8(757) or 8(758) or 8(759) or 8(760) or 8(761) or 8(762) or 8(763) or 8(764) or 8(765) or 8(766) or 8(767) or 8(768) or 8(769) or 8(770) or 8(771) or 8(772) or 8(773) or 8(774) or 8(775) or 8(776) or 8(777) or 8(778) or 8(779) or 8(780) or 8(781) or 8(782) or 8(783) or 8(784) or 8(785) or 8(786) or 8(787) or 8(788) or 8(789) or 8(790) or 8(791) or 8(792) or 8(793) or 8(794) or 8(795) or 8(796) or 8(797) or 8(798) or 8(799) or 8(800) or 8(801) or 8(802) or 8(803) or 8(804) or 8(805) or 8(806) or 8(807) or 8(808) or 8(809) or 8(810) or 8(811) or 8(812) or 8(813) or 8(814) or 8(815) or 8(816) or 8(817) or 8(818) or 8(819) or 8(820) or 8(821) or 8(822) or 8(823) or 8(824) or 8(825) or 8(826) or 8(827) or 8(828) or 8(829) or 8(830) or 8(831) or 8(832) or 8(833) or 8(834) or 8(835) or 8(836) or 8(837) or 8(838) or 8(839) or 8(840) or 8(841) or 8(842) or 8(843) or 8(844) or 8(845) or 8(846) or 8(847) or 8(848) or 8(849) or 8(850) or 8(851) or 8(852) or 8(853) or 8(854) or 8(855) or 8(856) or 8(857) or 8(858) or 8(859) or 8(860) or 8(861) or 8(862) or 8(863) or 8(864) or 8(865) or 8(866) or 8(867) or 8(868) or 8(869) or 8(870) or 8(871) or 8(872) or 8(873) or 8(874) or 8(875) or 8(876) or 8(877) or 8(878) or 8(879) or 8(880) or 8(881) or 8(882) or 8(883) or 8(884) or 8(885) or 8(886) or 8(887) or 8(888) or 8(889) or 8(890) or 8(891) or 8(892) or 8(893) or 8(894) or 8(895) or 8(896) or 8(897) or 8(898) or 8(899) or 8(900) or 8(901) or 8(902) or 8(903) or 8(904) or 8(905) or 8(906) or 8(907) or 8(908) or 8(909) or 8(910) or 8(911) or 8(912) or 8(913) or 8(914) or 8(915) or 8(916) or 8(917) or 8(918) or 8(919) or 8(920) or 8(921) or 8(922) or 8(923) or 8(924) or 8(925) or 8(926) or 8(927) or 8(928) or 8(929) or 8(930) or 8(931) or 8(932) or 8(933) or 8(934) or 8(935) or 8(936) or 8(937) or 8(938) or 8(939) or 8(940) or 8(941) or 8(942) or 8(943) or 8(944) or 8(945) or 8(946) or 8(947) or 8(948) or 8(949) or 8(950) or 8(951) or 8(952) or 8(953) or 8(954) or 8(955) or 8(956) or 8(957) or 8(958) or 8(959) or 8(960) or 8(961) or 8(962) or 8(963) or 8(964) or 8(965) or 8(966) or 8(967) or 8(968) or 8(969) or 8(970) or 8(971) or 8(972) or 8(973) or 8(974) or 8(975) or 8(976) or 8(977) or 8(978) or 8(979) or 8(980) or 8(981) or 8(982) or 8(983) or 8(984) or 8(985) or 8(986) or 8(987) or 8(988) or 8(989) or 8(990) or 8(991) or 8(992) or 8(993) or 8(994) or 8(995) or 8(996) or 8(997) or 8(998) or 8(999) or 8(1000) or 8(1001) or 8(1002) or 8(1003) or 8(1004) or 8(1005) or 8(1006) or 8(1007) or 8(1008) or 8(1009) or 8(1010) or 8(1011) or 8(1012) or 8(1013) or 8(1014) or 8(1015) or 8(1016) or 8(1017) or 8(1018) or 8(1019) or 8(1020) or 8(1021) or 8(1022) or 8(1023) or 8(1024) or 8(1025) or 8(1026) or 8(1027) or 8(1028) or 8(1029) or 8(1030) or 8(1031) or 8(1032) or 8(1033) or 8(1034) or 8(1035) or 8(1036) or 8(1037) or 8(1038) or 8(1039) or 8(1040) or 8(1041) or 8(1042) or 8(1043) or 8(1044) or 8(1045) or 8(1046) or 8(1047) or 8(1048) or 8(1049) or 8(1050) or 8(1051) or 8(1052) or 8(1053) or 8(1054) or 8(1055) or 8(1056) or 8(1057) or 8(1058) or 8(1059) or 8(1060) or 8(1061) or 8(1062) or 8(1063) or 8(1064) or 8(1065) or 8(1066) or 8(1067) or 8(1068) or 8(1069) or 8(1070) or 8(1071) or 8(1072) or 8(1073) or 8(1074) or 8(1075) or 8(1076) or 8(1077) or 8(1078) or 8(1079) or 8(1080) or 8(1081) or 8(1082) or 8(1083) or 8(1084) or 8(1085) or 8(1086) or 8(1087) or 8(1088) or 8(1089) or 8(1090) or 8(1091) or 8(1092) or 8(1093) or 8(1094) or 8(1095) or 8(1096) or 8(1097) or 8(1098) or 8(1099) or 8(1100) or 8(1101) or 8(1102) or 8(1103) or 8(1104) or 8(1105) or 8(1106) or 8(1107) or 8(1108) or 8(1109) or 8(1110) or 8(1111) or 8(1112) or 8(1113) or 8(1114) or 8(1115) or 8(1116) or 8(1117) or 8(1118) or 8(1119) or 8(1120) or 8(1121) or 8(1122) or 8(1123) or 8(1124) or 8(1125) or 8(1126) or 8(1127) or 8(1128) or 8(1129) or 8(1130) or 8(1131) or 8(1132) or 8(1133) or 8(1134) or 8(1135) or 8(1136) or 8(1137) or 8(1138) or 8(1139) or 8(1140) or 8(1141) or 8(1142) or 8(1143) or 8(1144) or 8(1145) or 8(1146) or 8(1147) or 8(1148) or 8(1149) or 8(1150) or 8(1151) or 8(1152) or 8(1153) or 8(1154) or 8(1155) or 8(1156) or 8(1157) or 8(1158) or 8(1159) or 8(1160) or 8(1161) or 8(1162) or 8(1163) or 8(1164) or 8(1165) or 8(1166) or 8(1167) or 8(1168) or 8(1169) or 8(1170) or 8(1171) or 8(1172) or 8(1173) or 8(1174) or 8(1175) or 8(1176) or 8(1177) or 8(1178) or 8(1179) or 8(1180) or 8(1181) or 8(1182) or 8(1183) or 8(1184) or 8(1185) or 8(1186) or 8(1187) or 8(1188) or 8(1189) or 8(1190) or 8(1191) or 8(1192) or 8(1193) or 8(1194) or 8(1195) or 8(1196) or 8(1197) or 8(1198) or 8(1199) or 8(1200) or 8(1201) or 8(1202) or 8(1203) or 8(1204) or 8(1205) or 8(1206) or 8(1207) or 8(1208) or 8(1209) or 8(1210) or 8(1211) or 8(1212) or 8(1213) or 8(1214) or 8(1215) or 8(1216) or 8(1217) or 8(1218) or 8(1219) or 8(1220) or 8(1221) or 8(1222) or 8(1223) or 8(1224) or 8(1225) or 8(1226) or 8(1227) or 8(1228) or 8(1229) or 8(1230) or 8(1231) or 8(1232) or 8(1233) or 8(1234) or 8(1235) or 8(1236) or 8(1237) or 8(1238) or 8(1239) or 8(1240) or 8(1241) or 8(1242) or 8(1243) or 8(1244) or 8(1245) or 8(1246) or 8(1247) or 8(1248) or 8(1249) or 8(1250) or 8(1251) or 8(1252) or 8(1253) or 8(1254) or 8(1255) or 8(1256) or 8(1257) or 8(1258) or 8(1259) or 8(1260) or 8(1261) or 8(1262) or 8(1263) or 8(1264) or 8(1265) or 8(1266) or 8(1267) or 8(1268) or 8(1269) or 8(1270) or 8(1271) or 8(1272) or 8(1273) or 8(1274) or 8(1275) or 8(1276) or 8(1277) or 8(1278) or 8(1279) or 8(1280) or 8(1281) or 8(1282) or 8(1283) or 8(1284) or 8(1285) or 8(1286) or 8(1287) or 8(1288) or 8(1289) or 8(1290) or 8(1291) or 8(1292) or 8(1293) or 8(1294) or 8(1295) or 8(1296) or 8(1297) or 8(1298) or 8(1299) or 8(1300) or 8(1301) or 8(1302) or 8(1303) or 8(1304) or 8(1305) or 8(1306) or 8(1307) or 8(1308) or 8(1309) or 8(1310) or 8(1311) or 8(1312) or 8(1313) or 8(1314) or 8(1315) or 8(1316) or 8(1317) or 8(1318) or 8(1319) or 8(1320) or 8(1321) or 8(1322) or 8(1323) or 8(1324) or 8(1325) or 8(1326) or 8(1327) or 8(1328) or 8(1329) or 8(1330) or 8(1331) or 8(1332) or 8(1333) or 8(1334) or			

 Indian and Northern Affairs Canada / Affaires Indiennes et du Nord Canada

Document no. - N° document
File reference no. - N° de référence de dossier

**BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE**

NOTE: The words "from our Band Funds" ("notre" or "nos", whichever is the case, must appear in all resolutions requesting expenditures from Band Funds.
NOTA: Les mots "des fonds de notre bande" ("notre" ou "nos", selon le cas) doivent paraître dans toutes les résolutions portant sur des dépenses à faire de fonds des bandes.

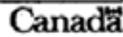
The council of the Le conseil de	D-U M Y A Province	Cash free balance - Solde disponible
		Capital account Compte capital \$ _____
Date of duly convened meeting Date de l'assemblée dûment convoquée		Revenue account Compte revenu \$ _____

DO HEREBY RESOLVE
DÉCIDE, PAR LES PRÉSENTES:

- THAT all Ministry of Forests, Lands and Natural Resource Operations' invoices are for the account of the "Purchaser".
- THAT scaling of the timber be performed by the Ministry of Forests, Lands and Natural Resource Operations fully licensed and approved scalers.
- THAT each log be hammer indented on both ends with our registered timber mark(s) # _____ before leaving on Reserve landing(s)

Quorum _____	_____ (Chief - Chef)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVE AU MINISTÈRE					
Expenditure - Dépense	Authority/Statute Act/Section Autorité/Statut de la Loi sur les Indiens	Source of funds Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue	Expenditure - Dépense	Authority/Statute Act/Section Autorité/Statut de la Loi sur les Indiens	Source of funds Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue
Recommending officer - Recommandé par			Recommending officer - Recommandé par		
Signature _____ Date _____			Signature _____ Date _____		
Approving officer - Approuvé par			Approving officer - Approuvé par		
Signature _____ Date _____			Signature _____ Date _____		

803 (12-88) 7635-01-000-0002 Printed on recycled paper - imprimé sur papier recyclé 

DRAFT - REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

TIMBER INFORMATION PACKAGE

END OF TIMBER PERMIT APPLICATION PACKAGE

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - 43

27

Appendix 10: Feasibility Stage Technical Review

Checklist for Feasibility Stage Technical Review**

Project Name _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
Feasibility Study	_____	_____	_____
• Filed in Technical Library – <i>GCdocs#</i> _____	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Option Analysis	_____	_____	_____
Preferred Option Recommended	_____	_____	_____
Land Requirements Identified	_____	_____	_____
O&M Capacity Assessment	_____	_____	_____
Subconsultant Reports	_____	_____	_____
IEMS Environmental Review-Project Description Form supplemented by an Environment Assessment Scoping Report	_____	_____	_____
Phase 1 Environmental Site Assessment (ESA) Report – for Subdivision Projects Only	_____	_____	_____
Pre-design Research Identified	_____	_____	_____
Regulatory Impact/ Permits Identified	_____	_____	_____
<small>(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, timber permit assessment, gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit) Note: Timber Permit is not required if First Nation has their own forestry land code under the First Nation Land Management Act.</small>			
Land Encumbrance Check	_____	_____	_____
Project Schedule	_____	_____	_____
Project Construction Process	_____	_____	_____
Class ‘C’ Capital Cost Estimate	_____	_____	_____
Class ‘D’ O&M Cost Estimate	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.



Chapter 4:

THE DESIGN STAGE OF A CAPITAL PROJECT

A Practical Guide To Capital Projects | 4 of 6



A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre

Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351
Facsimile: 604-775-7149
Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	v
Table of Contents	vi
Glossary of Abbreviations	viii
Definitions.....	xi

The Design Stage of a Capital Project

Introduction	1
4.1 Design Stage Funding Application (DAR).....	5
4.2 Design Approval Request (DAR) Review	10
4.2.1 Capital Management Officer Review	10
4.2.2 Engineer Review	10
4.3 Design Stage Funding Application Process at ISC.....	12
4.4 Design Stage Deliverables	13
4.4.1 Preliminary Design Phase Deliverables	14
4.4.2 Final Design Phase Deliverables.....	17
4.5 Design Stage Analysis by First Nations.....	21
4.6 Design Stage Deliverable Review by ISC.....	23
4.6.1 Capital Management Officer	23
4.6.2 Engineer Review	23
4.7 Design Stage Final Processing by ISC.....	25

Appendices

1: Design Approval Request (DAR)	29
2: ISC Environmental Review Process	43
2A: ISC Environmental Review Process Summary.....	45
2B: Generic Terms of Reference for Environmental Assessment	47
2C: Projects Environmental Assessment Scoping Report.....	53
3: Cost Estimates - Definitions	57
4: Project Implementation.....	59
4A: Guidelines for Hiring an Independent Project Manager	61
4B: ISC Guidelines for First Nations Engaging a Consultant on a Capital Project	67

Appendices Cont.

4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings	71
4D: ISC Sample Professional Services Contract [CN2 Template]	73
4E: Advice on Hiring a Professional Engineer or Professional Geoscientist	75
5: Terms of Reference – Design Stage [Sample]	93
6: Risk Assessment Tool [RAT] Sample	103
7: design Stage Funding Application	105
8: Capital Projects Report DCI #460671	107
9: Land Status Report Request Information	111
10: ISC Timber Permit Information [for non-FNLM Bands]	115
11: Letters of Assurance (NBC) - Schedules A, B-1, B-2, C-A, C-B	145
12 : Permit and Authorization Information	159
13: Design Stage Technical Review	161

Figures

Figure 1: Work-flow for Capital Project Approval Process	2
--	---

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEPE	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
FNIIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organizational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit (with Funding Services)
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act. CEAA 2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes, or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subtrades, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subtrade contractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations which identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning, budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures, prescribed in the environmental review process, were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's ISCRETION. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - Protect and maintain existing assets with an emphasis on health and safety;
 - Mitigate health and safety risks through new and existing assets;
 - Address water and sewer project backlogs;
 - Include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organizations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs.

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).

Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post Construction Stage of a Capital Project

Appendix

4

The Design Stage of a Capital Project

An overview of the Design Stage of a Capital Project

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations' consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision making for the successful implementation of capital projects.

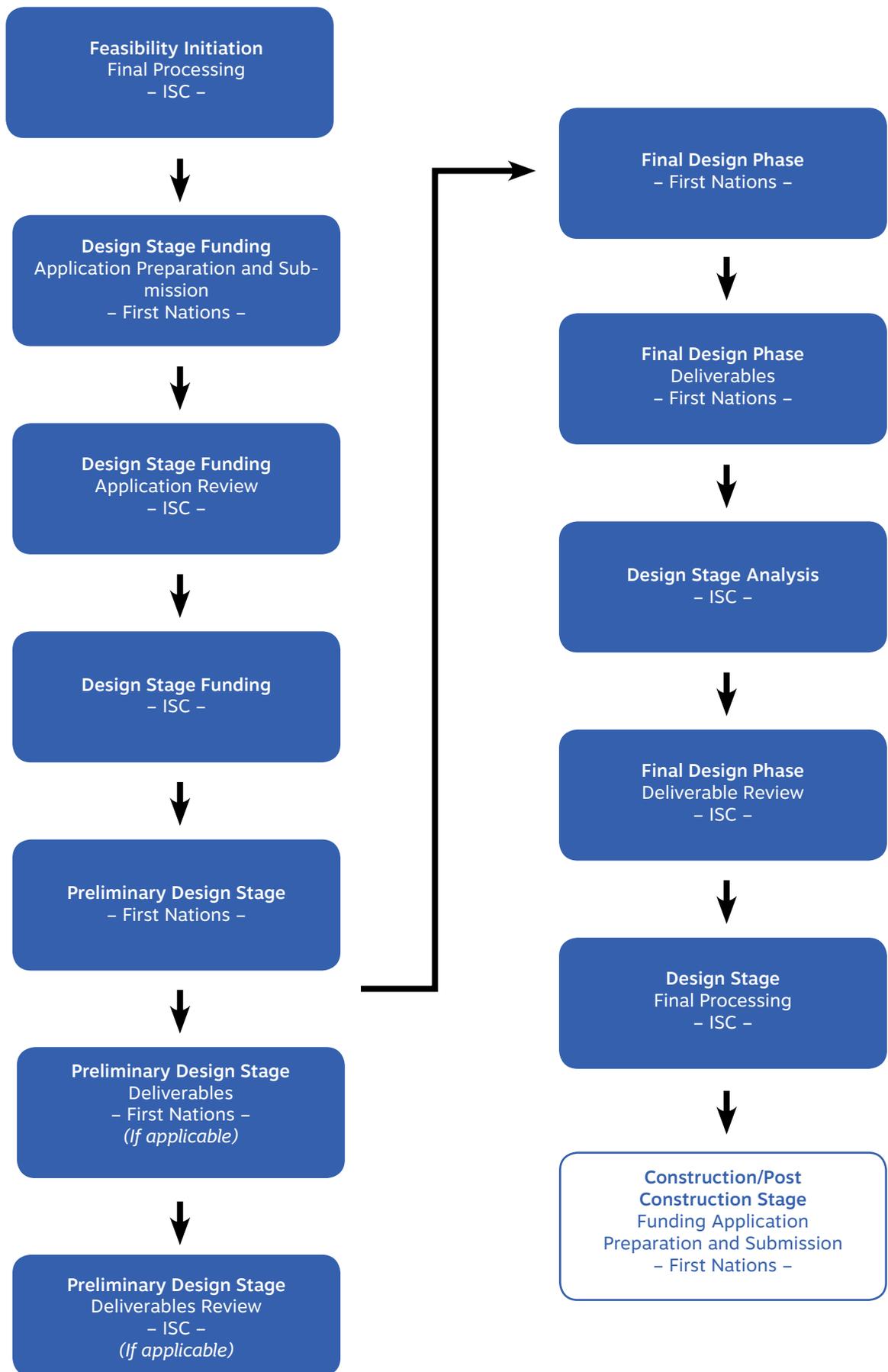
The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

Funding processes related to other components of the capital facilities and maintenance program (CFMP) program such as schools, housing and operation and maintenance funding are covered in other documents.

The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle — feasibility, design, construction and post construction. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

Figure 1: Work-flow for Capital Project Approval Process



The design stage of a capital project develops the recommended option selected at the feasibility stage. Any additional information required to develop a design is obtained and all project information is analyzed and processed to result in a design package which will provide the necessary instructions for project construction.

The design stage process generally incorporates a preliminary design phase (sometimes called pre-design phase or the design development phase) and a final design phase. Reports are generally required on the completion of both phases.

The preliminary design phase will include the additional field investigation and research activities required to obtain all the necessary physical and technical data needed to generate a project design and a Class B estimate. Examples of collected data include legal survey information, topographical information, geotechnical information, environmental information, hydrological data, treatment process testing and manufacturer information. The preliminary design combines the gathered data and information with the technical design requirements as specified in ISC Design Guidelines and Level of Service Standards.

If a construction management contracting process is being proposed for project construction, an initial Construction Management Business Plan must be prepared during the preliminary design phase. Forming a Construction Management Evaluation Team (CMET) will be a part of this process.

The preliminary design is considered complete when the unknown conditions that have a potentially significant influence on the design have been identified and when the design criteria have been sufficiently developed to allow the final design to commence. A “rule of thumb” measure is that completion of the preliminary design represents approximately 60% of the total design effort.

ISC may not require a preliminary design report for small, non-complex projects where the scope of research and field investigations during the design stage is relatively minor due to the nature of the project or

because the feasibility stage provided sufficient design information. ISC will confirm when a preliminary design report is not required.

The final design phase includes the completion of detailed design calculations, the preparation of drawings and specifications that are ready for construction, the preparation of tendering and contract documents and the preparation of a Class A cost estimate. A final design report is required for all projects.

If a construction management contracting process is being proposed for project construction, a final Construction Management Business Plan must be completed during the detailed design phase with associated input from the Construction Management Evaluation Team (CMET).

An environmental assessment study report for low and medium environmental risk projects (confirm with Engineer) is required when submitting a preliminary design report and a finalized version is required with the final design stage deliverables. If a preliminary design report is not required, the environmental assessment study report will only be submitted with the final design stage deliverables.

4.1 Design Stage Funding Application (DAR)

A design stage funding application labeled a Design Approval Request (DAR) is required for all capital projects (except Group 2 ACRS projects and small O&M projects) and will incorporate a funding request both preliminary design and final design phases. The amount of information provided in the DAR is intended to match the size and complexity of the project. Generating a DAR will be a systematic progression from the Feasibility Approval Request (FAR) generated to start the feasibility stage. See [Appendix 1: Design Approval Request \(DAR\)](#) for guidance on completing DAR.

A First Nation will generally apply for design stage funding concurrently with submitting feasibility stage deliverables to ISC. Submission of a DAR formally triggers the design stage funding request process.

The DAR summarizes the project and contains the following sections:

- First Nation's Approval Signature — indicates First Nation project concurrence with DAR objectives and project implementation process;
- Executive Summary — one page project summary with funding requirements table;
- Project Identification — detailed project description with project justification and project funding history;
- Feasibility Study Summary — summary of key findings of feasibility study including the option analysis and a description of the recommended option. The finalized Feasibility Study will have already been submitted as a feasibility stage deliverable;
- Proposed Design Process — summary of design objectives, additional technical studies required, land requirements, permits and technical issues;
- Project Management Framework — proposed First Nation project management plan including process for engaging a project leader, independent project manager (if applicable), and professional consultant services. The experience of the project team must reflect the size and complexity of the project;

Identify a project procurement strategy (general construction contracting or construction management). If the construction management process is being used, identify the construction manager hiring process (may be already completed) and the proposed procedures to generate an initial and final Construction Management Business Plan and to form a Construction Management Evaluation Team (CMET).

See ISC's website information for the CFM Program – Project Information – Policies and Directives for information on Operational Parameters for the Review and Evaluation of Construction Management Projects.

- Environmental Assessment Process – summary of the environmental assessment scoping report with a proposed assessment of negligible, low or medium environmental risk. An additional environmental assessment study report is required for projects assessed at low or medium risk. See [Appendix 2: Environmental Review Process](#);
- Financial Information – proposed design stage costs for professional consultant services (include design fees, environmental fees and project management fees), band administration fees, Total Estimated Cost (TEC)(Class C) including construction costs, anticipated O&M costs, proposed cost sharing, proposed municipal-type service agreements and any significant risk issues impacting costs. See [Appendix 3: Cost Estimates – Definitions](#);
- Project Schedule – proposed schedule with milestone dates and responsibilities.

The DAR appendices should include the following items (as applicable):

A. Site Plan/Facility System Layout

B. Land Encumbrance – Land encumbrance check and identification of any land access issues including any consultations with other First Nations and neighbouring jurisdictions regarding possible off-Reserve construction;

C. Project Manager or Construction Manager Information (if applicable) – If the First Nation is hiring an independent project manager or a construction manager (or both), terms of reference (as applicable) and proposals to provide the appropriate services are required. See Section 2.7.2 Hiring a Project Manager and [Appendix 4A: Hiring a project manager](#) .

Note:

If the First Nation has been satisfied with the professional services provided by a consultant during the feasibility stage, the First Nation will often request the same consultant to submit a proposal in response to the TOR.

If the First Nation wants to consider professional services from another consultant, the First Nation can request that consultant to submit a proposal in response to the TOR.

If the First Nation is considering changing consultants between the feasibility and design stages, inviting several consultants to submit proposals in response to the TOR is recommended. This competitive process will help the First Nation select the most qualified firm at the best value. The Capital Management Officer and Senior Engineer can assist First Nations in determining evaluation criteria for multiple proposal review and will participate in the proposal review process if requested.

In some cases for smaller, less complex projects, a written TOR may not be needed if the First Nation has already chosen a consultant. Project TOR can be verbally communicated to the consultant who will subsequently generate a Proposal for Consultant Services which must specifically address the First Nations expectations and the deliverable requirements identified in Section 4 of this chapter.

D. Terms of Reference (TOR) for Professional Consultant Services –

Stipulates the professional consultant services expected by the First Nation. This document defines the scope of the project, the required technical standards, the expected completion schedule and the contractual requirements.

The TOR must clearly identify that all applicable design stage deliverables (described in Section 4.4 of this chapter) must be completed by the consultant. See Section 2.7.3 Hiring a Professional Services Consultant and [Appendix 4: Project Implementation of Hiring Professionals](#) for information on hiring a consultant and a sample contract.

See [Appendix 5: Terms of Reference – Design Stage \(Sample\)](#) for assistance when creating a project TOR. The Capital Management Officer and Senior Engineer can also assist First Nations in the development of a project specific TOR.

E. Proposal for Consultant Services – Provides the written response submitted by a consultant to the First Nation’s request for professional design services. The terms of reference will be used by the consultant to determine the contents of their proposal. The proposal must clearly identify a scope of work and all associated costs to produce all the applicable design stage deliverables identified in Section 4.4 of this chapter.

The proposal will also provide information concerning:

- The qualifications and experience of the consultant company;
- The qualifications and experience of the consultant personnel specifically assigned to the project;
- The proposed strategies, activities and tasks the consultant will use to complete the design stage (both pre-design and design phases);
- The expected schedule for completion of the design stage deliverables;
- The requested fees and disbursements (travel, photocopying, etc.) to complete the assignment.

The consultant fee schedule must detail the hourly rates charged by each consultant team member, the number of hours and associated cost estimate for each task to be performed and an estimate of disbursement costs. Where sub-consultants (eg. geotechnical, environmental) will be performing tasks for the prime consultant, their task-specific proposals with time and costing information are to be included in the overall project proposal.

If a number of consultants were invited to submit proposals, only the proposal selected by the First Nation needs to be submitted to ISC.

Note:

The document **CN2 — Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program — Project Information — Best Practices for Construction Contracting.

For guidelines and templates see:

[Appendix 4B: Procedures for Engaging a Consultant on a CFM Capital Project;](#)

[Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings.](#)

[Appendix 4D: Sample Professional Services Contract \(CN2 Template\)](#)

[Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist \(excerpt from EGBC Website\)](#)

[Appendix 2C: Environmental Assessment Scoping Report](#)

4.2 Design Approval Request (DAR) Review

4.2.1 Capital Management Officer Review

The Capital Management Officer will review the DAR for completeness and validity. Generally, the review will include:

- Confirming that the First Nation accepts the findings and recommendations of the feasibility stage and that they wish to proceed with the design stage.
- Confirming that the project description and project justification are similar in nature and in scope to those identified in the feasibility stage. Any significant deviations must be fully explained and shown to be within the mandate of BC Region's capital program.
- Reviewing the cash flow projections to determine the impact on the ISC budget process.

Any deficiencies in the funding application will be communicated to the First Nation in writing.

Assuming the funding application meets the appropriate criteria, the Capital Management Officer will generate and populate the design stage version of the previous CFM Program Record Document (CPRD) and will then forward the CPRD and project information to the Senior Engineer for technical review.

4.2.2 Engineer Review

The technical review will consider whether the proposed scope of work provides value for the First Nation and ISC, meets the project objectives and is appropriate, functional and cost effective. Any deficiencies will be communicated to the First Nation.

The DAR technical review will include:

- Reviewing the project description and project justification to confirm

that the scope of work is consistent with previous submissions and that any changes have been justified.

- Comparing the cost estimates with earlier submissions and confirming that any significant variances are fully explained.
- Reviewing the terms of reference and the proposal for consultant services to assess that:
 - » The proposed scope of work is sufficient to produce a technically sound design which will meet all capital program requirements;
 - » All applicable design stage deliverables identified in Section 4.4 of this chapter will be produced;
 - » The consulting firm is qualified;
 - » The identified project team has the necessary qualifications and experience;
 - » The proposed schedule is realistic;
 - » The professional fees are reasonably within accepted guidelines;
 - » The process for design stage reviews conforms to a formalized consultant review procedure;
- Evaluating the project management plan to assess appropriate management procedures are in place to implement the project through the design stage (eg. project leader, project manager, schedule control, budget control, funding availability);.
- Confirming that the project cost estimates are reasonable;
- Reviewing the proposal for the environmental assessment study report (if required) to confirm that all significant environmental impacts will be investigated.
- Generating a Risk Assessment Tool for projects with a total ISC contribution greater than \$5M. See [Appendix 6: Risk Assessment Tool \(Sample\)](#).
- Comparing the DAR to the Design Stage Funding Application checklist. See [Appendix 7](#). The design stage checklist may be useful to the First Nation as a quick guide to verify that the documentation is complete.
- Inserting required information onto the CPRD form and forwarding for approvals.

Note:

For smaller, non-complex projects, preliminary design deliverables may not be required. Check with your Capital Management Officer to confirm.

4.3 Design Stage Funding Application Process at ISC

The Capital Management Officer or Senior Engineer will contact the First Nation regarding the status of the funding application.

If the funding application meets the necessary requirements, the Capital Management Officer will process the project for funding eligibility. Refer to Chapter 1 for Banking Day procedures and the funding of projects.

If project funding is received by the First Nation, appropriate reporting by the First Nations as specified in the funding agreement amendment must be processed to stay off the Halt List. See [Appendix 8: Capital Projects Report DCI #460671](#).

4.4 Design Stage Deliverables

During the design stage, a First Nation will receive project deliverables as determined by the terms of reference and the proposals for professional consultant services. The deliverables received from your consultants will generally consist of the following documents:

- Preliminary Design Phase Deliverables (if applicable - see following note):
 - » Preliminary Design Report
 - » Preliminary Design Drawings and Outline Specifications
 - » Construction Management Business Plan (Initial) (if applicable)
 - » Environmental Assessment Study Report (if required)
 - » Administrative Reporting
- Final Design Phase Deliverables:
 - » Final Design Report (or Design Brief as per Design Guidelines for Waterworks)
 - » Final Design Drawings, Specifications and Tender Documents
 - » Construction Management Business Plan (Final) (if applicable)
 - » Environmental Assessment Study Report (finalized) (if required)
 - » Administrative Reporting

The pre-design report should be submitted both as a paper copy and as a PDF file. A set of reduced drawings is to be bound into the binder and a set of accompanying full size drawings is to be bound separately.

ISC Design Guidelines provide content and formatting requirements for water, wastewater and road projects reports.

4.4.1 Preliminary Design Phase Deliverables

A. Preliminary Design Report contains the following information:

- Updated project description and project justification — any deviations to the project description and project justification stated in the previous funding applications and feasibility study are to be identified and explained.
- Preliminary design investigations — details the additional field investigation and research completed and included identifying the design concepts assessed, the investigation methodologies used, the results obtained, and the conclusions and recommendations determined.
- Preliminary design criteria — summary of the preliminary design criteria and calculations to be used in the design such as utility system demands, building loadings, treatment system capacities, populations and areas served, expected treatment quality parameters, applicable codes and standards and any other factors to be used in the design process.

ISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered. See ISC's website information for the CFM Program — Project Information - Policies and Directives for a link to the Design Guidelines.

- Land Encumbrance — confirm the land tenure identified in the feasibility study. See [Appendix 9: Land Status Report Request Information.](#)
- Permits — identify any permits required for construction. Communications with the issuing authorities should be documented to indicate that the permits will be provided at the construction stage. Depending on the construction activities, permits may include timber permits, gravel extraction permits, solid waste disposal permits, highways permits, burning permits and provincial land tenure permits (License of Occupation). Any off-reserve land required for construction must be the subject of a consultation with any First Nations with treaty claims to that parcel.

- Timber permits and gravel extraction permits issued by ISC require significant processing time. Advance planning for obtaining these permits is recommended. See [Appendix 10: ISC Timber Permit Information \(for non-FNLM Bands\)](#).
 - Comments from Regulatory Agencies — include copies of any correspondence with regulatory agencies providing their review comments. Depending on the type of project, the regulatory agencies may include:
 - » First Nation Health Authority (FNHA) — drinking water, wastewater and solid waste disposal;
 - » Environment Canada — wastewater, solid waste disposal, Species at Risk issues;
 - » Fisheries and Oceans Canada — all works impacting fish-bearing waters;
 - » Transport Canada — navigable waters;
 - » BC Ministry of Agriculture and Lands — lands management;
 - » BC Ministry of Environment — fish and wildlife;
 - » BC Ministry of Transportation — public road access, and works involving public roads.
 - Financial Information — include a Class B cost estimate of all project costs from the feasibility stage to the post construction stage. See [Appendix 3 Cost Estimates — Definitions](#).
- B. Preliminary Design Drawings and Outline Specifications** — Provide sufficient detail to adequately describe the scope, limit, location and operation of the proposed project. For example, the preliminary drawings for a water treatment plant should include a site plan with the building location, inlet/outlet piping, site services, building floor plan, building sections and elevations, flow diagram, schematic piping and instrumentation diagrams, hydraulic grade line profile, and building equipment layout. Outline specifications are required to adequately describe work components. The drawings must be signed and sealed by a professional registered to practice in BC.
- C. Construction Management Business Plan (Initial)** — Will identify the First Nation’s available financial, technical and management resources required to implement the project using the construction

Note:

Where any proposed works encroach on privately held (non-band, certificate of possession) lands, a legal right-of-way will be required to ensure the First Nation's right of access to the lands for the purpose of constructing, operating and maintaining the works.

Where any proposed works are proposed for construction on off-reserve land, a License of Occupation is required from the provincial government to validate occupation of the land. The provincial government will proceed through a process of public input and environmental assessment relating to the subject land parcel.

management contracting process and specify the process for engaging the services of a fully qualified construction manager. The activities of the Construction Management Evaluation Team (CMET) should be detailed. See ISC's website information for the CFM Program — Project Information — Policies and Directives — Operational Parameters for the Review and Evaluation of Construction Management Projects for information on the review and evaluation of construction management projects including the development of the initial construction management business plan.

- D. Environmental Assessment Study Report** (if required) — Details the environmental impacts, mitigation measures and monitoring requirements related to the construction and operation of the proposed works. Any potential off-Reserve environmental impacts need to be addressed with neighbouring First Nations and other jurisdictions. See [Appendix 2: Environmental Review Process](#).

E. First Nation Administrative Reporting during the preliminary design phase is to include:

- Capital Project Progress Reporting — Reporting on project progress in accordance with the schedule identified in the agreement amendment is an ISC funding requirement and failure to report results in a funding halt. See [Appendix 8: Capital Projects Report DCI #46067](#).
- Expenditure accounting from the First Nation — compares project expenditures to the funding received for both the design and feasibility stages. Expenditure breakdowns should correspond to the approved funding request. Note that project final accounting will be compared to the First Nations annual financial audit report;
- Capital Project Request for Override — required if the project design stage has justifiably taken longer than one year to complete. Substantiation for the delay of the project must be identified on the request. Failure to report results in a funding halt.

4.4.2 Final Design Phase Deliverables

A. Final Design Report (also referred to as a Design Brief) contains the following information:

- Updated Project Description and Project Justification — any deviations to the project description and project justification stated in the previous funding applications, the feasibility stage or preliminary design reports are to be identified and explained.
- Design Criteria — summary of the final design criteria and calculations used in the project design, applicable codes and standards and any other relevant factors used in the design process.
- The ISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered.
- Professional Certification Schedules (for buildings such as water treatment plants) — certifies professional responsibility for project design coordination, design activities and construction inspection. See [Appendix 11: Letters of Assurance \(NBC\) — Schedules A, B-1, B-2, C-A, C-B](#).

Note:

Where any proposed works are proposed for construction on off-reserve land, it is the duty of the Federal Government to consult with any other First Nations that might have established or potential Indigenous or treaty rights to that land. Generally this process can be sufficiently accomplished via the provincial public input process for generating a License of Occupation.

- Land Encumbrances — provide a current land encumbrance check if the previous check has exceeded the one year validity period. Provide details for any associated land issues (e.g., Certificate of Possession land issues). Agreements for constructing on non-band lands must be explained and documented.
- Permits and Approvals — include finalized permits or draft permits/authorizations (Fisheries and Oceans Canada) in sufficient detail to be readily finalized should the project proceed to the construction stage. See [Appendix 12: Permit and Authorization Information](#).
- Comments from Regulatory Agencies — include copies of correspondence from applicable regulatory agencies. Any conditions applied by these regulatory agencies are to be incorporated into the design to the approval of the agencies prior to the project proceeding to the construction stage.
- Draft Commissioning Plan (for complex projects) — outlines the consultant's proposed process to inspect, test and substantiate that the completed works are properly working to their design capacity. See the applicable design guidelines for commissioning requirements for specific projects. Including a training component for First Nations operator during the commissioning process is recommended.
- Draft Operation and Maintenance (O&M) Manual (for complex projects) — required to provide direction to operators for the operation and maintenance of a facility during construction and subsequent to facility completion before a finalized O&M manual is produced at project completion. Refer to the ISC design guidelines

for water and wastewater for the contents expected in an O&M manual. See Appendix 4 for information on where to access these guidelines.

- O&M Training Plan (for complex projects) — provide a training plan for O&M operators that includes some level of training during project construction so that operators are prepared to safely and effectively operate and maintain the new project facilities upon project completion.
- Financial Information - include a Class A cost estimate of all project costs. Detail any cost-sharing arrangements and any MTSA agreements. Provide a Class A estimate of the O&M costs and summarize all sources of O&M funding available to the First Nation. See [Appendix 3: Cost Estimates — Definitions](#).
- Project Schedule - include an updated schedule for the completion of the project.

- B. Final Design Drawings, Specifications and Tender Documents** — Final design drawings, specifications and tender documents must be complete and have sufficient detail for contractors to bid on the project and construct the project strictly in accordance with the specified requirements.

All required environmental mitigation measures should be clearly identified in the design drawings and specifications. All drawings and specifications must be signed and sealed by a professional registered to practice in BC. The tender document is to comply with the ISC tendering tender policy. See ISC's website information for the CFM Program — Project Information — Policies and Directives - Tendering Policy on Federally Funded Capital Projects for First Nations on Reserve.

- C. Construction Management Business Plan (Final)** — Updated plan summarizing the finalized construction management process to implement the project. The activities of the Construction Management Evaluation Team (CMET) should be detailed. See ISC's website information for the CFM Program — Project Information — Policies and Directives - Operational Parameters for the Review and Evaluation of Construction Management Projects for information on the review and evaluation of construction management projects

including the development of the final construction management business plan.

D. Environmental Assessment Study Report (Finalized) (if required)
— Submitted with any required revisions. Recommended mitigation measures must be incorporated into the project final design. See [Appendix 2: Environmental Review Process](#).

E. First Nation Administrative Reporting during the final design phase is to include:

- Capital Project Progress Reporting — Reporting on project progress in accordance with the schedule identified in the agreement amendment is an ISC funding requirement and failure to report results in a funding halt. See [Appendix 8: Capital Projects Report DCI #46067](#);
- Expenditure accounting from the First Nation — compares project expenditures to the funding received for both the design and feasibility stages. Expenditure breakdowns should correspond to the approved funding request. Note that project final accounting will be compared to the First Nations annual financial audit report;
- Capital project request for override — required if the project design stage has justifiably taken longer than one year to complete. Substantiation for the delay of the project must be identified on the request. Failure to report results in a funding halt.

4.5 Design Stage Analysis by First Nations

The following questions should have been answered upon completion of the design stage. The First Nation should examine the deliverables and be satisfied that the information provided addresses the following project decisions and subsequent project activities.

Question 1: Have all the design criteria been appropriately finalized?

Has the appropriate information been used to determine design criteria that meet project expectations?

Question 2: Have the required cost estimates and project schedule been provided?

Has the required financial information been provided to allow the required financial planning? Is there enough information to be able to monitor the cost and schedules for the contractors and consultants?

Question 3: Is the environmental assessment complete?

Have all environmental impacts on the community been identified and appropriately incorporated into the project to minimize long-term effects?

Question 4: Have the regulatory agencies been involved in the design?

Is there assurance that regulatory agencies support the project continuing to the construction stage and that all permits are in place or ready to be finalized?

Question 5: Have all land issues been finalized?

Are all land tenure agreements in place to allow construction to proceed without project holdups due to unauthorized access and construction? Has there been appropriate consultation with First Nations and other jurisdictions to obtain agreements to construct any off-reserve facilities?

Question 6: Have all operation and maintenance activities and costs been confirmed?

Has adequate resource planning and funding been identified to permit the proper operation and maintenance of the proposed works? Have operators and circuit riders provided feedback on the proposed operation and maintenance of the new asset? How do the additional operation and maintenance responsibilities associated with the new asset impact personnel and equipment resources currently required for the operation and maintenance of existing community infrastructure assets?

Question 7: Is the project ready for construction?

Does the final design meet all relevant guidelines, standards, laws and regulations and is the project ready to proceed to the construction stage?

Question 8: Has the project been structured to incorporate community employment and economic opportunities?

Have contracts, local arrangements and employment resources been organized to provide local employment and economic opportunities?

Based on the analysis of the design stage information and assuming there is agreement with the project information, project decisions and project impacts, the First Nation will send the design stage deliverables to the Capital Management Officer generally accompanied by an application for construction stage funding (PAR).

If, however, the First Nation decision-making process on whether to proceed with the project requires more time for deliberation, the design stage deliverables can be sent to the Capital Management Officer without an application for construction stage funding. ISC will review the deliverables and if complete, the design stage will be marked as “Reporting Complete” in GCIMS.

4.6 Design Stage Deliverable Review by ISC

Design stage deliverables received by ISC will be reviewed within sixty days of hard copy receipt. The review process will include an initial completeness check by the capital management officer and a subsequent technical review by the ISC engineer.

4.6.1 Capital Management Officer

The Capital Management Officer will review the design stage deliverables to confirm that all required deliverables have been received. The design stage information will be assessed to confirm general conformance to ISC program requirements and the package will then be sent to the Engineer for technical evaluation.

If all design stage deliverables have not been received, the Capital Management Officer or Engineer will request additional information from the First Nation.

4.6.2 Engineer Review

The preliminary design and final design report reviews by the Engineer can include the following items. Design review procedures (similar to an OQM process) incorporated into the project will be considered in the ISC review process.

- Reviewing the Preliminary Design Report to ensure that adequate field assessment and research has been completed. The conclusions, recommendations and design criteria are to be technically sound, cost effective, and must meet all relevant guidelines, standards, codes, laws and regulations.
- Reviewing the Preliminary Design Drawings and outline specifications for conformance to project requirements and consistency with the preliminary design report.

- Reviewing the Final Design Report (or Design Brief) to ensure that the design is technically sound, cost effective, and that it meets all relevant guidelines, standards, codes, laws and regulations.
- Reviewing the final design drawings, specifications and tender documents for conformance to project requirements and consistency with the Final Design Report.
- Reviewing land encumbrances and land agreements.
- Reviewing any required permits.
- Reviewing comments received from regulatory agencies and assessing that their concerns have been addressed in the Preliminary Design and Final Design Reports.
- Reviewing the draft commissioning plan.
- Reviewing the draft O&M Manual and maintenance plan.
- Reviewing cost estimates to confirm their correctness and comparability to current construction market pricing.
- If applicable, reviewing the Construction Management Business Plan and associated construction management activities for conformance to the established procedures.
- If applicable, reviewing the Environmental Assessment Study Report for environmental impacts and recommended mitigation measures to ensure that they are included in the final design drawings, specifications and tender documents.
- Generating a Simple Environmental Review report or sending environmental information to an environmental specialist to complete a Detailed Environmental Review report for a more complex project.

Depending on the significance of identified environmental impacts, the Environmental Assessment Study Report and other applicable deliverables as required (e.g., drawings, specifications, permits) may be circulated to selected government departments or agencies for comments relating to their environmental responsibilities.

- Comparing design stage deliverables to the Design Stage Technical Review checklist. See [Appendix 13](#). The checklist may be useful to the First Nation as a quick guide to help verify the deliverable package is complete.

4.7 Design Stage Final Processing by ISC

Subsequent to the technical evaluation, project progress will be as follows:

- If the design stage deliverables are appropriately complete to proceed to construction and no additional design stage information is required, the First Nation will be notified and GCIMS will be updated to show this stage of the project is complete;
- If an application for construction stage funding (PAR) was received with the design stage deliverables and no additional design stage information is required, then the process moves into construction stage funding as described in Chapter 5;
- If an application for construction stage funding (PAR) was not received with the design stage deliverables and no additional design stage information is required, then the First Nation will be contacted to discuss a proposed schedule for submitting a PAR;
- If additional design stage information is required, additional information from the First Nation will be requested. If the additional information was not included in the originally accepted and funded Proposal for Professional Consultant Services, then additional funding can be requested.



Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1: Design Approval Request (DAR)

INDIGENOUS SERVICES CANADA(ISC) DESIGN APPROVAL REQUEST (DAR)

Date: _____

Project Information

Submission No.: (is this the first submission (#1), (#2), etc.) _____
 Project Number (CPMS): _____
 Project Name: _____
 Funding Requested (include project contingencies): _____
 Asset Type: _____
 Link to Community Profile: _____

First Nation Information

Band Number: _____
 First Nation: _____
 Reserve: _____
 Chief: _____

Regional Information

Region: _____
 Project Capital Mgmt. Officer: _____
 Project/Technical Officer: _____
 Regional Manager (ID): _____
 Regional Manager (CP): _____
 Regional Director: _____
 Regional Director General: _____

Date Submitted for DISC Approval: _____
Submitted To: _____
Submitted By: _____

Design Application Request | 1

APPROVAL SIGNATURES

First Nation Approvals

Chief (or person authorized by C&C)

Date

ISC Regional Approvals

ISC Regional Project /Technical Officer

Date

ISC Regional Manager

Date

ISC Regional Director

Date

ISC Regional Director General

Date

ISC Headquarter Approvals

ISC Senior Assistant Deputy Minister
Regional Operations
(High Risk Projects and all Projects above \$10M)

Date

2 | Design Application Request

Introduction

This guide is intended to assist those preparing Design Application Requests for submission to Indigenous Services Canada, British Columbia Region. The Design Approval Request replaces the Treasury Board Style Submissions, and is required for projects with a total cost (since feasibility) over \$0.5 million.

Design Application Approval is generally provided on the basis of Class “C” cost estimates for pre-design and Class “B” cost estimates for design. Approval permits the initiation of a project and allows the spending of only those funds necessary to cover the costs to complete the pre-design and/or design.

Executive Summary

All “Design Application Request” documents submitted are to include a one page Executive Summary. The Executive Summary is to incorporate and present the following items:

- Brief project description.
- Provide a brief justification for project to receive funding for design. Should include reference to the Priority Ranking Framework and/or ISC policy.
- Provide a brief rationale to demonstrate that the option chosen is the most physically, environmentally and economically feasible option to meet the needs of the community.
- For the option chosen identify the project risk, recipient risk and the overall rating as per the Management Control Framework (ISC TO COMPLETE THIS BULLET).
- Yearly cash flows and Total Estimated Cost (TEC) for Design (in current dollars).
- Estimated yearly cash flows and Total Estimated Cost (TEC) for design, including engineering and contingencies (use table below).
- Indicate estimated construction cost and schedule (as per BC Region’s FNIIP).

Project X Yearly Cash Flows – -Pre-design /Design				
	Year 1	Year 2	Year 3	Total
A-Base				
Targeted Funds				
Other ISC				
Total ISC Funding				
FN Funding				
Other Funding Source #1				
Other Funding Source #2				
Total Non-ISC Funding				
Total Estimated Cost (TEC)				

Notes:

1. If there are more than two other funding sources, then add the appropriate number of rows for the funding sources.
2. If the project will be completed in more than three years, add additional columns for the additional years. If the project will be completed in one year, use only one column.

Table of Contents

1.0	Identification of Need	6
1.1	Requirement of the Asset and Justification	6
1.2	Priority Ranking Framework and other ISC Policies/Programs	6
1.3	Space Allowance (applicable to Schools only)	6
1.4	Previous Approvals and Project Expenditures	6
2.0	Existing Conditions	7
2.1	Basic Community Profile	7
2.2	Location	7
2.3	Inspections of existing asset(s) related to the project (if applicable)	7
3.0	Feasibility	8
3.1	Identification of options analyzed	8
3.2	Proposed Design Criteria	8
3.3	Technical Difficulties	8
4.0	Project Management Framework	9
4.1	ISC Roles and Responsibilities	9
4.2	First Nation Roles and Responsibilities	9
4.3	Project Manager Roles and Responsibilities	9
4.4	Architect/Engineering Services	10
5.0	Financial	10
5.1	Project Costs	10
5.2	Cost Sharing Agreements (if applicable)	11
5.3	Municipal Type Service Agreements (if applicable)	11
5.4	Risk Elements	11
5.5	Payment	11
6.0	Risk Assessment	11
7.0	Project Schedule	12
	Appendices	13

1.0 Identification of Need

1.1 Requirement of the Asset and Justification

- Description of the needs of the First Nation.
- Justification for the asset/project based on the findings of the feasibility study.
- Identify conformance to the applicable ISC Level of Service Standards (LOSS).
- Describe if the proposed works relate to a Physical Development Plan, Comprehensive Community Plan, Infrastructure Master Plan, or similar document.
- Description of existing facility or system, disposal of facility or system (as applicable), and applicable operation and maintenance (O&M) funding.
- Identify who will manage the O&M activities.

1.2 Priority Ranking Framework and other ISC Policies/Programs

- Reference of where the project is on the Project Priority Ranking Framework and why it is there (ISC TO COMPLETE THIS BULLET).
- Reference any other ISC policy or program that was applicable in identifying this project as a necessity (ISC TO COMPLETE THIS BULLET).

1.3 Space Allowance (applicable to Schools only)

- Space Allowance for the school building based on student enrolment using the most recent School Space Accommodations Standards (SSAS).
- Use of allowable size based on SSAS (i.e. classrooms, gym size, special purpose rooms).
- Use of recreational area.

1.4 Previous Approvals and Project Expenditures

- Identify approved budget and provide dates for feasibility stage project approval, including project allocations and expenditures.
- Explain any significant events that happened or issues raised that caused the project to be modified or delayed

Expand on each section and provide any additional information that would be pertinent to the Project being submitted

2.0 Existing Conditions

2.1 Basic Community Profile

- Existing population on and off reserve.
- Number of residences (identify the number of buildings serviced by the existing infrastructure – water and sewer).
- Describe the community buildings.
- Describe the level of certification of the existing operators.

2.2 Location

- Location and access – include a site plan (in the appendices).
- Identify location of asset/system on and or off reserve (as applicable).
- Identify access routes to the project site
- Remoteness Classification with reference to origin of classification.
- Zone Classification.
- Calculation of geographic and site indices.

2.3 Inspections of existing asset(s) related to the project (if applicable)

- What inspections of the existing asset(s) were completed (ACRS or others)?
- Provide a summary of the asset condition as reported in the Capital Assets Inventory System (CAIS) and Assets Condition Reporting System (ACRS). (ISC TO COMPLETE THIS BULLET).
- What were the main findings that justify immediate replacement of the asset? For example, is it health and safety, fire, etc.?

3.0 Feasibility

3.1 Identification of options analyzed

- Identify each option analysed, including a brief description of each option and associated costs (capital, O&M and 20 year life cycle costs).
- Advantages and disadvantages of each option.
- Rank options and provide rationale for the recommended option.
- Identify any unique factors materially affecting the project (e.g. timing of approval, financial management plans, cost-sharing arrangements).
- Identify if Municipal Type Agreements (MTAs) exist.

3.2 Proposed Design Criteria

- Summarize the proposed design objectives. Provide a rationale and proposed design parameters for the chosen option.
- Identify projected population (existing, 10-year and 20-year design horizon). Also identify the annual population growth rate. Provide supporting demographic studies, data or statistics for review
- Identify current and projected water demands, wastewater flows, fire flows, traffic volume, etc. (as applicable). Provide a rationale for the proposed demands or flows, i.e., the assumptions or data used for the projections.
- Provide a summary of the recommendations or findings from the following studies (typically undertaken during feasibility): geotechnical, environmental, archaeological, hydrogeological, etc.
- Summarize the required permits and approvals from all applicable regulatory agencies.
- Summarize land requirements or issues of concern.
- List the appropriate standards that will be followed (include in the appendices).

3.3 Technical Difficulties

- Identify complicating technical project difficulties which may be a factor in either increasing project costs or delaying the project schedule.

4.0 Project Management Framework

4.1 ISC Roles and Responsibilities

- Review of project approval requests
- Processing project funding requests in the funding allocation process
- Generating a risk management framework
- Generating Aboriginal Recipient Funding Arrangement amendments
- Ensuring funding is available for allocation to First Nations in accordance with the funding process

4.2 First Nation Roles and Responsibilities

- Ensuring that projects are kept on budget.
- Ensuring deliverables are met and project is on schedule.
- Issuing payments as recommended by the Project Manager
- Verifying the performance of the Project Manager and adjusting payments as required.
- Attendance at project meetings.
- Verifying a change in scope approval process and approving change in scope as required.
- Ensuring project expenditures are consistent with expected audit expenditures

4.3 Project Manager Roles and Responsibilities

- A guide on hiring a Project Manager is included in Appendix 1 of the ISC Practical Guide to Capital Projects.
- Verifying that the work is delivered as per contractual terms and conditions.
- Ensuring payments are controlled based on contractual obligations (proposal, project scope, quality, schedule and price).
- Reviewing and verifying all invoices and recommending payment to the Band and Project Team.
- Reviewing of significant project items.
- Overseeing the work's quality to verify that the designer(s) implement appropriate Quality Control and Quality Assurance.
- Reviewing and recommending to Band and Project Team draft contractual clauses, including but not limited to appropriate financial leverage (e.g., payment terms), warranty and process warranty clauses, insurance, scope definition, quality assurance/ quality control expectations, and terms of payment's alignment with measurable/verifiable milestone deliverables.
- Ensuring deliverables are met and project is on schedule.
- Reporting.
- Attendance at Project meetings.
- Recommending change in scope requests.

Design Application Request | 9

4.4 Architect/Engineering Services

- Providing documentation (drawings, specifications, design reports, tender documents, etc).
- Providing completion documents that meet ISC requirements.
- Meeting required schedules.
- Verification of the work carried out by the sub-consultants.
- Conformance to funding amounts.
- Following all Federal Legislations.
- Following all Federal and Provincial codes, standards, regulations, etc., as applicable.
- QA/QC services.
- Budget control.
- Assessing changes in scope.

5.0 Financial

5.1 Project Costs

Pre-design/Design

- Present a summary of the proposed pre-design/ design costs, including Band administration fees, in a tabulated format. A detailed breakdown of the pre-design/design costs should be included in the consultant's proposal.
- Present a monthly cash flow for the pre-design/ design work.
- Indicate that expenditures and commitments will not exceed the budget shown in this submission without prior approval from the First Nation and funding agency (ISC).

Construction (from feasibility)

- Identify estimated construction costs for the recommended option, including contingency amount (typically 10%), engineering and Band administration fees during construction.
- Identify the O&M costs for the recommended option.
- Identify the 20 year Life Cycle Cost for the recommended option.
- Provide a cost breakdown, in the appendices, for the recommended option, as follows:
- Tabular format separated into construction and non-construction costs.
- Where the project costs are shared, add lines after the "total project costs", showing each party's share, in current dollars, for each year as well as in total. Summarize sharing arrangements.
- If applicable, show the following non-construction costs: consultant design fees, site survey and geotechnical costs, inspection and quality control fees, First Nation project management and/or project administration costs, technical training, maintenance management system, hydro, telephone, etc.

10 | Design Application Request

- Provide a cost breakdown, in the appendices, of the estimated annual O&M costs and the amount allowed under CAIS.
- Indicate an increase/decrease of the O&M costs in comparison to those for the existing facility or system (if it is being replaced).

5.2 Cost Sharing Agreements (if applicable)

- Explain any project cost sharing arrangements and the rationale for the cost-sharing proportion, for capital, O&M and future works.

5.3 Municipal Type Service Agreements (if applicable)

- Summarize any municipal type service agreements generated during the project
- Identify on-going impacts of the agreements and cost implications
- Identify roles and responsibilities for parties to the agreement.

5.4 Risk Elements

- Clearly state in lay terms major risks for the project (if any), followed by the percentage figure, and the base cost used to calculate the dollar amount allocated for each risk item.

5.5 Payment

- Identify the procedures (including roles and responsibilities) for managing payments to consultants or other professionals providing design services.

6.0 Risk Assessment

Summarize the findings of the risk assessment carried out by ISC for this project stage and include a copy of the Risk Assessment Tool (RAT) in Appendix 7.

7.0 Project Schedule

•Provide an estimate for completion of each project milestone identified in the following table (as applicable):

Project Milestone	Completion Date	Responsibility*
Feasibility Study		
Selection of Design Consultant		
Pre-design/Design Funding Submission (DAR)		
Funding for Pre-design/Design		
Draft Pre-design Report		
Draft Pre-design Report Review		
Final Pre-design Report		
60% Detailed Design Submission (schools only)		
90% Detailed Design Submission (schools only)		
Draft Design Report Submission		
Draft Design Report Review		
Final Design Report and Tender Documents		
Construction Funding Submission (PAR)		

* The responsibility will fall under one or more of the following: Indigenous Services Canada (ISC), First Nation (FN), Design Consultant (DC), Supplier/ Manufacturer (S/M)

Appendices

1. Feasibility Study Report
2. Site Plan and facility or system layout
3. Site plan reduced to 8 ½ by 11 inches, but no larger than 11 by 14 inches
4. Facility or system layout plan to give general outline and location of major elements of the project;
5. Land Encumbrance Check and any land access issues;
6. Relevant correspondence and information from associated organizations and agencies
7. Terms of Reference for independent Project Manager [if applicable];
8. Project Manager proposal [if applicable]
9. Construction Manager proposal [if applicable]
10. Terms of Reference for professional consultant services [if applicable];
11. Professional consultant services proposal for pre-design/design (including fee tabulation and schedule)
12. Environmental Scoping Study
13. Recommended Option Detailed Cost Breakdown (refer to Section 5.1.2; tabular format)

Appendix 2: Environmental Review

Appendix 2A: ISC Environmental Review Process Summary

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessment

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Appendix 2A: ISC Environmental Review Process Summary

All federally-funded projects must follow an Environmental Review Process [ERP] to ensure that no significant adverse environmental effects result from the implementation of a project. The objectives of the ERP are:

- predict the environment effects of a proposed project;
- identify measures to mitigate the effects;
- determine the significance of residual environmental effects and applicable mitigation measures;
- recommend follow-up programs to monitor impacts of environmental effects;
- fulfill the federal Duty to Consult with other Aboriginal interests regarding projects to be constructed on lands subject to treaty claims.

The level of environmental review should match the risk and likelihood of significant adverse effects associated with carrying out a project. Larger, more complex projects adjacent to water bodies or discharging into receiving waters would generally require a higher degree of environmental analysis.

The project environmental review process begins at the feasibility stage with an Environmental Scoping Study to outline potential issues. A project description form is initiated. If no significant issues are apparent that cannot be mitigated with standard procedures, the project is considered a minor project and considered “negligible environmental risk.” ISC has developed a “Minor Projects List” for identifying routine projects normally considered negligible environmental risk although any project may be elevated past the minor level for a more detailed assessment if conditions warrant. Renovations or upgrades are typical minor level projects. No further environmental information is required for a minor project.

If the Environmental Scoping Study identifies potentially significant environmental issues, the ISC engineer will request an Environmental Detailed Study to be completed during the design stage [usually at the pre-design phase]. Depending on the study results, the ISC engineer may classify the project as a low environmental risk requiring a “Simple Environmental Review Form”. The ISC engineer may request additional environmental information to confirm a low environmental risk rating.

Construction of a water treatment plant or a residential subdivision would be typical projects in the low risk category.

If the project is large or complex and the report indicates risks and potential effects are not readily known, the project will be referred to an ISC environmental specialist who will manage a more comprehensive evaluation of environmental effects and generate a “Detailed Environmental Review Form”. Projects requiring this form will require higher level approval authorities.

Depending on the scope of the environmental mitigation measures incorporated into the project, a Mitigation Measures Compliance Report may be required as part of the project completion reporting. This report is used to confirm that the mitigation measures prescribed in the environment review were incorporated into the project. This form is not required for projects that underwent a Minor Review. Projects that underwent a Simple Environmental Review may require this form at ISC’s discretion. Projects that underwent a Detailed Environmental Review will require form completion.

Environmental decisions will be tracked by the Integrated Environmental Management System [IEMS] which was launched in April, 2014.

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessments

The Generic Terms of Reference (TOR) presented here as an annotated table of contents provides the proponent with the guidelines in planning and conducting an environmental assessment.

Executive Summary

1. Introduction	<p>Provide contextual background information on the project and the proponent and project justification.</p> <p>1.1 Proponent Information</p> <p>1.2 Project Overview (including Title and Location)</p> <p>1.3 Regulatory Framework (e.g. Funding, Permits and/or Approvals)</p>
-----------------	---

<p>2. Project Description and scope of project</p>	<p>Provide a detailed project description. The project description should cover all aspects of the project including anticipated environmental impacts to the project. A detailed description will allow the RA(s) to scope the project components and activities appropriately.</p> <p>Note: For projects involving cutting of timber, the description must include the RPF's break down of volume/species (based upon a timber cruise) to be cut from the subject area and the proposed harvesting system.</p> <p>A detailed project description at the start of the project design phase clarifies potential interactions with the environmental and thereby reduces the risk that ISC or other RAs will require additional information to assess the project.</p> <p>Community Infrastructure Projects require a Scoping Report submitted during the feasibility stage of the project (Part 4).</p> <p>Identify all components that were scoped into the project including all necessary activities and with First Nation consultation early on in the development process.</p> <p>2.1 Project Background</p> <p>2.2 Location of project and mapping and study areas</p> <p>2.3 Project Facilities and associated infrastructure</p> <p>2.4 Construction activities</p> <p>2.5 Operations activities</p> <p>2.6 Decommissioning plans</p> <p>2.7 Alternative means of carrying out the project</p> <p>2.8 First Nations Consultation</p>
--	--

<p>3. Project Setting</p>	<p>Provide a detailed description of the existing environment in the project area including landscape, water bodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc). Indicate the areas affected by the project. Outline known environmentally significant historical uses and First Nations uses in the area of the project, if available. Develop and/or update the list of VECs in the project area.</p> <p>Identify all environmental components that were scoped into the assessment (i.e. Valued Ecosystem Components)</p> <p>3.1 Geophysical Environment</p> <p>3.2 Atmospheric Environment</p> <p>3.3 Aquatic Environment and Hydrology Surface Hydrology</p> <p>3.4 Terrestrial Environment, Wildlife, Species at Risk</p> <p>3.5 Land Use Setting</p> <p>3.6 Develop list of Valued Ecosystem Components</p> <p>3.7 Socio-economic Conditions</p> <p>3.8 First Nations Historical Use</p> <p>3.9 First Nations Interests and Involvement</p>
---------------------------	--

4. Environmental Effects	<p>Provide a narrative description of assessment approach and methodology used to conduct the EA. Note data sources and indicators used to consider the effects, and discuss mitigation and any residual effects of the project and whether those effects are significant or not.</p> <p>Summarize the results and recommendations of studies carried out as part of the EA (e.g. geotechnical studies, water quality investigations, SARA wildlife & habitat surveys, archaeological investigations, survey results, fisheries studies, etc).</p> <p>Describe the project/environment interactions</p> <p>Cumulative effects including past and foreseeable future developments (e.g. Phase II of a subdivision, Phase II of a commercial park) need to be addressed appropriately.</p> <p>Effects assessment may be summarized in an Interaction Matrix based on the VECs.</p> <p>4.1 Impact Assessment Methodology</p> <p>4.2 Construction Phase – Effects Assessment</p> <p>4.3 Operations and Maintenance Phase – Effects Assessment</p> <p>4.4 Decommissioning – Effects Assessment</p> <p>4.5 Socio-economic Effects on First Nations communities</p> <p>4.6 Accidents and Malfunctions</p> <p>4.7 Effects of the Environment on the Project</p> <p>4.8 Cumulative Effects</p>
--------------------------	---

5. Mitigation	<p>Provide a narrative summary of how environmental effects will be mitigated and show how the mitigation measures have been included in the design implementation of the project. Applicable portions of the design and/or operation and maintenance information should be referenced in the EA report document to confirm that mitigation measures have been incorporated. Mitigation measures may also be used as conditions of the lease, permit and/or funding agreement, presented as a table of commitments.</p> <p>Where a project causes interactions with species at risk, specific mitigation measures must be identified. Mitigation strategies for species at risk are hierarchical with avoidance being preferred (e.g. timing, design/location change), followed by minimization through project modification or implementation under special conditions, and lastly, compensatory mitigation (e.g. replacement of lost habitat).</p> <p>A table of commitments and assurances may drafted and signed by the proponent to ensure that mitigation measures are incorporated and implemented in the final design and construction activities. This table must also be incorporated in the contractor's tender.</p> <p>5.1 Narrative Summary of Project Impacts and Mitigation Measures Table: See Sample Mitigation Table Template Appendix 2</p> <p>5.2 Summary of Commitments Table of Commitments and Assurances</p>
---------------	--

The EA provided for a project that involves cutting of timber, must include a Registered Professional Forester (RPF) breakdown of volume/species to be cut and a 1:5,000 Logging Plan map (LP map) signed and sealed by a RPF. The RPFs LP Map must be superimposed over the sub-division site (or development) map for that project; show the North arrow; the boundary of the reserve; the area in which timber will be cut; the method of harvesting (clear cut, selective or other); identify streams, wet lands, water bodies, archaeological sites, sensitive habitats or SARA Species or other SARA sites on the map, and identify on the map each mitigative measures specified for cutting of timber component of that project. The LP Map must identify who will ensure compliance on site with these mitigative measures during logging & how & when it will be done.

6. Permits/ Approvals, and, Correspondence with Other Government Departments	<p>Provide information on the status of required environmental permits and approvals necessary to undertake the project (e.g. rights of ways, fisheries authorization, navigable waters, sand and gravel and timber permits).</p> <p>When available include correspondence and/or preliminary comments by other government departments (e.g. DFO, EC, Parks Canada, Health Canada, B.C. Ministry of Water Land and Air Protection, BC Ministry of Sustainable Resource Management: Archaeology and Registry Services Branch etc.)</p>
7. Public Participation and Engagement	<p>Document strategies used to assess project input from the First Nation community and/or public. Identify concerns that were raised and how they were addressed and/or mitigated. For First Nations, this may be in the form of a letter from Chief and Council and/or a Band Council Resolution.</p>
8. Summary	<p>Provide a narrative summary of the environmental effects associated with the proposed project. Identify significance (not likely significant or significant). For significant impacts, summarize proposed mitigation strategies and how they will reduce environmental effects. Quantify wherever possible.</p> <p>Where follow-up is recommended, discuss planned follow-up activities. Include a table which shows VECs, project activities, environmental effects, mitigation measures, and reference to supporting documents. For VECs where impacts are found to be not likely significant ensure that justification is provided. Provide a recommendation regarding project viability based on environmental considerations</p> <p>8.1 Summary and Table</p> <p>8.2 Conclusion</p>
9. Appendices	<p>Attach any additional information including Supporting Documents, Other Permits or Approvals, Maps, Figures, Photos, etc</p>
10. Access	<p>It is Proponent's responsibility to obtain assured access to/ egress from the Indian Reserve for all phases of the Project including access to Certificate of Possession Holders' lands provided to ISC.</p>

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Although scoping is part of the EA process for all projects, an EA scoping report is only required for ISC Community Infrastructure Projects and where specifically directed by your ISC environmental or natural resources specialist for ISC Lands and Economic Development.

An EA scoping report is to be a stand alone document which includes the project description, environmental setting, significant environmental issues, valued ecosystem components (VECs), and completed and planned EA investigations. This report is completed during the feasibility stage of a CI Project and when directed by LED and will be used in the assessment of project viability. The following are to be addressed in the EA scoping report.

Introduction	Provide a summary description of the project including construction (site preparation, clearing, trees), operation, decommissioning, and other activities expected during the life of the project. Project proponent contact information including organization, name, mailing address, telephone number, and email address (if available) are required. Provide a list of information sources used.
Maps/Plans	Provide plans showing the geographical location of the project with latitude and longitude, the proposed location(s) of the project within the context of the Reserve and an overall preliminary plan for the project. Include environmentally significant features (e.g. water bodies, forests, significant elevation changes, species ranges, known habitats, etc.) Where appropriate and readily available, inclusion of First Nation nomenclature for place names, flora, fauna, etc. should be considered. Copies of topographic maps and aerial photos/mosaics should be provided where available.

Environmental Setting	<p>Provide a summary description of the existing environment in the project area including landscape, waterbodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc.). Indicate the areas potentially affected by the project. Outline known environmentally significant historical uses and develop a list of VECs for the project. Where multiple sites are being considered during the feasibility stage, environmental restrictions and impacts at each site must be considered and incorporated into the site selection process.</p> <p>Socio-economic conditions should be described if potentially impacted by environmental changes caused by the proposed project.</p>
Environmental Effects	<p>Indicate known and suspected environmental effects of the project on listed VECs</p> <p>Identify any cumulative effects that are anticipated on the basis of initially available information. Include effects likely to result from the project in combination with other pre-existing developments and/or in combination with developments that will be carried out as a direct result of this project.</p>

Studies / Investigation	<p>Describe the scope of work for the planned EA for all phases of the project. Document site assessments completed to date. Identify further investigations which are required to address situations where environmental effects are unknown or to determine appropriate mitigation activities.</p> <p>A determination must be made as to the likely presence of wildlife, birds, aquatic life, flora and/or habitat at risk in the project area. This determination must be made using relevant data base lists, range maps, local knowledge (where available), and other existing information on species known to occur in the project area. Where the range of a species at risk overlaps with the proposed project area, existing information sources must be checked and documented to determine whether actual or potential habitat or residences for these species are present.</p> <p>Example information sources include: the Conservation Data Centre (CDC) for rare element occurrence records, Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the Species at Risk Public Registry for recovery strategies, recovery teams, action plans and management strategies, and the Ministry of Sustainable Resource Management=s Species and Ecosystem Explorer.</p>
Public Consultation	<p>Document consultation with other government departments and agencies. Provide contact information. Outline any additional consultation planned with the community, public, or other government departments and agencies as part of the EA.</p>
Accessory Activities	<p>Accessory activities planned during the design stage must be assessed (e.g. geotechnical, surveys, etc.). Identify activities causing significant environmental impacts on VECs and outline mitigation measures that will be implemented. Note: Accessory activities planned during feasibility and associated mitigation measures must be summarized in the feasibility stage proposal</p>
.	

Appendix 3: Cost Estimates - Definitions

Class “A” Cost Estimate

A Class “A” estimate is based on a quantity take off from the final drawings and specifications. It is used to evaluate tenders and it may also be used as the tool for controlling the construction of a project. A Class “A” estimate is always done at the completion of the design and specifications. It forms the basis for funding submissions for construction/acquisition of the project.

Class “B” Cost Estimate

A Class “B” cost estimate is prepared after the completion of site reviews and studies, and after the development of preliminary designs that show and define all major systems. Class “B” cost estimates are required at the completion of the preliminary design page.

Class “C” Cost Estimate

A Class “C” cost estimate is prepared with limited site information, based on probable conditions affecting the site. It represents the summation of the estimated costs for all known components of the project. It is used for project planning, establishing a more specific definition of project requirements, and for obtaining preliminary project approval. A Class “C” cost estimate is produced at the end of a project Feasibility Study and is generally used to support a funding request for Design.

Class “D” Cost Estimate

This is a “ball park” or “order of magnitude” figure used for preliminary consideration of the proposed project. A Class “D” cost estimate is based on the broad requirements for the project with little or no site information. The figure can be obtained from previous similar projects, or from Capital Specialists and District Engineers who may have estimates on a file from recent projects in other communities. A Class “D” cost estimate is generally used to support a funding request for Feasibility Study.

Appendix 4: Project Implementation and Hiring Professionals

Appendix 4A: Guidelines for Hiring an Independent Project Manager

Appendix 4B: ISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

Appendix 4D: DISC Sample Professional Services Contract [CN2 Template]

Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist (excerpt from EGBC website)

Appendix 4A: Guidelines for Hiring an Independent Project Manager

1.0 Introduction

An independent project manager provides project management services without being directly associated with the consulting firms providing planning, design and construction services. The person hired to perform the duties must have suitable technical and professional qualifications matching the size and complexity of the project. Usually the project manager is either a registered architect or professional engineer with over five years experience in construction project management and has experience successfully managing similar projects. The project manager may be a sole practitioner or may work for a project management company. The project manager is often involved with a project from start to completion, but can also be engaged only during the design or construction stages of a project.

Hiring an independent project manager is often the first significant step to implement a large project. The three main tasks associated with hiring a project manager if using a multiple proposal call are:

- Preparing a terms of reference [TOR] setting out expected roles and responsibilities for the proposed project manager;
- Sending out requests for proposals [RFP] to selected project management firms;
- Evaluating received proposals against pre-determined criteria.

Where a First Nation has established a successful working relationship with an architectural or engineering consultant, they may consider using this consultant to provide project management services until the completion of the Feasibility Stage and defer hiring an independent project manager until the beginning of the Design Stage.

An independent project manager should be at arm's length from the project consultant designers. An independent project manager is an advocate for the First Nation and should not be in collaboration with the design consultant.

Hiring the right person to be the project manager can result in a successful project that:

1. Meets the project objectives of the First Nation;
2. Stays on schedule;
3. Stays on budget.

2. Duties of a Project Manager

The duties of the Project Manager fall under three major headings and involve the following:

2.1 Implementation, Planning, and Project Monitoring

- confirming the project definition and First Nation requirements;
- establishing the project team, roles, and responsibilities;
- establishing lines of communication with all parties throughout the life of the project;
- generating a project strategy for carrying out the project and for developing the project work activities;
- preparing a detailed project schedule;
- monitoring project progress against the schedule and making revisions where necessary;
- preparing the various project submissions for funding approval;
- maintaining project records and files;
- reporting on the status of the project to the First Nation administration and/or Chief and Council;
- evaluating the scope, time, cost, and quality implications of the project and any changes.

2.2 Consultant Services Selection

- writing the terms of reference [TOR] to request proposals;
- determining consultant selection criteria;
- selecting a team to choose a consultant;
- recommending approval for award of contract to the successful consultant and negotiating the terms of the consulting agreement.

2.3 Consultant and Construction Contract Management Services

- providing advice and recommendations on project procurement options [eg. public or invited tender, or construction management in accordance with the First Nation's approved tendering policy];
- ensuring compliance with the terms of the consultant and construction contracts;
- checking and dealing the First Nation's responsibilities for insurance;
- issuing change orders;
- resolving claims and disputes;
- assessing the value of work completed;
- reviewing progress claims and authorizing payments;
- reporting on construction deficiencies to the consultant and contractor and making recommendations for corrective action;
- obtaining final reports, record drawings, warranties, manuals, and completion certificates;
- recommending final payment based on the satisfactory completion of the contract requirements;
- evaluating the consultant and the contractor.

3. Terms of Reference for Hiring an Independent Project Manager

If a First Nation has already established a successful relationship with an individual or firm and does not wish to seek competitive proposals for the position, the terms of reference used to hire a project manager can be relatively brief and informal. However, as a minimum they should set out the duties of the project manager, as described above, and also include:

- Description of specific project management services required [including duration of services];
- Specifying minimum qualifications (e.g. the project manager must be either a professional engineer or a registered architect licensed to practice in British Columbia, the minimum number of years of experience, etc.);
- Providing any relevant project information [eg. reports or studies] or special or unusual project issues that will be helpful to the individual or firm submitting a proposal;

- Listing members of the First Nation project team;
- Identifying a proposed schedule;
- Specifying the terms of payment and cost control.

4. Requesting Proposals

Prospective project managers asked to submit proposals should provide information under the following headings. If a First Nation has established a successful relationship with an individual or firm and is proceeding on a sole source basis, the following information should still be submitted to the First Nation in a proposal for services.

- names and related experience of staff to be part of the project team;
- a work plan outline;
- anticipated project schedule;
- proposed fees

For more complex projects, additional information should be provided regarding:

- understanding of the project;
- work plan and associated work activities;
- references;
- project staffing plans;
- staff résumés;

5.0 Evaluating Proposals

Criteria normally used to evaluate proposals are as follows. Weights are often assigned to the criteria to establish a comparative level of criteria importance. Cost of services is generally not weighted as a primary criteria. In comparing proposals, the quality of the services and the experience of the personnel are considered the key criteria.

- Understanding of the project;
- Scope of services, work plan, and schedule;
- Management of the provided services;
- Consultant team;

- Qualifications and experience of the firm;
- Cost of services.

6.0 Project Management Fees Provided by DISC

Fees requested for project management are part of the project approval process and will be reviewed along with project submissions. The maximum allowable fee for the combined total of project management and local project coordination is 3% of the construction cost. Disbursements would be additional expenses. Fees which are considered eligible for reimbursement may be much less than 3% and will be based on the size of the project and the services provided as detailed in the submitted project management proposal.

If an independent project management is engaged for the feasibility stage, an initial proposal for project management services only for the feasibility stage can often simplify the process by eliminating the uncertainty to forecast future project costs and complexity. Project management fees can be reviewed and revised through all project development stages.

Appendix 4B: DISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Purpose:

This document provides parameters for First Nations to procure a consultant to provide professional consulting services for the development and implementation of capital projects funded by the DISC Capital Facilities and Maintenance Program [CFMP].

General:

The following procedures are recommended when engaging a consultant:

1. Written Terms of Reference [TOR] to define the assignment;
2. First Nation acceptance of a written proposal from the consultant which includes assignment deliverables, schedules and fees;
3. Written, standard contract signed by the First Nation and the consultant which includes dispute mechanisms and termination clauses and directly references the written proposal submitted by the consultant;
4. Confirmation of consultant personnel who will work on the assignment;
5. On-going process for monitoring schedule and costs [written].

Engaging a consultant without the written acceptance of a documented proposal to define the scope of the assignment and to determine a schedule and fees is actively discouraged. Verbal communication and a handshake are not considered to be in the best interests of meeting mutual expectations and an ongoing professional relationship.

A proposal submitted from a professional consultant can be subsequently revised based on mutual discussions between the First Nation and the consultant before becoming part of the contract. There may be a revision in fees due to proposal revisions.

Definitions:

Terms of Reference [TOR]: A description of the assignment to be completed by a professional consultant. A TOR can be verbal, but is almost always written to document a common understanding of the assignment.

Proposal: A written response to a TOR from a professional consultant identifying how the assignment will be carried out to achieve the specific project objectives. The proposal will generally include experience of the firm, personnel to be assigned to the project, work processes to be completed, a proposed schedule and proposed fees.

Request for Proposal [RFP]: An invitation to a number of professional consultants [or one professional consultant in selected cases] to submit a proposal in response to a written TOR. A set of criteria which will be used to evaluate the firms submitting proposals should be included with the RFP.

Total DISC Project Cost [TIPC]: All DISC costs for all stages including contingencies as applicable.

Minor Projects: Estimated TIPC < \$1.5M

Major Projects: Estimated TIPC > \$1.5M

Consultant Selection:

The process for selecting a consultant will be influenced by the factors listed. A larger, more complex project will generally result in a longer and more stringent selection process.

- Complexity of the project
- Size of the project
- Expected consultant costs
- Previous working relationship with a consultant
- Expertise of a consultant
- Availability of consultant to assign time and resources to the project.

Consultant selection will generally follow one of two processes:

1. Multiple source selection – numerous consultants [generally 3 to 5] are solicited to submit proposals to complete the assignment. The proposals received are comparatively assessed to award the contract to the professional consultant with the “best value” proposal which meets the objectives of the TOR;
2. Sole source selection – one consultant is solicited to submit a proposal to complete the assignment.

Consultant Costs:

The Association of Professional Engineers and Geoscientists in B.C. [APEGBC] and the Architectural Institute of BC [AIBC] publish guidelines for determining professional fees. Professional costs can include project management fees, design fees, subconsultant fees and expenses/disbursements. Fees for large value projects are generally considered on a % basis while small value projects generally are costed on an hourly basis.

Procurement Guidelines:

1. Feasibility Stage Professional Services

Procurement of professional consultants for any value of project can be a sole source selection or a multiple source selection;

2. Design Stage Professional Services

Procurement of professional consultants should be in accordance with the criteria listed below. Unless specifically required in the feasibility stage contract [not usual and not recommended], there is no obligation for a First Nation to engage the feasibility stage consultant for design stage professional services.

- Minor Projects: Multiple source selection or sole source selection;
- Major Projects: Multiple source selection is the recommended approach.

3. Construction Stage Professional Services

Engaging the design stage consultant based on a sole source selection to provide construction stage professional services is highly recommended.

If there is a working relationship issue between the First Nation and the design stage consultant and the procurement of another professional consultant is required at this stage, procurement of a professional consultant for any value of project can be multiple source selection or a sole source selection.

Appendix 4C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

PROPOSAL EVALUATION -				
Evaluator:	Date:			
Rating Factor:	Excellent	9 to 10 = Item is addressed in a fashion that is clearly superior.		
	Good	7 to 8 = Item is addressed in completeness, is well defined and documented - no faults, weaknesses, or deficiencies that would affect		
	Fair	5 to 6 = Item is addressed in a clear and relatively complete fashion (minor uncertainties or weaknesses may be noted).		
	Below Avg.	3 to 4 = Item is addressed, though details may be lacking or deficiencies may exist that might limit the success of the project.		
	Poor	1 to 2 = Item is poorly addressed through insufficient documentation, or proposal does not meet required standards for skills or det-		
	Unacceptable	0 = Item is not addressed in proposal or is addressed in a clearly unacceptable fashion.		
CATEGORY	Rating	Weight	Score	Totals
1. Understanding of Project Scope and Objectives [Weighted Max. Score = 20]				
1. Appreciation of Project Complexity		0.4		
2. Analysis of Project Goals		0.4		
3. Identification of Special Issues		0.4		
4. Emphasis on Site Visit/Meetings with Nuxalk Nation and Adjacent Neighbour		0.4		
5. Presentation/Clarity		0.4		
6. Completeness (Meet the proposal requirements/checklist)				
2. Proposed Work Plan and Schedule/ Project Management [Weighted Max. Score = 30]				
1. Organization of Team		0.5		
2. Project Methodology		0.5		
3. Work Plan		0.4		
4. Schedule Management		0.4		
5. Budget Management		0.4		
6. Communications / Local Liason		0.4		
7. Risk Management		0.4		
3. Experience and Qualification of team members [Weighted Max. Score = 25]				
1. Technical Experience of General Consulting Firm[s] /Team Members		0.5		
2. Technical Experience of Assigned Personnel / Subconsultant(s) for Collection Systems		0.3		
3. Technical Experience of Assigned Personnel / Subconsultant(s) for WW Treatment Systems		0.3		
4. Technical Experience of Assigned Personnel / Subconsultant(s) for Ground Disposal Systems		0.3		
5. Technical Experience of Assigned Personnel / Subconsultant(s) for Outfalls		0.3		
6. Knowledge of General Consulting Firm on Federal, Provincial Regulatory Requirements		0.4		
7. References/Past Client Experiences of the Consultant or Team Members/NonFNsClient Feedback		0.4		
4. Experience of Team Members on Similar Projects [Weighted Max. Score = 15]				
1. Past Experience with FNs/INAC Projects and Processes		0.5		
2. Past Experience on Similar Projects		0.5		
3. References / First Nations Client Experience / INAC Feed Back		0.5		
5. Dedicated Hours and Allocation for Most Appropriated Use [Weighted Max. Score = 20]				
1. Hours for Site Work (investigation) Justified		0.4		
2. Hours for Meeting Justified		0.4		
3. Hours for Report Writing Justified		0.4		
4. Hours for Traveling Justified		0.4		
5. Hours for Project Management Justified		0.4		
6. Proposed Costs are reasonable and Cost Effective [Weighted Max. Score = 10]				
1. Cost on Technical Works Justified		0.2		
2. Cost on Travel Justified		0.2		
3. Cost on Administration Justified		0.2		
4. Cost on Project Management Justified		0.2		
5. Overall Cost Effectiveness		0.2		
7. Cost in Comparison with Other Proposals [Weighted Max. Score = 15]				
(The lowest cost = 15. Second lowest cost = 14, 3rd lowest cost = 13 ...)				
PROPOSAL RATING [MAX. SCORE = 135]				

Appendix 4D: ISC Sample Professional Services Contract [CN2 Template]

The document **CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting:

<https://www.sac-isc.gc.ca/eng/1493133359279/1533649821050>

Appendix 4E: Advice on Hiring a Professional Engineer or Professional Geoscientist [excerpt from APEGBC Website]

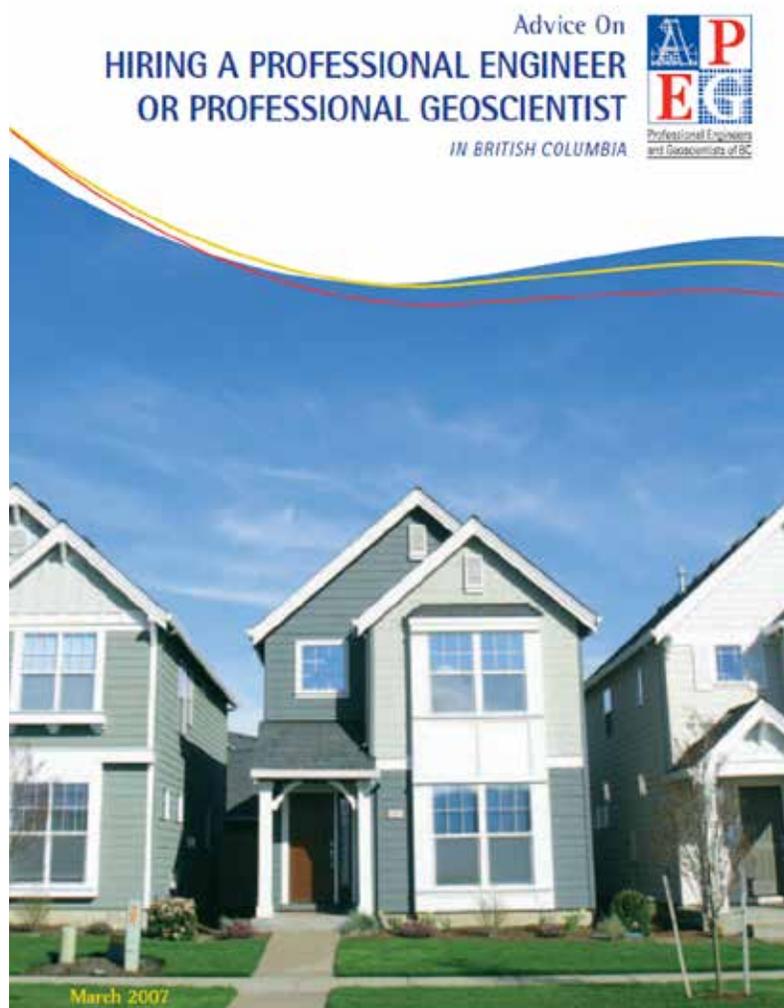




TABLE OF CONTENTS

Introduction	2
Who Should Read this Consumer Guide?	2
APEGBC – Who We Are and What We Do	3
What Types of Projects May Require an Engineer?	4
What Types of Projects May Require a Geoscientist?	4
Before Starting Your Project	5
What is Required of the Professional?	6
Understanding the Role of the Professional	7
Relationship Between You, the Professional, and the Contractor	8
Selecting a Professional	9
The Contract	11
During and Post-Construction	12
What If There is a Problem?	13
Resources	15

APEGBC gratefully acknowledges the assistance of the Consulting Engineers of BC in the preparation of the Guide.



Introduction

This Guide is intended to help you:

- Determine if your project requires the services of a professional engineer or professional geoscientist (a “Professional”)
- Understand what APEGBC can do for you
- Find out if the prospective engineer or geoscientist is licensed to practice in BC
- Avoid problems by highlighting useful tips for selecting, hiring and working with a Professional
- Determine how to deal with problems that may arise

Who Should Read this Consumer Guide?

This Guide addresses the typical homeowner project and contains general information. It may not be appropriate for all projects that require the services of a Professional. The advice and information in this publication is not suitable for large, complex and/or commercial projects. **APEGBC assumes no responsibility for any consequences arising from the use of the information contained in this guide.**

For more detailed information or for larger, more complex and/or commercial projects, we recommend you consult the Management of Buildings Project Manual (Please note that all websites are provided at the end of this publication).



You should carefully review this guide PRIOR TO hiring a Professional. Careful selection of the professional best suited to your project, and clear communication in the beginning, is the foundation of a successful project.



APEGBC – Who We Are and What We Do

The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is responsible for the licensing and conduct of professional engineers and professional geoscientists (Professionals). The primary duty of APEGBC is to protect the public by regulating the practices of professional engineering and professional geoscience in the province. APEGBC's powers and functions are described in its governing legislation: the *Engineers and Geoscientists Act* and the Bylaws of the Association, which include a Code of Ethics.

The Act, Bylaws and Code of Ethics are available online at www.apeg.bc.ca, and will be referred to from time to time in this publication.

What APEGBC Can Do:

- Help you determine if a person is licensed as a Professional in BC and the Professional's area of expertise via the searchable member directory available online
- Advise you regarding a Professional's disciplinary history
- Investigate complaints regarding a Professional's conduct, as provided in the Act and the Bylaws

What APEGBC Does Not Do:

APEGBC only regulates individuals, not businesses.

- Provide information on firms or help you to pick a firm or Professional
- Resolve issues with contractors on your behalf
- Resolve issues regarding your contract or negotiations
- Demand performance or action of a Professional



What Types of Projects May Require an Engineer?

Here is a partial list of typical building projects and upgrades where a professional engineer may be required:

- Foundations
- Excavations
- Grading plans
- Drainage
- Retaining walls
- Structural design including beams and trusses
- Drinking water, storm water and sewage system design
- Additions to existing buildings
- Pollution and contamination concerns
- Slope stability concerns

What Types of Projects May Require a Geoscientist?

The practice of professional geoscience includes the investigation of geological conditions.

For more information on geoscience and the work undertaken by professional geoscientists, see APEGBC's website: www.apeg.bc.ca.

Here is a partial list of projects where a professional geoscientist may be required:

- Foundation investigations
- Grading plans
- Groundwater and drainage investigations
- Slope stability investigations
- Flood and debris hazard assessments
- Pollution/contamination investigations
- Assistance with archaeological investigations

There is some overlap between the services provided by engineering geologists and geotechnical engineers. However, only engineers can provide design services.



Before Starting Your Project

- Get in contact with your local municipal or regional building/permit and planning departments to determine whether your project requires the services of a Professional. These departments have knowledge about local conditions and will be able to advise you on whether permits or other documents are required before your project can proceed.
- Only consider hiring professionals with the appropriate experience and training for your project; different types of engineering and geoscience can be very specialized.
- Use APEGBC's searchable member directory to help determine whether you are dealing with a registered member of the Association, and also what kind of engineering or geoscience the person practices: www.apeg.bc.ca/members/search.html.
- Consider if the expertise of a Professional may benefit your project, even if a Professional is not required by law.
- Know your **RESPONSIBILITIES** as well as your **RIGHTS**.





What is Required of the Professional?

Adherence to the Code of Ethics of the Association

All members of APEGBC must comply with the Code of Ethics. If your project requires the services of a professional engineer, the following are required:

The BC Building Code applies everywhere in British Columbia except the City of Vancouver.

In the City of Vancouver, the Vancouver Building Bylaw governs.

Letters of Assurance

A Letter of Assurance is a form signed and sealed by a professional engineer who accepts responsibility for the design and field review of the project. These forms are legal documents based on the authority of the BC Building Code (BCBC) or the Vancouver Building Bylaw (VBB).

Field Reviews

Field reviews are a requirement under Letters of Assurance and APEGBC's "Quality Management" bylaw (Bylaw 14(b)), and must be undertaken by professionals during construction. A field review typically consists of site visits during construction to confirm design assumptions and observe quality and progress of the elements designed by the professional engineer. The engineer must also prepare site visit reports outlining observations and deficiencies in the work and bring them to the attention of the contractor's site representative.

A concept review of the structural design of your project may be required, though there are exemptions for simple structures.

The City of Vancouver also carries out structural audit reviews on selected projects within the City of Vancouver.

Note: You need to confirm with the local authority or the government agency overseeing your project what it requires from the Professional.



Understanding the Role of the Professional

While only a professional engineer or geoscientist can legally provide engineering or geoscience services, work may be performed by other members of the Association, or by other individuals acting under the “direct supervision” of a Professional. The legislation that governs the professions states that any person can assist in the performance of any professional service or work described in the “practice of professional engineering” or “practice of professional geoscience” definitions so long as that work is directly supervised by a Professional.

The duties and obligations of the Professional should be established by a contract between the client and the Professional.

Typically, engineers-in-training (EITs) or Geoscientists in training (GITs), technologists and technicians carry out work under the direct supervision of a Professional.



Professionals are neither required nor expected to be on-site at all times. Letters of Assurance require the engineer to conduct sufficient field reviews in order to confirm that the project (or parts of the project the engineer is responsible for) substantially complies with the engineer’s drawings and the appropriate Building Code. There is no specified level of inspection – the standard varies depending on the nature of the project.

A Professional may **not** be qualified to perform certain aspects of a project. In such a circumstance, the Professional **must** refuse to do such work, but will typically engage or recommend a Professional with the required expertise.



Relationship Between You, the Professional, and the Contractor

If your project is complex or large enough that it requires the services of a Professional, chances are that you will also have to engage the services of a contractor.

If the contractor hires the Professional, it is important to note that any disagreement between you and the contractor may affect the services provided by the Professional, which can lead to significant delay of your project.



If you did not hire the Professional directly, the person is not reporting to you and it is not grounds for a complaint of unprofessional conduct if the Professional stops work at the instruction of his/her client, the contractor.

To maintain the most control over your project, hire the Professional and the contractor directly and separately.



Selecting a Professional

There are several sources that can aid you in selecting the Professional you require, including:

- Asking friends and family for referrals
- Asking your contractor for referrals
- Contacting the Consulting Engineers of BC
- Phone Book
- Internet

The Consulting Engineers of BC has information on selecting a professional engineer at: www.cebc.org/selecting.html.

Best Practices

The Consulting Engineers of BC (CEBC) has information on selecting a professional engineer at www.cebc.org/selecting. There are steps that you can and should take before you hire a Professional so that your project proceeds in a safe and timely manner. APEGBC recommends that professionals be selected based on qualifications rather than on price alone.

Deciding on the parameters of your project sooner, rather than later, can help you to avoid problems down the road – including disagreements with those you have hired. Below are some suggested “best practices” to take into account when considering hiring a Professional.

It is important to recognize that costs associated with home improvements or projects are generally never fixed.

Before hiring a Professional, consider:

- What is the scope of your project?
- What do you hope to accomplish?
- How much are you willing to spend?
- Do you have to take into account any time constraints?
- What portion(s) of your project require a Professional?



Selecting a Professional cont'd

When Discussing Your Project With a Professional:

- Take notes and listen carefully
- Ask for references and follow up
- Determine whether the Professional has undertaken similar work in the past
- Ask whether the Professional believes a permit may be required to undertake the project
- Ask for a written proposal and a copy of the Professional's standard contract
- Ask about the costs associated with the project – What could increase or decrease the costs?
- Ask about the fees for all phases of the project
- Request a copy of the Professional's Certificate of Insurance





The Contract

A written contract helps to protect you and the Professional if problems arise.

The contract should include:

- Description of work to be carried out
- Description of compensation, and the timing and method of payment
- Contact information
- Description of the procedures governing additional services (for example, requiring all work order changes to be in writing and initialled by both parties or by agreeing that work-order changes may be approved verbally with written follow-up confirmation)
- Description of the procedure to be used by either party to terminate the contract

APEGBC Bylaw 17 requires members to disclose in writing whether or not they have insurance and whether that insurance is applicable to the services in question.

Don't be afraid to ask questions! Make sure you feel confident about the Professional you are hiring *before* you sign any agreement.

The contract may also include:

- Who is responsible for paying for other people's services
- What other charges may be involved and who will pay them
- Who will obtain necessary permits, approvals, etc.
- The starting and completion dates - but keep in mind that unanticipated delays can occur
- Ownership or custody of the project documents

A standard form contract is available through the Association of Consulting Engineers of Canada (ACEC) website, www.acec.ca



During and Post-Construction

- Keep records of the project such as a log or calendar
- Keep copies of written agreements and correspondence
- Keep copies of bills, invoices and cancelled cheques
- Keep copies of plans, permits and reports
- Keep copies of municipal inspection reports
- Keep copies of lien notices, if applicable

A builders' lien may be filed against your property as security for unpaid fees.

APEGBC publishes a number of professional practice guidelines, each particular to a field of engineering. These guidelines outline project organization, responsibilities and expectations for professional practice. There is a section devoted to the responsibilities of various participants in a project, including responsibilities of the owner. These responsibilities include cooperation with the Professional regarding the establishment of a realistic schedule for the provision of services. The guidelines are available at: www.apeg.bc.ca/library/practiceguidelines.html.





What If There is a Problem?

Most problems between a client and a Professional arise from communication issues. The scope of services, the quality of services and the timeliness of those services can lead to misunderstandings.

Meet with the Professional to Discuss Problems

If you encounter a problem (i.e., poor communication, unsure of what is going on, rising costs, etc.), the first step is to set up a meeting with the Professional and discuss your concerns.

When meeting, be sure to:

- List specific concerns or deviations from your agreement
- Present records of the problem
- Request specific action
- Allow time for a response

Peer Review

You may wish to arrange, at your own expense, an independent review of the services performed. This review would be undertaken by another Professional and typically encompasses a review of drawings, calculations and plans that have been prepared.

Dispute Resolution

If you cannot solve the problem on your own, you may wish to hire a lawyer who can act on your behalf to resolve the matter or, if necessary, pursue the matter in court.

Claims up to \$25,000 can be dealt with in Small Claims Court. Most contractual disputes are best dealt with through the court system. APEGBC can investigate the underlying reasons for the dispute to see if they warrant disciplinary action. Similarly, negligence and incompetence are more often dealt with through the courts alone unless the errors or omissions are significant enough to constitute unprofessional conduct.

The BC Court Services website has information on how to file in Small Claims Court (not exceeding \$25,000).



What If There is a Problem cont'd

The complaint procedure and a flowchart are on the APEGBC website.

When to Contact APEGBC

APEGBC can investigate allegations of:

- A breach of the Act, Bylaws or Code of Ethics
- Negligence or incompetence
- Fraud, deceit or misrepresentation

APEGBC will not force the Professional to take any particular action. Our mandate and role is to investigate conduct and where warranted, bring disciplinary action against the Professional.

Do your homework. When preparing a complaint for submission to APEGBC, describe the problem and what you have done to try and resolve it. List facts in chronological order and provide as much detail as possible; keeping a log or calendar will make this much easier. Submit copies of plans, reports and any other documents you have that are related to your project and that can be of use to the Association in assessing your complaint. Also, identify any other individuals who have knowledge of the problem, including city or municipality employees and contractors.

The investigation of complaints can be a lengthy process. The more clear and complete the complaint, the easier it is to investigate.



Resources

- Association of Consulting Engineers of Canada website: www.acec.ca
- Association of Professional Engineers of BC website: www.apeg.bc.ca
- BC Building Projects Committee, Management of Building Projects: An Industry Practice Manual, First Edition (see also www.bcprojectsmannual.com)
- BC Court Services website: www.ag.gov.bc.ca/courts
- BC Dispute Resolution Office website: www.ag.gov.bc.ca/dro
- BC Supreme Court Self-Help Centre website: www.supremecourtselfhelp.bc.ca
- Canadian Council of Professional Geoscientists website: www.ccpge.ca
- City of Vancouver Bulletin 2000-064-BU Structural Audit Reviews:
www.city.vancouver.bc.ca/commsvcs/licandinsp/bulletins/2000/2000-064.pdf
- City of Vancouver Emergency Preparedness website: www.city.vancouver.bc.ca/corpsvcs/emerg
- City of Vancouver general information regarding License and Inspection Bulletins:
www.city.vancouver.bc.ca/commsvcs/licandinsp
- City of Vancouver website: www.vancouver.ca
- Consulting Engineers of BC website: www.cebc.org
- Courts of British Columbia website: www.courts.gov.bc.ca
- Engineers Canada website: www.engineerscanada.ca
- Get It In Writing website (Hiring a Contractor): www.hiringcontractor.com
- Government of BC Building Policy Branch website: www.housing.gov.bc.ca/building
- Government of BC Housing Policy Branch website: www.housing.gov.bc.ca/housing
- Government of Canada Public Safety website: www.safecanada.ca
- Guide to the Letters of Assurance in the BC Building Code:
www.housing.gov.bc.ca/building/guidelo1.html
- Links to websites for most municipalities and regional districts in BC
www.civicnet.bc.ca/siteengine/ActivePage.asp?PageID=88
- McLachlin, Wallace and Grant, The Canadian Law of Architecture and Engineering, Second Edition (Toronto and Vancouver: Butterworths, 1994)
- Provincial Emergency Program website: www.pep.bc.ca

Appendix 5: Terms of Reference – Design Stage [Sample]

TERMS OF REFERENCE PROVISION OF ENGINEERING SERVICES PRELIMINARY AND
DETAILED DESIGN STAGE OF MUNICIPAL WORKS FOR THE

[Insert Name]

TABLE OF CONTENTS

1. Introduction
2. Background
3. Objectives
4. Project Team
5. Scope of Work
6. Execution
7. Terms of Payment

1.0 INTRODUCTION

[Insert Band Name] seeks the provision of engineering services for the preliminary and detailed design including the development of drawings, specifications and tender documents for [insert project name].

The Consultant will adopt a team approach in working together with [Insert Band Name] representatives as well as Indigenous and Northern Affairs Canada (DISC) staff to develop the preliminary and detailed design.

2.0 BACKGROUND

[Insert project description and background]

3.0 OBJECTIVES

The objective of this contract is to provide all planning and engineering services required for preliminary and detailed design of the above mention project.

[Elaborate and include project objectives]

4.0 PROJECT TEAM

4.1 Band

The Band refers to the [insert band name]. The contract for engineering services is between the Band and the Consultant. These Terms of Reference form part of the contract between the Band and Consultant.

4.2 Project Manager or Project Leader

The project manager/leader is a representative of the Band engaged to manage the contract between the Band and Consultant as well as the funding agreement between the Band and DISC.

4.3 Consultant

The Consultant is the individual, firm, or corporation identified in contract to complete the preliminary and detailed design.

4.4 DISC Engineer

The DISC engineer is a technical representative of DISC. The DISC engineer will review the preliminary design and detailed design for compliance with applicable standards, regulations and guidelines, sound engineering practice, operational and maintenance issues and overall cost.

5.0 SCOPE OF WORK

The scope of work includes but is not necessarily limited to the following:

5.1 Preliminary Design

5.1.1 Preliminary Design Report

The Preliminary Design Report shall contain the following information:

- a. Updated project description and project justification —any deviations to the project description and project justification stated in the previous feasibility study are to be identified and explained.
- b. Preliminary design investigations — Complete site investigations that are necessary for the detailed designs. These investigations may include but are not necessarily limited to:
 - » Geotechnical Investigation
 - » Site Survey
 - » Environmental Investigation
 - » Archaeological Assessment

The additional field investigation and research completed should include identifying the design concepts assessed, the investigation methodologies used, the results obtained, and the conclusions and recommendations determined.

- c. Preliminary design criteria — Provide a summary of the preliminary design criteria and calculations used in the design such as utility system demands, building loadings, treatment system capacities, populations and areas served, expected treatment quality parameters, applicable codes and standards and any other factors to be used in the design process. The DISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered.
- d. Cost estimate — Include a Class “B” cost estimate of all project costs from the feasibility stage to the post construction stage. Cost estimate definitions are described in Appendix 1 - Cost Estimates.
- e. Comments from Regulatory Agencies — Identify, contact, provide information and seek comments from regulatory agencies which are relevant to or may have an interest in the project. Include copies of any correspondence with regulatory agencies providing their review comments.

Depending on the type of project, the regulatory agencies may include:

- » First Nations Health Authority— drinking water, wastewater and solid waste disposal;
 - » Environment Canada — wastewater, solid waste disposal, Species at Risk issues;
 - » Fisheries and Oceans Canada —all works impacting fish bearing waters;
 - » Transport Canada — navigable waters;
 - » BC Ministry of Agriculture and Lands — lands management;
 - » BC Ministry of Environment — fish and wildlife;
 - » BC Ministry of Transportation— public road access, and works involving public roads.
- f. Land Encumbrance Confirmation—confirm the land tenure identified in the feasibility study. Land encumbrance issues, such as establishment of a right-of-ways, easements, utility permits, etc., need to be addressed.
 - g. Permits — identify any permits required for construction. Communications with the issuing authorities should be documented to indicate that the permits will be provided at the construction stage. Depending on the construction activities, permits may include timber permits, gravel extraction permits, solid waste disposal permits, highways permits, burning permits and provincial land tenure permits.

Timber permits and gravel extraction permits issued by DISC require significant processing time. Advance planning for obtaining these permits is recommended. Practical Guide to Capital Projects—Timber Permits provides additional details regarding the permit process and the associated environmental assessment requirements.

5.1.2 Preliminary Design Drawings and Outline Specifications

Provide sufficient detail to adequately describe the scope, limit, location and operation of the proposed project. For example, the preliminary drawings for a water treatment plant should include a site plan with the building location, inlet/outlet piping, site services, building floor plan, building sections and elevations, flow diagram, schematic piping and instrumentation diagrams, hydraulic grade line profile, and building equipment layout. Outline specifications are required to adequately describe work components.

5.1.3 Environmental Detailed Study

The Environmental Detailed Study details the environmental impacts, mitigation measures and monitoring requirements related to the construction and operation of the proposed works.

5.2 Final Design

5.2.1 Final Design Report

The Final Design Report shall contain the following information:

- a. Updated Project Description and Project Justification — any deviations to the project description and project rationale stated in the previous funding applications, the feasibility study and preliminary design reports are to be identified and explained.
- b. Design Criteria — summary of the final design criteria and calculations used in the project design, applicable codes and standards and any other salient factors used in the design process. The DISC Design Guidelines provide additional information requirements for water, wastewater and road projects. Note that the water and wastewater design guidelines contain a checklist useful to designers to ensure that specified design aspects are considered.
- c. Cost Estimate — include a Class “A” estimate of total project costs for all stages (feasibility to post construction) including a breakdown of

- d. proposed funding to be provided by DISC and a description of any other funding sources. A contingency allowance of 10% of the estimated project construction cost is generally included in this estimate..
- e. Project Schedule — Include an updated schedule for the completion of the project with time durations provided for the tender period, contract award, construction and post construction phases.
- f. Commissioning Plan — Outlines the consultant’s proposed process to inspect, test and prepare the completed works for their intended operation throughout their design life. See the applicable design guidelines for commissioning requirements for specific projects. Including a training component for First Nations operator during the commissioning process is recommended.
- g. Draft Operation and Maintenance (O&M) Manual — Required to provide direction to potential operators for the operation and maintenance of a facility during construction and subsequent to facility completion before a finalized O&M manual is produced at project completion. Refer to the DISC design guidelines for water and wastewater for the contents expected in an O&M manual.
- h. O&M Training Plan — Provide a training plan for O&M operators that includes some level of training during project construction so that operators are prepared to safely and effectively operate and maintain the new project facilities upon project completion.
- i. O&M Cost Estimate —A Class “A” estimate of the O&M costs for the completed project is required along with a determination of funding available from DISC and other First Nation revenues. For major assets such as water treatment plants, wastewater treatment plants and schools, the estimated O&M funding required to operate and maintain the facility (until programmed DISC O&M funding is available through a funding arrangement) is to be determined, and this amount is to be included in the total project costs.
- j. Land Encumbrance Check — Provide a current land encumbrance check if the previous check has exceeded the one year validity period. Agreements for constructing on non-band lands must be documented. Where any proposed works encroach on privately held (non-band, certificate of possession) lands, a legal right-of-way will be required to ensure the First Nation’s right of access to the lands for the purpose of constructing, operating and maintaining the works.
- k. Permits — include finalized permits or draft permits/authorizations (DFO) in sufficient detail to be readily finalized should the project proceed to the construction stage.
- l. Comments from Regulatory Agencies — include copies of correspondence from applicable regulatory agencies. Any conditions applied by these

regulatory agencies are to be incorporated into the design to the approval of the agencies prior to the project proceeding to the construction stage.

5.2.2 Final Design Drawings, Specifications and Tender Documents

Final design drawings, specifications and tender documents must be complete and have sufficient detail for a contractor to bid on the project and construct the project strictly in accordance with the specified requirements.

All required environmental mitigation measures should be clearly identified in the design drawings and specifications. All drawings and specifications must be signed and sealed by a professional registered to practice in BC.

5.2.3 Environmental Detailed Study (Finalized)

Submitted with any required amendments to incorporate mitigation measures into the project final design.

6.0 EXECUTION

6.1 Project Implementation

6.1.1 Review the existing documents, reports, drawings, and correspondents relevant to the project.

6.1.2 Visit the site and meet with First Nation representatives to become acquainted with site conditions and the concerns of the Band, including population expansion, future demands on services, potential land acquisitions, existing land encumbrances and other relevant design parameters.

6.1.3 Carry out all required field survey work and investigations.

6.1.4 Complete the preliminary and detailed design work in conformance with applicable guidelines, standards and regulations including:

- DISC Design Guidelines for Water Works in BC Region,
- DISC Design Guidelines for Wastewater Systems in B.C. Region
- DISC Design Guidelines for Road Works in B.C. Region,

6.1.5 Consult with Band to select appropriate service level for the project. Refer to DISC Level of Service Standard (LOSS) publications to identify the level of service that will be funded by DISC and consult with the band to determine if they are willing to fund a higher level of service.

6.1.6 The preliminary and detailed design stage of the capital project will be divided into two phases:

- Preliminary Design Phase
- Detailed Design Phase

The deliverables for each phase will be submitted in draft form for review and comments prior to proceeding to the next phase. The Project Manager or Project Leader will consult with the Band and forward the deliverables to DISC for comments following each phase. The consultant shall respond to all comments prior to finalizing the deliverables.

6.2 Deliverables

	Deliverable	Format	Reviewer
Preliminary Design Phase	Preliminary Design Report <ul style="list-style-type: none"> • Project Description & Justification • Preliminary Design Investigation • Preliminary Design Criteria • Class “B” Cost Estimate • Land Encumbrance Check • Permits and Comment from Regulatory Agencies 	One paper and one digital - signed and sealed	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Preliminary Design Drawings and Outline Specifications	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Environmental Assessment Study Report	One paper and one digital - signed	First Nations and DISC Project Engineer
Detailed Design Phase	Final Design Report <ul style="list-style-type: none"> • Project Description & Rational • Design Criteria • Class “A” Cost Estimate • Schedule • Commissioning Plan • Draft O&M Plan • Class “A” O&M Cost Estimate • O&M Training Plan • Land Encumbrance Check • Permits and Comment from Regulatory Agencies 	One paper and one digital - signed and sealed	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Environmental Detailed Study (Finalized)	One paper and one digital - signed	First Nations and DISC Project Engineer
	Tender Documents and Specifications	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)
	Design Drawings	One paper and one digital	First Nations and DISC Project Engineer (Water/Wastewater Project Engineer)

6.3 Schedule

Time is of the essence.

The work stipulated in these Terms of Reference shall commence within 2 weeks of notice of award.

The work stipulated in these Terms of Reference shall be completed by [completion date].

6.4 Project Cost Control

The consultant is responsible for managing the overall cost of the project. If at any time the scope of the project is changed resulting from unforeseen design constraints or requests to modify the design which will affect the overall cost of the project or the O&M cost, the consultant shall immediately notify the Project Manager/Leader and provide an explanation and updated cost estimated.

7.0 TERMS OF PAYMENT

7.1 Payments will be based on the contract.

7.2 The Consultant will on a monthly (or other approved) interval, submit an invoice detailing the services performed. Invoices shall show the hours charged by each person for each task and the hourly rate. Back-up for these items, or itemized receipt, shall be provided with every invoice. The proportions of hours spent by team members on tasks shall generally conform to the proposal.

7.3 The Consultant's proposal shall include an allowance for meetings, discussions, and responding to review comments.

7.4 No payment will be made on the cost of work incurred to remedy errors or omissions for which the Consultant is responsible.

7.5 If at any time during the progress of the work, the Consultant considers that the cost figure outlined in the contract will be exceeded, either by some unforeseen event or change in the Terms of Reference, he shall immediately provide the Project Manager with complete details. **AT NO TIME SHALL THE CONTRACT FEE (i.e. the ceiling cost figure) BE EXCEEDED WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE PROJECT MANAGER OR PROJECT LEADER.**

Appendix 6: Risk Assessment Tool [RAT] Sample

Major Capital Project Risk Assessment Tool

Overall Project Risk Assessment and Risk Mitigation Plan

Date: [Redacted] ** To enter values for R/R in Column E, scroll down to Explanatory Notes at Row 66*

First Nation Name: [Redacted] *** Per Tab 4, use the suggested weights provided in Column H on this spreadsheet.*

Region: BC **** Regions may amend Column H but must justify and document the amendment.*

Project Name: [Redacted] ***** Risk Score = Unadjusted Percent Risk (UPR) = (Sum (RRisk x WTRisk) x 100) / (Sum (RRisk x WTRisk))*

Project No.: [Redacted] ****** Percent Risk = Adjusted Percent Risk (APR) = (UPR x (Sum (RRisk x WTRisk)) / Sum (RRisk x WTRisk))*

Total AVNDG funding: [Redacted]

Funding spent to date: [Redacted]

Funding spent to date project: [Redacted]

Project Percent Risk: 0.0 Low Risk As of [Redacted]

Contingency for risk: \$ 0.00

To find Project Risk, scroll down to Explanatory Notes at Row 66

Project Risk Element	Risk Rating (R/Risk)	Suggested Weight (WTRisk)	Unadjusted Risk Rating (URRisk)	Risk Level	Description of Potential Risks	Suggested Risk Mitigation Strategy	Risk Cost (\$,000)	Rationale on how the risk cost estimate was calculated as well as what the sum is meant to cover.	Risk Expiry Date (YYYY-MM-DD)	
1 General Assessment (Community Capacity)	0	1	0	Low Risk	The community was assigned a General Assessment score of 0 pursuant to the General Assessment Workbook.	No action required, continue to monitor.	0	0	2014-11-27	
2 Consultant/ Contractor Capacity (Project Management)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the management of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	2014-11-27	
3 Consultant/ Contractor Capacity (Design)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated a consistent level of expertise in the design of similar projects with a minimum of 20 years of senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	2014-11-27	
4 Consultant/ Contractor Capacity (Construction)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the construction of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	0	2014-11-27	
5 Environmental	0	1	0	Low Risk	There is minimal Environment value to the project area and the project would have minimal impact to the surrounding environment.	No action required, continue to monitor.	0	0	2014-11-27	
6 Remediness	0	1	0	Low Risk	Project site is easily accessible all year.	No action required.	0	0	2014-11-27	
7 Project Stage	0	1	0	Low Risk	Project Designs are completed and the project is ready to proceed to construction.	No action required.	0	0	2014-11-27	
8 Project Duration	0	1	0	Low Risk	Project can be constructed within months.	No action required, continue to monitor.	0	0	2014-11-27	
9 Project Complexity	0	1	0	Low Risk	The project is typical and matches the expertise of the project team.	No action required, continue to monitor.	0	0	2014-11-27	
10 Funding Limit	0	1	0	Low Risk	Total Project value less than \$5 million or not likely to exceed \$10 Million.	No action required, continue to monitor.	0	0	2014-11-27	
11 Funding Suspension	0	1	0	Low Risk	Community regularly completes necessary reports on-line and the community has no other ongoing projects.	No action required, continue to monitor.	0	0	2014-11-27	
12 Cost Sharing	0	1	0	Low Risk	There is no cost sharing from the community.	No action required.	0	0	2014-11-27	
Risk Score = 0.0							Total contingency for risk expressed in dollars: 0.00			

Appendix 7: design Stage Funding Application

Checklist for Design Stage Funding Application**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Project Implementation Plan/ Schedule	_____	_____	_____
Feasibility Study	_____	_____	_____
• Filed in Technical Library – <i>GCdocs#</i> _____	_____	_____	_____
Land Encumbrance Check	_____	_____	_____
Start IEMS Simple Environmental Review or Detailed Environmental Review Form	_____	_____	_____
Fee for completing an Environmental Assessment Study Report (if required)	_____	_____	_____
Required Permits Identified	_____	_____	_____
• Timber Description	_____	_____	_____
• Other Permits	_____	_____	_____
(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit, etc.)			
Project Construction Process	_____	_____	_____
• Initial Const. Mgmt. Best Practices	_____	_____	_____
O&M Capacity Assessment	_____	_____	_____
• Cost Estimate for O&M Manual	_____	_____	_____
• Cost Estimate for O&M Plan	_____	_____	_____
Comments by other Regulatory Agencies	_____	_____	_____
• Environment Canada	_____	_____	_____
• Fisheries Canada (DFO)	_____	_____	_____
• Others _____	_____	_____	_____
(FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)			
Terms of Reference for Consultant Services	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate	_____	_____	_____
Class 'C' Total Project Cost Estimate	_____	_____	_____
Cash Flow	_____	_____	_____
Funding Submission/ DAR	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____
***Confirm Consultan's SOW for WTP & WWTP: Complete Design Guideline Checklist	_____	_____	_____
CI Technical Reviewer: _____			
Date: _____			

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 8: Capital Projects Report DCI #460671

Certificate of Completion for Capital Projects

Check one:

Provisional (facility is being used for the intended purpose, with minor work remaining)

Final (all work is completed)

First Nation Name and Number	
Reserve Name and Number	
Project Number	Funding Arrangement Number
Project Title	
<p>Check all that apply:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All details of the project are resolved and there is no flaw, omission, uncompleted work, claim or outstanding payment. • The "As Constructed" plans are available. • Flaws, omissions, incomplete work, claims or outstanding payments exist, and an Action Plan and either a Substantial Completion Certificate or a Certificate of Occupancy are attached. • The construction complies with all requirements of all applicable codes, standards and INAC Funding Arrangement. <input type="checkbox"/> Official inspection report(s) or certificate(s) by qualified inspector(s) are attached. <p>List the reports or supporting documents attached: e.g.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fire commissioner (Human Resources Development Canada) <input type="checkbox"/> Environmental Licence (Provincial) <input type="checkbox"/> Health Canada (water, sewage, testing, etc.) <input type="checkbox"/> Worker's Compensation (Safety and Labour Conditions) <input type="checkbox"/> Survey and Soil Testing Reports, Concrete Testing Reports, etc. <input type="checkbox"/> Substantial Completion Certificate as per provincial legislation (e.g. <i>the Construction Lien Act</i>) <input type="checkbox"/> Certificate of Occupancy. <input type="checkbox"/> Operator's certification for water/sewage treatment plants <input type="checkbox"/> Environmental Mitigation Report, if required by Environmental Assessment. 	

I hereby certify that all work has been completed in accordance with the Terms and Conditions set out in the Funding Agreement, and the Effective Project Approval; and that all specified codes and standards have been met.

Signature of Project Manager or Person Authorized by the Band Council:	Date:
Received by INAC:	Date:

DCI 460671 (2005-2006)

TPMS RR CODE: 0121



COMMUNITY INFRASTRUCTURE

COMMUNITY CAPITAL FACILITIES SERVICE DELIVERY (INCLUDING HOUSING) CAPITAL PROJECTS: CERTIFICATE OF COMPLETION FOR CAPITAL PROJECTS

Due Date: The certificate must be completed and submitted to the INAC regional office within 90 days after

1. a capital project is fully completed; or
2. a capital project is substantially completed and the facility is being used for the intended purpose

Instructions

- ▶ Indicate whether this is a provisional certificate or a final certificate, i.e. whether the project is 100% complete or is at the stage where it is being used for the intended purpose, with minor work remaining.
- ▶ Fill in the First Nation and Reserve information, the project title, project number and funding arrangement number.
- ▶ Check all boxes that apply.
- ▶ List the reports or supporting documents attached.
- ▶ The certificate has to be signed and dated by the project manager authorized by the First Nation's council.

First Nations are responsible for ensuring that all work is carried out according to the funding arrangement. If there are flaws in the work, incomplete work or work that has not been done according to the funding arrangement, then the First Nation has to negotiate with the contractor to ensure that everything is completed.

Prior to use, the facility has to be inspected to ensure that all work meets the technical specifications. For housing projects, a CMHC-approved inspector must inspect the house and a Health Canada inspector has to approve the septic system. For other projects, inspection must be done by a qualified professional inspector. Each inspector should provide a separate official inspection report to the First Nation, a copy of which must be attached to the Certificate of Completion.

Provisional Certificate of Completion

When a facility has been completed to the stage where it is safely being used for the intended purpose, but still has outstanding work, a *Substantial Completion Certificate* or a *Certificate of Occupancy* can be issued by the consultant and attached to the *Provisional Certificate of Completion*. This is with the condition that the outstanding work are completed within a reasonable time taking into account the weather conditions, availability of material and parts etc. A portion of project funding would be held back until 100% completion. In addition, at this stage, only partial O&M funding would be provided.

Final Certificate of Completion

In capital projects, there is usually a hold back amount of money imposed, sometimes known as a deficiency holdback, which is retained until the deficiencies have been rectified. For new facilities, there is also a warranty period that, depending on the circumstances, could commence once the substantial or construction completion certificate has been issued.

Upon the expiration of the warranty period, a final inspection is carried out and if all deficiencies have been rectified, the *Final Certificate of Completion* is issued. At this point, the project is fully turned over to the owner and the warranty of performance bond with the contractor is cancelled. Upon receipt of the *Final Certificate of Completion*, the asset enters full O&M phase.

OVERVIEW

The Operation and Maintenance of the Infrastructure Program is one component of INAC's strategic objective to assist First Nations to build healthy and sustainable communities. The objective of the program is to provide funding to assist First Nations to acquire, construct, operate and maintain basic community facilities and services such as water and sewage, roads, electrification, schools, community buildings and fire protection. The program ensures that these facilities and community services meet recognized standards and are comparable to the services provided to nearby communities by provincial and municipal governments.

Certificate of Completion on Capital Projects

A Certificate of Completion showing that a capital project is finished must be completed at the end of every capital project. This is required before funding for operation and maintenance can be provided. The Certificate of Completion should be filed with the overall project completion report within six months of project completion. It must be signed by the project manager after inspection by a CMHC-approved building inspector (for housing projects) or by another qualified inspection authority (for public buildings or facilities where public health and safety are involved). Inspection reports or certificates by these authorities should be attached to the completion certificate.

Appendix 9: Land Status Report Request Information

TIPS TO SPEED UP YOUR ENCUMBRANCE CHECK / LAND STATUS REPORT REQUEST

(for housing and infrastructure/capital projects)

NOTE: If your issues revolve around a **transfer of land, an allotment of land, or a subdivision of a lot**, then please forward your request to your **Land Transaction Officer** at Indian and Northern Affairs Canada. If it is for a purpose pertaining to a lease, permit, license or the like, then your request should be forwarded to your **Land Management & Leasing Officer** at the department. Land encumbrance checks for social housing, ministerial guarantees, individual loans, capital projects, infrastructure, and the like, should be submitted to myself. Please see below for address, phone and fax.

NOTE: At the end of this letter is a Table (Schedule A) giving some examples of projects that reflect the kind of encumbrance checks / land status reports that fall under my jurisdiction. If you are unsure who you should forward your request to, contact the Land Management & Leasing Officer, or the Land Transaction Officer for the applicable band, or myself.

PLEASE ENSURE THAT THE FOLLOWING GUIDELINES FOR SUBMISSION OF A REQUEST ARE FORWARDED TO ANY CONTRACTED OUTSIDE PARTY WHICH MAY BE REQUESTING THE CHECK ON THE BANDS BEHALF.

ALSO, PLEASE ENSURE THAT ANYONE IN YOUR OFFICE WHO MAY INQUIRE ABOUT SUCH MATTERS IS ISSUED A COPY OF THESE GUIDELINES.

When you are going to submit a request for an encumbrance check / land status report there are a number of things that should be included in your situation. Often when pertinent information is not included in the request the result is confusion, or a delay in the processing of your request. So here are some handy tips and suggestions for you to consider when you are submitting your request which will help the system process your request as smoothly and quickly as possible:

- 1.) Always include the Band Name, Reserve Name, and Reserve Number.
Example: Squamish Band, Capilano I.R. No.5
- 2.) Always state the purpose of the request for the encumbrance check.
Example: Social Housing, Ministerial Guarantee, Waterworks, Sewage Plant, Road Improvement, etc.
- 3.) If there is a legal survey plan (Canada Lands and Survey Records - CLSR Plan or Regional Survey British Columbia - RSBC Plan) of the area / lot you wish to have checked, please refer to the proper lot number and plan number as shown on the legal plan. If it is possible, also submit a copy (or portion thereof) of the plan being referenced, and identify the subject area on this copy.

- 4.) If there is not a legal survey plan of the subject area / lot proceed with consideration of points (a) through (f) as noted below.
- a) Using a map, or sketch, clearly identified the subject area on the map as accurately and neatly as possible.
 - b) Ensure that when the subject area has been identified, it can also be located in relation to the reserve land base as a whole.
 - c) On the map, or sketch, that is being used to identify the subject area (s), there should be no other areas, lots, etc, identified or singled out, other than the subject area(s). This is to ensure that the correct area is checked during the land status report / encumbrance check.
 - d) Unsurveyed lots / areas should be identified by cross-hatching (criss-crossing) the area. Highlighting, shading, or coloured pen is not an acceptable way of identifying the subject areas if we are to receive your request in the form of a copy of the original or in the form of a fax transmittal . These methods are only acceptable in the event that we receive the original request at our office; however, the cross-hatch method is preferable.
 - e) If the band has its own system of numbering lots within the reserve, and this numbering system does not correspond with legal survey plans, please do not use the bands numbering system to identify the subject lot / area (s). Instead use the cross-hatch method as outlined in item (d) above. This will avoid confusion and the possibility of mistaking a lot which has been identified using the Bands lot numbering system for lots which have been formally surveyed.
 - f) Always ensure that **NORTH** is identified on the map, or sketch, that you submit.
- 5) Avoid, if possible, references to home addresses, road names, street names, highway names, or locations of certain buildings, ie. Band office, churches, community centres etc. The reason for this is that our legal plans which we use as reference tools in the process of completing your requests do not identify these types of things. The plans that we use only make reference to legally surveyed lots, CLSR Plan numbers, RSBC Plan numbers, and the like.
- 6) If the request is for more than one reserve, please submit them as separate requests as they must be processed separately anyhow. Note that this will not slow the process down but rather will avoid confusion and unnecessary delays.
- 7) **PLEASE SUBMIT YOUR REQUEST ONCE ONLY.** It is advisable to ensure that if you fax in your request, then you mail in the original request thereafter, please mark on the faxed copy that you have sent the original in the mail to follow. Or you can choose to avoid this confusion by faxing only, or sending in the original only. This will help to avoid double logging of the same job. Try to avoid overlapping requests. If you have submitted a request previously and wish to verify if it has been received by our office. Overlapping, or repeated, requests only adds to the workload and slows down the process as a whole.

SCHEDULE A

The following table serves only as an example of the types of projects that fall within the jurisdiction of my position. As noted earlier, you may contact our office if you are unsure where to send your request for a land status report / land encumbrance check.

HOUSING	Band Administered Housing, Social Housing Allocations, Ministerial Guarantees, Individual Housing Loans.
WATER	Water Distribution Systems, Treatment & Filtration Facilities, Pump Houses, Construction & Improvements, etc.
TRANSPORTATION	Construction & Improvement, Sewage Systems, Drainage Issues, Sewage Treatment Facilities, Wastewater Disposal, etc.
SEWAGE AND SOLID WASTE	Construction & Improvement, Sewage Systems, Drainage Issues, Sewage Treatment Facilities, Wastewater Disposal, etc.
OTHER	Construction & Improvement, Schools, Band Offices, Daycares, Community Complexes, Flood & Erosion Control, etc.

If you have any questions, or concerns, with regards to encumbrance checks / land status reports, or anything contained within this information package, feel free to contact me directly. Phone, fax and address are below.

Sincerely,

Land Encumbrance Researcher

Appendix 10: ISC Timber Permit Information [for non-FNLM Bands]

INDIGENOUS AND NORTHERN AFFAIRS CANADA

TIMBER PERMIT INFORMATION PACKAGE

CAUTIONARY NOTE:

INAC's TP Info package is in process of being updated by the department (Sheldon Gagne):

- To reflect the new name of our department; (through-out)
- To correct the flow chart to refer to requirement for a "BCR" ;
(*BCR= approval by FN of a harvesting proposal presented to it, by a Proponent*)
- To refer to "Environment & Climate Change Canada" (EC) through out ;
(instead of "Environment Canada");
- To modify TP info package (pg 16) under "Migratory Birds" to require the Registered Professional Biologist (RP Bio), to refer to EC's website (not pg 16 of INAC TP Info package), for information about : "Incidental Take"; "nesting calendars" ; AND ; for EC's advice & recommendations (for compliance with applicable statutory legislation).

DRAFT - REVISED JANUARY 2017

CIDMS 3524053 – MSWord Version

0

TABLE OF CONTENTS

<u>TABLE OF CONTENTS</u>	<u>PAGE 1</u>
<u>FLOWCHART SHOWING ROLES AND RESPONSIBILITIES</u>	<u>PAGE 3</u>
<u>PROCESS FOR ISSUING A TIMBER PERMIT ON RESERVE LANDS</u>	<u>PAGE 6</u>
<u>LOGGING PLAN</u>	<u>PAGE 10</u>
<u>ENVIRONMENTAL REVIEW</u>	<u>PAGE 13</u>
<u>ADDITIONAL CEAA 2012 INFORMATION</u>	<u>PAGE 19</u>
<u>SAMPLE VEC MITIGATION MEASURES TIMBER HARVESTING</u>	<u>PAGE 22</u>
<u>SAMPLE BAND COUNCIL RESOLUTION (BCR)</u>	<u>PAGE 24</u>

ROLES AND RESPONSIBILITIES

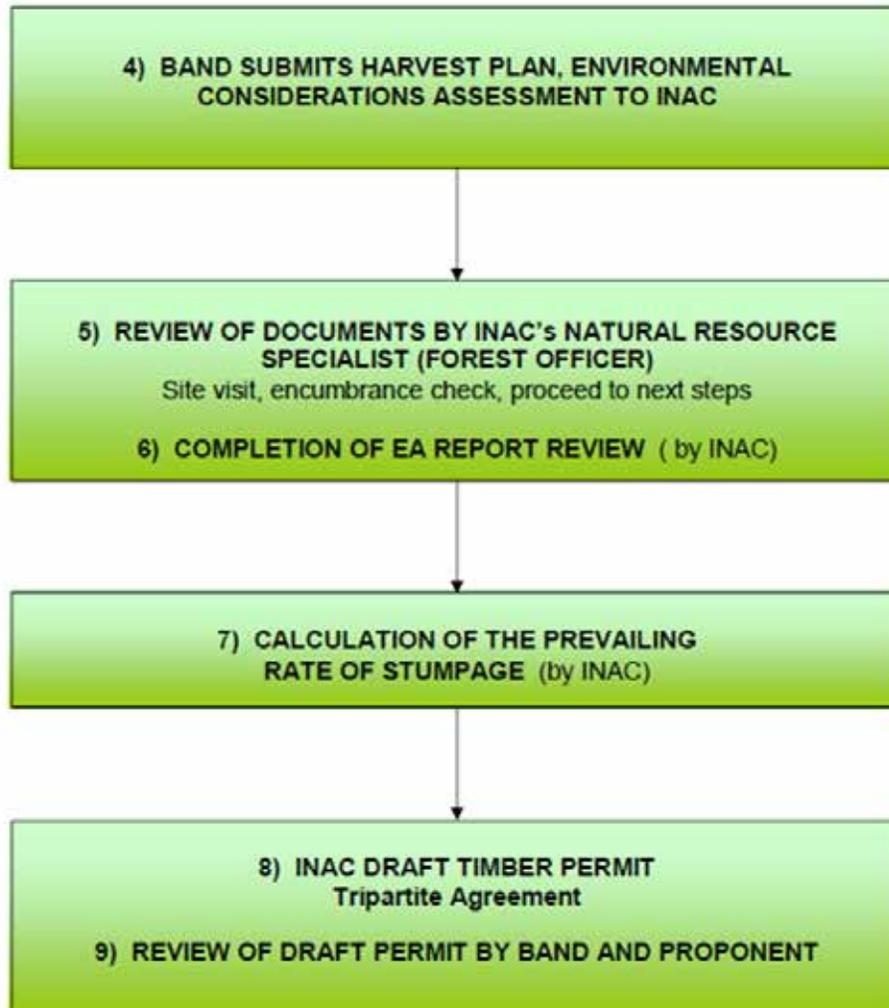
WHO	ACTION REQUIRED
◇ FIRST NATION	REQUESTS TIMBER PERMIT APPLICATION PACKAGE
◇ INAC	SENDS INFORMATION PACKAGE
◇ PROPONENT	SUBMITS LOGGING PLAN (LP), AND LOGGING PLAN MAP, ENVIRONMENTAL REVIEW (ER), SITE PLAN (SP) REPORT ON SPECIES AT RISK (SARA); AND OTHER APPLICABLE PROFESSIONAL REPORTS (AS NEEDED) GIVEN SITE CONSTRAINTS TO INAC SIGNED AND SEALED BY A REGISTERED PROFESSIONAL FORESTER OR OTHER PROFESSIONALS AS NEED BE.
◇ BAND COUNCIL	PROVIDES BCR ON HARVEST PROPOSAL
◇ INAC	REVIEW / REFERS / SEARCHES: REVIEWS APPLICATION WHICH INCLUDES (BUT IS NOT LIMITED TO): A SEARCH FOR ENCUMBRANCES AND FOR TIMBER SURRENDERS; AND REFERRAL OF HARVESTING PROPOSAL, IF DEEMED NECESSARY (UNDER <i>CEAA 2012</i>) TO ENVIRONMENT CANADA AND DEPARTMENT OF FISHERIES AND OCEANS; AND OTHERS FOR COMMENT (IF APPLICABLE GIVEN SITE PROPOSED FOR HARVEST)
◇ INAC	COORDINATES SITE VISIT WITH BANDS FORESTER AND BAND OFFICERS
◇ INAC	COMPLETES ENVIRONMENTAL IMPACT DECISION IN ACCORDANCE WITH – <i>CEAA 2012</i>
◇ INAC	DRAFTS TIMBER PERMIT CHECKS STATUS OF TIMBER MARK; SETS PERFORMANCE BOND/SECURITY DEPOSIT AND DETERMINES DUES (STUMPAGE)
◇ BAND (PERMITTEE) / PURCHASER	REVIEWS TIMBER PERMIT PROVIDES INSURANCE CERTIFICATE WITH ADEQUATE COVERAGE AND SECURITY DEPOSIT
◇ INAC	APPLIES TO MINISTRY OF FORESTS, LANDS AND NATURAL RESOURCE OPERATIONS FOR DESIGNATION OF SCALE SITE(S)
◇ BAND (PERMITEE) / PURCHASER / INAC	EXECUTES TIMBER PERMIT AND INAC DISTRIBUTES COPIES TO ALL PARTIES

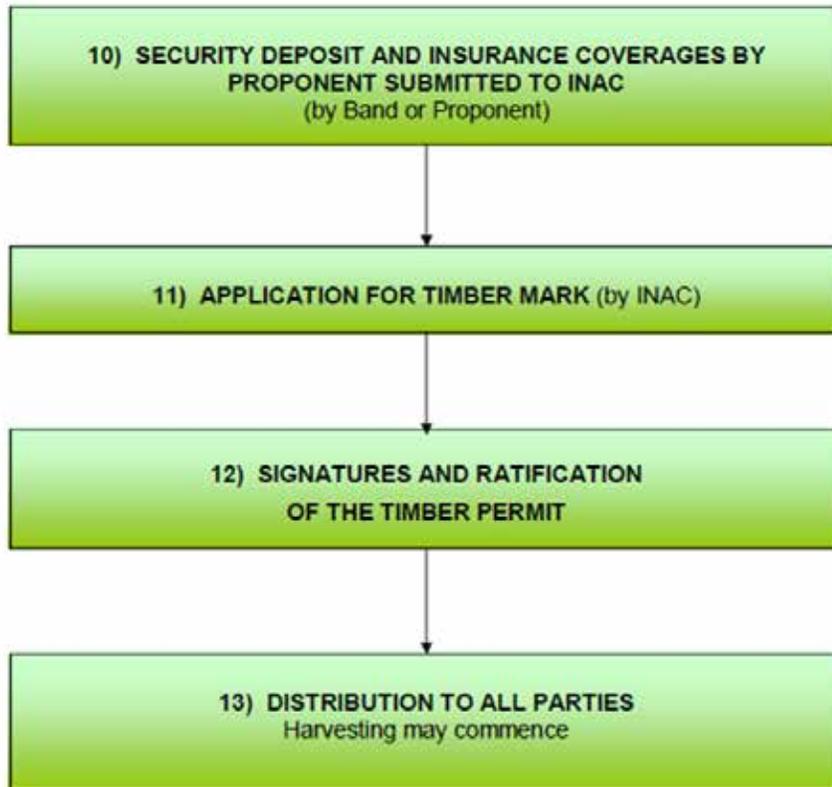
2

DRAFT – REVISED JANUARY 2017
 VANCOUVER#
 VANCOUVER#3524053 - v3

FLOW CHART FOR GRANTING OF A TIMBER PERMIT
(GOVERNED BY THE INDIAN ACT AND INDIAN TIMBER REGULATIONS)







PROCESS FOR ISSUING A TIMBER PERMIT FOR LOGGING ON RESERVE LANDS

1) The Proposed Harvest Plan:

A member or a group of band members or a corporation submits a request to the Band/First Nation Council to harvest band timber. They identify the reserve and the area on the reserve that they are proposing to harvest.

2) Band Council's Consent:

The council considers the proposal and either does or does not consent to the harvest and sale of the timber.

3) Band Council Resolution:

If consent is granted, the council assembles the required info on the Band Council Resolution (BCR) form (a sample of which is attached). The BCR should supply all the information which will be used in the preparation of the timber permit. This may include, but not limited to:

- which Band / First Nation or member or group of members will be the designated "Permittee",
- who will be the designated "Purchaser" of the timber (must not be a member of the Band),
- whether the timber will be exported or not,
- the species and approximate volume to be harvested,
- the stumpage rates if greater than the prevailing rates for each species and grade,
- whether a security deposit will be required, and
- the Band consents to the issuing of the timber permit.

A quorum of the Council (Chief included) ratifies the resolution and submits it to INAC for further processing.

4) Required Supplemental Information:

- a) Under the *Canadian Environmental Assessment Act 2012 (CEAA 2012)* the proponent must provide for a complete environmental assessment of the project. This involves identifying all potential environmental impacts and stating the proposed methods of mitigation. This has to be accompanied with the Site Plan/logging plan. **INAC will not proceed with the issuance of the timber**

6

permit until the environmental assessment is completed to the satisfaction of the INAC. A site visit will be conducted by the Natural Resource Officer to ensure all environmental assessment factors have been considered and addressed.

- b) A Site Plan must be completed by a registered professional forester and submitted to INAC whenever the area being harvested will continue to remain in timber production. The Site Plan must identify the exact location of the proposed cutblocks and roads, the standards units, stocking standards and soil disturbance limits.
- c) A comprehensive logging plan (LP) must be submitted to INAC. It should include a description of the area being logged, the methods and equipment being used, the season of the logging and a complete 1:5,000 scale logging plan and 1:20,000 scale overview maps. It should also identify any potential logging problems and environmental concerns.
- d) Any other information that would assist INAC in processing the timber permit. This would include written comments from interested third parties such as the Department of Fisheries and Oceans, Parks Canada, Forestry Canada, Environment Canada, Ministry of Forests, Lands and Natural Resource Operations and other interest groups.

5) **Encumbrance Check:**

The land encumbrance check is carried out using the Indian Lands Registry. The proponents of the project are promptly advised of any encumbrances and how, they might affect the project. If the Band/First Nation Council is aware of any registered land encumbrances they should report these encumbrances to INAC during the submission process.

6) **Environmental Report:**

An environmental report is compiled by a Registered Professional Forester, or Registered Biologist on the environmental considerations of the project. This will include a decision on the status of the project in terms of significant environmental concerns on Valued Ecosystem Components (VEC's) and the suggested mitigative measures to be incorporated in the project. The environmental report is reviewed in the field by INAC. INAC as the *Federal Authority* must make a decision that the project will not likely cause significant adverse environmental effects and approve the project. Or, decide the project will cause significant adverse environmental effects and reject the project. This decision must be made before a Timber Permit may be granted.

7

7) Determination of the Prevailing Rate of Stumpage:

INAC determines the prevailing stumpage rates in the given Forest District in which the timber is located. Note: trees on Reserve are considered a capital asset of the First Nation, and stumpage is deposited into the capital account of the First Nation.

8) Application for Timber Mark:

INAC makes all applications to the Ministry of Forests, Lands and Natural Resource Operations for the granting of registered timber marks for timber to be harvested on Reserve and for the granting of mark site designations.

9) Draft Timber Permit Tripartite Agreement (TPTA):

The TPTA will incorporate at least the following:

- The parties to the TPTA,
- Volume of timber to be harvested and sold,
- Location of the timber to be harvested detailed on 1:5000 scale map(s),
- Expiration of the permit (April 30th of the next year)
- Party responsible for the harvesting,
- Prevailing rates of stumpage for species and grades,
- Performance bonds, security deposits etc.,
- Utilization standards and harvesting practices,
- Environmental and non-timber values protection,
- A Permit Area Map (1:20,000 scale MFLNRO forest cover maps)
- CEEA/SARA Report(s)

10) Security Deposits:

One or more security instruments may be required pending the risk assessment by INAC. The security deposit is approximately 15% of the stumpage value of timber.

11) Insurance Certificate Required:

The party responsible for harvesting must provide appropriate insurance coverage for logging operations. Unless otherwise stated, General Comprehensive Liability insurance coverage must be for a minimum of 5 (five) million dollars. **Her Majesty**

8

in Right of Canada™ must also be named as an additional insured to the policy which shall be evidenced on the insurance certificate.

12) Ratification of the Timber Permit Tripartite Agreement

All signatures on Timber Permit documents have to be witnessed. At the discretion of the INAC representative, this may require witnessing by a notary public or Commissioner for taking affidavits in the province of BC. Factors to consider are the nature of the project, area to be harvested and availability of Commissioners.

13) Distribution to all parties:

When the Timber Permit has been granted by the Minister or his/her authorized representative of INAC, each party will be issued its own copy.

LOGGING PLAN

Purpose:

The intent of a logging plan is to provide the site specific detail necessary to ensure that harvesting operations achieve the standards and obligations stated in timber permits and higher level plans such as Management Working Plans.

Logging plans are just one document of a complete package of information that should be submitted to INAC for assessment, prior to the issuance of a timber permit. Part of this package will also include the environmental assessment (required under CEAA/SARA), silvicultural prescription, referral letters and optional documents such as cruise reports, appraisal calculations and heritage studies.

The Logging Plan must be consistent with and reflect the mitigative measures found within the ER and SARA Reports.

Components:

Information in logging plans should at a minimum include the following:

- 1) A 1:20,000 scale overview map of the project area and location of the proposed cut-block(s) along with the name of the Reserve or Lot and if applicable the name(s) of the individual land holding(s) such as Certificate of Possession (CP) or Cardex Holders .
- 2) An accurate 1: 5000 map illustrating:
 - block boundaries
 - new roads to be constructed
 - timber types
 - bridges, culverts
 - skidding/ yarding direction
 - north arrow
 - water courses, rivers, lakes (labelled and classified)
 - bridges, culverts and waterbars
 - established roads
 - landings
 - terrain features
 - elevations
 - buildings, camps
 - contour lines
 - forest cover information
 - area to be logged in colour with different colour for each harvesting method to be utilized
 - ensure that map legend identifies different colour schemes
 - RMZ's, RRZ's, buffer-zones, salmon streams, heritage sites, habitats requiring protection
 - All water courses, rivers, and lakes must be identified and classified on the logging plan and map (eg. W1 wetland, S3 stream, etc)

10

CIDMS 3524053 – MSWord Version

- the Riparian Reserve Zone (RRZ) and Riparian Management Zone (RMZ) for each water course, river, and lake must be clearly identified on the harvest /logging plan

Example of a Logging Plan Map:



- 3) A Summary of the block(s) to be harvested by area, volume by tree species, season, and silviculture system utilized should be incorporated into the logging plan map.

Example:

<u>Cutblock #</u>	<u>Area ha</u>	<u>Volume m3</u>	<u>Season</u>	<u>Species</u>	<u>Silvic System</u>
1a	12.5	4000	Summer	Fir	Clearcut
1b	5.6	2000	Summer	Pine	Selective
2a	33.0	7300	Winter	Spruce	Selective w Res

- 4) Provide details on the harvesting method(s) to be used including:
 - silviculture system ie. clearcut, selective, partial cut, selective with Reserves etc.
 - logging equipment utilized ie. skidder, highlead (cable based), horse etc
 - season (winter / summer or both)
 - rationale for opening size
 - direction of skidding relative to watercourses, roads etc

- 5) Provide information on post-logging treatment including:
 - slash disposal method, ie. burning
 - site preparation methods (trenched, mounds, burning, other)
 - **road, landing rehabilitation and deactivation plans**

- 6) Consideration for protection of other resource values such as:
 - heritage sites
 - fisheries
 - wildlife habitat (including any habitats protected by SARA)
 - community watersheds
 - recreation, traditional use sites
 - aesthetics and visual quality

- 7) Provide comments which may include logging production, contingency plans etc.

ENVIRONMENTAL REVIEW

BACKGROUND

STEP ONE

The first step involves the preliminary environmental assessment review by the proponent. This requires scoping of the project to determine the limits of the environmental review (ER) in terms of spatial (physical, biological and geographical factors) and temporal (time line factors) boundaries. As mentioned, it is very important that the ER begin as early into the planning process as possible. Scoping will focus analysis on the relevant issues and concerns.

During the scoping stage of the ER, it is important to:

- determine what undertakings and activities must be assessed as part of the project;
- determine what factors and issues need to be considered in the ER; and,
- determine the parties that should be involved in the project, their interests and concerns.

The scope of factors to be addressed in the ER should include:

- the environmental effects of the project, including cumulative impacts, malfunctions and accidents;
- the significance of the environmental effects;
- comments from other government agencies and interested parties;
- comments received from the public;
- technically and economically feasible measures that would mitigate any significant adverse environmental effects of the project; and,
- Compliance with the legislation governing Species at Risk that potentially inhabits the project areas which are protected under the federal *Species at Risk Act*.
- other matters relevant to the ER that may be required

During this step, scoping for the ER must be comprehensive, considering all the relevant factors associated with the project. As well, it is critical for the proponent to examine each phase of the proposed project in terms of the various linkages, their proximity to each other and their interdependence. For example, access to a cut block may involve the construction of a road through unstable terrain or harvesting of a block near a major highway may impact on visual qualities.

STEP TWO

Once the scoping is completed, the proponent can assess the environmental effects of a project. This **consists of three tasks**:

- description of the project;
- description of the existing environment; and
- identification of project-environment interactions.

The description of the project should include:

- geographic and site specific location(s) including detailed maps showing the project area and surrounding area which could be potentially impacted by the project ideally, for timber harvesting operations, 3 maps should be provided:
 1. a copy of the NTS 1:50,000 map showing the relevant reserve and project location on the reserve.
 2. a copy of a 1:20,000 overview map showing all proposed cut-blocks.
 3. a 1:5,000 harvest plan map showing site specific detail (MFLNRO forest cover maps should be utilized). A separate map showing silviculture activities may be submitted separate from the logging plan map.
- physical layout and design, silviculture system, harvesting system, block design rational;
- construction plans and schedules including roads, landings, bridges, culverts, sort yards, helicopter drop zones' camps, season of operation, etc; and
- operating plans and procedures, standard control and mitigation measures such as proper logging equipment, tree marking, terrain analysis, establishment of stream side buffer zones, etc.
- detailed cruise compilation showing all volumes/species in project area to be harvested. In exceptional circumstances the INAC - Natural Resources Officer may waive this requirement.

Secondly, the proponent is required to provide a detailed description of the key components of the existing environment. These are described as the Valued Ecosystem Components (VEC). The information on the VEC's must be relevant and reliable and based on site reconnaissance and office techniques. The VEC description must identify:

- relevant physical features and characteristics including landscape features such as terrain, slopes, aspect, elevation, lakes, rivers, streams, ground water, biogeoclimatic zone;
- ecological components and functions including soil quality and stability, habitats, fish and wildlife, vegetation, tree species composition;
- historic and present land and resource use;
- social factors including aboriginal heritage values, visual quality values recreational values and other non-timber values.

Please see the attached ER sample of VEC's that may be impacted during timber harvesting.

The third task in the preliminary ER is for the proponent to examine and evaluate the project environment interactions. Identifying the potential impacts should be done in the context of location, timing and interactions of the various project phases and the VEC's. Descriptions of these interactions should contain detailed information and include a statement on any cumulative effects. Any unresolved environmental and/or socio-economic impacts which may require further study should also be identified. Where a "not relevant" answer is given, justification for this response should be provided.

Other factors that should be taken into consideration include:

- effects on human health and safety;
- effects on socio-economic conditions;
- effects on physical and cultural heritage;
- effects on the current use of lands and resources for traditional purposes by First Nations.
- trans-boundary impacts (if applicable).

SPECIES AT RISK - SPECIFIC INFORMATION NOW REQUIRED FOR ALL INAC TIMBER PERMITS:

(Guidance to proponents in completing natural resource development plans, environmental assessments, and Species at Risk evaluations.)

With the introduction of the Species at Risk Act (SARA) by Environment Canada any forestry operation on Reserve Lands must now ensure that Species at Risk are protected. If logging is proposed, a solid management strategy is mandatory to protect endangered plant and animal communities and any of their habitats that may exist on Reserve Lands.

15

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

The following websites and information may be useful for practicing professionals when preparing their Logging Plan, Harvest Systems and Environmental Assessment of the area to meet the requirements of the SARA legislation.

Migratory Birds

The *Migratory Birds Convention Act (1994)* is legislation governing Migratory Birds which prohibits the taking or killing of migratory birds, their nests and eggs. It also prohibits the deposition of harmful substances in areas frequented by migratory birds. In order to assist proponents in complying with this legislation, the following measures should be considered:

- Vegetation clearing whenever possible should be done outside the general breeding bird season from April 1 to July 31. Where vegetation removal is required, areas where active migratory bird nests are located must be avoided or appropriate buffers put in place. Efforts should be made to minimize the extent of habitat fragmentation.
- Any areas identified as important habitat for migratory birds (i.e. breeding and/or foraging areas) should be avoided whenever possible.
- Environment Canada recommends that the proponent undertake a bird survey by a qualified Registered Professional Biologist prior to disturbance activities to determine the presence of any raptor, heron, or owl nests. In the event that activities are to take place around identified nests, the Ministry of Environment (BC) ***Environmental Objectives, Best Management Practices and Requirements for Land Developments (2001)*** should be consulted.
- The Canadian Wildlife Service, or the Ministry of Environment (BC), Wildlife Branch can also be contacted for assistance in determining possible mitigation and management options. An undisturbed buffer zone may be necessary to manage these nest sites.
- The Environmental Assessment for timber harvesting projects need to assess and identify any potential impacts to migratory birds or their habitats. If there are potential impacts to the migratory birds or their habitats, then the Environmental Assessment, Logging Plan & map and Site Plan must specify the mitigation measures and management plan to be followed for protection of migratory birds and their habitats. The said mitigation measures and management plan needs to be acceptable to the Canadian Wildlife Service branch of Environment Canada.

Species at Risk

The Species at Risk Act (SARA) was proclaimed in June 2003. Sections 33 and 58 of SARA came into force on June 1, 2004, thereby prohibiting the taking or possession of

16

DRAFT – REVISED JANUARY 2017
VANCOUVR#
VANCOUVR#3524053 - v3

listed species, and the damaging or destruction of their residences and/or critical habitat.

To determine the potential overlap and impact of timber harvesting activities on Species at Risk (SAR), the Environmental Assessment must include an assessment of the use and value of the area to wildlife species, including those that are listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as SAR. Such an assessment needs to include a database search and consultation with appropriate agencies needs to be conducted, followed by a field assessment by a qualified registered biologist. If the professional forester feels that a field assessment by a biologist is not required they should call the Canadian Wildlife Branch of Environment Canada to discuss the matter. After a decision from Environment Canada the Natural Resource Officer at INAC should be informed in writing of the decision. An evaluation of potential project impacts upon identified species and associated habitats must be conducted, and appropriate mitigation measures reviewed.

The Environmental Assessment must confirm that the relevant databases were searched to determine: a) the presence of any COSEWIC - listed species in or around the project area; and b) if any rare element occurrences have been documented for the area.

The Environmental Assessment must confirm that the relevant databases were searched to determine whether any species of concern are known or expected to use either the proposed project site or adjacent lands (within the zone of influence of the project). This search must include (but is not limited to):

- The main SARA website:

www.speciesatrisk.gc.ca/search/default_e.cfm

- The Conservation Data Center (CDC) database for any rare element occurrence records at:

<http://www.env.gov.bc.ca/cdc/>

- The Species At Risk Public Registry for Recovery Strategies, Action Plans, Species Accounts at:

<http://www.env.gov.bc.ca/wld/recoveryplans/rcvry1.htm>

- The Ministry of Environment's (BC)"Species and Ecosystem Explorer", and

<http://www.env.gov.bc.ca/atrisk/>

- Environment Canada's Species at Risk search tool

<http://www.speciesatrisk.gc.ca>

to determine if the ranges of any COSEWIC listed Species at Risk overlap with the site.

If the presence of SAR is identified within the project area, and/or is identified as being impacted by the timber harvesting project, then the RPF needs to consult with Environment Canada. The RPF's plans for addressing same needs to meet with Environment Canada's approval and be reflected in the Environmental Assessment, Logging Plan & map and Site Plan.

Foresters should also consult with regional habitat biologists if possible as they may be able to provide helpful information on certain endangered / threatened species in specific areas.

If the presence of a species at risk is identified within the project area, or is identified as being impacted prior to or during development activities, Environment Canada must be notified prior to the commencement of any further activities.

Mountain Pine Beetle Infestation Response

It should be recognized that beetle killed stands may offer suitable habitat for migratory birds and other endangered, threatened, or special concern species. Aggressive harvesting for the control of beetles can greatly reduce such habitat. When assessing the impacts of large scale beetle management activities, consideration should be given to the magnitude of the harvest, and its effect on critical habitat. If there is little reason to believe that migratory birds or species at risk are present in the area, or likely to use or rely on the habitat that remains following harvest, nothing more needs to be done. On the other hand, if the presence of such species is known or may reasonably be expected to occur in the area, and no alternate habitat exists in the vicinity, then habitat preservation measures should be identified.

18

**ADDITIONAL CEAA 2012 INFORMATION THAT MAY BE REQUIRED FOR INAC
TIMBER PERMITS****Water Quality**

Any fuel stored or used on this site is to be contained and transferred as required in a manner that minimizes the risk of accidental spillage of fuel into the marine environment and appropriate clean-up materials are to be kept on hand to allow clean-up of any spillage which may occur.

Power equipment used during the course of the work must be inspected daily by a competent individual for evidence of leaks of fuel, lubricants, hydraulic fluids or other potentially deleterious substances. If any evidence of leaks is detected, repairs shall be completed, or a leak-free replacement unit brought to the site prior to the continuation of on-site work.

A contingency plan must be provided which clearly sets out the procedures to be followed in the event of a spill occurring despite the best efforts of all concerned. This plan will need to be on site at a location where it can be readily referred to in the event of a spill, and all personnel need to be clearly advised of their respective responsibilities for implementing the necessary containment and clean up measures.

A Sediment and Management and appropriate Storm Water Management Plan (if applicable) must be provided which will ensure that silt-laden run off is not introduced into fish-bearing waters by any means, particularly during periods of high rainfall. This is especially important in connection with any road building and clear-cutting.

SEI Polygons (where applicable in coast and interior)

The Environmental Review, Logging Plan & map and Site Plan must identify any Sensitive Ecosystem Inventory Polygons (SEI Polygons) identified within the project area, and/or as being impacted by the timber harvesting project, and specify mitigative measures.

The mitigation measures for protection of the SEI Polygons need to meet with the approval of the Canadian Wildlife Service branch of Environment Canada.

STEP THREE

The third step consists of identifying, in detail, the mitigation measures which will be implemented to minimize any significant environmental effects, concerns and risks associated with the proposed project. **Mitigation means the elimination, reduction, or control of the adverse environmental effects of the project, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means.**

Mitigation measures should be part of the project design and defined in the harvest plan and/or SP submitted by the proponent. Proposed mitigation measures must be identified for each phase of the project; from planning and layout through to road building and harvesting and finally silviculture and deactivation. Mitigation measures will be refined as the ER (environmental review) progresses and the potential environmental effects become clearer.

The CEAA screening takes into consideration (at minimum) the following Valued Ecosystem Components or VEC's.

- Ground Water
- Surface Water
- Aquatic Biology
- Air Quality
- Land/Soil
- Flora (Vegetation)
- Fauna (Wildlife)
- Habitat
- Noise
- Special Places (ie. Cultural, Traditional, Historical, Scientific, Archaeological, Palaeontological)
- Health and Safety
- Socio-economic
- Recreational Resources

Forest Professionals must elaborate and provide greater detail on the VEC's they deem applicable to the project in order to ensure a well thought out forest/stand management plan. In certain instances INAC may ask the Forest Professional(s) to elaborate or provide greater detail in certain areas of their submission(s) if they feel information is lacking or if clarity is needed in a given area.

Please see the attached ER (Environmental Review) sample mitigation measures for timber harvesting activities.

INAC requires enough information on the potential significant environmental impacts as a result of the project and the proposed methods of mitigation so that a decision can be made on whether the project should proceed.

If the project is not likely to cause significant adverse environmental effects, considering appropriate mitigation measures, action may be taken that enables the project to proceed.

If the project is likely to cause significant adverse environmental effects, that cannot be justified, taking into account **appropriate mitigation measures**, it will not be permitted to proceed.

STEP FOUR

Once the ER Report is completed and submitted by the proponent, INAC will review it for completeness. Ideally, the ER Report should be submitted along with the Logging Plan, Logging Map and/or Silviculture Plan (SP) and any referral letters from third parties (DFO, MOE, MFLNRO, etc.) Proponents should be aware that INAC usually refers timber harvesting projects to relevant agencies and departments to review and provide comments. During the preparation of the harvesting proposal Proponents are encouraged to consult with relevant referral agencies. This may reduce the time required for formal reviewing of the project.

If the **preliminary ER Report is found to be satisfactory**, INAC will contact the proponent and/or band to set up an on-site visit.

Once the site visit is completed, INAC will make a CEAA Screening decision on the project. INAC will also complete the CEAA Screening and submit it to the CEAA Public Registry.

If the ER Report is found to be unsatisfactory INAC will return the report to the proponent for amendments.

STEP FIVE

At the conclusion of timber harvesting and clean up, a waste and residue and post harvest report signed and sealed by a RPF is required. This is to ensure that all provisions of the ER, SARA Report and Timber Permit have been met.

SAMPLE VEC MITIGATION MEASURES
TIMBER HARVESTING PROJECT

The following is an example of identified Valued Ecosystem Components (VEC) for various timber harvesting phases, and factors to consider for mitigation. This example is by no means an exhaustive listing of VECs and methods of mitigation and should only be used as a guide.

PROJECT PHASE: Timber Harvesting:

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
Water Courses	<ul style="list-style-type: none"> ➤ Specify appropriate stream side buffer zones along all watercourses (ie setbacks in metres) ➤ No cross-stream yarding for creeks, Maintain integrity of stream channel banks. ➤ Employ fall away/yard away techniques to keep logging debris out of stream channel ➤ Prevent destabilization of in-stream large organic debris ➤ Harvest when ground is frozen or dry
Fisheries	<ul style="list-style-type: none"> ➤ Conduct stream classification and outline basis for classification (S1, S3, S6 etc) ➤ Abide by guidelines specified by Fisheries and Oceans Canada ➤ Conduct operations to avoid conflicts with spawning periods ➤ Keep tops, limbs, logging debris, runoff, soil and other pollutants out of water
Fauna. Wildlife	<ul style="list-style-type: none"> ➤ Identify and protect wildlife habitat areas. Logging equipment must avoid riparian areas ➤ Consider local wildlife patterns
Land and soil. Erosion, degradation and slides	<ul style="list-style-type: none"> ➤ Utilize appropriate equipment and harvesting system ➤ Conduct terrain stability analysis to assist in block and road design ➤ Avoid gouging of soils, conserve soil organic matter ➤ Establish vegetative cover if soil conditions require stabilization ➤ Schedule logging when ground is dry or frozen ➤ Employ random skid trail patterns ➤ Yard uphill wherever possible to minimize convergence of erosion channels
Flora. Vegetation, Site productivity	<ul style="list-style-type: none"> ➤ Follow MFLNRO Regional guidelines and recommendations for specific ecosystems and sites ➤ Complete site-specific (SP) and implement a reforestation program and follow-up treatments ➤ Use appropriate silviculture system (specify system

22

DRAFT – REVISED JANUARY 2017

VANCOUVER#
VANCOUVER#3524053 - v3

TIMBER INFORMATION PACKAGE

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
	used)
	➤ Protect advanced regen and immature trees
	➤ Design cutblocks with windfirm edges
Shoreline and foreshore	➤ Establish and maintain windfirm shoreline buffer zone
	➤ Log dumps and boom areas must be to DFO and MOE standards
	➤ Boom yard operations must avoid conflicts with spawning periods
Noise	➤ Consider hours of work and proximity to residential areas
Traditional/heritage sites	➤ Consult with band, identify and protect as required
	➤ Mark and maintain buffer zone around all traditional/heritage sites
Visual Quality	➤ Log minimum area adjacent to public use area and revegetate as soon as possible
	➤ Consider block design and position in relation to viewscapes
Air Quality	➤ Slash disposal by burning will be accomplished under the direction and permission of a MFLNRO burning permit.
	➤ Consider weather conditions with respect to smoke management
	➤ Do not burn in close proximity to residential areas
Health and Safety	➤ Follow WCB guidelines for each phase of the timber harvesting operation
	➤ Have workers trained and equipped to WCB standards

PROJECT PHASE: Access road and skid trail construction

VALUED ECOSYSTEM COMPONENT	MITIGATION METHOD
Excessive site disturbance/slope quality	➤ Design, construct, maintain and de-activate roads and skid trails to current engineering standards
	➤ Utilize total-chance planning concept
	➤ Plan and construct roads to avoid areas with evidence of slope instability
	➤ Do not construct roads during extremely unfavourable soil moisture conditions
	➤ Construct roads and skid trails with appropriate equipment
	➤ Minimize width of right-of-way
	➤ Grass seed embankments
	➤ Minimize number of skid trails. Utilize random skidding pattern
	➤ Take advantage of stable benches, ridge tops and gentle slopes
	➤ Ditch and waterbar all roads and skid trails following logging operations

23

DRAFT – REVISED JANUARY 2017
 VANCOUVER#
 VANCOUVER#3524053 - v3

TIMBER INFORMATION PACKAGE

- Rehab roads and skid trails if no further use required

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3

 Indian and Northern Affairs Canada
Affaires Indiennes et du Nord Canada

Chronogramme no. - N° chronogramme
File reference no. - N° de référence au dossier

**BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE**

NOTE: The words "this Band Fund" ("ce Fonds" or "ce fonds"), whichever is the case, must appear in all resolutions requesting expenditures from Band Funds.
NOTE: Les mots "ce Fonds de notre bande" ("ce Fonds" ou "ce fonds") selon le cas doivent paraître dans toutes les résolutions portant sur des dépenses à partir des fonds des bandes.

The council of the Le conseil de	Date of duly convened meeting Date de l'assemblée dûment convoquée	<table border="1"> <tr> <td>Day</td> <td>Month</td> <td>Year</td> <td>Province</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Day	Month	Year	Province					Cash free balance - Solde disponible
			Day	Month	Year	Province					
Capital account Compte capital	Revenue account Compte revenu										

**DO HEREBY RESOLVE
DÉCIDE, PAR LES PRÉSENTES:**

- THAT a Timber Permit be granted in accordance with Section 5(2) of the Indian Timber Regulations.
- THAT the environmental impact review of the Harvest Plan be performed in accordance with the Canadian *Environmental Assessment Act (CEAA 2012)* and other applicable legislation.
- THAT _____ M³ of Cedar _____ M³ of Pine
 _____ M³ of Fir _____ M³ of Cypress
 _____ M³ of Hemlock _____ M³ of Cottonwood
 _____ M³ of Balsam _____ M³ of Maple
 _____ M³ of Spruce _____ M³ of Alder
 _____ M³ of Poplar _____ M³ of Birch

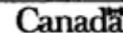
Be harvested and sold from our Reserve(s) # _____ as indicated in the enclosed Harvest Plan.

- THAT the _____ Band / First Nation be designated as the "Permittee".
- THAT the _____ be designated as the "Purchaser".
- THAT stumpage be charged as per the rates identified in the Timber Permit; and the deposited in the _____ Band / First Nation Capital Trust Account. The stated stumpage shall be at minimum, equal the prevailing stumpage rates paid in the Forest District where the cutting permit is located for the given species and grade of timber.
- THAT an export levy of be charged in excess of stumpage for all species at rates consistent with the Provincial Ministry of Forest Lands and Natural Resources, and it be deposited in the _____ Band/ First Nation Capital Trust Account.

Outturn _____	_____ (Chair - Président)	_____
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVÉ AU MINISTÈRE			
Approvals - Approuvés Authority - Autorité Source of funds - Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue	Approvals - Approuvés Authority - Autorité Source of funds - Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue	Approving officer - Recommandé par Signature _____ Date _____	Approving officer - Recommandé par Signature _____ Date _____
Approving officer - Approuvé par Signature _____ Date _____	Approving officer - Approuvé par Signature _____ Date _____		

DRAFT - REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - v3



20

 Indian and Northern Affairs Canada / Affaires Indiennes et du Nord Canada

Document no. - N° document
File reference no. - N° de référence de dossier

**BAND COUNCIL RESOLUTION
RÉSOLUTION DE CONSEIL DE BANDE**

NOTE: The words "from our Band Funds" ("notre" or "nos", whichever is the case, must appear in all resolutions requesting expenditures from Band Funds.
NOTE: Les mots "des fonds de notre bande" ("notre" ou "nos", selon le cas) doivent paraître dans toutes les résolutions portant sur des dépenses à faire de fonds des bandes.

The council of the Le conseil de	D-U M Y A Province	Cash free balance - Solde disponible
		Capital account Compte capital \$ _____
Date of duly convened meeting Date de l'assemblée dûment convoquée		Revenue account Compte revenu \$ _____

DO HEREBY RESOLVE
DÉCIDE, PAR LES PRÉSENTES:

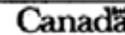
- THAT all Ministry of Forests, Lands and Natural Resource Operations' invoices are for the account of the "Purchaser".
- THAT scaling of the timber be performed by the Ministry of Forests, Lands and Natural Resource Operations fully licensed and approved scalers.
- THAT each log be hammer indented on both ends with our registered timber mark(s) # _____ before leaving on Reserve landing(s)

Quorum _____	_____ (Chief - Chef)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)
_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)	_____ (Councillor - Conseiller)

FOR DEPARTMENTAL USE ONLY - RÉSERVE AU MINISTÈRE					
Expenditure - Dépense	Authority/Statute Act/Section Autorité/Statut de la Loi sur les Indiens	Source of funds Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue	Expenditure - Dépense	Authority/Statute Act/Section Autorité/Statut de la Loi sur les Indiens	Source of funds Source des fonds <input type="checkbox"/> Capital <input type="checkbox"/> Revenue
Recommending officer - Recommandé par			Recommending officer - Recommandé par		
Signature _____ Date _____			Signature _____ Date _____		
Approving officer - Approuvé par			Approving officer - Approuvé par		
Signature _____ Date _____			Signature _____ Date _____		

803 (12-88) 7635-01-000-0002

Printed on recycled paper - imprimé sur papier recyclé



TIMBER INFORMATION PACKAGE

END OF TIMBER PERMIT APPLICATION PACKAGE

DRAFT – REVISED JANUARY 2017
VANCOUVER#
VANCOUVER#3524053 - 43

27

Appendix 11: Letters of Assurance (NBC) - Schedules A, B-1, B-2, C-A, C-B

First Nation's Building Permit Procedures

Schedule A

**Confirmation of Commitment by Owner's Agent and
Coordinating Registered Professional**

Note: 1. This letter must be submitted before commencement of construction of the project.
2. In this letter the words in italics are as defined in the National Building Code of Canada or as defined herein.
3. A **copy or duplicate original** of this Schedule shall be submitted to the _____ First Nation Council.

To: **Chief and Council** Date: _____
First Nation

(Professional Seal)

Re: _____
Name of Project

Address of Project

Legal Description of Project

The undersigned has retained _____ as a *coordinating registered professional* to coordinate the design work and *field reviews* of the *registered professionals* required for this project. The *coordinating registered professional* shall coordinate the design work and *field reviews* of the *registered professionals* required for the project in order to ascertain that the design will substantially comply with the National Building Code of Canada and other applicable enactments respecting safety and that the construction of the project will substantially comply with the National Building Code of Canada and other applicable enactments respecting safety, not including the construction safety aspects.

"*field reviews*" are defined to mean those reviews of the work

- (a) at a project site of a development to which the construction documents and specifications relate, and
- (b) where applicable, at fabrication locations where *building* components are fabricated for use at the project site that a *registered professional* in his or her professional discretion considers necessary to ascertain whether the work substantially complies in all material respects with the plans and supporting documents prepared by the *registered professional*.

Page 8 11/3/2014

First Nation's Building Permit Procedures

Schedule A (continued)

The owner's agent and the *coordinating registered professional* each acknowledge their responsibility to notify the addressee of this letter of the date the *coordinating registered professional* ceases to be retained by the owner's agent before the date the *coordinating registered professional* ceases to be retained or, if that is not possible, then as soon as possible. The *coordinating registered professional* acknowledges the responsibility to notify the addressee of this letter of the date a *registered professional* ceases to be retained before the date the *registered professional* ceases to be retained or, if that is not possible, then as soon as possible.

The owner's agent and the *coordinating registered professional* understand that where the *coordinating registered professional* or a *registered professional* ceases to be retained at any time during construction, work on the above project will cease until such time as:

- (a) a new *coordinating registered professional* or *registered professional*, as the case may be, is retained, and
- (b) a new letter in the form set out in Schedule A or in the forms set out in Schedules B-1 and B2, as the case may be, is filed with the *authority having jurisdiction*.

The undersigned *coordinating registered professional* certifies that he or she is a *registered professional* as defined herein, and agrees to coordinate the design work and *field reviews* of the *registered professionals* required for the project as outlined in the attached Schedules B1 and B2 including coordination and integration of functional testing of fire and life safety systems.

Coordinating Registered Professional

Owner's agent

Coordinating Registered Professional's Name (Print)

Signing Officer's Name (Print)

Coordinating Registered Professional's Signature

Signature Signing Officer's Signature

Date

Date

(Coordinating Registered Professional's Seal here)

Schedule A (continued)

In the Province of British Columbia, a *registered professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act.

A *coordinating registered professional* is defined to mean the *registered professional* who coordinates the design work and *field reviews* of the *registered professionals* required for the project as outlined in the attached Schedules B1 and B2 including coordination and integration of functional testing of fire and life safety systems.

First Nation's Building Permit Procedures

Schedule B-1

Assurance of Professional Design and Commitment for Field Review

- Note:
1. This letter must be submitted before commencement of construction on the project.
 2. In this letter the words in italics are as defined in the National Building Code of Canada or as defined herein.
 3. A **copy or duplicate original** of this Schedule shall be submitted to the First Nation Council.

To: **Chief and Council** Date: _____

Re: _____

Name of Project

Address of Project

Legal Description of Project

The undersigned hereby gives assurance that the design of the (Initial those of the items listed below that apply to this *registered professional*. All the disciplines will not necessarily be employed on every project.)

- _____ Architectural
- _____ Structural
- _____ Mechanical
- _____ Plumbing
- _____ Fire Suppression Systems
- _____ Electrical
- _____ Geotechnical - temporary
- _____ Geotechnical - permanent

(Professional Seal)

components of the plans and supporting documents prepared by this *registered professional* as outlined on the attached Schedule B2 substantially comply with the National Building Code of Canada and other applicable enactments respecting safety except for construction safety aspects.

The undersigned hereby undertakes to be responsible for *field reviews* of the above referenced components during construction as indicated on the attached "Summary of Design and Field Review Requirements" (Schedule B-2).

First Nation's Building Permit Procedures

Schedule B-1 (continued)

The undersigned also undertakes to notify the *authority having jurisdiction* in writing as soon as possible if the undersigned's contract for *field review* is terminated at any time during construction.

I certify that I am a *registered professional* as defined herein.

Name (Print)

Signed

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the *Registered Professional* is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional*. In the Province of British Columbia, a *registered professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an Architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional Engineer under the Engineers and Geoscientists Act.

First Nation's Building Permit Procedures

Schedule B-2

Summary of Design and Field Review Requirements

Note: 1. This form must be submitted with Schedule B-1 before commencement of construction on the project. 2. In this letter the words in italics have the same meaning as in the National Building Code of Canada and as defined in the attached Schedule B1.

Date: _____
(Registered Professional)

PROJECT: _____
(Name)

(Address)

(Initial applicable discipline below and cross out and initial non-applicable items within the discipline.)

ARCHITECTURAL

- 1.1 Fire resisting assemblies
- 1.2 *Fire separations* and their continuity
- 1.3 *Closures*, including tightness and operation
- 1.4 Egress systems, including *access to exit* within *suites* and *floor areas*
- 1.5 Performance and physical safety features (guardrails, handrails, etc.)
- 1.6 Structural capacity of architectural components, including anchorage and seismic restraint
- 1.7 Sound control
- 1.8 Landscaping, screening and site grading
- 1.9 Provisions for firefighting access
- 1.10 *Access requirements for persons with disabilities*
- 1.11 Elevating devices
- 1.12 Functional testing of architecturally related fire emergency systems and devices
- 1.13 Development Permit and conditions therein
- 1.14 Interior signage, including acceptable materials, dimensions and locations
- 1.15 Review of all applicable shop drawings
- 1.16 Interior and exterior finishes

Page 13

11/3/2014

Schedule B-2 (Continued)

1.17 Dampproofing and/or waterproofing of walls and slabs below *grade* (Professional Seal)

Schedule B-2 (Continued)

1.18 Roofing and flashings

1.19 Wall cladding systems

1.20 Thermal insulation systems, including condensation control and cavity ventilation

1.21 Exterior glazing

1.22 Integration of building envelope components

1.23 Environmental separation requirements (Part 5)

STRUCTURAL

2.1 Structural capacity of structural components of the *building*, including anchorage and seismic restraint

2.2 Structural aspects of *deep foundations*

2.3 Review of all applicable shop drawings

2.4 Structural aspects of unbonded post-tensioned concrete design and construction

MECHANICAL

3.1 HVAC systems and devices, including high *building* requirements where applicable

3.2 *Fire dampers* at required *fire separations*

3.3 *Continuity of fire separations* at HVAC penetrations

3.4 Functional testing of mechanically related fire emergency systems and devices

3.5 Maintenance manuals for mechanical systems

3.6 Structural capacity of mechanical components, including anchorage and seismic restraint

3.7 Review of all applicable shop drawings

Schedule B-2 (Continued)**PLUMBING**

- 4.1 *Roof drainage systems*
- 4.2 *Site and foundation drainage systems*
- 4.3 *Plumbing systems and devices*
- 4.4 *Continuity of fire separations at plumbing penetrations*
- 4.5 *Functional testing of plumbing related fire emergency systems and devices*
- 4.6 *Maintenance manuals for plumbing systems*
- 4.7 *Structural capacity of plumbing components, including anchorage and seismic restraint*
- 4.8 *Review of all applicable shop drawings*

FIRE SUPPRESSION SYSTEMS

- 5.1 *Suppression system classification for type of occupancy*
- 5.2 *Design coverage, including concealed or special areas*
- 5.3 *Compatibility and location of electrical supervision, ancillary alarm and control devices*
- 5.4 *Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary*
- 5.5 *Qualification of welder, quality of welds and material*
- 5.6 *Review of all applicable shop drawings*
- 5.7 *Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards*
- 5.8 *Maintenance program and manual for suppression systems*
- 5.9 *Structural capacity of sprinkler components, including anchorage and seismic restraint*
- 5.10 *For partial systems - confirm sprinklers are installed in all areas where required*
- 5.11 *Fire Department connections and hydrant locations*
- 5.12 *Fire hose standpipes*
- 5.13 *Functional testing of fire suppression systems and devices*

Schedule B-2 (Continued)**ELECTRICAL**

-
- 6.1 Electrical systems and devices, including high building requirements where applicable
 - 6.2 Continuity of *fire separations* at electrical penetrations
 - 6.3 Functional testing of electrical related fire emergency systems and devices
 - 6.4 Electrical systems and devices maintenance manuals
 - 6.5 Structural capacity of electrical components, including anchorage and seismic restraint
 - 6.6 Clearances from *buildings* of all electrical utility equipment
 - 6.7 Fire protection of wiring for emergency systems
 - 6.8 Review of all applicable shop drawings

GEOTECHNICAL - TEMPORARY

-
- 7.1 *Excavation*
 - 7.2 Shoring
 - 7.3 Underpinning
 - 7.4 Temporary construction dewatering

GEOTECHNICAL - PERMANENT

-
- 8.1 Bearing capacity of the soil
 - 8.2 Geotechnical aspects of deep *foundations*
 - 8.3 Compaction of engineered fill (Professional Seal)
 - 8.4 Structural considerations of soil, including slope stability and seismic loading
 - 8.5 Backfill
 - 8.6 Permanent dewatering
 - 8.7 Permanent underpinning

First Nation's Building Permit Procedures

Schedule C-A

Assurance of Coordination of Professional Field Review

- Note:
1. This letter must be submitted after completion of the project but before the occupancy permit is issued, or a final inspection is made, by the *authority having jurisdiction*.
 2. In this letter the words in italics have the meaning as defined in the previously submitted Schedule A.
 3. A **copy or duplicate original** of this Schedule shall be submitted to the _____ First Nation Council.

To: **Chief and Council**
First Nation

Date: _____

(Professional Seal)

Re: _____
Name of Project

Address of Project

Legal Description of Project

I hereby give assurance that:

- (a) I have fulfilled my obligations for coordination of *field review* of the *registered professionals* required for the project as described in the previously submitted Schedule A, "Confirmation Of Commitment By Owner And By Coordinating Registered Professional"
- (b) I have coordinated the functional testing of the fire emergency systems and devices to ascertain that they substantially comply in all material respects with:
 - (i) the applicable requirements of the National Building Code of Canada and other applicable enactments respecting safety, not including construction safety aspects; and,

First Nation's Building Permit Procedures

(ii) the construction documents, specifications and supporting documents.

(C) I am a *registered professional* as defined herein.

Project: _____

(Address)

(The coordinating registered professional shall complete the following:)

Name (Print)

Signature

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the coordinating registered professional is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a coordinating *registered professional*, who is also a *registered professional*. In the Province of British Columbia, a *registered professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act.

First Nation's Building Permit Procedures

Schedule C-B

Assurance of Professional Field Review and Compliance

- Note:
1. This letter must be submitted after completion of the project but before the occupancy permit is issued, or a final inspection is made, by the *authority having jurisdiction*. A separate letter must be submitted by each registered professional.
 2. In this letter the words in italics have the same meaning as defined in the previously submitted Schedules B1 and B2.
 3. A **copy or duplicate original** of this Schedule shall be submitted to the First Nation Council.

To: **Chief and Council
First Nation**

Date: _____

(Professional Seal)

Re: _____
Area of responsibility (e.g. Architectural, etc.) (Print)

Name of Project

Address of Project

Legal Description of Project

I hereby give assurance that:

- (a) I have fulfilled my obligations for *field review* as outlined in the previously submitted Schedule B-1, "Assurance of Professional Design and Commitment for Field Review," and Schedule B-2, "Summary of Design and Field Review Requirements"; and,
- (b) those components of the project opposite my initials in Schedule B-2 substantially comply in all material respects with:

First Nation's Building Permit Procedures

Schedule C-B (continued)

- (i) the applicable requirements of the National Building Code of Canada and other applicable enactments respecting safety, not including construction safety aspects; and,
 - (ii) the construction documents, specifications and supporting documents.
- (c) I am a *registered professional* as defined herein.

Project: _____

(Address)

(The coordinating *registered professional* shall complete the following:)

Name (Print)

Signature

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the *Registered Professional* is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (print name of firm)

Page 20

11/3/2014

Schedule C-B (continued)

Note: The above letter must be signed by a *Registered Professional*. In the Province of British Columbia, a *Registered Professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an Architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional Engineer under the Engineers and Geoscientists Act.

Appendix 12 : Permit and Authorization Information

Numerous permits and or authorizations may be required before capital projects can proceed.

A. Federal Government of Canada

The federal government has several agencies issuing permits or authorizations on First Nations lands:

1. Indigenous and Northern Affairs Canada [ISC]

ISC is responsible for the following permits for non-FNLM First Nations:

- Timber harvesting
- Gravel extraction
- Burning

Contact your Resource Officer at Lands and Economic Development (LED) on the process for obtaining these permits.

2. Fisheries and Oceans Canada (FOC)

Any activities that could impact fish, or fish habitat, may require a permit [authorization] from FOC. FOC can be contacted through their website www.dfo-mpo.gc.ca

3. Transport Canada [TC]

Activities that affect navigable waters may require a permit from Transport Canada. TC can be contacted through their website www.tc.gc.ca or through their Navigation Protection Program administrators.

B. First Nation Health Authority [FNHA]

FNHA is responsible for in-ground waste disposal fields associated with individual households. They can be contacted through one of their regional offices.

C. Province of British Columbia

The provincial government is responsible for issuing permits which may be required for:

- Hazardous waste generation
- Hazardous waste transportation
- Water use
- Water ISCharge
- Wastewater plant registration
- Road Access
- Logging

All provincial permits can be accessed through the Provincial “Front Counter” at www.frontcounter.gov.bc.ca or at 1-877-855-3222.

D. Municipal Governments

Municipal permits from cities, towns, or regional districts are very site specific and may or may not be required in your area. Contact the engineering department of your local municipal government. Local government may also provide free building inspections for electrical, plumbing or structural components both during construction and renovations.

If you are not within a municipality or regional district, the BC Safety Authority (BCSA) can perform inspections and issue permits on building safety including electrical installations. They can be reached at www.safetyauthority.ca

Appendix 13: Design Stage Technical Review

Checklist for Design Stage Technical Review**

Pre-design/ Pilot Study/ Preliminary Design Phase Final Design Phase

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
Project Description & Rationale	_____	_____	_____
Preliminary/ Final Design Report (signed & sealed)	_____	_____	_____
• Preliminary Design Investigation Details	_____	_____	_____
• Preliminary/ Final Design Report (signed & sealed)	_____	_____	_____
• Preliminary/ Final Design Drawings (signed & sealed)	_____	_____	_____
• Outline/ Final Specifications (signed & sealed)	_____	_____	_____
• Tender Documents (signed & sealed)	_____	_____	_____
• Land Encumbrance Check	_____	_____	_____
• Right-of-ways Identified/ Confirmed	_____	_____	_____
• Environment Assessment Study Report	_____	_____	_____
• Complete IEMS Simple Environmental Review or Detailed Environmental Review Form	_____	_____	_____
• Required Permits Identified/ Confirmed	_____	_____	_____
• Timber Description	_____	_____	_____
• Other Permits _____ <small>(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit, etc.)</small>	_____	_____	_____
• Comments by other Regulatory Agencies	_____	_____	_____
• Environment Canada	_____	_____	_____
• Fisheries Canada	_____	_____	_____
• Others _____ <small>(FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)</small>	_____	_____	_____
• For ***WTP & WWTPs:	_____	_____	_____
• Complete Design Guideline Checklist	_____	_____	_____
• Commissioning Plan	_____	_____	_____
• Draft O&M Manual	_____	_____	_____
• O&M Training Plan	_____	_____	_____
• Project Schedule	_____	_____	_____
• Class 'B/ A' Total Project Cost Estimate	_____	_____	_____
• Cash '___' O&M Cost Estimate	_____	_____	_____
• Project Construction Process	_____	_____	_____
• Const. Mgmt. Business Plan	_____	_____	_____
• Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant



Chapter 5:

THE ACQUISITION / CONSTRUCTION OF A CAPITAL PROJECT

A Practical Guide To Capital Projects | 5 of 6



A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre

Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351
Facsimile: 604-775-7149
Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	v
Table of Contents	vi
Glossary of Abbreviations	viii
Definitions.....	xi

The Acquisition / Construction Stage of a Capital Project

Introduction	1
5.1 Construction Stage Funding Application (PAR)	4
5.2 Project Approval Request for Construction (PAR) Review	9
5.2.1 Capital Management Officer Review	9
5.2.2 Engineer Review	9
5.3 Construction Stage Funding Application Process at ISC.....	12
5.4 Construction Stage Deliverables	13
5.5 Construction Analysis by First Nations	15
5.6 Construction Stage Deliverable Review by ISC.....	17
5.6.1 Capital Management Officer.....	17
5.6.2 Senior Engineer	17
5.7 Construction Stage Processing by ISC.....	18

Appendices

1: Project Approval Request for Construction [PAR]	23
2: ISC Environmental Review Process.....	39
2A: ISC Environmental Review Process Summary.....	41
2B: Generic Terms of Reference for Environmental Assessment	43
2C: Projects Environmental Assessment Scoping Report.....	49
3: Project Implementation.....	53
3A: Guidelines for Hiring an Independent Project Manager	55
3B: DISC Guidelines for First Nations Engaging a Consultant	61
3C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings	65
3D: ISC Sample Professional Services Contract [CN2 Template]	67
3E: Advice on Hiring a Professional Engineer or Professional Geoscientist	69

Appendices cont.

4: Terms of Reference - Construction and Post-Construction Stage [Sample].....	87
5: Risk Assessment Tool [RAT] Sample	101
6: Construction Stage Funding Application	103
7: Capital Projects Report DCI #460671.....	105

Figures

Figure 1: Work-flow for Capital Project Approval Process	3
--	---

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEPE	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
FNIIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organizational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit (with Funding Services)
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act. CEAA2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes, or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subtrades, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subtrade contractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations which identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning, budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures, prescribed in the environmental review process, were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's ISCRETION. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - Protect and maintain existing assets with an emphasis on health and safety;
 - Mitigate health and safety risks through new and existing assets;
 - Address water and sewer project backlogs;
 - Include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organisations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs.

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).

Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post Construction Stage of a Capital Project

Appendix

5

The Acquisition / Construction Stage of a Capital Project

An overview of the Acquisition and Construction Stage of a Capital Project

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision making for the successful implementation of capital projects.

The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

Funding processes related to other components of the capital facilities and maintenance program (CFMP) program such as schools, housing and operation and maintenance funding are covered in other documents.

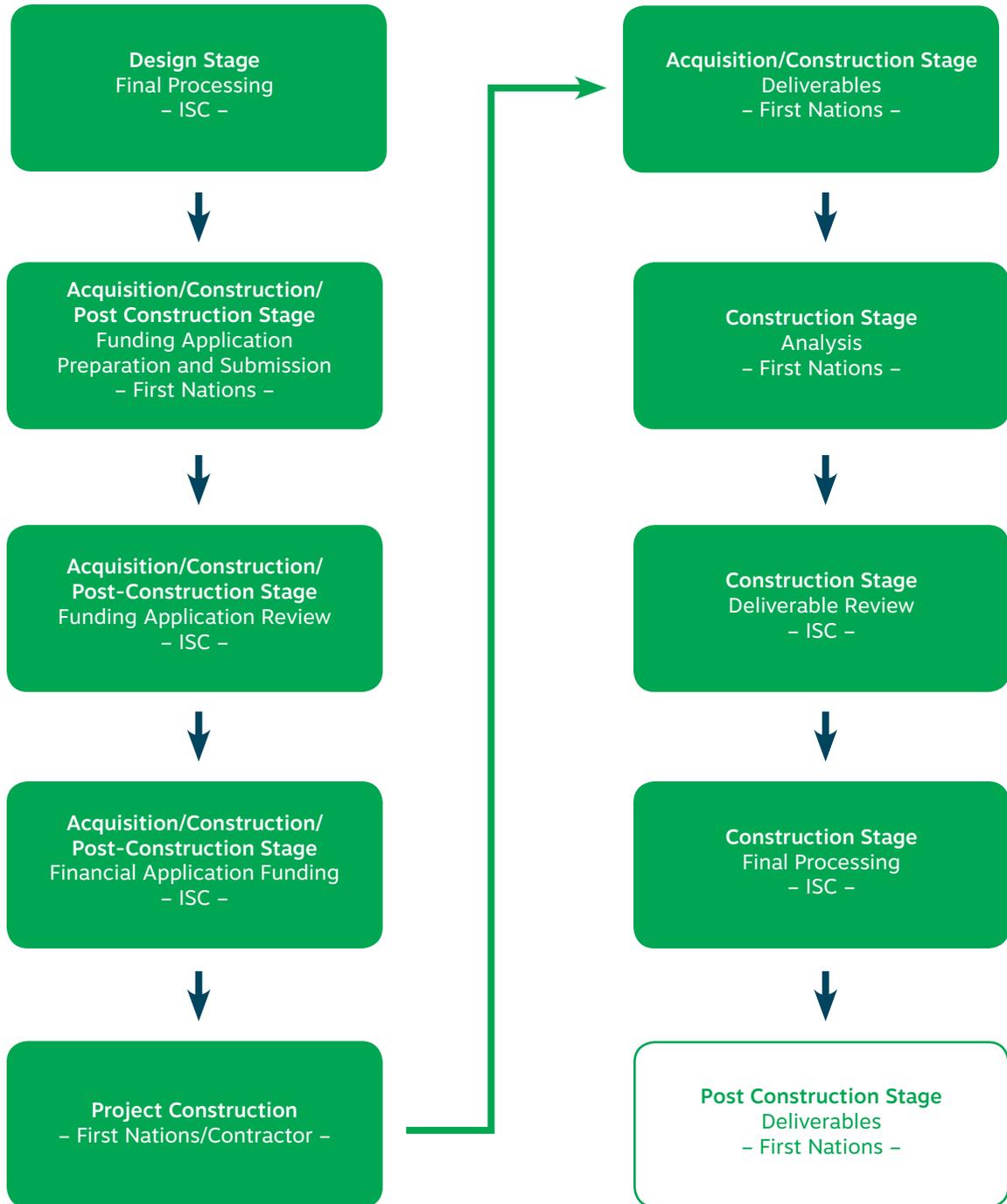
The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle — feasibility, design, construction and post construction. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

The construction stage is when actual, physical construction is started and completed. At the beginning of this stage, a bid process determines the cost of the project using the design completed in the design stage. Completion of this stage will result in a project which meets the requirements of the First Nation.

The construction stage funding application will include funds to complete all work required for the construction stage and for the post-construction stage. There will not be a separate funding application for the post-construction stage. The proposal for professional consultant services identifying services for the construction stage must also include services required for post-construction stage deliverables.

Figure 1: Work-flow for Capital Project Approval Process



5.1 Construction Stage Funding Application (PAR)

A construction stage funding application labeled a Project Approval Request (PAR) for Construction is required for all capital projects (except Group 2 ACRS projects and small O&M projects) and will incorporate a funding request for completing both the construction stage and the post-construction stage. The amount of information provided in the PAR is intended to match the size and complexity of the project. Generating a PAR will be a systematic progression from generating a Design Approval Request (DAR) to start the design stage. See [Appendix 1: Project Approval Request for Construction \(PAR\)](#) for guidance on completing a PAR.

A First Nation will generally apply for construction stage funding (PAR) concurrently with submitting final design stage deliverables to ISC. Submission of a PAR formally triggers the construction stage funding request application process.

If a First Nation has a RFNIIP project scheduled for construction in the following fiscal year, the funding application (PAR) should be submitted in the preceding November.

The PAR summarizes the project and contains the following sections:

- First Nations Approval Signature — indicates FN project concurrence with PAR objectives and project implementation process;
- Executive Summary — one page project summary with funding requirements table;
- Project Identification — detailed project description with project justification and project funding history;
- Design Criteria — summary of design objectives, design parameters, permits, land requirements, results from additional investigations and technical issues. The final Design Report and the final design drawings, specifications and tender documents will have already been submitted as design stage deliverables;

- Project Management Framework — proposed First Nation project management plan including the process for engaging a project leader, independent project manager (if applicable) and professional consultant services. If the construction management process is being used, identify the construction manager and provide qualifications. The experience of the project team must reflect the size and complexity of the project;
- Procurement Process — identify the proposed project construction procurement strategy. If the construction management process is being used, outline the key components of the finalized Construction Management Business Plan and describe the prior involvement of the Construction Management Evaluation Team (CMET);

See ISC's website information for the CFM Program — Project Information — Policies and Directives for information on Operational Parameters for the Review and Evaluation of Construction Management Projects.

- Environmental Assessment Process (low or medium environmental risk projects) — summarize environmental assessment study report issues, proposed mitigation measures, environmental reporting and any follow-up monitoring required. The final Environmental Assessment Report will have already been submitted as a design stage deliverable. See [Appendix 2: Environmental Review Process](#);
- Financial Information — proposed construction stage costs and proposed cash flow including: construction costs (Class A), professional consultant services fees (e.g., tendering, contract administration, inspection and quality control, site surveys, geotechnical services, environmental inspection, project management, construction management and post construction completion reporting), band administration fees, anticipated O&M costs, technical training costs, cost sharing arrangements and municipal-type service agreement costs;
- O&M Training — training requirements and a training plan;
- Project Schedule — proposed schedule with milestone dates and responsibilities.

The PAR appendices should include the following items (as applicable):

- A. Land Encumbrance Check** — Updated land encumbrance check
- B. Land Access Documents** — Rights of way, easements and other land agreement requirements to provide entitlement to property.

Note:

Recommended common practice is to continue into the construction stage using the services of the design stage consultant. In the few circumstances where this does not occur, generating a request for consultant proposals based on a terms of reference to clearly identify the scope of work and services is recommended. **See Section 2.7.3 and Appendix 9: Project Implementation.**

- C. Permits, Approvals and Comments** — Comments from organizations and agencies associated with the project should be included. Where a permit requires a commitment of construction funding prior to being finalized (e.g., a timber permit or a fisheries authorization), a draft of the final permit is to be submitted along with a statement from the First Nation that they will proceed with finalizing the permit immediately upon notification of funding.
- D. Relevant Correspondence and Information** — Specific information pertaining to project construction.
- E. Project Manager or Construction Manager Information** (as applicable) — Provide proposals for an independent project manager and/or a construction manager to provide the appropriate services required during the construction and post-construction stages. See Section 2.7.2 Hiring a Project Manager, Section 2.7.5 Hiring a Construction Manager and [Appendix 3: Project Implementation Hiring of Professionals](#).
- F. Terms of Reference (TOR) for Professional Consultant Services** — Stipulates the professional consultant services expected by the First Nation. This document defines the scope of the project, the required technical standards, the expected completion schedule and the contractual requirements.

Note:

The document **CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting.

The TOR must clearly identify all required construction stage and post-construction stage services to be completed by the consultant.

See [Appendix 4: Terms of Reference – Construction and Post-Construction Stage \(Sample\)](#) for assistance when creating a project TOR. The Capital Management Officer and Senior Engineer can also assist First Nations in the development of a project specific TOR.

G. Proposal for Consultant Services – Provides the written response submitted by a consultant to the First Nation's request for professional services during the construction and post construction stages. The proposal must clearly identify a scope of work and all associated costs to provide all applicable services and produce all the deliverables required during project construction and post-construction activities as identified in Sections 5.4 and 6.1. The scope of work is to identify the tasks to be performed such as tendering, project management, contract administration, construction inspection, commissioning (testing, operation proofing, start-up), training, development of an O&M manual, development of a facility maintenance management plan, environmental monitoring and post-completion reporting.

The proposal will also provide information concerning:

- The qualifications and experience of the consultant company;
- The qualifications and experience of the consultant personnel specifically assigned to the project;
- The proposed strategies, activities and tasks the consultant will use to provide the services;
- The expected schedule for project completion and a fee schedule and disbursements (travel, photocopying, etc.) to complete the assignment.

The consultant fee schedule must detail the hourly rates charged by each consultant team member, the number of hours and associated cost estimate for each task to be performed and an estimate of disbursement costs. Where sub-consultants (eg. geotechnical, environmental) will be performing tasks for the prime consultant, their task-specific proposals with time and costing information are to be included in the overall project proposal. See [Appendix 3D: Sample Professional Services Contract \(CN2 Template\)](#) and [Appendix 3E: Advice on Hiring a Professional Engineer or Professional Geoscientist \(excerpt from APEGBC Website\)](#)

- H. Construction Management Business Plan** (Final) (if applicable) — Updated plan summarizing the finalized construction management process to implement the project.
- I. Financial Information** — Provide detailed cost breakdown.

5.2 Project Approval Request for Construction (PAR) Review

5.2.1 Capital Management Officer Review

The Capital Management Officer will review the PAR for completeness and validity. Generally, the review will include:

- Confirming that the First Nation accepts the findings and recommendations of the design stage and that they wish to proceed with the construction stage;
- Confirming that the project description and project justification are similar in nature and in scope to those identified in the design stage. Any significant deviations must be fully explained and shown to be within the mandate of BC Region's capital program;
- Reviewing the cash flow projections to determine the impact on the ISC budget process;

Any deficiencies in the funding application will be communicated to the First Nation in writing.

Assuming the funding application meets the appropriate criteria, the Capital Management Officer will generate and populate the design stage version of the previous CFM Program Record Document (CPRD) and will then forward the CPRD and project information to the Senior Engineer for technical review.

5.2.2 Engineer Review

The technical review will consider whether the proposed scope of work provides value for the First Nation and ISC, meets the project objectives and is appropriate, functional, cost effective and in accordance with all relevant guidelines, standards, codes, laws and regulations. Any deficiencies will be communicated to the First Nation.

The technical review will include:

- Reviewing the final design report, design drawings and specifications to ensure that all previous review comments have been incorporated into the project and that the project is ready for implementation;
- Reviewing the project description and project justification to confirm that the nature and scope of work is consistent with the previous submissions, and that any changes have been justified;
- Confirming the project priority ranking number;
- Confirming that cost estimates and cash flow are reasonable;
- Comparing the cost estimates with earlier submissions and confirming that any significant variances are fully explained;
- Reviewing the proposal for professional consultant services to assess that:
 - » All applicable services and deliverables required by Section 5.4 of this chapter and by Section 6.1 of Chapter 6 will be produced;
 - » The consulting firms and identified project team has the necessary qualifications and experience to administer the construction contract and monitor the construction program;
 - » The proposed scope of work is sufficient to ensure adequate inspections and construction monitoring which will produce the required level of project quality;
 - » The proposed schedule is realistic and adequate;
 - » The professional fees are reasonably within accepted guidelines;
 - » Adequate management and quality controls are specified to ensure a cost effective, technically proficient construction implementation team.
- If applicable, reviewing the final construction management business plan;
- If applicable, reviewing the Environmental Assessment Study Report to ensure that all proposed mitigation measures have been incorporated into the project;
- Managing the environmental assessment process. The Project Description Form will be combined with a Minor Exclusion determination, a Simple Report or a Detailed Report to reach a decision that the project does not generate any significant

environmental impacts which cannot be reasonably mitigated. Any questions regarding adverse environmental impacts need to be addressed before the project can proceed to funding consideration. Completed and signed documents will be electronically filed in the Integrated Environmental Management System (IEMS);

- Updating the Risk Assessment Tool for projects with a total ISC contribution greater than \$5M. See [Appendix 5: Risk Assessment Tool \(Sample\)](#);
- Comparing the PAR to the Construction Stage Funding Application checklist. See [Appendix 6](#). The checklist for construction stage funding application may be useful to the First Nation as a quick guide to verify that the application documentation is complete;
- Inserting required information on to the CPRD form and forward for approvals.

Note:

Consultation with ISC is recommended before proceeding with any significant changes to the scope of work approved in the funding application, which will result in a contingency allowance release or a cost overrun. The First Nation will be responsible for providing any funds required to deal with additional costs. ISC may or may not allocate additional funds to cover off cost exceedances depending on the type of changes and their magnitude.

5.3 Construction Stage Funding Application Process at ISC

The Capital Management Officer or Project Engineer will contact the First Nation regarding the status of the funding application.

If the funding application meets the necessary requirements, the Capital Management Officer will process the project for funding eligibility. Refer to Chapter 1 for Banking Day procedures and the funding of projects.

If project funding is received by the First Nation, appropriate reporting by the First Nations as specified in the funding agreement amendment must be processed to stay off the Halt List. [*See Appendix 7: Capital Projects Report DCI #460671.*](#)

5.4 Construction Stage Deliverables

During the construction stage, the project focus will be on project construction, contractor performance and consultant team services (e.g., contract administration, construction inspection, etc.).

The following construction stage deliverables may or may not be required (as noted) during this stage depending on project developments:

- Summary of tenders (required for invitational or public tendering processes) — A summary of the tenders received, a tender analysis, a recommendation for contract award and a copy of the executed contract are to be submitted. The tender analysis is to compare the recommended bid against the Class A cost estimate and provide an explanation for any variances exceeding 15%. Should the lowest tender exceed the allocated ISC funding level, a substantiated request for additional funding should be submitted. In some cases where funding is limited, an assessment of options to reduce the scope of work may be required.
- Project meeting minutes (if applicable) — if ISC are participants in a project team for a major project, minutes of any project meetings between the First Nations, consultant and contractor are to be submitted to the Capital Management Officer and the Engineer.
- Administrative reporting during the construction stage is to include:
 - » Capital Project Progress Reporting - reporting on project progress in accordance with the schedule identified in the agreement amendment is an ISC funding requirement and failure to report results in a funding halt. See [Appendix 7: Capital Projects Report DCI #46067](#).
 - » Requests for capital project overrides if this project stage has justifiably taken longer than one year.
- Contingency allowance release (if required) — the First Nation can request the release of a portion or all of any contingency allowance that has been approved and held by ISC. To be considered for release, the request is to include documentation substantiating the contingency requirement (e.g., the reason for construction change orders).
- Cost overrun application (if required) — a First Nation may request additional project funding above the approved ISC project funding allocation. The request for additional funding should be received

in advance of the need for the funds to ensure that contractual requirements can be maintained. A revised PAR executive summary with a detailed accounting for the additional funds required and a new financial table explaining the funding and expenditure situation will be required. Senior level approval signatures will be required to approve additional funding.

5.5 Construction Analysis by First Nations

On completion of the construction stage, a technically-sound, well constructed and cost effective facility should be in place to serve the needs of the community.

The following questions will have been answered on completion of this stage:

Question 1: Has the project been constructed in accordance with the design?

Can the First Nation be assured that the project meets the expectations of the community and has been constructed to meet the applicable guidelines, standards, codes, laws and regulations?

Question 2: Has a quality project has been delivered?

Is the First Nation assured that the responsible professional has completed sufficient field inspection and testing to certify the quality of the work?

Question 3: Are First Nation operators trained in operation and maintenance?

Can the First Nation be assured that trained operators are in place to assume the operation and maintenance of the completed project?

Question 4: Is an O&M Manual and a Maintenance Management Plan complete?

Is the First Nation assured that their operators have received a manual to describe the O&M requirements of the completed project and a plan to manage their O&M activities?

Question 5: Has project contract administration has been adequately performed?

Is the First Nation assured that the responsible professional has performed contract administration duties to ensure that all parties to the contract have been treated in a fair and equitable manner?

Question 6: Has the First Nation received economic benefits from the project?

Would there be opportunities for additional benefits in future projects?

5.6 Construction Stage Deliverable Review by ISC

5.6.1 Capital Management Officer

The Capital Management Officer will review deliverables which will generally include:

- Reviewing the summary of tenders and re-confirming cash flow requirements;
- Reviewing progress reports and requests for project overrides;
- Reviewing any requests for contingency releases and/or cost overruns.

5.6.2 Senior Engineer

The Senior Engineer review of the construction stage deliverables will include:

- Reviewing the summary of tenders to assess compliance to ISC tendering policy and comparisons to the Class A cost estimate;
- Reviewing any contingency release and/or cost overrun requests.

5.7 Construction Stage Processing by ISC

Processing of deliverables for the construction stage will generally occur during this stage as applicable and when required.

Upon completion of this stage, the project will move into post construction stage processing as described in Chapter 6.



Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1: Project Approval Request for Construction [PAR]

INDIGENOUS SERVICES CANADA(ISC) DESIGN APPROVAL REQUEST (DAR)

Date: _____

Project Information

Submission No.: (is this the first submission (#1), (#2), etc.) _____
 Project Number (CPMS): _____
 Project Name: _____
 Funding Requested (include project contingencies): _____
 Asset Type: _____
 Link to Community Profile: _____

First Nation Information

Band Number: _____
 First Nation: _____
 Reserve: _____
 Chief: _____

Regional Information

Region: _____
 Project Capital Mgmt. Officer: _____
 Project/Technical Officer: _____
 Regional Manager (ID): _____
 Regional Manager (CP): _____
 Regional Director: _____
 Regional Director General: _____

Date Submitted for DISC Approval: _____
Submitted To: _____
Submitted By: _____

Project Approval Request | 1

APPROVAL SIGNATURES

First Nation Approvals

Chief (or person authorized by C&C)

Date

ISC Regional Approvals

ISC Regional Project /Technical Officer

Date

ISC Regional Manager

Date

ISC Regional Director

Date

ISC Regional Director General

Date

ISC Headquarter Approvals

ISC Senior Assistant Deputy Minister

Date

Introduction

This guide is to assist those preparing a Project Approval Request for Construction for submission to Indigenous Services Canada, British Columbia Region. The Project Approval Request for Construction replaces the Treasury Board Style Submissions, and is required for projects with a total cost (since feasibility) over \$0.5 million.

Project Approval for Construction is generally provided on the basis of Class “A” cost estimates. Approval permits the spending of remaining project funds.

Executive Summary

All “Project Approval Request” documents submitted are to include a one page Executive Summary. The Executive Summary is to incorporate and present the following items:

- Brief project description.
- Provide a brief justification for project to receive funding for design. Should include reference to the Priority Ranking Framework and/or ISC policy.
- Provide a brief rationale to demonstrate that the option chosen is the most physically, environmentally and economically feasible option to meet the needs of the community.
- For the option chosen identify the project risk, recipient risk and the overall rating as per the Management Control Framework (ISC TO COMPLETE THIS BULLET).
- Yearly cash flows and Total Estimated Cost (TEC) for Construction (in current dollars).
- Estimated yearly cash flows and Total Estimated Cost (TEC) for the construction stage, including engineering and contingencies (use table below).

Project X Yearly Cash Flows – -Pre-design /Design				
	Year 1	Year 2	Year 3	Total
A-Base				
Targeted Funds				
Other ISC				
Total ISC Funding				
FN Funding				
Other Funding Source #1				
Other Funding Source #2				
Total Non-ISC Funding				
Total Estimated Cost (TEC)				

Notes:

1. If there are more than two other funding sources, then add the appropriate number of rows for the funding sources.
2. If the project will be completed in more than three years, add additional columns for the additional years. If the project will be completed in one year, use only one column.

Table of Contents

1.0	Identification of Need	7
1.1	Requirement of the Asset and Justification	7
1.2	Priority Ranking Framework and other ISC Policies/Programs	7
1.3	Space Allowance (applicable to Schools only)	7
1.4	Previous Approvals and Project Expenditures	7
2.0	Existing Conditions	8
2.1	Basic Community Profile	8
2.2	Location	8
2.3	Inspections of existing asset(s) related to the project (if applicable)	8
3.0	Design	9
3.1	Recommended option	9
3.2	Design Criteria	9
3.3	Technical Difficulties	9
4.0	Project Management Framework	10
4.1	ISC Roles and Responsibilities	10
4.2	First Nation Roles and Responsibilities	10
4.3	Project Manager Roles and Responsibilities	10
4.4	Architect/Engineering Services	11
4.5	General Contractor (If applicable)	11
5.0	Procurement	11
5.1	Procurement Stream	11
6.0	Environment	11
6.1	Mitigation Measures	11
7.0	Financial	12
7.1	Project Costs	12
7.2	Cost Sharing Arrangements (if applicable)	12

7.4	Risk Elements	12
7.5	Payment	13
8.0	O&M Training	13
9.0	Risk Assessment	13
10.0	Project Schedule	14
	Appendices	15

1.0 Identification of Need

1.1 Requirement of the Asset and Justification

- Description of the needs of the First Nation.
- Justification for the asset/project based on the findings of the feasibility study.
- Identify conformance to the applicable ISC Level of Service Standards (LOSS).
- Describe if the proposed works relate to a Physical Development Plan, Comprehensive Community Plan, Infrastructure Master Plan, or similar document.
- Description of existing facility or system, disposal of facility or system (as applicable), and applicable operation and maintenance (O&M) funding.
- Identify who will manage the O&M activities.

1.2 Priority Ranking Framework and other ISC Policies/Programs

- Reference of where the project is on the Project Priority Ranking Framework and why it is there (ISC TO COMPLETE THIS BULLET).
- Reference any other ISC policy or program that was applicable in identifying this project as a necessity (ISC TO COMPLETE THIS BULLET).

1.3 Space Allowance (applicable to Schools only)

- Space Allowance for the school building based on student enrolment using the most recent School Space Accommodations Standards (SSAS).
- Use of allowable size based on SSAS (i.e. classrooms, gym size, special purpose rooms).
- Use of recreational area.

1.4 Previous Approvals and Project Expenditures

- Identify approved budget and provide dates for feasibility stage project approval, including project allocations and expenditures.
- Explain any significant events that happened or issues raised that caused the project to be modified or delayed

Expand on each section and provide any additional information that would be pertinent to the Project being submitted

2.0 Existing Conditions

2.1 Basic Community Profile

- Existing population on and off reserve.
- Number of residences (identify the number of buildings serviced by the existing infrastructure – water and sewer).
- Describe the community buildings.
- Describe the level of certification of the existing operators.

2.2 Location

- Location and access – include a site plan (in the appendices).
- Identify location of asset/system on and or off reserve (as applicable).
- Identify access routes to the project site
- Remoteness Classification with reference to origin of classification.
- Zone Classification.
- Calculation of geographic and site indices.

2.3 Inspections of existing asset(s) related to the project (if applicable)

- What inspections of the existing asset(s) were completed (ACRS or others)?
- Provide a summary of the asset condition as reported in the Capital Assets Inventory System (CAIS) and Assets Condition Reporting System (ACRS). (ISC TO COMPLETE THIS BULLET).
- What were the main findings that justify immediate replacement of the asset? For example, is it health and safety, fire, etc.?

3.0 Design

3.1 Recommended option

- Identify the option chosen, including a brief description and associated costs (capital, O&M and 20 year life cycle costs).
- Identify any unique factors materially affecting the project (e.g. timing of approval, financial management plans, and cost-sharing arrangements).
- Identify if Municipal Type Agreements (MTAs) exist.

3.2 Design Criteria

- Summarize the design objectives. Provide a rationale and design parameters for the proposed works.
- Identify projected population (existing, 10-year and 20-year design horizon). Also identify the annual population growth rate. Provide supporting demographic studies, data or statistics for review
- Identify current and projected water demands, wastewater flows, fire flows, traffic volume, etc. (as applicable). Provide a rationale for the proposed demands or flows, i.e., the assumptions or data used for the projections.
- Provide a summary of the recommendations or findings from the following studies (typically undertaken during feasibility): geotechnical, environmental, archaeological, hydrogeological, etc. Append copies of each report (as applicable).
- Append all permits and approvals from all applicable regulatory agencies.
- Summarize land requirements or issues of concern. Append ROW agreements, easements, etc.
- List the appropriate standards that will be followed (include in the appendices).

3.3 Technical Difficulties

- Identify complicating technical project difficulties which may be a factor in either increasing project costs or delaying the project schedule.

4.0 Project Management Framework

4.1 ISC Roles and Responsibilities

- Review of project approval requests
- Processing project funding requests in the funding allocation process
- Generating a risk management framework
- Generating Aboriginal Recipient Funding Arrangement amendments
- Ensuring funding is available for allocation to First Nations in accordance with the funding process

4.2 First Nation Roles and Responsibilities

- Ensuring that projects are kept on budget.
- Ensuring deliverables are met and project is on schedule.
- Issuing payments as recommended by the Project Manager
- Verifying the performance of the Project Manager and adjusting payments as required.
- Attendance at project meetings.
- Verifying a change in scope approval process and approving change in scope as required.
- Ensuring project expenditures are consistent with expected audit expenditures

4.3 Project Manager Roles and Responsibilities

- A guide on hiring a Project Manager is included in Appendix I of the ISC Practical Guide to Capital Projects.
- Verifying that the work is delivered as per contractual terms and conditions.
- Ensuring payments are controlled based on contractual obligations (proposal, project scope, quality, schedule and price).
- Reviewing and verifying all invoices and recommending payment to the Band and Project Team.
- Reviewing of significant project items.
- Overseeing the work's quality to verify that the designer(s) implement appropriate Quality Control and Quality Assurance.
- Reviewing and recommending to Band and Project Team draft contractual clauses, including but not limited to appropriate financial leverage (e.g., payment terms), warranty and process warranty clauses, insurance, scope definition, quality assurance/ quality control expectations, and terms of payment's alignment with measurable/verifiable milestone deliverables.
- Ensuring deliverables are met and project is on schedule.
- Reporting.
- Attendance at Project meetings.
- Recommending change in scope requests.

10 | Project Approval Request

4.4 Architect/Engineering Services

- Providing documentation (drawings, specifications, design reports, tender documents, etc).
- Providing completion documents that meet ISC requirements.
- Meeting required schedules.
- Provide technical advice as required
- Inspection of work to verify conformance to specifications and design
- Conformance to funding amounts.
- Following all Federal Legislations.
- Following all Federal and Provincial codes, standards, regulations, etc., as applicable.
- QA/QC services.
- Budget control.
- Assessing changes in scope.

4.5 General Contractor (If applicable)

Identify the General Contractor's role and responsibility in the following:

- Staying within budget.
- Meeting Project milestones and schedules.
- Building to Federal and Provincial Legislation.
- Identifying risks and providing mitigation strategies.
- Change order Approval process.

5.0 Procurement

5.1 Procurement Stream

- Identify the proposed procurement process. Describe the manner in which the project will be implemented (e.g. by public tendered contract, construction management, multiple contracts, etc.).

6.0 Environment

6.1 Mitigation Measures

- Identify proposed mitigation measures during construction or post construction monitoring, if required.
- Identify roles and responsibilities, reporting and ongoing costs associated with environmental impacts and costs

7.0 Financial

7.1 Project Costs

Indicate that expenditures and commitments will not exceed the budget shown in this submission without prior approval from the First Nation and funding agency (ISC).

- Identify estimated construction costs, including contingency amount (typically 10%), engineering services and Band administration fees during construction.
- Identify the O&M costs.
- Identify the 20 year Life Cycle Cost.
- Provide a detailed cost breakdown, in the appendices, for construction, as follows:
 - Tabular format separated into construction and non-construction costs.
 - Where the project costs are shared, add lines after the “total project costs”, showing each party’s share, in current dollars, for each year as well as in total. Summarize sharing arrangements.
 - If applicable, show the following non-construction costs: consultant design fees, site survey and geotechnical costs, inspection and quality control fees, First Nation project management and/or project administration costs, technical training, maintenance management system, hydro, telephone, etc.
- Provide a detailed cost breakdown, in the appendices, of the estimated annual O&M costs and the amount allowed under CAIS.
- A detailed cost breakdown for engineering services during construction should be included in the consultant’s proposal.
- Indicate an increase/decrease of the O&M costs in comparison to those for the existing facility or system (if it is being replaced).
- Where Class “A” estimates are not available, an explanation is required

7.2 Cost Sharing Arrangements (if applicable)

- Explain any project cost sharing arrangements and the rationale for the cost-sharing proportion, for capital, O&M and future works.

7.3 Municipal Type Service Agreements (if applicable)

- Summarize any municipal type service agreements generated during the project
- Identify on-going impacts of the agreements and cost implications
- Identify roles and responsibilities for parties to the agreement.

7.4 Risk Elements

- Clearly state in lay terms major risks for the project (if any), followed by the percentage figure, and the base cost used to calculate the dollar amount allocated for each risk item.

7.5 Payment

- Identify the procedure for managing and releasing holdback payments (including roles and responsibilities) and the amount of the holdback payment.
- Identify the procedure for managing and releasing progress payments (including roles and responsibilities) and the amount of the progress payments.
- Identify the procedure for managing and releasing final payments (including roles and responsibilities) and the amount of the final payment.
- Identify the procedures (including roles and responsibilities) for managing payments to consultants or other professionals providing services during construction.

8.0 O&M Training

- Identify training requirements and a training plan to ensure operators are available to operate and maintain the facility/system being constructed.

9.0 Risk Assessment

- Summarize the findings of the risk assessment carried out by ISC for this project stage and include a copy of the Risk Assessment Tool (RAT) in Appendix 8

10.0 Project Schedule

- Provide an estimate for completion of each project milestone identified in the following table (as applicable):

	Completion Date	Responsibility*
Design Report		
Selection of Consultant for Construction		
Selection of Project Manager for Construction(if applicable)		
Construction Funding Submission (PAR)		
Funding for Construction		
Tender Close		
Review of Tenders		
Contract Award		
Site Mobilization		
Substantial Completion		
Construction Completion		
Completion documentation		
One-year warranty period (expire date)		

* The responsibility will fall under one or more of the following: Indigenous Services Canada (ISC), First Nation (FN), Design Consultant (DC), Supplier/ Manufacturer (S/M)

Appendices

1. Additional Information/ Data.
2. Relevant correspondence.
3. Permits, approvals or comments from agencies.
4. Right-of-way, easements and/ or land agreements.
5. School Space Accommodation Standard (SSAS) table and enrollment data (consultant to complete for school projects only – ISC to assist).
6. List of applicable standards and codes.
7. Detailed cost breakdown (capital and O&M).
8. Risk Assessment Tool (RAT) for the project (ISC TO COMPLETE THIS TASK).
9. Proposal for engineering services during construction (including fee table and schedule).
10. Project team contact identification and information in a tabulated format.
11. Site Plan and facility or system layout:
 - a. Site plan reduced to 8 ½ by 11 inches, but no larger than 11 by 14 inches
 - b. Facility or system layout plan to give general outline and location of major elements of the project.
12. Land Encumbrance Check.
13. Design report (sealed and signed).
14. Design drawings (sealed and signed).
15. Specifications (sealed and signed).
16. Tender documents.
17. Other reports such as: environmental, geotechnical, archaeological, hydrogeological, etc.
18. Project Manager Qualifications/ resume.

Appendix 2: Environmental Review

Appendix 2A: ISC Environmental Review Process Summary

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessment

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Appendix 2A: ISC Environmental Review Process Summary

All federally-funded projects must follow an Environmental Review Process [ERP] to ensure that no significant adverse environmental effects result from the implementation of a project. The objectives of the ERP are:

- predict the environment effects of a proposed project;
- identify measures to mitigate the effects;
- determine the significance of residual environmental effects and applicable mitigation measures;
- recommend follow-up programs to monitor impacts of environmental effects;
- fulfill the federal Duty to Consult with other Aboriginal interests regarding projects to be constructed on lands subject to treaty claims.

The level of environmental review should match the risk and likelihood of significant adverse effects associated with carrying out a project. Larger, more complex projects adjacent to water bodies or discharging into receiving waters would generally require a higher degree of environmental analysis.

The project environmental review process begins at the feasibility stage with an Environmental Scoping Study to outline potential issues. A project description form is initiated. If no significant issues are apparent that cannot be mitigated with standard procedures, the project is considered a minor project and considered “negligible environmental risk.” ISC has developed a “Minor Projects List” for identifying routine projects normally considered negligible environmental risk although any project may be elevated past the minor level for a more detailed assessment if conditions warrant. Renovations or upgrades are typical minor level projects. No further environmental information is required for a minor project.

If the Environmental Scoping Study identifies potentially significant environmental issues, the ISC engineer will request an Environmental Detailed Study to be completed during the design stage [usually at the pre-design phase]. Depending on the study results, the ISC engineer may classify the project as a low environmental risk requiring a “Simple Environmental Review Form”. The ISC engineer may request additional environmental information to confirm a low environmental risk rating.

Construction of a water treatment plant or a residential subdivision would be typical projects in the low risk category.

If the project is large or complex and the report indicates risks and potential effects are not readily known, the project will be referred to an ISC environmental specialist who will manage a more comprehensive evaluation of environmental effects and generate a “Detailed Environmental Review Form”. Projects requiring this form will require higher level approval authorities.

Depending on the scope of the environmental mitigation measures incorporated into the project, a Mitigation Measures Compliance Report may be required as part of the project completion reporting. This report is used to confirm that the mitigation measures prescribed in the environment review were incorporated into the project. This form is not required for projects that underwent a Minor Review. Projects that underwent a Simple Environmental Review may require this form at ISC’s discretion. Projects that underwent a Detailed Environmental Review will require form completion.

Environmental decisions will be tracked by the Integrated Environmental Management System [IEMS] which was launched in April, 2014.

Appendix 2B: Community Infrastructure Generic Terms of Reference for Environmental Assessments

The Generic Terms of Reference (TOR) presented here as an annotated table of contents provides the proponent with the guidelines in planning and conducting an environmental assessment.

Executive Summary

1. Introduction	<p>Provide contextual background information on the project and the proponent and project justification.</p> <p>1.1 Proponent Information</p> <p>1.2 Project Overview (including Title and Location)</p> <p>1.3 Regulatory Framework (e.g. Funding, Permits and/or Approvals)</p>
-----------------	---

<p>2. Project Description and scope of project</p>	<p>Provide a detailed project description. The project description should cover all aspects of the project including anticipated environmental impacts to the project. A detailed description will allow the RA(s) to scope the project components and activities appropriately.</p> <p>Note: For projects involving cutting of timber, the description must include the RPF's break down of volume/species (based upon a timber cruise) to be cut from the subject area and the proposed harvesting system.</p> <p>A detailed project description at the start of the project design phase clarifies potential interactions with the environmental and thereby reduces the risk that ISC or other RAs will require additional information to assess the project.</p> <p>Community Infrastructure Projects require a Scoping Report submitted during the feasibility stage of the project (Part 4).</p> <p>Identify all components that were scoped into the project including all necessary activities and with First Nation consultation early on in the development process.</p> <p>2.1 Project Background</p> <p>2.2 Location of project and mapping and study areas</p> <p>2.3 Project Facilities and associated infrastructure</p> <p>2.4 Construction activities</p> <p>2.5 Operations activities</p> <p>2.6 Decommissioning plans</p> <p>2.7 Alternative means of carrying out the project</p> <p>2.8 First Nations Consultation</p>
--	--

<p>3. Project Setting</p>	<p>Provide a detailed description of the existing environment in the project area including landscape, water bodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc). Indicate the areas affected by the project. Outline known environmentally significant historical uses and First Nations uses in the area of the project, if available. Develop and/or update the list of VECs in the project area.</p> <p>Identify all environmental components that were scoped into the assessment (i.e. Valued Ecosystem Components)</p> <p>3.1 Geophysical Environment</p> <p>3.2 Atmospheric Environment</p> <p>3.3 Aquatic Environment and Hydrology Surface Hydrology</p> <p>3.4 Terrestrial Environment, Wildlife, Species at Risk</p> <p>3.5 Land Use Setting</p> <p>3.6 Develop list of Valued Ecosystem Components</p> <p>3.7 Socio-economic Conditions</p> <p>3.8 First Nations Historical Use</p> <p>3.9 First Nations Interests and Involvement</p>
---------------------------	--

<p>4. Environmental Effects</p>	<p>Provide a narrative description of assessment approach and methodology used to conduct the EA. Note data sources and indicators used to consider the effects, and discuss mitigation and any residual effects of the project and whether those effects are significant or not.</p> <p>Summarize the results and recommendations of studies carried out as part of the EA (e.g. geotechnical studies, water quality investigations, SARA wildlife & habitat surveys, archaeological investigations, survey results, fisheries studies, etc).</p> <p>Describe the project/environment interactions</p> <p>Cumulative effects including past and foreseeable future developments (e.g. Phase II of a subdivision, Phase II of a commercial park) need to be addressed appropriately.</p> <p>Effects assessment may be summarized in an Interaction Matrix based on the VECs.</p> <p>4.1 Impact Assessment Methodology</p> <p>4.2 Construction Phase – Effects Assessment</p> <p>4.3 Operations and Maintenance Phase – Effects Assessment</p> <p>4.4 Decommissioning – Effects Assessment</p> <p>4.5 Socio-economic Effects on First Nations communities</p> <p>4.6 Accidents and Malfunctions</p> <p>4.7 Effects of the Environment on the Project</p> <p>4.8 Cumulative Effects</p>
---------------------------------	---

<p>5. Mitigation</p>	<p>Provide a narrative summary of how environmental effects will be mitigated and show how the mitigation measures have been included in the design implementation of the project. Applicable portions of the design and/or operation and maintenance information should be referenced in the EA report document to confirm that mitigation measures have been incorporated. Mitigation measures may also be used as conditions of the lease, permit and/or funding agreement, presented as a table of commitments.</p> <p>Where a project causes interactions with species at risk, specific mitigation measures must be identified. Mitigation strategies for species at risk are hierarchical with avoidance being preferred (e.g. timing, design/location change), followed by minimization through project modification or implementation under special conditions, and lastly, compensatory mitigation (e.g. replacement of lost habitat).</p> <p>A table of commitments and assurances may drafted and signed by the proponent to ensure that mitigation measures are incorporated and implemented in the final design and construction activities. This table must also be incorporated in the contractor’s tender.</p> <p>5.1 Narrative Summary of Project Impacts and Mitigation Measures Table: See Sample Mitigation Table Template Appendix 2</p> <p>5.2 Summary of Commitments Table of Commitments and Assurances</p>
----------------------	--

The EA provided for a project that involves cutting of timber, must include a Registered Professional Forester (RPF) breakdown of volume/species to be cut and a 1:5,000 Logging Plan map (LP map) signed and sealed by a RPF. The RPFs LP Map must be superimposed over the sub-division site (or development) map for that project; show the North arrow; the boundary of the reserve; the area in which timber will be cut; the method of harvesting (clear cut, selective or other); identify streams, wet lands, water bodies, archaeological sites, sensitive habitats or SARA Species or other SARA sites on the map, and identify on the map each mitigative measures specified for cutting of timber component of that project. The LP Map must identify who will ensure compliance on site with these mitigative measures during logging & how & when it will be done.

6. Permits/ Approvals, and, Correspondence with Other Government Departments	<p>Provide information on the status of required environmental permits and approvals necessary to undertake the project (e.g. rights of ways, fisheries authorization, navigable waters, sand and gravel and timber permits).</p> <p>When available include correspondence and/or preliminary comments by other government departments (e.g. DFO, EC, Parks Canada, Health Canada, B.C. Ministry of Water Land and Air Protection, BC Ministry of Sustainable Resource Management: Archaeology and Registry Services Branch etc.)</p>
7. Public Participation and Engagement	<p>Document strategies used to assess project input from the First Nation community and/or public. Identify concerns that were raised and how they were addressed and/or mitigated. For First Nations, this may be in the form of a letter from Chief and Council and/or a Band Council Resolution.</p>
8. Summary	<p>Provide a narrative summary of the environmental effects associated with the proposed project. Identify significance (not likely significant or significant). For significant impacts, summarize proposed mitigation strategies and how they will reduce environmental effects. Quantify wherever possible.</p> <p>Where follow-up is recommended, discuss planned follow-up activities. Include a table which shows VECs, project activities, environmental effects, mitigation measures, and reference to supporting documents. For VECs where impacts are found to be not likely significant ensure that justification is provided. Provide a recommendation regarding project viability based on environmental considerations</p> <p>8.1 Summary and Table</p> <p>8.2 Conclusion</p>
9. Appendices	<p>Attach any additional information including Supporting Documents, Other Permits or Approvals, Maps, Figures, Photos, etc</p>
10. Access	<p>It is Proponent's responsibility to obtain assured access to/ egress from the Indian Reserve for all phases of the Project including access to Certificate of Possession Holders' lands provided to ISC.</p>

Appendix 2C: Community Infrastructure Projects Environmental Assessment Scoping Report

Although scoping is part of the EA process for all projects, an EA scoping report is only required for ISC Community Infrastructure Projects and where specifically directed by your ISC environmental or natural resources specialist for ISC Lands and Economic Development.

An EA scoping report is to be a stand alone document which includes the project description, environmental setting, significant environmental issues, valued ecosystem components (VECs), and completed and planned EA investigations. This report is completed during the feasibility stage of a CI Project and when directed by LED and will be used in the assessment of project viability. The following are to be addressed in the EA scoping report.

Introduction	Provide a summary description of the project including construction (site preparation, clearing, trees), operation, decommissioning, and other activities expected during the life of the project. Project proponent contact information including organization, name, mailing address, telephone number, and email address (if available) are required. Provide a list of information sources used.
Maps/Plans	Provide plans showing the geographical location of the project with latitude and longitude, the proposed location(s) of the project within the context of the Reserve and an overall preliminary plan for the project. Include environmentally significant features (e.g. water bodies, forests, significant elevation changes, species ranges, known habitats, etc.) Where appropriate and readily available, inclusion of First Nation nomenclature for place names, flora, fauna, etc. should be considered. Copies of topographic maps and aerial photos/mosaics should be provided where available.

Environmental Setting	<p>Provide a summary description of the existing environment in the project area including landscape, waterbodies, archaeology, natural resources, and environmental uses (e.g. wildlife habitat, natural resource harvesting, residential properties, etc.). Indicate the areas potentially affected by the project. Outline known environmentally significant historical uses and develop a list of VECs for the project. Where multiple sites are being considered during the feasibility stage, environmental restrictions and impacts at each site must be considered and incorporated into the site selection process.</p> <p>Socio-economic conditions should be described if potentially impacted by environmental changes caused by the proposed project.</p>
Environmental Effects	<p>Indicate known and suspected environmental effects of the project on listed VECs</p> <p>Identify any cumulative effects that are anticipated on the basis of initially available information. Include effects likely to result from the project in combination with other pre-existing developments and/or in combination with developments that will be carried out as a direct result of this project.</p>

Studies / Investigation	<p>Describe the scope of work for the planned EA for all phases of the project. Document site assessments completed to date. Identify further investigations which are required to address situations where environmental effects are unknown or to determine appropriate mitigation activities.</p> <p>A determination must be made as to the likely presence of wildlife, birds, aquatic life, flora and/or habitat at risk in the project area. This determination must be made using relevant data base lists, range maps, local knowledge (where available), and other existing information on species known to occur in the project area. Where the range of a species at risk overlaps with the proposed project area, existing information sources must be checked and documented to determine whether actual or potential habitat or residences for these species are present.</p> <p>Example information sources include: the Conservation Data Centre (CDC) for rare element occurrence records, Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the Species at Risk Public Registry for recovery strategies, recovery teams, action plans and management strategies, and the Ministry of Sustainable Resource Management=s Species and Ecosystem Explorer.</p>
Public Consultation	<p>Document consultation with other government departments and agencies. Provide contact information. Outline any additional consultation planned with the community, public, or other government departments and agencies as part of the EA.</p>
Accessory Activities	<p>Accessory activities planned during the design stage must be assessed (e.g. geotechnical, surveys, etc.). Identify activities causing significant environmental impacts on VECs and outline mitigation measures that will be implemented. Note: Accessory activities planned during feasibility and associated mitigation measures must be summarized in the feasibility stage proposal</p>
.	

Appendix 3: Project Implementation an Hiring Professionals

Appendix 3A: Guidelines for Hiring an Independent Project Manager

Appendix 3B: ISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Appendix 3C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

Appendix 3D: DISC Sample Professional Services Contract [CN2 Template]

Appendix 3E: Advice on Hiring a Professional Engineer or Professional Geoscientist (excerpt from EGBC website)

Appendix 3A: Guidelines for Hiring an Independent Project Manager

1.0 Introduction

An independent project manager provides project management services without being directly associated with the consulting firms providing planning, design and construction services. The person hired to perform the duties must have suitable technical and professional qualifications matching the size and complexity of the project. Usually the project manager is either a registered architect or professional engineer with over five years experience in construction project management and has experience successfully managing similar projects. The project manager may be a sole practitioner or may work for a project management company. The project manager is often involved with a project from start to completion, but can also be engaged only during the design or construction stages of a project.

Hiring an independent project manager is often the first significant step to implement a large project. The three main tasks associated with hiring a project manager if using a multiple proposal call are:

- Preparing a terms of reference [TOR] setting out expected roles and responsibilities for the proposed project manager;
- Sending out requests for proposals [RFP] to selected project management firms;
- Evaluating received proposals against pre-determined criteria.

Where a First Nation has established a successful working relationship with an architectural or engineering consultant, they may consider using this consultant to provide project management services until the completion of the Feasibility Stage and defer hiring an independent project manager until the beginning of the Design Stage.

An independent project manager should be at arm's length from the project consultant designers. An independent project manager is an advocate for the First Nation and should not be in collaboration with the design consultant.

Hiring the right person to be the project manager can result in a successful project that:

1. Meets the project objectives of the First Nation;
2. Stays on schedule;
3. Stays on budget.

2. Duties of a Project Manager

The duties of the Project Manager fall under three major headings and involve the following:

2.1 Implementation, Planning, and Project Monitoring

- confirming the project definition and First Nation requirements;
- establishing the project team, roles, and responsibilities;
- establishing lines of communication with all parties throughout the life of the project;
- generating a project strategy for carrying out the project and for developing the project work activities;
- preparing a detailed project schedule;
- monitoring project progress against the schedule and making revisions where necessary;
- preparing the various project submissions for funding approval;
- maintaining project records and files;
- reporting on the status of the project to the First Nation administration and/or Chief and Council;
- evaluating the scope, time, cost, and quality implications of the project and any changes.

2.2 Consultant Services Selection

- writing the terms of reference [TOR] to request proposals;
- determining consultant selection criteria;
- selecting a team to choose a consultant;
- recommending approval for award of contract to the successful consultant and negotiating the terms of the consulting agreement.

2.3 Consultant and Construction Contract Management Services

- providing advice and recommendations on project procurement options [eg. public or invited tender, or construction management in accordance with the First Nation's approved tendering policy];
- ensuring compliance with the terms of the consultant and construction contracts;
- checking and dealing the First Nation's responsibilities for insurance;
- issuing change orders;
- resolving claims and disputes;
- assessing the value of work completed;
- reviewing progress claims and authorizing payments;
- reporting on construction deficiencies to the consultant and contractor and making recommendations for corrective action;
- obtaining final reports, record drawings, warranties, manuals, and completion certificates;
- recommending final payment based on the satisfactory completion of the contract requirements;
- evaluating the consultant and the contractor.

3. Terms of Reference for Hiring an Independent Project Manager

If a First Nation has already established a successful relationship with an individual or firm and does not wish to seek competitive proposals for the position, the terms of reference used to hire a project manager can be relatively brief and informal. However, as a minimum they should set out the duties of the project manager, as described above, and also include:

- Description of specific project management services required [including duration of services];
- Specifying minimum qualifications (e.g. the project manager must be either a professional engineer or a registered architect licensed to practice in British Columbia, the minimum number of years of experience, etc.);
- Providing any relevant project information [eg. reports or studies] or special or unusual project issues that will be helpful to the individual or firm submitting a proposal;

- Listing members of the First Nation project team;
- Identifying a proposed schedule;
- Specifying the terms of payment and cost control.

4. Requesting Proposals

Prospective project managers asked to submit proposals should provide information under the following headings. If a First Nation has established a successful relationship with an individual or firm and is proceeding on a sole source basis, the following information should still be submitted to the First Nation in a proposal for services.

- names and related experience of staff to be part of the project team;
- a work plan outline;
- anticipated project schedule;
- proposed fees

For more complex projects, additional information should be provided regarding:

- understanding of the project;
- work plan and associated work activities;
- references;
- project staffing plans;
- staff résumés;

5.0 Evaluating Proposals

Criteria normally used to evaluate proposals are as follows. Weights are often assigned to the criteria to establish a comparative level of criteria importance. Cost of services is generally not weighted as a primary criteria. In comparing proposals, the quality of the services and the experience of the personnel are considered the key criteria.

- Understanding of the project;
- Scope of services, work plan, and schedule;
- Management of the provided services;
- Consultant team;

- Qualifications and experience of the firm;
- Cost of services.

6.0 Project Management Fees Provided by DISC

Fees requested for project management are part of the project approval process and will be reviewed along with project submissions. The maximum allowable fee for the combined total of project management and local project coordination is 3% of the construction cost. Disbursements would be additional expenses. Fees which are considered eligible for reimbursement may be much less than 3% and will be based on the size of the project and the services provided as detailed in the submitted project management proposal.

If an independent project management is engaged for the feasibility stage, an initial proposal for project management services only for the feasibility stage can often simplify the process by eliminating the uncertainty to forecast future project costs and complexity. Project management fees can be reviewed and revised through all project development stages.

Appendix 3B: DISC Guidelines for First Nations Engaging a Consultant on a CFMP Capital Project

Purpose:

This document provides parameters for First Nations to procure a consultant to provide professional consulting services for the development and implementation of capital projects funded by the DISC Capital Facilities and Maintenance Program [CFMP].

General:

The following procedures are recommended when engaging a consultant:

1. Written Terms of Reference [TOR] to define the assignment;
2. First Nation acceptance of a written proposal from the consultant which includes assignment deliverables, schedules and fees;
3. Written, standard contract signed by the First Nation and the consultant which includes dispute mechanisms and termination clauses and directly references the written proposal submitted by the consultant;
4. Confirmation of consultant personnel who will work on the assignment;
5. On-going process for monitoring schedule and costs [written].

Engaging a consultant without the written acceptance of a documented proposal to define the scope of the assignment and to determine a schedule and fees is actively discouraged. Verbal communication and a handshake are not considered to be in the best interests of meeting mutual expectations and an ongoing professional relationship.

A proposal submitted from a professional consultant can be subsequently revised based on mutual discussions between the First Nation and the consultant before becoming part of the contract. There may be a revision in fees due to proposal revisions.

Definitions:

Terms of Reference [TOR]: A description of the assignment to be completed by a professional consultant. A TOR can be verbal, but is almost always written to document a common understanding of the assignment.

Proposal: A written response to a TOR from a professional consultant identifying how the assignment will be carried out to achieve the specific project objectives. The proposal will generally include experience of the firm, personnel to be assigned to the project, work processes to be completed, a proposed schedule and proposed fees.

Request for Proposal [RFP]: An invitation to a number of professional consultants [or one professional consultant in selected cases] to submit a proposal in response to a written TOR. A set of criteria which will be used to evaluate the firms submitting proposals should be included with the RFP.

Total DISC Project Cost [TIPC]: All DISC costs for all stages including contingencies as applicable.

Minor Projects: Estimated TIPC < \$1.5M

Major Projects: Estimated TIPC > \$1.5M

Consultant Selection:

The process for selecting a consultant will be influenced by the factors listed. A larger, more complex project will generally result in a longer and more stringent selection process.

- Complexity of the project
- Size of the project
- Expected consultant costs
- Previous working relationship with a consultant
- Expertise of a consultant
- Availability of consultant to assign time and resources to the project.

Consultant selection will generally follow one of two processes:

1. Multiple source selection – numerous consultants [generally 3 to 5] are solicited to submit proposals to complete the assignment. The proposals received are comparatively assessed to award the contract to the professional consultant with the “best value” proposal which meets the objectives of the TOR;
2. Sole source selection – one consultant is solicited to submit a proposal to complete the assignment.

Consultant Costs:

The Association of Professional Engineers and Geoscientists in B.C. [APEGBC] and the Architectural Institute of BC [AIBC] publish guidelines for determining professional fees. Professional costs can include project management fees, design fees, subconsultant fees and expenses/disbursements. Fees for large value projects are generally considered on a % basis while small value projects generally are costed on an hourly basis.

Procurement Guidelines:

1. Feasibility Stage Professional Services

Procurement of professional consultants for any value of project can be a sole source selection or a multiple source selection;

2. Design Stage Professional Services

Procurement of professional consultants should be in accordance with the criteria listed below. Unless specifically required in the feasibility stage contract [not usual and not recommended], there is no obligation for a First Nation to engage the feasibility stage consultant for design stage professional services.

- Minor Projects: Multiple source selection or sole source selection;
- Major Projects: Multiple source selection is the recommended approach.

3. Construction Stage Professional Services

Engaging the design stage consultant based on a sole source selection to provide construction stage professional services is highly recommended.

If there is a working relationship issue between the First Nation and the design stage consultant and the procurement of another professional consultant is required at this stage, procurement of a professional consultant for any value of project can be multiple source selection or a sole source selection.

Appendix 3C: Sample Consultant Evaluation Matrix with Selection Criteria and Weightings

PROPOSAL EVALUATION -				
Evaluator:	Date:			
Rating Factor:	Excellent	9 to 10 = Item is addressed in a fashion that is clearly superior.		
	Good	7 to 8 = Item is addressed in completeness, is well defined and documented - no faults, weaknesses, or deficiencies that would affect		
	Fair	5 to 6 = Item is addressed in a clear and relatively complete fashion (minor uncertainties or weaknesses may be noted).		
	Below Avg.	3 to 4 = Item is addressed, though details may be lacking or deficiencies may exist that might limit the success of the project.		
	Poor	1 to 2 = Item is poorly addressed through insufficient documentation, or proposal does not meet required standards for skills or det-		
	Unacceptable	0 = Item is not addressed in proposal or is addressed in a clearly unacceptable fashion.		
CATEGORY	Rating	Weight	Score	Totals
1. Understanding of Project Scope and Objectives [Weighted Max. Score = 20]				
1. Appreciation of Project Complexity		0.4		
2. Analysis of Project Goals		0.4		
3. Identification of Special Issues		0.4		
4. Emphasis on Site Visit/Meetings with Nuxalk Nation and Adjacent Neighbour		0.4		
5. Presentation/Clarity		0.4		
6. Completeness (Meet the proposal requirements/checklist)				
2. Proposed Work Plan and Schedule/ Project Management [Weighted Max. Score = 30]				
1. Organization of Team		0.5		
2. Project Methodology		0.5		
3. Work Plan		0.4		
4. Schedule Management		0.4		
5. Budget Management		0.4		
6. Communications / Local Liason		0.4		
7. Risk Management		0.4		
3. Experience and Qualification of team members [Weighted Max. Score = 25]				
1. Technical Experience of General Consulting Firm[s] /Team Members		0.5		
2. Technical Experience of Assigned Personnel / Subconsultant(s) for Collection Systems		0.3		
3. Technical Experience of Assigned Personnel / Subconsultant(s) for WW Treatment Systems		0.3		
4. Technical Experience of Assigned Personnel / Subconsultant(s) for Ground Disposal Systems		0.3		
5. Technical Experience of Assigned Personnel / Subconsultant(s) for Outfalls		0.3		
6. Knowledge of General Consulting Firm on Federal, Provincial Regulatory Requirements		0.4		
7. References/Past Client Experiences of the Consultant or Team Members/NonFNs/Client Feedback		0.4		
4. Experience of Team Members on Similar Projects [Weighted Max. Score = 15]				
1. Past Experience with FNs/INAC Projects and Processes		0.5		
2. Past Experience on Similar Projects		0.5		
3. References / First Nations Client Experience / INAC Feed Back		0.5		
5. Dedicated Hours and Allocation for Most Appropriated Use [Weighted Max. Score = 20]				
1. Hours for Site Work (investigation) Justified		0.4		
2. Hours for Meeting Justified		0.4		
3. Hours for Report Writing Justified		0.4		
4. Hours for Traveling Justified		0.4		
5. Hours for Project Management Justified		0.4		
6. Proposed Costs are reasonable and Cost Effective [Weighted Max. Score = 10]				
1. Cost on Technical Works Justified		0.2		
2. Cost on Travel Justified		0.2		
3. Cost on Administration Justified		0.2		
4. Cost on Project Management Justified		0.2		
5. Overall Cost Effectiveness		0.2		
7. Cost in Comparison with Other Proposals [Weighted Max. Score = 15]				
(The lowest cost = 15. Second lowest cost = 14, 3rd lowest cost = 13 ...)				
PROPOSAL RATING [MAX. SCORE = 135]				

Appendix 3D: ISC Sample Professional Services Contract [CN2 Template]

The document **CN2 – Contracting for Professional Services by First Nations and Aboriginal Communities** provides information on how to hire professional consultants and provides a sample contract for consideration by the First Nation. See ISC's website information for the CFM Program – Project Information – Best Practices for Construction Contracting:

<https://www.sac-isc.gc.ca/eng/1493133359279/1533649821050>

Appendix 3E: Advice on Hiring a Professional Engineer or Professional Geoscientist [excerpt from APEGBC Website]

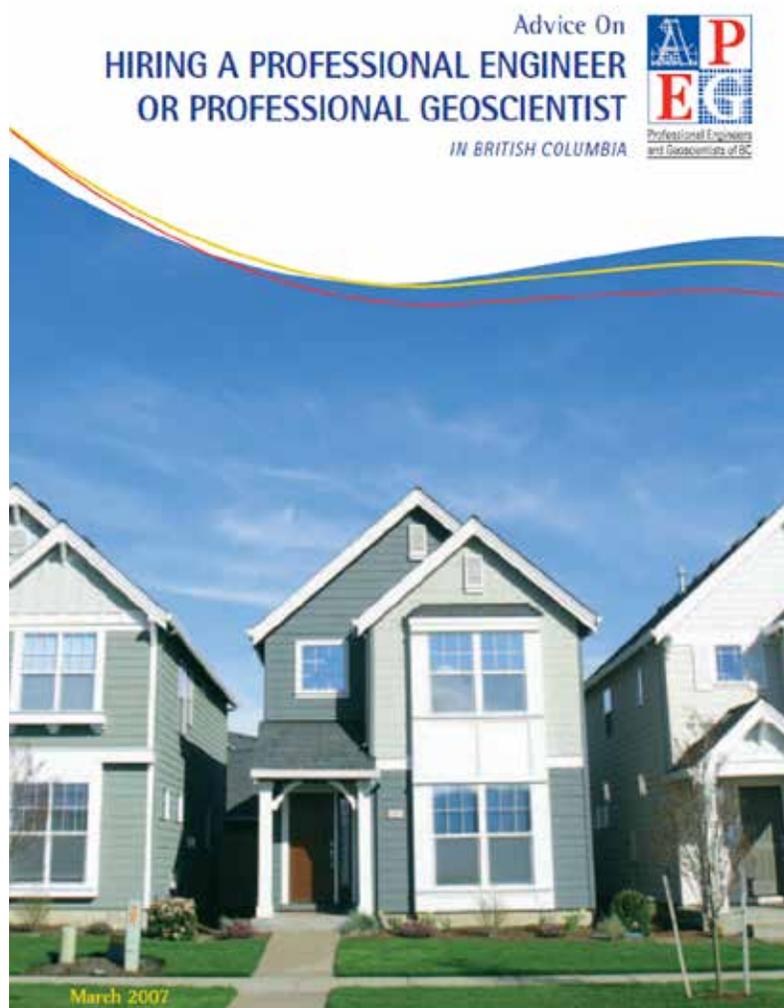




TABLE OF CONTENTS

Introduction	2
Who Should Read this Consumer Guide?	2
APEGBC – Who We Are and What We Do	3
What Types of Projects May Require an Engineer?	4
What Types of Projects May Require a Geoscientist?	4
Before Starting Your Project	5
What is Required of the Professional?	6
Understanding the Role of the Professional	7
Relationship Between You, the Professional, and the Contractor	8
Selecting a Professional	9
The Contract	11
During and Post-Construction	12
What If There is a Problem?	13
Resources	15

APEGBC gratefully acknowledges the assistance of the Consulting Engineers of BC in the preparation of the Guide.



Introduction

This Guide is intended to help you:

- Determine if your project requires the services of a professional engineer or professional geoscientist (a “Professional”)
- Understand what APEGBC can do for you
- Find out if the prospective engineer or geoscientist is licensed to practice in BC
- Avoid problems by highlighting useful tips for selecting, hiring and working with a Professional
- Determine how to deal with problems that may arise

Who Should Read this Consumer Guide?

This Guide addresses the typical homeowner project and contains general information. It may not be appropriate for all projects that require the services of a Professional. The advice and information in this publication is not suitable for large, complex and/or commercial projects. **APEGBC assumes no responsibility for any consequences arising from the use of the information contained in this guide.**

For more detailed information or for larger, more complex and/or commercial projects, we recommend you consult the Management of Buildings Project Manual (Please note that all websites are provided at the end of this publication).



You should carefully review this guide PRIOR TO hiring a Professional. Careful selection of the professional best suited to your project, and clear communication in the beginning, is the foundation of a successful project.



APEGBC – Who We Are and What We Do

The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is responsible for the licensing and conduct of professional engineers and professional geoscientists (Professionals). The primary duty of APEGBC is to protect the public by regulating the practices of professional engineering and professional geoscience in the province. APEGBC's powers and functions are described in its governing legislation: the *Engineers and Geoscientists Act* and the Bylaws of the Association, which include a Code of Ethics.

The Act, Bylaws and Code of Ethics are available online at www.apeg.bc.ca, and will be referred to from time to time in this publication.

What APEGBC Can Do:

- Help you determine if a person is licensed as a Professional in BC and the Professional's area of expertise via the searchable member directory available online
- Advise you regarding a Professional's disciplinary history
- Investigate complaints regarding a Professional's conduct, as provided in the Act and the Bylaws

What APEGBC Does Not Do:

APEGBC only regulates individuals, not businesses.

- Provide information on firms or help you to pick a firm or Professional
- Resolve issues with contractors on your behalf
- Resolve issues regarding your contract or negotiations
- Demand performance or action of a Professional



What Types of Projects May Require an Engineer?

Here is a partial list of typical building projects and upgrades where a professional engineer may be required:

- Foundations
- Excavations
- Grading plans
- Drainage
- Retaining walls
- Structural design including beams and trusses
- Drinking water, storm water and sewage system design
- Additions to existing buildings
- Pollution and contamination concerns
- Slope stability concerns

What Types of Projects May Require a Geoscientist?

The practice of professional geoscience includes the investigation of geological conditions.

For more information on geoscience and the work undertaken by professional geoscientists, see APEGBC's website: www.apeg.bc.ca.

Here is a partial list of projects where a professional geoscientist may be required:

- Foundation investigations
- Grading plans
- Groundwater and drainage investigations
- Slope stability investigations
- Flood and debris hazard assessments
- Pollution/contamination investigations
- Assistance with archaeological investigations

There is some overlap between the services provided by engineering geologists and geotechnical engineers. However, only engineers can provide design services.



Before Starting Your Project

- Get in contact with your local municipal or regional building/permit and planning departments to determine whether your project requires the services of a Professional. These departments have knowledge about local conditions and will be able to advise you on whether permits or other documents are required before your project can proceed.
- Only consider hiring professionals with the appropriate experience and training for your project; different types of engineering and geoscience can be very specialized.
- Use APEGBC's searchable member directory to help determine whether you are dealing with a registered member of the Association, and also what kind of engineering or geoscience the person practices: www.apeg.bc.ca/members/search.html.
- Consider if the expertise of a Professional may benefit your project, even if a Professional is not required by law.
- Know your **RESPONSIBILITIES** as well as your **RIGHTS**.





What is Required of the Professional?

Adherence to the Code of Ethics of the Association

All members of APEGBC must comply with the Code of Ethics. If your project requires the services of a professional engineer, the following are required:

The BC Building Code applies everywhere in British Columbia except the City of Vancouver.

In the City of Vancouver, the Vancouver Building Bylaw governs.

Letters of Assurance

A Letter of Assurance is a form signed and sealed by a professional engineer who accepts responsibility for the design and field review of the project. These forms are legal documents based on the authority of the BC Building Code (BCBC) or the Vancouver Building Bylaw (VBB).

Field Reviews

Field reviews are a requirement under Letters of Assurance and APEGBC's "Quality Management" bylaw (Bylaw 14(b)), and must be undertaken by professionals during construction. A field review typically consists of site visits during construction to confirm design assumptions and observe quality and progress of the elements designed by the professional engineer. The engineer must also prepare site visit reports outlining observations and deficiencies in the work and bring them to the attention of the contractor's site representative.

A concept review of the structural design of your project may be required, though there are exemptions for simple structures.

The City of Vancouver also carries out structural audit reviews on selected projects within the City of Vancouver.

Note: You need to confirm with the local authority or the government agency overseeing your project what it requires from the Professional.



Understanding the Role of the Professional

While only a professional engineer or geoscientist can legally provide engineering or geoscience services, work may be performed by other members of the Association, or by other individuals acting under the “direct supervision” of a Professional. The legislation that governs the professions states that any person can assist in the performance of any professional service or work described in the “practice of professional engineering” or “practice of professional geoscience” definitions so long as that work is directly supervised by a Professional.

The duties and obligations of the Professional should be established by a contract between the client and the Professional.

Typically, engineers-in-training (EITs) or Geoscientists in training (GITs), technologists and technicians carry out work under the direct supervision of a Professional.



Professionals are neither required nor expected to be on-site at all times. Letters of Assurance require the engineer to conduct sufficient field reviews in order to confirm that the project (or parts of the project the engineer is responsible for) substantially complies with the engineer’s drawings and the appropriate Building Code. There is no specified level of inspection – the standard varies depending on the nature of the project.

A Professional may **not** be qualified to perform certain aspects of a project. In such a circumstance, the Professional **must** refuse to do such work, but will typically engage or recommend a Professional with the required expertise.



Relationship Between You, the Professional, and the Contractor

If your project is complex or large enough that it requires the services of a Professional, chances are that you will also have to engage the services of a contractor.

If the contractor hires the Professional, it is important to note that any disagreement between you and the contractor may affect the services provided by the Professional, which can lead to significant delay of your project.



If you did not hire the Professional directly, the person is not reporting to you and it is not grounds for a complaint of unprofessional conduct if the Professional stops work at the instruction of his/her client, the contractor.

To maintain the most control over your project, hire the Professional and the contractor directly and separately.



Selecting a Professional

There are several sources that can aid you in selecting the Professional you require, including:

- Asking friends and family for referrals
- Asking your contractor for referrals
- Contacting the Consulting Engineers of BC
- Phone Book
- Internet

The Consulting Engineers of BC has information on selecting a professional engineer at: www.cebc.org/selecting.html.

Best Practices

The Consulting Engineers of BC (CEBC) has information on selecting a professional engineer at www.cebc.org/selecting. There are steps that you can and should take before you hire a Professional so that your project proceeds in a safe and timely manner. APEGBC recommends that professionals be selected based on qualifications rather than on price alone.

Deciding on the parameters of your project sooner, rather than later, can help you to avoid problems down the road – including disagreements with those you have hired. Below are some suggested “best practices” to take into account when considering hiring a Professional.

It is important to recognize that costs associated with home improvements or projects are generally never fixed.

Before hiring a Professional, consider:

- What is the scope of your project?
- What do you hope to accomplish?
- How much are you willing to spend?
- Do you have to take into account any time constraints?
- What portion(s) of your project require a Professional?



Selecting a Professional cont'd

When Discussing Your Project With a Professional:

- Take notes and listen carefully
- Ask for references and follow up
- Determine whether the Professional has undertaken similar work in the past
- Ask whether the Professional believes a permit may be required to undertake the project
- Ask for a written proposal and a copy of the Professional's standard contract
- Ask about the costs associated with the project – What could increase or decrease the costs?
- Ask about the fees for all phases of the project
- Request a copy of the Professional's Certificate of Insurance





The Contract

A written contract helps to protect you and the Professional if problems arise.

The contract should include:

- Description of work to be carried out
- Description of compensation, and the timing and method of payment
- Contact information
- Description of the procedures governing additional services (for example, requiring all work order changes to be in writing and initialled by both parties or by agreeing that work-order changes may be approved verbally with written follow-up confirmation)
- Description of the procedure to be used by either party to terminate the contract

APEGBC Bylaw 17 requires members to disclose in writing whether or not they have insurance and whether that insurance is applicable to the services in question.

Don't be afraid to ask questions! Make sure you feel confident about the Professional you are hiring *before* you sign any agreement.

The contract may also include:

- Who is responsible for paying for other people's services
- What other charges may be involved and who will pay them
- Who will obtain necessary permits, approvals, etc.
- The starting and completion dates – but keep in mind that unanticipated delays can occur
- Ownership or custody of the project documents

A standard form contract is available through the Association of Consulting Engineers of Canada (ACEC) website, www.acec.ca



During and Post-Construction

- Keep records of the project such as a log or calendar
- Keep copies of written agreements and correspondence
- Keep copies of bills, invoices and cancelled cheques
- Keep copies of plans, permits and reports
- Keep copies of municipal inspection reports
- Keep copies of lien notices, if applicable

A builders' lien may be filed against your property as security for unpaid fees.

APEGBC publishes a number of professional practice guidelines, each particular to a field of engineering. These guidelines outline project organization, responsibilities and expectations for professional practice. There is a section devoted to the responsibilities of various participants in a project, including responsibilities of the owner. These responsibilities include cooperation with the Professional regarding the establishment of a realistic schedule for the provision of services. The guidelines are available at: www.apeg.bc.ca/library/practiceguidelines.html.





What If There is a Problem?

Most problems between a client and a Professional arise from communication issues. The scope of services, the quality of services and the timeliness of those services can lead to misunderstandings.

Meet with the Professional to Discuss Problems

If you encounter a problem (i.e., poor communication, unsure of what is going on, rising costs, etc.), the first step is to set up a meeting with the Professional and discuss your concerns.

When meeting, be sure to:

- List specific concerns or deviations from your agreement
- Present records of the problem
- Request specific action
- Allow time for a response

Peer Review

You may wish to arrange, at your own expense, an independent review of the services performed. This review would be undertaken by another Professional and typically encompasses a review of drawings, calculations and plans that have been prepared.

Dispute Resolution

If you cannot solve the problem on your own, you may wish to hire a lawyer who can act on your behalf to resolve the matter or, if necessary, pursue the matter in court.

Claims up to \$25,000 can be dealt with in Small Claims Court. Most contractual disputes are best dealt with through the court system. APEGBC can investigate the underlying reasons for the dispute to see if they warrant disciplinary action. Similarly, negligence and incompetence are more often dealt with through the courts alone unless the errors or omissions are significant enough to constitute unprofessional conduct.

The BC Court Services website has information on how to file in Small Claims Court (not exceeding \$25,000).



What If There is a Problem cont'd

The complaint procedure and a flowchart are on the APEGBC website.

When to Contact APEGBC

APEGBC can investigate allegations of:

- A breach of the Act, Bylaws or Code of Ethics
- Negligence or incompetence
- Fraud, deceit or misrepresentation

APEGBC will not force the Professional to take any particular action. Our mandate and role is to investigate conduct and where warranted, bring disciplinary action against the Professional.

Do your homework. When preparing a complaint for submission to APEGBC, describe the problem and what you have done to try and resolve it. List facts in chronological order and provide as much detail as possible; keeping a log or calendar will make this much easier. Submit copies of plans, reports and any other documents you have that are related to your project and that can be of use to the Association in assessing your complaint. Also, identify any other individuals who have knowledge of the problem, including city or municipality employees and contractors.

The investigation of complaints can be a lengthy process. The more clear and complete the complaint, the easier it is to investigate.



Resources

- Association of Consulting Engineers of Canada website: www.acec.ca
- Association of Professional Engineers of BC website: www.apeg.bc.ca
- BC Building Projects Committee, Management of Building Projects: An Industry Practice Manual, First Edition (see also www.bcprojectsmannual.com)
- BC Court Services website: www.ag.gov.bc.ca/courts
- BC Dispute Resolution Office website: www.ag.gov.bc.ca/dro
- BC Supreme Court Self-Help Centre website: www.supremecourtselfhelp.bc.ca
- Canadian Council of Professional Geoscientists website: www.ccpge.ca
- City of Vancouver Bulletin 2000-064-BU Structural Audit Reviews:
www.city.vancouver.bc.ca/commsvcs/licandinsp/bulletins/2000/2000-064.pdf
- City of Vancouver Emergency Preparedness website: www.city.vancouver.bc.ca/corpsvcs/emerg
- City of Vancouver general information regarding License and Inspection Bulletins:
www.city.vancouver.bc.ca/commsvcs/licandinsp
- City of Vancouver website: www.vancouver.ca
- Consulting Engineers of BC website: www.cebc.org
- Courts of British Columbia website: www.courts.gov.bc.ca
- Engineers Canada website: www.engineerscanada.ca
- Get It In Writing website (Hiring a Contractor): www.hiringacontractor.com
- Government of BC Building Policy Branch website: www.housing.gov.bc.ca/building
- Government of BC Housing Policy Branch website: www.housing.gov.bc.ca/housing
- Government of Canada Public Safety website: www.safecanada.ca
- Guide to the Letters of Assurance in the BC Building Code:
www.housing.gov.bc.ca/building/guidelo1.html
- Links to websites for most municipalities and regional districts in BC
www.civicnet.bc.ca/siteengine/ActivePage.asp?PageID=88
- McLachlin, Wallace and Grant, The Canadian Law of Architecture and Engineering, Second Edition (Toronto and Vancouver: Butterworths, 1994)
- Provincial Emergency Program website: www.pep.bc.ca

Appendix 4: Terms of Reference - Construction and Post-Construction Stage [Sample]

NOTES REGARDING THE USE OF THIS “STANDARD” TERMS OF REFERENCE:

The square brackets and contents inside square brackets should be deleted and replaced with the required information.

This Terms of Reference is intended for use on band managed projects for the planning and design of new development areas.

TERMS OF REFERENCE PROVISION OF ENGINEERING SERVICES FOR TENDERING, CONSTRUCTION STAGE AND POST-CONSTRUCTION STAGE OF MUNICIPAL WORKS FOR THE

[Insert Name]

TABLE OF CONTENTS

1. Introduction
2. Background
3. Objectives
4. Project Team
5. Scope of Work
6. Execution
7. Terms of Payment

1.0 INTRODUCTION

[Insert Band Name] seeks the provision of engineering services during the tendering, construction stage and post-construction stage for the [insert project name].

The Consultant will adopt a team approach in working together with [Insert Band Name] representatives, prospective bidders/contractor; and Indigenous and Northern Affairs Canada (DISC) staff.

2.0 BACKGROUND

[Insert project description and background]

3.0 OBJECTIVES

The objective of this contract is to provide all engineering services required during the tendering, construction stage and post-construction stage of the above mentioned project.

[Elaborate including project objectives]

4.0 PROJECT TEAM

4.1 Band

The Band refers to the [insert band name]. The contract for engineering services is between the Band and the Consultant. These Terms of Reference form part of the contractual agreement between the Band and Consultant.

4.2 Project Manager or Project Leader

The project manager or project leader is a representative of the Band engaged to manage the contract between the Band and consultant and between the Band and contractor as well as the funding agreement between the Band and DISC.

4.3 Consultant

The consultant is the individual, firm, or corporation identified in contact to provide the services stipulated in these Terms of Reference.

4.4 DISC Engineer

The DISC engineer is a technical representative of DISC. The DISC engineer will monitor the progress of the project and review contingency release and cost overrun applications and the completion report.

5.0 SCOPE OF WORK

The scope of work includes but is not necessarily limited to the following:

5.1 Tender Administration

5.1.1 Administer all works related to the tender call, including:

- Preparing tender documents, specifications and drawings
- Advertising
- Reply to queries and preparing addendums
- Arranging a site inspection by interested bidders if deemed necessary
- Witnessing the tender opening.

5.1.2 Review and assess tenders and make recommendations for award. Prepare a summary of the tenders received, a tender analysis, a recommendation for contract award and submit a copy of the executed contract. The tender analysis is to compare the recommended bid against the Class "A" cost estimate and provide an explanation for any variances exceeding 15%. Should the lowest tender exceed the allocated DISC funding level, a substantiated request for additional funding should be submitted. In some cases where funding is limited, an assessment of options to reduce the scope of work may be required.

5.2 Construction Services

5.2.1 Provide the services of a Field Reviewer (FR), who is a Professional Engineer, to be responsible for assurance of the works in all material respects to design and construction standards. The FR should make regular site visits, until completion of the works. The FR may or may not be the Engineer of Record (EOR).

5.2.2 Provide a resident inspector to inspect, monitor, measure, and test the Contractor's work on a full time basis until completion of the work to assure that construction works substantially comply in all material respects to design and construction standards. The resident inspector may or may not be the Field Reviewer or a Professional Engineer. Where the resident inspector is not a Professional Engineer, direct supervision by the FR should provide specific instructions on what to observe, check, confirm, test, record and report. Where engineering judgement or decisions is required the inspector must refer back to the FR. The FR may call on the Engineer of Record to address the issue.

5.2.3 Check and certify the Contractor's progress claims for the purpose of recommending payment;

5.2.4 Provide a liaison between the Contractor, the Band, and others (e.g. B.C. Hydro, B.C. Tel, Water Rights, DISC etc.).

5.2.5 Resolve conflicts that may arise between parties during construction.

5.2.6 Ensure that all required approvals have been obtained.

5.2.7 Arrange for such services as concrete testing, soils testing and analysis, and other services that the Consultant deems necessary.

5.2.8 Arrange for environmental monitoring and/or archaeological monitoring as deemed necessary.

5.2.9 Prepare interim and final completion/performance certificates.

5.3 Environmental Monitor

If required, provide an environmental monitor as recommended by the Environmental Detailed Study and/or as required by permits, approvals, regulation and/or guidelines. The environmental monitor shall be a scientist or engineer specializing in the environment.

5.4 Archaeological Monitor

If required, provide an archaeological monitor as recommended by the Archaeological Assessment Study and/or as required by Band's archaeological policy.

5.5 Permits and Approvals

Obtain any permits and approvals from regulatory agencies that were not finalized as part of the design stage.

5.6 Project Meeting

Arrange a preconstruction meeting, monthly progress meetings, and a project completion meeting between the Contractor, First Nations representatives and Consultant.

5.7 Builders Lien Act and Certificate of Completion

The Consultant shall act as the Payment Certifier for the head contractor with reference to the Builders Lien Act.

5.8 Commissioning

If required, manage the commissioning of the project and provide additional start-up services as outlined in the Commissioning Plan included in the design stage deliverables.

5.9 Training

If required, provide training as outlined in the Draft Training Plan included in the design stage deliverables.

5.10 Legal Survey

Provide the services of a Land Surveyor commissioned by the Association of British Columbia Land Surveyors to complete a legal survey of the project area and register the survey plan.

5.11 Documentation

5.11.1 Daily Inspection Reports

The resident inspector shall prepare daily inspection reports. The report shall include for that day:

- Work completed
- Inspection test completed
- Contractors equipment and crew working on site
- Material delivered to site
- Weather and temperature
- Changes to Contract
- Record of force account work
- Visitors to site
- Discussion with contractor and/or other relevant agencies
- Coloured photos

5.11.2 Project Meeting Minutes

Prepare minutes of any project meetings between the First Nations representatives, Consultant and Contractor and submitted to all parties involved in the meeting.

5.11.3 Change Orders and Force Account Work

All change orders and force account work shall be approved by the Project Manager or Project Leader. Prepare submissions for change orders and force account work approval. The submissions should include a detailed description of the necessity for such work, the quantities involved, the Consultant's estimate, and the Contractor's quote.

5.11.4 Progress Estimates and Budget Tracking

The consultant shall prepare Progress Estimates, within 5 days after the end of the calendar month for the purpose of:

- Evaluating the contractor's progress claim and issuing Payment Certificates; and
- Tracking and updating the project budget.

The Progress Estimate shall set out as of the end of the last day of the proceeding month:

- a. The total value of the Work completed and the materials and products incorporated into the Work
- b. Total quantity or percentage completed for each payment item
- c. Holdback amounts if any
- d. Total amount owing by the Band to the Contractor

In addition to the amount set out in the proceeding month the Progress Estimate shall also include the previous Progress Estimate amounts and the projected contract value. The projected contract value shall include all change orders and force account work whether approved or foreseen. The projected contract value shall be tracked for budget purposes.

5.11.5 Project Schedule Updates

The tender and contract documents shall require the contractor to submit a project schedule with the Form of Tender and to update the schedule if changes occur. The schedule shall show all major and critical tasks and the critical path of the project. The consultant shall monitor the progress of the project relative to the schedule. If the consultant observes the contractor falling behind schedule or if changes occur to the contract which will extend the contract, the consultant shall request an updated schedule with an explanation for the delays. All schedule update shall be forwarded to the Project Manager or Project Leader with explanation.

5.11.6 Contingency allowance release (if required)

Assist the First Nation in preparing documentation to request the release of a portion or all of any contingency allowance that has been approved and held by DISC.

5.11.7 Cost overrun application (if required)

Assist the First Nation in preparing documentation to may request additional project funding above the approved total project cost.

5.12 Completion Report

Completion report to be submitted on letter size paper, bound in a three ring binder. Prints of reduced drawings are to be stamped and sealed and bound into the binder. The completion report is to include:

5.12.1 Project Expenditure Accounting

All final project expenditures including all First Nation, consultant and contractor expenses as applicable must be reconciled by the First Nation. This reconciliation must match the project expenditure accounting which will be detailed in the First Nation financial audit report.

The final project costs are to be broken down according to the various elements of the project and are to be compared to the Class "A" estimates and to the approved requests for DISC project funding. Any significant variances are to be explained. The final costs are to include the costs of planning, design, project management, construction (include final contractor payment certificate complete with all change orders), professional services during construction and completion reporting. Any surplus funding shall be identified.

Consult with the Band in preparation of the project expenditure accounting.

5.12.2 Capital Asset Inventory System (CAIS) Forms

Completed and seal the CAIS forms. The Project Manager will forward the forms to chief councillor for signature, as required for each new community asset. The forms are also to identify any existing assets that were deleted by the new project. See DISC's A Practical Guide to Capital Projects, BC Region, Appendix 15 for blank CAIS forms.

5.12.3 Project Implementation History

- a. Description of the project including why the project was necessary and the option selected to resolve the problem;
- b. Project construction (or procurement) process (e.g.: public tender, construction management);
- c. The construction contract award process and rationale including a comparison of the costs from all bidders;
- d. The number of construction contracts in the project complete with a description of the contracts;
- e. A project synopsis describing problems or outstanding issues, areas of special interest, variances from the original project scope complete with their justification, project scheduling challenges, project deficiencies;
- f. Consultant summary of construction costs including budgets, variances and change order history;
- g. A description of any training programs implemented including the duration of training and number of personnel trained;

5.12.4 Project Participants Listing

During the duration of the project including the project team members, the project manager and/or project management firm, the design professional(s), the construction inspector(s) and contractors.

5.12.5 Project Milestones Chronological Listing

Dates of design completion, project approval, funding approval, contract award, construction start, substantial completion date, final completion date, start and end of warranty period, and completion reporting submission date.

5.12.6 Project Documentation (as applicable)

- a. Field inspection reports as prepared by the project professionals' inspectors during construction;
- b. Inspection test results for any materials and installation testing conducted during construction;
- c. Colour photographs to document the project history from start to finish;
- d. Commissioning report(s) for the final inspection, testing, set-up and start-up of systems and controls;
- e. National Building Code Schedules "A", "B" and "C" for building projects

- a. Fuel tank registration;
- b. A complete set of reduced record drawing prints. The Record Drawings are annotated, signed and sealed as follows: “These Record Drawings accurately record all significant design changes known to me, having exercised due diligence in monitoring construction of the work, and the design as represented by these Record Drawings substantially conforms with the design intent.”
- c. One complete set of digital record drawings in Adobe Acrobat (.pdf) format;
- d. DISC Design Guidelines for Water and Wastewater Systems outline the requirements for the development of O&M Manuals. See Appendix 16 for location of these guidelines;
- e. Copy of the posted legal survey plan. In that legal registration of the survey plan may not be available for some time after project completion, a copy of the “ready for registration” plan that has been submitted for registration is acceptable. The registered plan is to ensure that all community assets are legally protected for the use, operation and maintenance by the First Nation;
- f. Copies of all permits and authorizations (DFO) issued;
- g. Mitigation Measures Compliance Form – sign-off form documenting environmental compliance during construction for projects where a Detailed Environmental Review was required. This form may also be required at DISC’s discretion for projects where a Simple Environmental Review was required. See Appendix 11G for a copy of this form.
- h. A signed, sealed and dated professional certification statement by a qualified professional architect/engineer that should read: “I hereby give assurance that all constructed works in this project have been completed in general accordance with the record drawings, the project specifications and the general codes and standards, that all required testing has been carried out in accordance with the specifications, applicable codes and standards and generally accepted procedures and that required environmental mitigation measures identified in the project have been implemented.”

Note:

The completion report will be forwarded to DISC by the Band to meet the reporting requirements of the funding agreement. In addition to the documentation prepared by the consultant the Band will need to provide following documentation:

First Nation Letter of Acceptance — states chief and council’s acceptance of the completed project and confirmation of final costs (including First Nation, consultant

and contractor costs as applicable). The letter is to be signed by authorized personnel, usually the chief administrator or band manager, and should be addressed to the First Nation's assigned capital specialist.

Certificate of Completion — is to be completed by the First Nation's authorized project manager and attached to the letter of acceptance. DISC's A Practical Guide to Capital Projects, BC Region Appendix 13 includes a sample Certificate of Completion for Capital Project form from the First Nations National Reporting Guide.

6.0 EXECUTION

6.1 Implementation

The Consultant shall execute all tasks stipulated in these Terms of Reference scope of work in a timely manner.

6.2 Deliverables

Deliverable	Format	Reviewer
Tender Document, Specification and Drawings	2 hard copies bound for First Nation Bound hard copies as Required by Tenderers	First Nation Representatives
Contract Documents	3 hard copies bound -signed and sealed	First Nation Representatives
Daily Site Inspection Reports and Inspection Test Results	1 copy - Email, Fax, or Hard-copy	First Nation Representatives
Schedule Updates	As required 1 copy - Eail and hard copy	First Nation Representatives
Payment Certificates and Progress Estimates	Monthly 1 copy - Email and hard copy	First Nation Representatives
Completion Report <ul style="list-style-type: none"> • Project Expenditure Accounting • CAIS forms • Project Implementation History • Project Participants List • Project Milestones • Chronological List • Site Inspection Reports • Inspection Test Results • Colour Photographs • Commissioning Report • National Building Code Schedules • Fire Commissioner's Final Inspection Letter • Signed and Sealed Record Drawings • Record Drawings PDF Format • O&M Manual • Copies of Permits and Authorizations • Posted Legal Survey Plan • Professional Certification Statement 	One paper copy and one digital - signed and sealed	First Nation Representatives Management Officer and DISC Engineer.

6.3 Schedule

Time is of the essence.

The work stipulated in these Terms of Reference, starting with the call for tenders and preparation of tender documents, shall commence within 1 weeks of notice of award.

The consultant is responsible for tracking the progress of the project.

6.4 Project Cost Control

The consultant is responsible for managing the overall cost of the project. If at any time the scope of the project is changed resulting from unforeseen circumstances or requests to modify the design, which will affect the overall cost of the project or O&M cost, the constant shall immediately notify the Project Manager or Project Leader and provide an explanation and updated cost estimated.

7.0 TERMS OF PAYMENT

7.1 Payments will be based on the contract.

7.2 The Consultant will on a monthly (or other approved) interval, submit an invoice detailing the services performed. Invoices shall show the hours charged by each person for each task, and the hourly rate. Back-up for these items, or itemized receipt, shall be provided with every invoice. The proportion of hours spent by team members on tasks shall generally conform to the proposal. The hourly rate shall be identical to the rate quoted in the proposal.

7.3 The Consultant's proposal shall include an allowance for meetings, discussions, and responding to review comments.

7.4 No payment will be made on the cost of work incurred to remedy errors or omissions for which the Consultant is responsible.

7.5 If at any time during the progress of the work, the Consultant considers that the cost figure outlined in the contract will be exceeded, either by some unforeseen event or change in the Terms of Reference, he shall immediately provide the Project Manager with complete details. AT NO TIME SHALL THE CONTRACT FEE (i.e. the ceiling cost figure) BE EXCEEDED WITHOUT PRIOR WRITTEN AUTHORIZATION OF THE PROJECT MANAGER.

Appendix 5: Risk Assessment Tool [RAT] Sample

Major Capital Project Risk Assessment Tool

Overall Project Risk Assessment and Risk Mitigation Plan

Date: [Redacted] *** To enter values for R/R in Column E, scroll down to Explanatory Notes at Row 66**

First Nation Name: [Redacted] **** Per Tab 4, use the suggested weights provided in Column H on this spreadsheet.**

Region: BC ***** Regions may amend Column H but must justify and document the amendment.**

Project Name: [Redacted] ****** Risk Score = Unadjusted Percent Risk (UPR) = (Sum (RRR₁ x WT₁) + 100) / (Sum (RRR_n x WT_n))**

Project No.: [Redacted] ******* Percent Risk = Adjusted Percent Risk (APR) = (UPR x (Sum (RR₁^W x WT₁^W)) / (Sum (RR_n^W x WT_n^W))**

Total AVNDG funding: [Redacted]

Funding spent to date: [Redacted]

Project Percent Risk: 0.0 Low Risk As of [Redacted]

Contingency for risk: \$ 0.00

Low Risk Project Risk. Low Risk does not Explanatory Notes at Row 66

Project Risk Element	Risk Rating (RR)	Unadjusted Weight (UW)	Adjusted Weight (AW)	Risk Level	Description of Potential Risk	Suggested Risk Mitigation Strategy	Risk CMT (\$,000)	Risk Expiry Date (YYYY-MM-DD)	
1 General Assessment (Community Capacity)	0	1	0	Low Risk	The community was assigned a General Assessment score of 0 pursuant to the General Assessment Workbook.	No action required, continue to monitor.	0	2016-11-27	
2 Consultant/ Contractor Capacity (Project Management)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the management of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	2016-11-27	
3 Consultant/ Contractor Capacity (Design)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated a consistent level of expertise in the design of similar projects with a minimum of 20 years of senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	2016-11-27	
4 Consultant/ Contractor Capacity (Construction)	0	1	0	Low Risk	The Consulting Group / Contractor has demonstrated an adequate and consistent level of expertise in the construction of similar projects with a minimum of 20 years senior level experience on directly related projects of similar scope and magnitude.	No action required, continue to monitor.	0	2016-11-27	
5 Environmental	0	1	0	Low Risk	There is minimal Environment value to the project area and the project would have minimal impact to the surrounding environment.	No action required, continue to monitor.	0	2016-11-27	
6 Remediness	0	1	0	Low Risk	Project site is easily accessible at year.	No action required.	0	2016-11-27	
7 Project Stage	0	1	0	Low Risk	Project Designs are completed and the project is ready to proceed to construction.	No action required.	0	2016-11-27	
8 Project Duration	0	1	0	Low Risk	Project can be constructed within months.	No action required, continue to monitor.	0	2016-11-27	
9 Project Complexity	0	1	0	Low Risk	The project is typical and matches the expertise of the project team.	No action required, continue to monitor.	0	2016-11-27	
10 Funding Limit	0	1	0	Low Risk	Total Project value less than \$5 million or not likely to exceed \$10 Million.	No action required, continue to monitor.	0	2016-11-27	
11 Funding Suspension	0	1	0	Low Risk	Community regularly completes necessary reports on-line and the community has no other ongoing projects.	No action required, continue to monitor.	0	2016-11-27	
12 Cost Sharing	0	1	0	Low Risk	There is no cost sharing from the community.	No action required.	0	2016-11-27	
Risk Score = 0.0							Total contingency for risk expressed in dollars.	0.00	

Appendix 6: Construction Stage Funding Application

Checklist for Acquisition/ Construction Stage Funding Application**

Project Name: _____
 CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Support	_____	_____	_____
Project Description & Rationale	_____	_____	_____
Project Implementation Plan/ Schedule	_____	_____	_____
Final Design Information	_____	_____	_____
• Final Design Drawings (signed & sealed)	_____	_____	_____
• Final Specifications (signed & sealed)	_____	_____	_____
• Final Design Report (signed & sealed)	_____	_____	_____
Filed in Technical Library - <i>GCdocs#</i> _____	_____	_____	_____
• Tender Documents (signed & sealed)	_____	_____	_____
• Class 'A' Total Capital Cost Estimate	_____	_____	_____
• Cash Flow Projection	_____	_____	_____
• ISC to review and sign-off IEMS - Simple or Detailed Environmental Review Form	_____	_____	_____
• Land Encumbrance Check	_____	_____	_____
• Right-of-ways Identified/ Confirmed	_____	_____	_____
• Required Permits	_____	_____	_____
• Draft Timber Permit	_____	_____	_____
• Other Draft Permits _____	_____	_____	_____
<small>(Gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit)</small>			
• Comments by other Regulatory Agencies	_____	_____	_____
<small>(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, etc.)</small>			
• Class 'A' O&M Cost Estimate	_____	_____	_____
• For ***WTP & WWTPs only	_____	_____	_____
• Complete Design Guideline Checklist	_____	_____	_____
• Commissioning Plan	_____	_____	_____
• Draft O&M Manual	_____	_____	_____
• Draft Emergency Response Plan (ERP)	_____	_____	_____
• Draft Maintenance Management Plan	_____	_____	_____
• O&M Training Plan	_____	_____	_____
Proposals for Consultant/ Subconsultants Services and Fee Estimate	_____	_____	_____
Project Construction Process	_____	_____	_____
• Final Construction Mgmt. Business Plan	_____	_____	_____
Funding Submission/ PAR for Construction	_____	_____	_____
Check Level of Service Standard (LoSS)	_____	_____	_____

CI Technical Reviewer: _____

Date: _____

** Checklists are for the use of CI Technical Reviewer. Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

Appendix 7: Capital Projects Report DCI #460671

Certificate of Completion for Capital Projects

Check one:

- Provisional (facility is being used for the intended purpose, with minor work remaining)**
- Final (all work is completed)**

First Nation Name and Number	
Reserve Name and Number	
Project Number	Funding Arrangement Number
Project Title	
<p>Check all that apply:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All details of the project are resolved and there is no flaw, omission, uncompleted work, claim or outstanding payment. • The "As Constructed" plans are available. • Flaws, omissions, incomplete work, claims or outstanding payments exist, and an Action Plan and either a Substantial Completion Certificate or a Certificate of Occupancy are attached. • The construction complies with all requirements of all applicable codes, standards and INAC Funding Arrangement. <input type="checkbox"/> Official inspection report(s) or certificate(s) by qualified inspector(s) are attached. <p>List the reports or supporting documents attached: e.g.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Fire commissioner (Human Resources Development Canada) <input type="checkbox"/> Environmental Licence (Provincial) <input type="checkbox"/> Health Canada (water, sewage, testing, etc.) <input type="checkbox"/> Worker's Compensation (Safety and Labour Conditions) <input type="checkbox"/> Survey and Soil Testing Reports, Concrete Testing Reports, etc. <input type="checkbox"/> Substantial Completion Certificate as per provincial legislation (e.g. <i>the Construction Lien Act</i>) <input type="checkbox"/> Certificate of Occupancy. <input type="checkbox"/> Operator's certification for water/sewage treatment plants <input type="checkbox"/> Environmental Mitigation Report, if required by Environmental Assessment. <p>_____</p> <p>_____</p> <p>_____</p>	

I hereby certify that all work has been completed in accordance with the Terms and Conditions set out in the Funding Agreement, and the Effective Project Approval; and that all specified codes and standards have been met.

Signature of Project Manager or Person Authorized by the Band Council:	Date:
Received by INAC:	Date:

DCI 460671 (2005-2006)

TPMS RR CODE: 0121



COMMUNITY INFRASTRUCTURE

COMMUNITY CAPITAL FACILITIES SERVICE DELIVERY (INCLUDING HOUSING) CAPITAL PROJECTS: CERTIFICATE OF COMPLETION FOR CAPITAL PROJECTS

Due Date: The certificate must be completed and submitted to the INAC regional office within 90 days after

1. a capital project is fully completed; or
2. a capital project is substantially completed and the facility is being used for the intended purpose

Instructions

- ▶ Indicate whether this is a provisional certificate or a final certificate, i.e. whether the project is 100% complete or is at the stage where it is being used for the intended purpose, with minor work remaining.
- ▶ Fill in the First Nation and Reserve information, the project title, project number and funding arrangement number.
- ▶ Check all boxes that apply.
- ▶ List the reports or supporting documents attached.
- ▶ The certificate has to be signed and dated by the project manager authorized by the First Nation's council.

First Nations are responsible for ensuring that all work is carried out according to the funding arrangement. If there are flaws in the work, incomplete work or work that has not been done according to the funding arrangement, then the First Nation has to negotiate with the contractor to ensure that everything is completed.

Prior to use, the facility has to be inspected to ensure that all work meets the technical specifications. For housing projects, a CMHC-approved inspector must inspect the house and a Health Canada inspector has to approve the septic system. For other projects, inspection must be done by a qualified professional inspector. Each inspector should provide a separate official inspection report to the First Nation, a copy of which must be attached to the Certificate of Completion.

Provisional Certificate of Completion

When a facility has been completed to the stage where it is safely being used for the intended purpose, but still has outstanding work, a *Substantial Completion Certificate* or a *Certificate of Occupancy* can be issued by the consultant and attached to the *Provisional Certificate of Completion*. This is with the condition that the outstanding work are completed within a reasonable time taking into account the weather conditions, availability of material and parts etc. A portion of project funding would be held back until 100% completion. In addition, at this stage, only partial O&M funding would be provided.

Final Certificate of Completion

In capital projects, there is usually a hold back amount of money imposed, sometimes known as a deficiency holdback, which is retained until the deficiencies have been rectified. For new facilities, there is also a warranty period that, depending on the circumstances, could commence once the substantial or construction completion certificate has been issued.

Upon the expiration of the warranty period, a final inspection is carried out and if all deficiencies have been rectified, the *Final Certificate of Completion* is issued. At this point, the project is fully turned over to the owner and the warranty of performance bond with the contractor is cancelled. Upon receipt of the *Final Certificate of Completion*, the asset enters full O&M phase.

OVERVIEW

The Operation and Maintenance of the Infrastructure Program is one component of INAC's strategic objective to assist First Nations to build healthy and sustainable communities. The objective of the program is to provide funding to assist First Nations to acquire, construct, operate and maintain basic community facilities and services such as water and sewage, roads, electrification, schools, community buildings and fire protection. The program ensures that these facilities and community services meet recognized standards and are comparable to the services provided to nearby communities by provincial and municipal governments.

Certificate of Completion on Capital Projects

A Certificate of Completion showing that a capital project is finished must be completed at the end of every capital project. This is required before funding for operation and maintenance can be provided. The Certificate of Completion should be filed with the overall project completion report within six months of project completion. It must be signed by the project manager after inspection by a CMHC-approved building inspector (for housing projects) or by another qualified inspection authority (for public buildings or facilities where public health and safety are involved). Inspection reports or certificates by these authorities should be attached to the completion certificate.



Chapter 6:

THE POST-CONSTRUCTION STAGE OF A CAPITAL PROJECT

A Practical Guide To Capital Projects | 6 of 6



A Practical Guide To Capital Projects

9th Edition, Version 3.0
October 2018



Indigenous Services
Canada

Services aux
Autochtones Canada

Canada

Preface

The first edition of A Practical Guide to Capital Projects was published in the BC Region in early 2000. The Practical Guide was one of several initiatives implemented to respond to BC First Nations' requests to improve the capital project approval process. This edition updates the original edition to reflect changes in the program and provides additional information about capital project approvals.

A Practical Guide to Capital Projects will be updated as required and will be distributed to First Nations as new editions are published. The Guide is intended for the administrators and capital program managers of First Nations and Indigenous organizations, First Nations' project consultants and Indigenous Services Canada (ISC) staff. It contains information on BC Region's Capital Program, process and capital project submission requirements. Users of the Guide should refer to the ISC BC Region Program Guide for annual updates regarding BC Region's capital budgets and funding process schedules.

Your suggestions for improvement will continue to play an important role in adapting this guide to meet your needs. Any questions and/or feedback concerning this publication can be directed to:

Nathalie Lapierre

Manager, Infrastructure Development
Community Infrastructure Directorate
Indigenous Services Canada, BC Region
#600 - 1138 Melville Street
Vancouver, BC
V6E 4S3

Telephone: 604-666-0351
Facsimile: 604-775-7149
Email: Nathalie.Lapierre2@canada.ca

Table of Contents

Preface	i
Table of Contents	ii
Glossary of Abbreviations	iv
Definitions.....	vii

The Post Construction Stage of a Capital Project

Introduction	1
6.1 Post Construction Stage Deliverables.....	3
6.2 Post Construction Analysis by First Nations.....	7
6.3 Post Construction Stage Deliverable Review by ISC	9
6.3.1 Capital Management Officer.....	9
6.3.2 Senior Engineer	9

Appendices

Appendix 1: Capital Projects Report DCI #460671	15
Appendix 2: Capital Asset Inventory System (CAIS) Forms (with explanation and FAQ)	17
Appendix 3: Letters of Assurances.....	25
Appendix 4: Post Construction Stage Technical Review	39

Figures

Figure 1: Post Construction Stage.....	2
--	---

Glossary of Abbreviations

ACEC	Association of Consulting Engineering Companies
ACRS	Asset Condition Reporting System (now incorporated into ICMS)
AIBC	Architectural Institute of British Columbia
API	Annual Performance Inspection
ARFA	Aboriginal Recipient Funding Agreement (varying durations)
ARFA-	Block Aboriginal Recipient Funding Agreement – Block Agreements (varying durations)
CAIS	Capital Asset Inventory System (now incorporated into ICMS)
CCP	Comprehensive Community Plan
CDP	Community Development Plan
CEAA	Canadian Environmental Assessment Act 2012
CEAP	Canada’s Economic Action Plan
CFMP	Capital Facilities and Maintenance Program
CID	Community Infrastructure Directorate
CIDMS	Comprehensive Integrated Document Management System
CMO	Capital Management Officer
CPMS	Capital Project Management System (in transition to ICMS)
CPRD	Capital Facilities Management Program Record Document
CRM	Cost Reference Manual
CRTP	Circuit Rider Training Program
CSA	Canadian Standards Association
CSMP	Contaminated Sites Management Program
DAR	Design Approval Request
DCI	Data Collection Instrument
DWA	Drinking Water Advisory
EHO	Environmental Health Officer (with First Nations Health Authority)
EIA	Environmental Impact Assessment
EIF	Education Infrastructure Fund
ERP	Environmental Review Process
ESA	Environmental Site Assessment
FAR	Feasibility Approval Request
FL	Funding Limit

Glossary of Abbreviations

FNESS	First Nations Emergency Services Society
FNIF	First Nations Infrastructure Fund
FNIIIP	First Nation Infrastructure Investment Plan
FNLMI	First Nations Land Management Initiative
FNWWEPE	First Nations Water and Wastewater Enhanced Program
FS	Funding Services
GCIMS	Grants and Contributions Information Management System (previously FNITP)
NAHS	New Approach for Housing Support
ICMS	Integrated Capital Management System
IEMS	Integrated Environmental Management System
ISC	Indigenous Services Canada
KPI	Key Performance Indicator
LCC	Life Cycle Costs
LED	Lands and Economic Development
LOSS	Level of Service Standard
LTCP	Long Term Capital Plan
MCF	Management Control Framework
MTSA	Municipal Type Service Agreement
FNIIIP	National First Nations Infrastructure Investment Plan
O&M	Operations and Maintenance
OQM	Organisational Quality Management
P&P	Programs and Partnerships
PAR	Project Approval Request for Construction
PDP	Physical Development Plan
PIFI	Protocol for ISC-Funded Infrastructure (previously PAFI)
RAT	Risk Assessment Tool
RFNIIIP	Regional First Nations Infrastructure Investment Plan
RFP	Request for Proposal
RSU	Resource Services Unit Funding Services
SDWFNA	Safe Drinking Water for First Nations Act
SE	Senior Engineer and/or Specialist Engineer

Glossary of Abbreviations

SWOP	Safe Water Operations Program
TEC	Total Estimated Cost
TPC	Total Project Cost
TIPC	Total ISC Project Cost
TOR	Terms of Reference
WSER	Wastewater Systems Effluent Regulations

Definitions

A-Base Funding

Recurring set of funds approved by the Treasury Board to ISC at the onset of each budget period for the ongoing delivery of existing programs. This funding includes a Vote 1 component for internal department operations and a Vote 10 component for contributions toward on-reserve infrastructure.

B-Base Funding [or Targeted Funding]

Funding designed to support specific projects or initiatives such as the First Nations Water and Wastewater Action Plan. This funding is provided under individual budget authorities and expires at a pre-determined date which can be subsequently renewed or extended. Specific terms and conditions are generally attached with utilizing B-Base funding.

Annual Performance Inspection (API)

Yearly inspection of on-reserve water and wastewater systems by consulting engineers to assess system performance factors to determine risk levels as per requirements of the Protocol.

Asset Condition Reporting System (ACRS)

Inspection conducted once every three years to assess the general condition of on-reserve infrastructure assets, identify the repair and reconstruction needs for these assets, and assess the general level of operations and maintenance performance. The inspection is for community assets which receive ISC operation and maintenance subsidy funding. This inspection can provide information to substantiate the identification of capital project funding.

Banking Day

Monthly meeting at ISC BC Region to review eligible capital projects against the regional infrastructure investment plan and the availability of funds. The first priority for approving funding of projects would be for the projects identified in Year One of the Regional First Nation Infrastructure Investment Plan. The banking day meeting is also used to assess emerging pressures against the remaining budget.

Definitions

Canadian Environmental Assessment Act, 2012 (CEAA 2012)

Replaces the Canadian Environmental Assessment Act CEEA2012. Includes federal provisions for considering the environmental impacts of projects constructed on First Nations lands before taking any actions that would allow the project to proceed. An Environmental Review Process (ERP) has been developed by ISC to assess every capital project in order to meet the legislative requirements of CEAA 2102.

Capital Management Officer (CMO)

Works with the Senior Engineer as the primary capital project contacts for a specific First Nation. Capital Management Officers focus on project financial items and FNIIP development. Each First Nation is assigned a Capital Management Officer.

Capital Facilities and Maintenance Program (CFMP)

Incorporates three program activity areas, namely, the planning of capital infrastructure investments, the approval and delivery of on-reserve capital infrastructure and the ongoing operation and maintenance of that infrastructure. The program financially supports First Nations by providing transfer payments through the mechanics of funding agreements.

CFM Program Record Document (CPRD)

Internal ISC document managed by the Capital Management Officer used to track project costs and project funding requests.

Community Development Plan (CDP)

a planning document generally developed after the Comprehensive Community Plan (CCP) is completed and is intended to create a structured process to transition from the long-term goals and objectives generated in the CCP process toward the planning, assessment and implementation of community infrastructure improvements to support the CCP vision.

Comprehensive Community Plan (CCP)

Expresses the vision of the First Nation members for the sustainability and growth of their community. Developing a CCP establishes long term community objectives for all facets of community involvement [e.g., social, education, economic, land use, infrastructure] and identifies strategies, targets and priorities for achieving those objectives.

Definitions

Construction Management (CM)

Project construction strategy where the First Nation is the general contractor and hires a professional construction manager to directly manage the project construction process. Elements of a project are usually separated on a trade-by-trade basis and are implemented using competitively-awarded tender processes, or by using First Nations' own employment forces. The First Nation assumes the responsibility for project risks such as increasing material prices, bankruptcy of subtrades, schedule delays, health and safety management, warranty issues, etc. ISC does not support the construction management procurement process for building projects greater than \$2.0M construction cost or infrastructure projects greater than \$500.0K construction cost.

Contract Documents

Generally prepared by professional consultants to fully describe a project and the associated contractual arrangements and are used to obtain quotations/bids/tenders from general contractors and subtrade contractors. Contract documents normally include Instructions to Tenderers, a Tender Form used by a contractor to submit a quotation (tender), a copy of the proposed contractual agreement between the owner and the contractor, definitions section, general conditions of a contract, supplementary conditions of a contract, specifications, and contract drawings.

Cost Thresholds

Established cost criteria for evaluating investment costs of water and wastewater projects based on geographic [remoteness] indicators [Zones 1, 2,3 and 4]. Costs are based on unit cost per connection and cost per capita and increase with remoteness [i.e. higher Zone number]. Project approval levels can be determined by comparing project unit costs to the cost threshold numbers. Exceeding the cost threshold number will result in more project scrutiny and project approvals at higher authority levels.

Design Approval Request (DAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the design stage of a project.

Feasibility Approval Request (FAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to carry out a feasibility study.

Definitions

First Nations Infrastructure Investment Plan (FNIIP) (DCI#460674. GCIMS)

An annual report submitted by First Nations that identifies capital projects that the First Nation is planning on implementing in the upcoming five years. The Plan will update progress on current projects and identify a proposed schedule and budget for new projects. The investment plan process is a useful tool for First Nations to plan capital projects for the long term benefit of their community. The FNIIP is designed to apply a consistent approach to short and medium term planning, budget forecasts and to support project funding decision-making for regional ISC offices.

Funding Services Officer (FSO)

Primary First Nation contact for funding agreement implementation and the associated transfer of funds to the First Nation for capital project payments. Each First Nation is assigned a Funding Services Officer.

Grants and Contributions Information Management System (GCIMS) (previously FNITP)

Web-enabled transfer payment management system that automates transfer payment business processes, manages funding agreement information, and provides on-line access for First Nations and other funding recipients. Its primary function is to effectively manage transfer payments of departmental grants and contributions to recipients.

General Contractor

A general contractor is chosen using a tender process to construct a project under the terms of a construction contract with the First Nation. The general contractor is responsible for coordinating all trades and assumes all risks. The First Nation's professional consultant administers the contract between the First Nation and the general contractor.

Halt List

List of First Nations who have not met funding agreement conditions or capital project reporting requirements as identified in GCIMS. First Nations on the Halt List are generally ineligible to receive additional capital funding allocations.

Definitions

Integrated Capital Management System (ICMS)

National database system used to implement the Capital Facilities and Maintenance Program [CFMP]. The Project Tracking Module documents all aspects of capital project development for a specific First Nation including FNIIP planning, project approvals and capital funding.

Integrated Environmental Management System (IEMS)

National database system which tracks all environmental decisions processed under ISC's Environmental Review Process (ERP).

Land Encumbrance Check (LEC)

Confirmation of land tenure (ownership) rights and infringements relating to specific parcels of on-reserve land.

Level of Service Standards (LOSS)

Infrastructure system facility performance criteria which ISC is willing to fund from its capital program to support the development of First Nations' community infrastructure.

Life Cycle Costs (LCC)

A mathematical procedure which calculates the total costs (e.g. construction, operation, maintenance, major maintenance and disposal) of an asset in terms of a present value which reflects the effects of monetary interest and price escalation. A LCC analysis provides a hypothetical method of comparing competing options on the basis of total costs over the lifetime of the facility.

Long Term Capital Plan (LTCP)

Long range, structured plan for implementing community capital projects showing estimated project costs and proposed project development years. Plan should be minimum duration of five years and preferably ten years [or longer]. The LTCP should include all community capital projects in contrast to the FNIIP which only needs to include ISC-funded projects.

Major Capital Project

Projects where the total ISC funding contribution is greater than \$1.5 million.

Minor Capital Project

Projects where the total ISC funding contribution is less than \$1.5 million.

Definitions

Mitigation Measures Compliance Form

Form submitted at the end of a project to substantiate that the mitigation measures prescribed in the environmental review process were incorporated into the project design and tender documents and implemented during the construction of the project. The Mitigation Measures Compliance Form is not required for projects that underwent Minor Review only. Projects that underwent a Simple Environmental Review may require a Mitigation Measures Compliance Form at ISC's ISCRETION. Projects that underwent a Detailed Environmental Review will require a Mitigation Measures Compliance Form.

Municipal Type Service Agreement (MTSA)

An agreement between a First Nation and a local government (e.g., municipality or regional district) or a private contractor for providing municipal-type services such as water supply, fire suppression, wastewater disposal, solid waste disposal.

National First Nation Infrastructure Investment Plan (NFNIIP)

National roll-up of all regional infrastructure investment plans which is subject to ISC senior management approval. The objective of the NFNIIP is to provide a consistent national approach for the expenditure of capital program funds to:

- A. Establish and implement national priorities, which will:
 - Protect and maintain existing assets with an emphasis on health and safety;
 - Mitigate health and safety risks through new and existing assets;
 - Address water and sewer project backlogs;
 - Include other priorities such as investing in sustainable communities and community assets in order to resolve claims or self government agreements.
- B. Strengthen ISC's capital management regime and priority ranking criteria to ensure that all capital and related O&M funding is used to meet the national priorities;
- C. Strengthen and standardize procedures and information systems nationally;
- D. Ensure sufficient administration capacity to support an effective capital management regime;
- E. Ensure that adequate management controls are in place for all capital projects that include federal funding.

Definitions

Project Approval Request for Construction (PAR)

Project submission document sent to ISC by a First Nation requesting capital project funds to implement the construction and post-construction stages of a project.

Organisational Quality Management (OQM)

Voluntary program sponsored by Engineers and Geoscientists BC where certified engineering firms have committed to an established quality control framework within the workings of their organisations. A list of certified OQM firms is available on the Engineers and Geoscientists BC website.

Regional First Nation Infrastructure Investment Plan (RFNIIP)

ISC's departmental regional roll-up of all BC First Nations Infrastructure Investment plans which matches First Nation-identified projects, project priorities and available regional funding. The RFNIIP is approved by the BC Regional Director General and sent to Ottawa to be rolled up into the NFNIIP.

Risk Assessment Tool (RAT)

Internal ISC risk assessment tabulation document required for all projects with an ISC financial contribution > \$1.5M. The document will assess potential project implementation risks and generated mitigation strategies if risks are rated as medium or high.

Senior Capital Advisor

Provides project selection assistance to an assigned team of CMOs.

Senior Engineer (SE)

Works with the Capital Management Officer to process project proposals received from First Nations. Senior Engineers focus on project technical items. Each First Nation is assigned a Senior Engineer.

Specialist Engineer

Specialist engineers available to provide advice and assistance to First Nations, Senior Engineers and Capital Management Officers for projects related to their specialty (e.g., water treatment, wastewater treatment, environmental).

Chapter One:

The ISC BC Regional Capital Program

Chapter Two:

The Identification of a Capital Program

Chapter Three:

The Feasibility Stage of a Capital Project

Chapter Four:

The Design Stage of a Capital Project

Chapter Five:

The Acquisition Construction Stage of a Capital Project

Chapter Six:

Post-Construction Stage of a Capital Project

Appendix

6

The Post-Construction Stage of a Capital Project

An overview of the Post-Construction Stage of a Capital Project

Introduction

This *Practical Guide to Capital Projects* has been developed for use by First Nations, First Nations consultants and ISC employees. The objective of the guide is to clearly identify capital project submission requirements, to provide a road map for project development and to promote consistent decision making for the successful implementation of capital projects.

The guide deals exclusively with the planning, design and construction of community infrastructure assets and facilities.

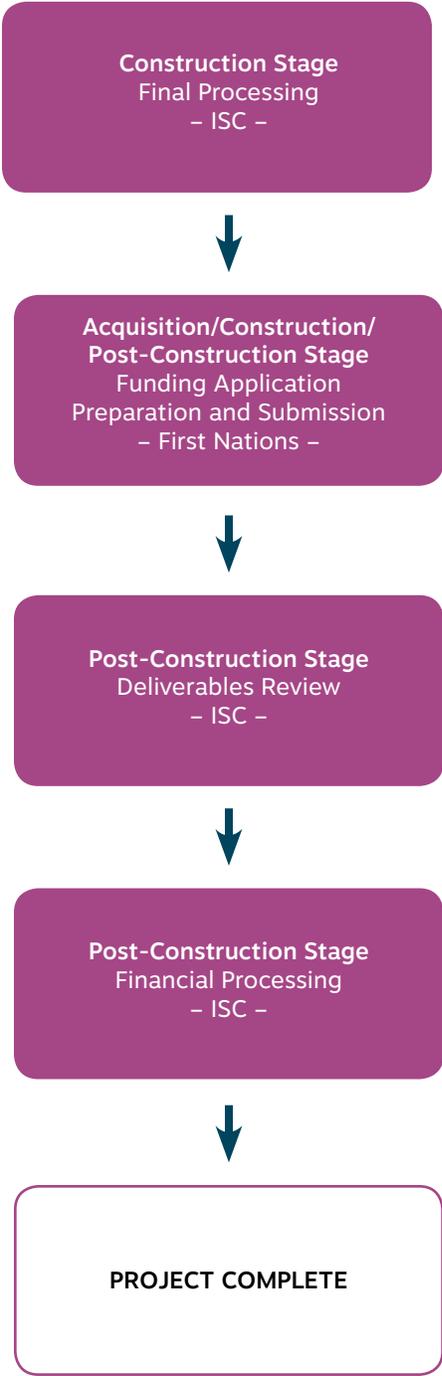
Funding processes related to other components of the capital facilities and maintenance program (CFMP) program such as schools, housing and operation and maintenance funding are covered in other documents.

The guide has been organized to facilitate the preparation of project funding applications.

Chapter 1 is an overview of the BC Region ISC Capital Program including a step-by-step description of the project approval process. **Chapter 2** describes processes for identifying a capital project. **Chapters 3 through 6** describe the funding application requirements, the deliverables and expected results for each stage of a capital project cycle – feasibility, design, construction and post-construction. **Appendices** are at the end of the document containing pertinent information for quick reference by the users.

The post-construction stage closes the capital project file and initiates the operation and maintenance funding process for the community assets constructed. No funding submissions are required for this stage as the cost of preparing the completion documentation is included in the construction stage funding application (PAR).

Figure 1: Post Construction Stage



6.1 Post-Construction Stage Deliverables

Deliverables Items A, B, C and D need to be processed by the First Nation, often with technical assistance from the professional consultant. The Project Completion Report, Item E is almost always prepared by the professional consultant.

- A. First Nation Letter of Acceptance** — States chief and council's acceptance of the completed project and confirmation of final costs (including First Nation, consultant and contractor costs as applicable). The letter is to be signed by authorized personnel, usually the chief administrator or band manager, and should be addressed to the First Nation's assigned Capital Management Officer.
- B. Certificate of Completion** — Is to be completed by the First Nation's authorized project manager and attached to the letter of acceptance. See *Appendix 1: Capital Projects Report DCI #460671*.
- C. Project Expenditure Accounting** — All final project expenditures including all First Nation, consultant and contractor expenses as applicable, must be reconciled by the First Nation. This reconciliation must match the project expenditure accounting which will be detailed in the First Nation financial audit report.

The final project costs are to be broken down according to the various elements of the project and are to be compared to the Class A estimates and to the approved requests for ISC project funding. Any significant variances are to be explained. The final costs are to include the costs of planning, design, project management, construction (include final contractor payment certificate complete with all change orders), professional services during construction and completion reporting.

- D. Capital Asset Inventory System (CAIS) Forms** — Completed forms with the consultant's seal and signature and the chief councillor's signature are required for each new community asset. The forms

must also identify any existing assets that were deleted by the new project. See *Appendix 2: Capital Asset Inventory System (CAIS) Forms (with explanation and FAQ)*.

- E. Completion Report** — One copy submitted on letter size paper and one copy as PDF file. The report is to be submitted with three complete sets of record drawings that document the actual works constructed in the project. The record drawings are to be provided as follows:
- Prints of reduced size drawings (11"x17") are to be ink signed and sealed and bound into the binder;
 - Prints of full-size drawings ink signed and sealed are to be unbound and rolled separately;
 - Full-size drawings in Adobe Acrobat PDF 995 (.pdf/A) format stored on a CD drive or a USB stick. Do not save the drawings in individual folders. Note: Drawings must be saved in the root folder of the USB key rather than in individual folders.

Specifically, the completion report is to include:

1. Project Implementation History, which includes:

- Description of the project including why the project was necessary and the option selected to resolve the problem;
- Project construction (or procurement) process (e.g.: public tender, construction management);
- The construction contract award process and rationale including a comparison of the costs from all bidders;
- The number of construction contracts in the project complete with a description of the contracts;
- A project synopsis describing problems or outstanding issues, areas of special interest, variances from the original project scope complete with their justification, project scheduling challenges, project deficiencies;
- Consultant summary of construction costs including budgets, variances and change order history;
- A description of any training programs implemented including the duration of training and number of personnel trained.

2. Project Participant Listing — Listing of project participants including the project team members, the project manager and/or project management firm, construction manager and/or construction management firm, design professional(s), the construction inspector(s) and contractors.

3. Project Milestones Chronological Listing — Dates of design completion, project approval, funding approval, contract award, construction start, substantial completion date, final completion date, start and end of warranty period, and completion reporting submission date.

4. The following project documentation (as applicable):

- Field Inspection Reports - as prepared by the project professionals' inspectors during construction;
- Inspection Test Results - for any materials and installation testing conducted during construction;
- Photographs - colour photographs to document the project history from start to finish;
- Commissioning Report(s) - for the final inspection, testing, set-up and start-up of systems and controls;
- For water treatment plants or wastewater treatment plants: digital copy of the HMI program, digital copy of the PLC ladder logic, ladder logic diagrams, final process narrative;
- Professional Certification Schedules - as required for any building construction. See *Appendix 3: Letters of Assurance (NBC) — Schedules A, B-1, B-2, C-A, C-B*;
- Final letter of inspection prepared by either a third party Fire Protection Engineer or a Fire Inspector from a local jurisdiction;
- Fuel Tank Registration — if required by Environment Canada regulations;
- Record Drawing Prints (Reduced) - complete set of reduced (11' x 17") professionally ink signed and sealed record drawing prints bound into the completion report documenting the actual works constructed in the project;
- Record Drawing Prints (Full Size) — complete set of full size drawings professionally ink signed and sealed unbound and rolled separately;
- Record Drawings Digital - one complete set of professionally signed and sealed digital record drawings in Adobe Acrobat PDF

995 (.pdf/A) format stored on a CD drive or a USB stick. Do not use folders when saving documents on the CD drive or USB stick;

- O&M Manual — one printed copy and one digital copy with instructions for operators and product information for equipment installed. See ISC design guidelines for specific O&M manual requirements for complex water and wastewater facilities;
- Legal Survey Plan - copy of the posted legal survey plan. Legal registration of the survey plan may not be available for some time after project completion so a copy of the “ready for registration” plan that has been submitted for registration is acceptable. The registered plan is to ensure that all community assets are legally protected for the use, operation and maintenance by the First Nation;
- A letter from the First Nation confirming they have received their own copy of the O&M manuals, the commissioning report, the completion report and the Record Drawings (and the digital copy of the HMI program, digital copy of the PLC ladder logic, ladder logic diagrams, final process narrative if applicable);
- Permits, Approvals and Authorizations - copies of all documents issued permits and authorizations (DFO) issued;
- Mitigation Measures Compliance Form — sign-off form documenting environmental compliance during construction for projects where a Detailed Environmental Review was required. This form may also be required at ISC’s discretion for projects where a Simple Environmental Review was required.
- A signed, sealed and dated professional certification statement by a qualified professional architect /engineer that should read:

“I hereby give assurance that all constructed works in this project have been completed in general accordance with the record drawings, the project specifications and applicable codes and standards, that all required testing has been carried out in accordance with the specifications, applicable codes and standards and generally accepted procedures and that required environmental mitigation measures identified in the project have been implemented.”

6.2 Post-Construction Analysis by First Nations

The post construction stage signifies the end of the project and the following questions will have been answered on completion of this stage:

Question 1: Have all contractual obligations been met?

Is the First Nation assured that their contractual obligations with the contractors and consultants have been met and there are no outstanding liens or claims against the project?

Question 2: Has professional certification been received?

Is the First Nation assured that their consultant has affixed their professional seal certifying that the work has been completed in general accordance with the design?

Question 3: Is the project history documented?

Does the First Nation have a documented history of the project for reference and use in future projects, as well as for the settlement of any disputes related to the completed works?

Question 4: Has record drawing information been documented?

Does the First Nation have a record of the constructed works for use in planning future extensions or improvements and for operation and maintenance activities?

Question 5: Has an O&M Manual been received?

Do the First Nation's operation and maintenance personnel have a plan detailing O&M tasks, equipment, labour and materials required to help achieve the design life span of the facilities? Do they have manufacturers' information available to assist them with O&M activities and ordering replacement components?

Question 6: How will the new facility impact current community O&M resources?

Does the First Nation know how operation and maintenance of the new project will impact community maintenance activities and community O&M resources?

Question 7: Has O&M funding been initiated?

Is the First Nation assured that adequate revenues (including the ISC subsidy) are available to operate and maintain the completed works?

Question 8: Has a certified accounting of all project costs been received?

Is the First Nation assured that all project related costs are accounted for and any funding shortfalls or surpluses are identified?

Question 9: Has the capital project file been closed?

Is the First Nation assured that all reporting requirements have been addressed and the project can be closed?

6.3 Post-Construction Stage Deliverable Review by ISC

6.3.1 Capital Management Officer

The Capital Management Officer will review post-construction stage deliverables which will generally include:

- Confirming that the First Nation accepts the completed project;
- Initiating discussions with the First Nation regarding the recovery of any surplus funding in accordance with the funding agreement;
- Confirming that ISC's project completion process is followed including the closure of the project in the capital project management system (ICMS/CPMS) and the archiving of the project files.

6.3.2 Senior Engineer

The engineer's review of the post-construction deliverables will include:

- Confirming that the completed project complies with the scope of work as detailed in the Final Design Report and that adequate explanations are provided for any variances in the scope of work;
- Reviewing the final cost and cost comparison information provided for completeness and accuracy. Any funding surpluses or shortfalls will be addressed with the Capital Management Officer;
- Confirming that proper professional certification for the project has been submitted;
- Reviewing the record drawings and capital asset inventory system (CAIS) forms for completeness and accuracy;
- Implementing ISC's capital project completion process:
 - » Closing the paper file with all relevant documentation included;
 - » Completing a Records Drawing form to send with the record drawing prints to the Asset Management Unit;

- » Completing the Capital Asset Inventory Change form to send with the submitted Capital Asset Inventory System forms to the Asset Management unit for the updating of ICMS;
- » Making the necessary changes to GCIMS and ICMS/CPMS to provide closure information and to indicate the project is complete;
- Comparing post-construction stage deliverables to the Post-Construction Stage Technical Review checklist. See *Appendix 4*. The checklist may be useful to the First Nation as a quick guide to help verify the deliverable package is complete.



Appendices

A Practical Guide To Capital Projects | Appendices

Appendix 1: Capital Projects Report DCI #460671

Certificate of Completion for Capital Projects

Check one:

- Provisional (facility is being used for the intended purpose, with minor work remaining)
- Final (all work is completed)

First Nation Name and Number	
Reserve Name and Number	
Project Number	Funding Arrangement Number
Project Title	
<p>Check all that apply:</p> <ul style="list-style-type: none"> <input type="checkbox"/> All details of the project are resolved and there is no flaw, omission, uncompleted work, claim or outstanding payment. • The "As Constructed" plans are available. • Flaws, omissions, incomplete work, claims or outstanding payments exist, and an Action Plan and either a Substantial Completion Certificate or a Certificate of Occupancy are attached. • The construction complies with all requirements of all applicable codes, standards and INAC Funding Arrangement. <input type="checkbox"/> Official inspection report(s) or certificate(s) by qualified inspector(s) are attached. <p>List the reports or supporting documents attached:</p> <p>e.g. <input type="checkbox"/> Fire commissioner (Human Resources Development Canada)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Environmental Licence (Provincial) <input type="checkbox"/> Health Canada (water, sewage, testing, etc.) <input type="checkbox"/> Worker's Compensation (Safety and Labour Conditions) <input type="checkbox"/> Survey and Soil Testing Reports, Concrete Testing Reports, etc. <input type="checkbox"/> Substantial Completion Certificate as per provincial legislation (e.g. <i>the Construction Lien Act</i>) <input type="checkbox"/> Certificate of Occupancy. <input type="checkbox"/> Operator's certification for water/sewage treatment plants <input type="checkbox"/> Environmental Mitigation Report, if required by Environmental Assessment. <p>_____</p> <p>_____</p> <p>_____</p>	

I hereby certify that all work has been completed in accordance with the Terms and Conditions set out in the Funding Agreement, and the Effective Project Approval; and that all specified codes and standards have been met.

Signature of Project Manager or Person Authorized by the Band Council:	Date:
Received by INAC:	Date:

DCI 460671 (2005-2006)

TPMS RR CODE: 0121



Appendix 2: Capital Asset Inventory System (CAIS) Forms (with explanation and FAQ)



Indigenous Services
Canada

Services aux
Autochtones Canada

Rev. Apr/18

ICMS – Asset Inventory (Formerly CAIS) Update Submission Requirements

The Asset Inventory is a module that captures O&M funded assets within the Integrated Capital Management System (ICMS) database.

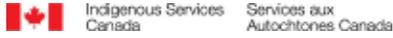
Assets in the ICMS-Asset Inventory that receive O&M funding, have to meet Indigenous Services Canada (ISC) Level of Service Standards (LOSS), be eligible for O&M funding and comply with current codes, regulations and legislation.

The Asset Inventory is updated when Post-Construction Completion Documentation is deemed completed. All submissions for April 1 funding must be received and approved no later than November 30th of the previous year.

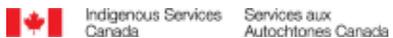
Technical data for each eligible asset must be captured in ICMS-Asset Inventory forms. The information in the ICMS-Asset Inventory forms should be accurate and reflect the scope of work in the Record Drawings. All the fields in the form have to be populated with required data.

- Works/assets or quantities which are to be maintained by parties other than the First Nation must be clearly and specifically identified.
- All submissions are to clearly identify all existing assets and their quantities replaced by the new works.

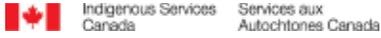
Relevant ICMS-Asset Inventory forms must be included in the Post-Construction Completion Documentation. The forms must be signed, dated and sealed by the architect/engineer of record which designed the asset and supervised the construction, and signed and dated by the First Nation Chief & Council.



(Rev. Apr/18)		
GENERAL		
ICMS - Asset Inventory		
ALL FIELDS MUST BE ENTERED		
First Nation Name:	FN Number:	
Reserve Name:	Reserve Number:	
Asset Code: _____ Asset Name: _____ Design Life: _____ CPMS No. (if applicable): _____ Overall Capital Cost (\$): _____ Construction Date: _____ yyyy - mm - dd		
Usage Description:	<input style="width: 100%;" type="text"/>	
Location Description (if applicable; street names, addresses etc.):	<input style="width: 100%;" type="text"/>	
List Assets & Quantities Replaced by New Works (use additional CAIS form if needed):	<input style="width: 100%;" type="text"/>	
Additional Information:		
<input style="width: 100%; height: 100%;" type="text"/>		
Photo (use additional sheet if needed):		
Validation Certified Correct _____ Professional Engineer/Architect _____ Date	Seal	Approved: _____ Chief Councillor _____ Date



(Rev. Apr/18)		
BUILDINGS		
ICMS - Asset Inventory		
ALL FIELDS MUST BE ENTERED		
First Nation Name:		FN Number:
Reserve Name:		Reserve Number:
Asset Name: _____		
Overall Capital Cost (\$): _____	Design Life (years): _____	
CPMS No. (if applicable): _____	Asset Code: CODE	Construction Date: _____ <small>yyyy - mm - dd</small>
Usage Description:		
Location Description (street names, addresses etc.):		
List Assets & Quantities Replaced by New Works:		
Gross Floor Area (external dimensions):	m ²	No. of Exits:
Emergency Equipment Servicing (Quantities):		
Exit Lights: _____	Extinguishers: _____	Heat Detectors: _____
Smoke Detectors: _____	Wet Sprinkler: _____	Dry Sprinkler: _____
Fire Alarm Systems: _____	Emergency Lights: _____	
Photo (use additional sheet if needed): 		
Validation Certified Correct _____ Professional Engineer/Architect _____ Date	Seal	Approved: _____ Chief Councillor _____ Date



WATER SYSTEM						(Rev. Apr/18)
ICMS - Asset Inventory						
ALL FIELDS MUST BE ENTERED						
First Nation Name:			FN Number:			
Reserve Name:			Reserve Number:			
Usage Description and Related Technical Documents: <input style="width: 100%;" type="text"/>						
List Assets & Quantities Replaced by New Works (use additional CAIS form if needed): <input style="width: 100%;" type="text"/>						
CPMS No. (if applicable):			Design Life:			
Supply System:						
1. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	m units			
Remarks/Location: _____						
2. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	m units			
Remarks/Location: _____						
Treatment System:						
1. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	ea units			
Remarks/Location: _____						
2. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	ea units			
Remarks/Location: _____						
Distribution System:						
1. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	m units			
Remarks/Location: _____						
2. Asset Code: <u>CODE</u>		Asset Name: _____				
Capital Cost (\$): _____	Construction Date: _____	Quantity: _____	m units			
Remarks/Location: _____						
Water Mains: Material Type:	Diameter (mm)	Length (meters)	No. of Main Valves	No. of Services	Comments:	
No. of Hydrants: _____			No. of Standpipes: _____			
Validation Certified Correct		Seal		Approved:		
_____ Professional Engineer/Architect				_____ Chief Councillor		
_____ Date				_____ Date		



(Rev. Apr/18)																																									
WASTEWATER COLLECTION AND DISPOSAL SYSTEM																																									
ICMS - Asset Inventory																																									
ALL FIELDS MUST BE ENTERED																																									
First Nation Name:			FN Number:																																						
Reserve Name:			Reserve Number:																																						
Usage Description and Related Technical Documents: <input style="width: 100%;" type="text"/>																																									
List Assets & Quantities Replaced by New Works (use additional CAIS form if needed): <input style="width: 100%;" type="text"/>																																									
CPMS No. (if applicable):			Design Life:																																						
Treatment System:																																									
1. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ ea																																					
		yyyy - mm - dd		units																																					
Remarks/Location:																																									
2. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ ea																																					
		yyyy - mm - dd		units																																					
Remarks/Location:																																									
Collection and Disposal System:																																									
1. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ m																																					
		yyyy - mm - dd		units																																					
Remarks/Location:																																									
2. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ m																																					
		yyyy - mm - dd		units																																					
Remarks/Location :																																									
3. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ m																																					
		yyyy - mm - dd		units																																					
Remarks/Location:																																									
4. Asset Code: <u>CODE</u> Asset Name: _____																																									
Capital Cost (\$): _____		Construction Date : _____		Quantity : _____ m																																					
		yyyy - mm - dd		units																																					
Remarks/Location :																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Wastewater Mains: Material Type:</th> <th style="width: 10%;">Diameter (mm)</th> <th style="width: 10%;">Length (meters)</th> <th style="width: 10%;">No. of Manholes</th> <th style="width: 10%;">No. of Services</th> <th style="width: 25%;">Comments:</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>						Wastewater Mains: Material Type:	Diameter (mm)	Length (meters)	No. of Manholes	No. of Services	Comments:																														
Wastewater Mains: Material Type:	Diameter (mm)	Length (meters)	No. of Manholes	No. of Services	Comments:																																				
Validation Certified Correct		Seal		Approved:																																					
_____ Professional Engineer/Architect				_____ Chief Councillor																																					
_____ Date				_____ Date																																					

(Rev. Apr/18)		
ROADS		
ICMS - Asset Inventory		
ALL FIELDS MUST BE ENTERED		
First Nation Name:	FN Number:	
Reserve Name:	Reserve Number:	
Asset Name: _____		
Overall Capital Cost (\$): _____	Design Life: _____	
CPMS No. (if applicable): _____	Asset Code: CODE	Construction Date: _____ <small>yyyy - mm - dd</small>
Location Description (street names, addresses etc.):		
Access to (community facilities & no. of dwellings):		
List Assets & Quantities Replaced by New Works:		
Special Vehicle Use : _____		
Estimated Annual Average Daily Traffic (AADT): _____ vehicles/day		
Road Surface:	Asphalt <input type="checkbox"/>	Bituminous Treated <input type="checkbox"/>
	Gravel <input type="checkbox"/>	Earth <input type="checkbox"/>
Surface Width: _____m	Road Length: _____km	Shoulder Width: _____m
Curb and Gutters: _____km	Ditches: _____km	No. of Culverts: _____each
Location Sketch:		
↑ N		
Validation Certified Correct _____ Professional Engineer/Architect _____ Date	Seal	Approved: _____ Chief Councillor _____ Date

Appendix 3: Letters of Assurance (NBC) - Schedules A, B-1, B-2, C-A, C-B

First Nation's Building Permit Procedures

Schedule A

Confirmation of Commitment by Owner's Agent and Coordinating Registered Professional

Note: 1. This letter must be submitted before commencement of construction of the project.
 2. In this letter the words in italics are as defined in the National Building Code of Canada or as defined herein.
 3. A *copy or duplicate original* of this Schedule shall be submitted to the _____ First Nation Council.

To: **Chief and Council** Date: _____
First Nation

(Professional Seal)

Re: _____
 Name of Project

Address of Project

Legal Description of Project

The undersigned has retained _____ as a *coordinating registered professional* to coordinate the design work and *field reviews* of the *registered professionals* required for this project. The *coordinating registered professional* shall coordinate the design work and *field reviews* of the *registered professionals* required for the project in order to ascertain that the design will substantially comply with the National Building Code of Canada and other applicable enactments respecting safety and that the construction of the project will substantially comply with the National Building Code of Canada and other applicable enactments respecting safety, not including the construction safety aspects.

"*field reviews*" are defined to mean those reviews of the work

(a) at a project site of a development to which the construction documents and specifications relate, and

(b) where applicable, at fabrication locations where *building* components are fabricated for use at the project site that a *registered professional* in his or her professional discretion considers necessary to ascertain whether the work substantially complies in all material respects with the plans and supporting documents prepared by the *registered professional*.

Page 8 11/3/2014

Schedule A (continued)

The owner's agent and the *coordinating registered professional* each acknowledge their responsibility to notify the addressee of this letter of the date the *coordinating registered professional* ceases to be retained by the owner's agent before the date the *coordinating registered professional* ceases to be retained or, if that is not possible, then as soon as possible. The *coordinating registered professional* acknowledges the responsibility to notify the addressee of this letter of the date a *registered professional* ceases to be retained before the date the *registered professional* ceases to be retained or, if that is not possible, then as soon as possible.

The owner's agent and the *coordinating registered professional* understand that where the *coordinating registered professional* or a *registered professional* ceases to be retained at any time during construction, work on the above project will cease until such time as:

- (a) a new *coordinating registered professional* or *registered professional*, as the case may be, is retained, and
- (b) a new letter in the form set out in Schedule A or in the forms set out in Schedules B-1 and B2, as the case may be, is filed with the *authority having jurisdiction*.

The undersigned *coordinating registered professional* certifies that he or she is a *registered professional* as defined herein, and agrees to coordinate the design work and *field reviews* of the *registered professionals* required for the project as outlined in the attached Schedules B1 and B2 including coordination and integration of functional testing of fire and life safety systems.

Coordinating Registered Professional

Owner's agent

_____ *Coordinating Registered Professional's Name (Print)*

_____ *Signing Officer's Name (Print)*

_____ *Coordinating Registered Professional's Signature*

_____ *Signature Signing Officer's Signature*

_____ *Date*

_____ *Date*

(Coordinating Registered Professional's Seal here)

Schedule A (continued)

In the Province of British Columbia, a *registered professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act.

A *coordinating registered professional* is defined to mean the *registered professional* who coordinates the design work and *field reviews* of the *registered professionals* required for the project as outlined in the attached Schedules B1 and B2 including coordination and integration of functional testing of fire and life safety systems.

First Nation's Building Permit Procedures

Schedule B-1

Assurance of Professional Design and Commitment for Field Review

- Note:
1. This letter must be submitted before commencement of construction on the project.
 2. In this letter the words in italics are as defined in the National Building Code of Canada or as defined herein.
 3. A *copy or duplicate original* of this Schedule shall be submitted to the First Nation Council.

To: **Chief and Council** Date: _____

Re: _____

Name of Project

Address of Project

Legal Description of Project

The undersigned hereby gives assurance that the design of the (Initial those of the items listed below that apply to this registered professional. All the disciplines will not necessarily be employed on every project.)

- _____ Architectural
- _____ Structural
- _____ Mechanical
- _____ Plumbing
- _____ Fire Suppression Systems
- _____ Electrical
- _____ Geotechnical - temporary
- _____ Geotechnical - permanent

(Professional Seal)

components of the plans and supporting documents prepared by this *registered professional* as outlined on the attached Schedule B2 substantially comply with the National Building Code of Canada and other applicable enactments respecting safety except for construction safety aspects.

The undersigned hereby undertakes to be responsible for *field reviews* of the above referenced components during construction as indicated on the attached "Summary of Design and Field Review Requirements" (Schedule B-2).

First Nation's Building Permit Procedures

Schedule B-1 (continued)

The undersigned also undertakes to notify the *authority having jurisdiction* in writing as soon as possible if the undersigned's contract for *field review* is terminated at any time during construction.

I certify that I am a *registered professional* as defined herein.

Name (Print)

Signed

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the *Registered Professional* is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a *registered professional*. In the Province of British Columbia, a *registered professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an Architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional Engineer under the Engineers and Geoscientists Act.

First Nation's Building Permit Procedures

Schedule B-2

Summary of Design and Field Review Requirements

Note: 1. This form must be submitted with Schedule B-1 before commencement of construction on the project. 2. In this letter the words in italics have the same meaning as in the National Building Code of Canada and as defined in the attached Schedule B1.

Date: _____
(Registered Professional)

PROJECT: _____
(Name)

(Address)

(Initial applicable discipline below and cross out and initial non-applicable items within the discipline.)

ARCHITECTURAL

- 1.1 Fire resisting assemblies
- 1.2 *Fire separations* and their continuity
- 1.3 *Closures*, including tightness and operation
- 1.4 Egress systems, including *access to exit* within *suites* and *floor areas*
- 1.5 Performance and physical safety features (guardrails, handrails, etc.)
- 1.6 Structural capacity of architectural components, including anchorage and seismic restraint
- 1.7 Sound control
- 1.8 Landscaping, screening and site grading
- 1.9 Provisions for firefighting access
- 1.10 *Access requirements for persons with disabilities*
- 1.11 Elevating devices
- 1.12 Functional testing of architecturally related fire emergency systems and devices
- 1.13 Development Permit and conditions therein
- 1.14 Interior signage, including acceptable materials, dimensions and locations
- 1.15 Review of all applicable shop drawings
- 1.16 Interior and exterior finishes

Page 13

11/3/2014

Schedule B-2 (Continued)

1.17 Dampproofing and/or waterproofing of walls and slabs below *grade* (Professional Seal)

Schedule B-2 (Continued)

1.18 Roofing and flashings

1.19 Wall cladding systems

1.20 Thermal insulation systems, including condensation control and cavity ventilation

1.21 Exterior glazing

1.22 Integration of building envelope components

1.23 Environmental separation requirements (Part 5)

STRUCTURAL

2.1 Structural capacity of structural components of the *building*, including anchorage and seismic restraint

2.2 Structural aspects of *deep foundations*

2.3 Review of all applicable shop drawings

2.4 Structural aspects of unbonded post-tensioned concrete design and construction

MECHANICAL

3.1 HVAC systems and devices, including high *building* requirements where applicable

3.2 *Fire dampers* at required *fire separations*

3.3 *Continuity of fire separations* at HVAC penetrations

3.4 Functional testing of mechanically related fire emergency systems and devices

3.5 Maintenance manuals for mechanical systems

3.6 Structural capacity of mechanical components, including anchorage and seismic restraint

3.7 Review of all applicable shop drawings

Schedule B-2 (Continued)**PLUMBING**

- 4.1 *Roof drainage systems*
- 4.2 *Site and foundation drainage systems*
- 4.3 *Plumbing systems and devices*
- 4.4 *Continuity of fire separations at plumbing penetrations*
- 4.5 *Functional testing of plumbing related fire emergency systems and devices*
- 4.6 *Maintenance manuals for plumbing systems*
- 4.7 *Structural capacity of plumbing components, including anchorage and seismic restraint*
- 4.8 *Review of all applicable shop drawings*

FIRE SUPPRESSION SYSTEMS

- 5.1 *Suppression system classification for type of occupancy*
- 5.2 *Design coverage, including concealed or special areas*
- 5.3 *Compatibility and location of electrical supervision, ancillary alarm and control devices*
- 5.4 *Evaluation of the capacity of city (municipal) water supply versus system demands and domestic demand, including pumping devices where necessary*
- 5.5 *Qualification of welder, quality of welds and material*
- 5.6 *Review of all applicable shop drawings*
- 5.7 *Acceptance testing for "Contractor's Material and Test Certificate" as per NFPA Standards*
- 5.8 *Maintenance program and manual for suppression systems*
- 5.9 *Structural capacity of sprinkler components, including anchorage and seismic restraint*
- 5.10 *For partial systems - confirm sprinklers are installed in all areas where required*
- 5.11 *Fire Department connections and hydrant locations*
- 5.12 *Fire hose standpipes*
- 5.13 *Functional testing of fire suppression systems and devices*

Schedule B-2 (Continued)**— ELECTRICAL**

-
- 6.1 Electrical systems and devices, including high building requirements where applicable
 - 6.2 Continuity of *fire separations* at electrical penetrations
 - 6.3 Functional testing of electrical related fire emergency systems and devices
 - 6.4 Electrical systems and devices maintenance manuals
 - 6.5 Structural capacity of electrical components, including anchorage and seismic restraint
 - 6.6 Clearances from *buildings* of all electrical utility equipment
 - 6.7 Fire protection of wiring for emergency systems
 - 6.8 Review of all applicable shop drawings

— GEOTECHNICAL - TEMPORARY

-
- 7.1 *Excavation*
 - 7.2 Shoring
 - 7.3 Underpinning
 - 7.4 Temporary construction dewatering

— GEOTECHNICAL - PERMANENT

-
- 8.1 Bearing capacity of the soil
 - 8.2 Geotechnical aspects of deep *foundations*
 - 8.3 Compaction of engineered fill (Professional Seal)
 - 8.4 Structural considerations of soil, including slope stability and seismic loading
 - 8.5 Backfill
 - 8.6 Permanent dewatering
 - 8.7 Permanent underpinning

First Nation's Building Permit Procedures

Schedule C-A

Assurance of Coordination of Professional Field Review

- Note:
1. This letter must be submitted after completion of the project but before the occupancy permit is issued, or a final inspection is made, by the *authority having jurisdiction*.
 2. In this letter the words in italics have the meaning as defined in the previously submitted Schedule A.
 3. A *copy or duplicate original* of this Schedule shall be submitted to the _____ First Nation Council.

To: **Chief and Council**
First Nation

Date: _____

(Professional Seal)

Re: _____
Name of Project

Address of Project

Legal Description of Project

I hereby give assurance that:

- (a) I have fulfilled my obligations for coordination of *field review* of the *registered professionals* required for the project as described in the previously submitted Schedule A, "Confirmation Of Commitment By Owner And By Coordinating Registered Professional"
- (b) I have coordinated the functional testing of the fire emergency systems and devices to ascertain that they substantially comply in all material respects with:
 - (i) the applicable requirements of the National Building Code of Canada and other applicable enactments respecting safety, not including construction safety aspects; and,

First Nation's Building Permit Procedures

(ii) the construction documents, specifications and supporting documents.

(C) I am a *registered professional* as defined herein.

Project: _____

(Address)

(The coordinating registered professional shall complete the following:)

Name (Print)

Signature

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the coordinating registered professional is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (Print name of firm)

Note: The above letter must be signed by a coordinating *registered professional*, who is also a *registered professional*. In the Province of British Columbia, a *registered professional* is defined to mean:

(a) a person who is registered or licensed to practice as an architect under the Architects Act, or

(b) a person who is registered or licensed to practice as a professional engineer under the Engineers and Geoscientists Act.

First Nation's Building Permit Procedures

Schedule C-B

Assurance of Professional Field Review and Compliance

- Note:
1. This letter must be submitted after completion of the project but before the occupancy permit is issued, or a final inspection is made, by the *authority having jurisdiction*. A separate letter must be submitted by each registered professional.
 2. In this letter the words in italics have the same meaning as defined in the previously submitted Schedules B1 and B2.
 3. A **copy or duplicate original** of this Schedule shall be submitted to the First Nation Council.

To: **Chief and Council
First Nation**

Date: _____

(Professional Seal)

Re: _____
Area of responsibility (e.g. Architectural, etc.) (Print)

Name of Project

Address of Project

Legal Description of Project

I hereby give assurance that:

- (a) I have fulfilled my obligations for *field review* as outlined in the previously submitted Schedule B-1, "Assurance of Professional Design and Commitment for Field Review," and Schedule B-2, "Summary of Design and Field Review Requirements"; and,
- (b) those components of the project opposite my initials in Schedule B-2 substantially comply in all material respects with:

First Nation's Building Permit Procedures

Schedule C-B (continued)

- (i) the applicable requirements of the National Building Code of Canada and other applicable enactments respecting safety, not including construction safety aspects; and,
 - (ii) the construction documents, specifications and supporting documents.
- (c) I am a *registered professional* as defined herein.

Project: _____

(Address)

(The coordinating registered professional shall complete the following:)

Name (Print)

Signature

Date

Address (Print)

Phone

(Affix Professional Seal here)

(If the Registered Professional is a member of a firm, complete the following.)

I am a member of the firm _____

and I sign this letter on behalf of the firm. (print name of firm)

Schedule C-B (continued)

Note: The above letter must be signed by a *Registered Professional*. In the Province of British Columbia, a *Registered Professional* is defined to mean:

- (a) a person who is registered or licensed to practice as an Architect under the Architects Act, or
- (b) a person who is registered or licensed to practice as a professional Engineer under the Engineers and Geoscientists Act.

Appendix 4: Post-Construction Stage Technical Review

Checklist for Post Construction Stage Technical Review**

Project Name: _____

CPMS/ ICMS # _____

	<u>Omitted</u>	<u>Submitted</u>	<u>Not Applicable</u>
First Nation Letter of Acceptance	_____	_____	_____
First Nation Certificate of Completion	_____	_____	_____
Project Expenditure Accounting	_____	_____	_____
• Final Project Costs	_____	_____	_____
• Budget Comparison	_____	_____	_____
• Funding Comparison	_____	_____	_____
CAIS Forms (signed and sealed)	_____	_____	_____
Completion Report	_____	_____	_____
• Project Implementation History	_____	_____	_____
• Project Participants	_____	_____	_____
• Project Milestones	_____	_____	_____
• Field Inspection Report	_____	_____	_____
• Inspection and all Test Results	_____	_____	_____
• Colour Photographs	_____	_____	_____
• For ***WTP & WWTPs Only:	_____	_____	_____
• Commissioning Reports	_____	_____	_____
• O&M Manual (both digital & hardcopy)	_____	_____	_____
• Emergency Response Plan	_____	_____	_____
• Copy of SCADA programing	_____	_____	_____
• Copy of program of the PLC	_____	_____	_____
• Maintenance Management Plan	_____	_____	_____
• Warranty Final Inspection Process	_____	_____	_____
• NBC Schedules 'A', 'B' and 'C'	_____	_____	_____
• Fire Commissioner's Final Inspection (by a third party Fire Protection Engineer or a Fire Inspector from local jurisdiction)	_____	_____	_____
• Fuel Tank Registration(if fuel tank installed during project)	_____	_____	_____
• Record Drawing Prints (signed & sealed) (11"x17" in completion report, and full sized prints)	_____	_____	_____
• Digital Record Drawings (Electronically Sealed Full Size pdf/A verified by Notarius platform)	_____	_____	_____
• Legal Survey Plan	_____	_____	_____
• Registered (ideally)	_____	_____	_____
• Copies of Permits: _____	_____	_____	_____
(Environment Canada, Fisheries Canada (DFO), FNHA, Transport Canada, BC Ministry of Environment, BC FLNRO, MoTI, timber permit, gravel extraction permit, solid waste disposal permit, burning permit, provincial land tenure permit)			
• Sealed Professional Certification	_____	_____	_____
Completion Report filed to Technical Library - <i>GCdocs#</i> _____	_____	_____	_____
Letter from First Nation confirming receipt of O&M Manual, Commissioning Report, Completion Report & Record Drawings	_____	_____	_____
CI Technical Reviewer: _____			
Date: _____			

** Checklists are for the use of CI Technical Reviewer.
Information listed may not all be required or additional information may be required.

*** WTP: Water Treatment Plant WWTP: Waste Water Treatment Plant

