

## Appendix 5: Terms of Reference – Subdivision Feasibility Study [Sample]

### SAMPLE TERMS OF REFERENCE FOR A SUBDIVISION FEASIBILITY STUDY

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## 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.

### LIST OF REFERENCES

## 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 with 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 reports, 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. These standards essentially set limits on development which in turn affect the capital planning process.

**3.4 Life Cycle Cost** - 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** - The 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

- ISC Capital Management Officer
- ISC Engineer

## 4.0 SCOPE OF THE WORK

- 4.1** The work of this contract comprises, but is not necessarily limited to the following:  
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 First Nation, 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 First Nation's review. These layouts must be tied into existing legal survey controls.
- 4.5** Site planning must take into account community growth patterns and service demands and shall include an assessment of all undeveloped areas with the community for potential housing and community building sites.
- 4.6** Site planning must take into account water supply options, water quality and wastewater disposal options.
- 4.7** 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
  - site servicing
  - acceptability to the First Nation membership
  - other factors the consultant considers relevant.
- 4.8** 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.

**4.9** 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,
- water supply,
- wastewater disposal,
- Phase 1 site soil investigation in accordance the current edition of the Contaminated Sites Regulation (CSR) of the Environmental Management Act (EMA)
- road construction,
- environmental hazards, including but not limited to, flooding, soil stability, landslide, earthquake, wildfires, tsunami, or rock fall
- erosion protection,
- flood control,
- other topics the consultant considers relevant.

**4.10** Prepare an environmental scoping study to outline any environmental impacts anticipated for the completed project following the requirements of the Impact Assessment Agency.

**4.10** 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,**
- A copy of *Contaminated Sites Profile* form or *Contaminated Sites declaration statement*, duly completed and signed.
- an environmental assessment outline report identifying any potential impacts and mitigation requirements for the duration of the project and at completion,
- all studies,

- a list compiling the technical resources referenced to complete the study including the specific Practice Guidelines from Engineers & Geoscientists that were referred to,
- 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.

**5.2** 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.

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

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

**5.5** 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.

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

**5.7** All drawings shall be prepared in metric units and include the First Nation's logo.

## 6.0 PROPOSALS:

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 First Nation 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 First Nation.

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