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AGREEMENT FOR CONTINGENT REPAYMENT TECHNICAL COOPERATION

between

BARBADOS

and the

INTER-AMERICAN DEVELOPMENT BANK

Final Designs for a Public Sewerage
System in the South Coast Area of Barbados

1987

AGREEMENT FOR CONTINGENT REPAYMENT TECHNICAL COOPERATION

AGREEMENT made and entered into this 30th day of January, 1987 by and between BARBADOS (hereinafter called the "Beneficiary") and the INTER-AMERICAN DEVELOPMENT BANK (hereinafter called the "Bank"), concerning the granting by the latter of a credit for technical cooperation (hereinafter called the "Credit").

This Agreement is entered into by virtue of the Agreement on the Special Programme for Preparation of Development Projects, signed on November 22, 1974, by the Government of Canada and the Inter-American Development Bank.

ARTICLE I

Object I

Section 1.01. Purpose of the Credit. The Credit shall be used exclusively to cooperate in the financing of expenses to be incurred in the realization of a technical cooperation programme (hereinafter called the "Programme") to assist the Beneficiary, through the Ministry of Health, in the preparation of final designs for a public sewerage system in the South Coast area of Barbados.

Section 1.02. Objectives of the Programme. The overall objectives of the Programme shall be:

- (a) to prepare an investment project to improve sewerage management facilities on the South Coast of Barbados in order to reduce risks to health from sewage and commercial waste pollution and improve environmental conditions for both the resident as well as the tourist population in the area, and
- (b) To strengthen the institutional capability of the Ministry of Health through on-the-job training to be received by the local technicians participating in the execution of the Programme.

Section 1.03. Description of the Programme. In order to accomplish the objectives set forth in Section 1.02, the Programme shall include activities revolving around two basic components: preparation of final designs of the selected project; and preparation of a loan request. These activities shall include the following tasks:

(a) Final Design for the Selected Project

- (i) Review the design parameters of the system (design period, population densities, areas served, per capita

contribution, infiltration, industrial wastes, design flows, etc.);

- (ii) Carry out detailed topographical and field survey work and geological and soil studies for the sewer lines, pumping stations, and treatment plant sites;
- (iii) Carry out detailed oceanographic studies to assist in the determination of minimum sewage treatment prior to ocean disposal;
- (iv) Select proper pumping equipment and economic sizes of the transmission lines;
- (v) Prepare final designs of sewers, pumping stations and treatment plant;
- (vi) Prepare final designs for final disposal method;
- (vii) Prepare final plans and specifications necessary for construction of the entire sewerage system; and
- (viii) Prepare bidding documents for procurement purposes, and a plan for the promotion of house connections.

(b) Preparation of Loan Request:

Prepare a loan request to an international lending organization for the financing of the project. This task shall include the preparation of additional supporting technical, institutional, financial and socioeconomic information in accordance with the Bank guidelines for preparation of projects.

ARTICLE II

Execution of the Programme

Section 2.01. Executing Agency. The Programme shall be carried out by the Beneficiary through the Ministry of Health (hereinafter called the "Executing Agency").

Section 2.02. Consulting Firm. (a) For the realization of the Programme, the Beneficiary, through the Executing Agency, shall select and contract the professional services of a firm of international consultants (hereinafter called the "Consulting Firm").

(b) The Consulting Firm shall provide the necessary personnel and resources to successfully complete the Programme with the highest professional standards. It is estimated that the Consulting Firm will complete the Programme within a period of 18 (eighteen) months. Within this period, the Consulting Firm shall furnish approximately 83 man/months of professional expertise, including international and local civil and

sanitary engineers, hydrologists, soil engineers, mechanical engineers, oceanographers, computer technologists, economists and financial analysts. The Consulting Firm shall submit to the approval of the Executing Agency and the Bank the professional qualifications of the personnel to be assigned by it to the Programme.

(c) The Consulting Firm shall: (i) meet the requirements indicated in Annex I which forms part of this Agreement, and (ii) perform its work in accordance with the terms of reference set forth in said Annex I, it being understood that such terms of reference may be modified by mutual agreement between the Beneficiary and the Bank.

(d) Due to the highly specialized nature of the work to be performed by the Consulting Firm:

(i) Only qualified consulting firms with sufficient accredited experience in the design of similar projects may participate in the selection process. This experience shall be clearly exhibited by the firms competing for the contracted or their associates.

(ii) The Executing Agency and the Bank shall closely monitor the performance of the Consulting Firm during the execution of its work. In addition, the Executing Agency and the Bank shall approve any change in the technical personnel assigned by the Consulting Firm to the Programme based on their professional qualifications.

Section 2.03. Procedure for Selection and Contracting of the Consulting Firm. The Beneficiary, through the Executing Agency, shall select and contract the services of the Consulting Firm in accordance with the provisions established in Annex II, which forms part of this Agreement.

Section 2.04. Period for Contracting of the Consulting Firm. The contract with the Consulting Firm shall be entered into within 6 (six) months from the date of this Agreement. The Executing Agency shall notify the Bank on the date on which the Consulting Firm commences its work.

Section 2.05. Reports of the Consulting Firm. (a) The contract to be entered into with the Consulting Firm shall provide that the Consulting Firm shall submit to the Executing Agency with 4 (four) copies to the Bank, the following reports:

(i) Work Program, to be submitted within fifteen days from the commencement of work, setting out the nature and timing of each component and activity of the Programme in accordance with the terms set forth in this Agreement.

(ii) First Interim Report, to be submitted six months from the commencement of work, describing the activities carried out and the results obtained to date, as well as the

actions programmed for the remainder of the Programme. This report shall include the methodology, model, and procedures to be used in the economic analysis.

- (iii) Second Interim Report, to be submitted within twelve months from the commencement of work, describing the activities carried out and the results obtained to date, as well as the actions programmed for the remainder of the Programme.
- (iv) Draft Final Report, to be submitted within sixteen months from the commencement of work, containing all elements and final results of the Programme.
- (v) Final Report, to be submitted within eighteen months from the commencement of work, containing all elements and final results of the Programme in final form, adequately incorporating the comments of the Executing Agency and the Bank.

(b) The Contract to be entered into with the Consulting Firm shall also establish that the Consulting Firm shall: (i) submit to the Executing Agency and the Bank any additional reports that may be reasonably requested in connection with the progress of its work; (ii) incorporate in all the reports mentioned in paragraph (a) above any revision, enlargement or both that the Executing Agency, the Bank, or both may deem necessary within the scope of the terms of reference set forth in the contract, and (iii) keep the Bank's Office in Barbados informed as to the development of its work.

Section 2.06. Recommendations of the Consulting Firm. It is understood that the opinions and recommendations of the Consulting Firm, shall not necessarily be binding upon the Beneficiary nor the Bank, both of which reserve the right to make such observations as they believe desirable with regard to such opinions and recommendations.

Section 2.07. Other obligations of the Beneficiary. The Beneficiary, through the Executing Agency, shall also:

- (a) Establish a Programme executing unit, including a senior civil or sanitary engineer with related experience in wastewater projects acting as coordinator of the unit and as official liaison between the Executing Agency and the Consulting Firm.
- (b) Furnish professional counterpart personnel, including a senior accountant, for approximately 24 man/months, to work directly in the execution of the Programme, and designate the secretarial, clerical, surveying and other auxiliary staff needed for the execution of the Programme.

- (c) Provide the Consulting Firm with all available background studies, information, materials and documentation relevant to the Programme.
- (d) Provide the Consulting Firm with the logistic support necessary for the execution of the Programme, including office space, supplies, communications and local transportation.
- (e) Submit to the Bank its comments on the reports of the Consulting Firm referred to in Section 2.05(a) within 30 (thirty) days from the receipt of the respective reports.
- (f) Forward to the Consulting Firm its observations, those of the Bank, or both on the reports referred to in Section 2.05(a), within 30 (thirty) days from the receipt of the respective report.
- (g) Submit to the Bank, within 30 (thirty) days of receipt of the final report of the Consulting Firm referred to in Section 2.05(a)(v), a report indicating the approval of said final report by the Beneficiary or its observations, and evaluating the results of the technical cooperation granted in accordance with this Agreement and the extent to which the objectives of the Programme indicated in Section 1.02 have been accomplished.
- (h) Furnish to the Bank any additional information which it may reasonably request in relation to the development of this technical cooperation operation and the utilization of the Credit, and keep the Bank's Office in Barbados informed as to the implementation of this Agreement.

Section 2.08. Period for Execution of the Programme. (a) The overall execution of the Programme, including the submission to the Bank of the report of the Executing Agency referred to in Section 2.07, shall be carried out within 25 (twenty five) months from the date of this Agreement.

(b) This period and the others which are stipulated in this Article shall be extended only for justified reasons with the written consent of the Bank.

ARTICLE III

Cost and Disbursement

Section 3.01. Amount of the Credit. (a) The Credit shall be granted on a contingent repayment basis and shall not exceed the amount of CND\$1,970,000 (one million nine hundred and seventy thousand Canadian dollars), to be charged to the resources of the Canadian Fund for the Preparation of Development Projects. Such amount shall exclusively finance the budget categories to be charged to the Credit as set forth in Section 3.03.

(b) It is agreed that: (i) the sum of CDN\$1,970,000 (one million nine hundred and seventy thousand Canadian dollars) indicated in paragraph (a) above, represents the maximum that may be utilized in the financing of the above-mentioned budget categories; and (ii) all amounts not used in such financing shall be cancelled.

Section 3.02. Participation of the Beneficiary. The Beneficiary agrees to contribute to the financing of the Programme, through the Executing Agency and within the period set forth in Section 2.08, not less than equivalent of US\$325,000 (three hundred and twenty-five thousand United States of America dollars), to complete the estimated cost of the Programme. Such amount shall be utilized in financing the budget categories to be charged to this allocation as set forth in Section 3.03.

Section 3.03. Budget. (a) The Credit, together with the allocation of the Beneficiary set forth in Section 3.02 shall be utilized in accordance with the following estimated breakdown:

	Credit of the Bank (in CDN\$)	Allocation of the Beneficiary (Equiv. en US\$)
1. ^{1/} Consulting Firm	1,752,000	
6. General Support	40,000	295,000
98. Contingencies	<u>178,000</u>	<u>30,000</u>
Total	<u>1,970,000</u>	<u>325,000</u>

(b) A more detailed budget is shown in Annex III which forms part of this Agreement.

Section 3.04. Additional Funds. The Beneficiary agrees to provide such additional funds, in excess of the amounts specified in Sections 3.01 and 3.02, as may be required for the complete execution of the Programme.

Section 3.05. Disbursement of the Credit. (a) Disbursement of the Credit shall conform to the following procedure: the Bank will disburse the Credit to the Beneficiary, through the Executing Agency, to the extent requested and to the extent that payments chargeable to the Credit are justified to the Bank's satisfaction by submission of documentary

^{1/} Numbers to the left correspond to the Bank's accounting categories for technical cooperation.

evidence. Prior to the first disbursement, the Executive Agency shall present to the Bank's satisfaction: (i) a certificate as to the name and office of the person or persons who shall represent the Beneficiary and the Executing Agency in all acts relating to the execution of this Agreement as well as authenticated specimens of their signature; (ii) a written request; (iii) a copy of the contract which the Executing Agency shall have negotiated with the Consulting Firm for the execution of the Programme; and (iv) a schedule for the utilization of the Beneficiary allocation referred to in Sections 3.02 and 3.03, including the list of the local professionals and technicians who shall participate in the execution of the Programme in accordance with Section 2.07.

(b) At the request of the Executing Agency, and once the requirements set forth in paragraph (a) above have been fulfilled, the Bank may establish a revolving fund charged to the Credit in a sum not exceeding the amount of CDN\$197,000 (one hundred and ninety-seven thousand Canadian dollars), which the Executing Agency shall utilize to defray expenses for the Programme chargeable to the Credit. Prior to the establishment of the revolving fund, the Executing Agency shall present for the Bank's approval, a detail of the expenses to be covered from the revolving fund during a period of 4 (four) months from the date of the request.

(c) Upon the request of the Executing Agency, the Bank may replenish the revolving fund entirely or in part as the resources are used and upon presentation of a detailed statement of the expenses covered from the revolving fund and with the allocation of the Beneficiary acceptable to the Bank, together with the supporting documents thereof, and a justification of such request. The account summaries of expenses shall be presented in accordance with the budget categories as shown in Section 3.03 and in Annex III.

(d) It is agreed that the last disbursement of not less than 10% of the total amount agreed upon with the Consulting Firm for executing the Programme, shall be conditioned on the acceptance of the final report of the Consulting Firm referred to in Section 2.05 (a)(vi), by both the Executing Agency and the Bank.

Section 3.06. Currencies for Disbursement. The Bank shall disburse the Credit in Canadian dollars.

Section 3.07. Rate of Exchange. In computing the United States of America dollar equivalent of the allocation of the Beneficiary for the Programme, the Bank shall proceed in accordance with its policies established for this purpose with Barbados.

Section 3.08. Use of the Credit. The Credit may be used only for the purchase of services and goods from Canada or for the acquisition of services and goods of local origin in Barbados. However, if the Bank deems it to be in the best interest of the Beneficiary, it may authorize the use of the Credit for the contracting of services and goods produced in other developing countries that are members of the Bank, and with the

concurrence of the Canadian International Development Agency, in any other country that is a member of the Bank.

Section 3.09. Period for Requesting the Final Disbursement.

(a) The Executing Agency shall submit to the Bank, to the Bank's satisfaction, the request for the final disbursement of the Credit within a period of 32 (thirty-two) months from this date of this Agreement. This period shall only be extended for justified reasons with the written consent of the Bank. If the Bank does not receive such request within the period specified above or any extension thereof agreed to in writing, the Agreement shall be considered cancelled at the end of such time with respect to any portion of the Credit not yet disbursed.

(b) The request for the final disbursement shall be submitted with:
(i) a copy of the final report of the Consulting Firm approved by the Beneficiary; and (ii) the supporting documents of the request.

Section 3.10. Suspension of Disbursement. The Bank may at any time suspend disbursements of the Credit if any circumstance has arisen which, in its opinion, may render unlikely the attainment of the proposed purposes. Upon the occurrence of any such circumstance, the Bank shall notify the Beneficiary in writing so that it may submit its points of view, and the Bank may suspend disbursements after 30 days from the date of such notification.

Section 3.11. Contingent Repayment of the Credit. (a) The Credit is granted subject to the condition that it shall be reimbursed in the event that the Beneficiary and/or the Executing Agency should receive a loan from the Bank, or from another external source of financing, for the financing of any project related to the Programme. In the event of financing by the Bank, the amount of the Credit shall be charged to the corresponding loan and the conditions established in the respective loan shall be applicable. Should the loan originate from some other source of financing, the Beneficiary agrees to negotiate with such other source to establish that the amount of the Credit be included in the respective loan and that such amount be paid to the Bank in one payment upon receipt the first disbursement of such loan.

(b) Disbursements of the Credit shall be owed in Canadian dollars.

Section 3.12. Receipts for Amounts Disbursed. At the conclusion of the disbursement of the Credit, the Beneficiary shall sign and deliver, at the request of the Bank, a receipt representing the amount disbursed in the form prescribed by the Bank. Such receipt shall prescribe that the amount disbursed of the Credit shall be reimbursed in the manner set forth in Section 3.11 above.

ARTICLE IV

Other Conditions

Section 4.01. Unit Responsible on Behalf of the Bank. The Operations Department, acting through its Preinvestment Unit, shall have basic responsibility for the implementation of this Agreement on behalf of the Bank, through the Bank's Office in Barbados.

Section 4.02. Supervision. It is agreed that the Bank shall have the right to undertake the supervision of the execution of the technical cooperation operation through its Office in Barbados and/or the officials it may designate for such purpose, without prejudice to the responsibilities of the Beneficiary to maintain supervision on its own part.

Section 4.03. Statement of Expenses. The Beneficiary, through the Executing Agency, shall present to the Bank's satisfaction, annual statements and one final statement of all expenses incurred chargeable to the Contribution and the Beneficiary allocation for the Programme. The statements related to the Contribution shall be presented certified by auditors satisfactory to the Bank.

(b) The annual statements shall be presented not later than 120 days from the conclusion of each year during the execution of the Programme. The final statement shall be presented not later than 90 days from the final disbursement of the Contribution. These periods shall only be extended with the prior consent of the Bank. For the purpose of this provision, the starting date of the Programme shall be the day on which the Consulting Firm initiates its work.


(c) The Bank may suspend disbursement of the Contribution if it does not receive, to its satisfaction, the annual statement of expenses indicated in paragraph (b) above within the period set forth therein, or within any other period it may have authorized.

Section 4.04. Limitation of Obligation of the Bank. The execution of this Agreement by the Bank does not imply any obligation on its part to finance, either partially or totally, any project or programme that may, directly or indirectly, result from the execution of the Programme.

IN WITNESS WHEREOF, this Agreement has been signed on behalf of the Beneficiary and the Bank by their respective duly authorized representatives, in two equally valid copies, as of the day and year first above written.

BARBADOS

INTER AMERICAN DEVELOPMENT BANK



Dr. Richard C. Haynes
Minister of Finance

Date: 19th January 1987
19 January, 1987



Michael E. Curtin
Executive Vice President

Date: January 30, 1987

ANNEX I

CONSULTING FIRM. PROPOSED TERMS
OF REFERENCE FOR THE EXECUTION
OF THE PROGRAMME

I. GENERAL INFORMATION

- 1.01 The Consulting Firm to be selected and hired to perform the tasks included in the Programme shall carry out its services according to the guidelines presented in these proposed terms of reference. The prequalified firms shall be furnished a copy of the feasibility report and predesign report by the Executing Agency, and based on this documentation and the proposed terms of reference, it shall develop its own technical proposals for consideration by the Executing Agency in the final selection of the Consulting Firm. The final terms of reference negotiated between the Executing Agency and the selected Consulting Firm must receive prior approval of the Bank before the work may begin.

II. TECHNICAL CHARACTERISTICS OF THE CONSULTING FIRM

- 2.01 Only qualified consulting firms with sufficient accredited experience in the design of similar projects including wastewater treatment plants and marine outfalls may participate in the selection process for this Programme. This experience shall be clearly exhibited by the firm or its associates.

III. TERM OF SERVICES

- 3.01 It is estimated that the Programme shall be completed within an 18 month period, including documentation necessary to submit a loan request to an international lending agency, which forms an integral part of the services to be rendered.

IV. CONTENT OF THE TERMS OF REFERENCE

- 4.01 The final sewage disposal process and location of the marine outfall for the South Coast shall be based on the results of oceanographic field studies and water quality mathematical model, and also with the selected method of sewage treatment and the treatment location.
- 4.02 The Consulting Firm shall carry out new marine investigations to collect data for the preparation of a water quality model for the entire coast area comprised between Speightstown (North) and Oistins bay (South) to define the final location, size, and length of the marine outfall for the South Coast, in order to attain, at the beaches' level a maximum of

200 Fecal coli/100 m.l., based on a combination of wastewater treatment and ocean dilution.

4.03 Final Designs

The Consulting Firm shall carry out the final design for the first stage of the system as defined in the feasibility report (year 2005). This shall comprise but not limited to the following:

(a) Review the design parameters:

- (i) design period
- (ii) population densities - sites
- (iii) areas served in hectares
- (iv) per capita contribution - average and peak
- (v) infiltration
- (vi) industrial wastes
- (vii) design flows - average and peak

(b) Topography. The Consulting Firm shall carry out all the necessary topographic works for the design of the system.

(c) Design of the sewerage system:

(i) Sewers

A comprehensive plan of the proposed sewers shall be submitted showing contour lines, all streams, rivers, estuaries, size and direction of flow of all proposed sanitary sewers draining to the treatment plants.

(ii) Pumping stations

Location and extent of tributary area, location of the pumping station and main force, a contour map of the property of the area to be used, proposed pumping station including provisions for auxiliary power where considered necessary.

(iii) Wastewater treatment plant

Based on the results of oceanographic studies and water quality model, environmental impact of likely treatment plant processes and their locations, the Consulting Firm shall carry out an alternative study to select the least cost alternative combining different degrees of treatment: pre-treatment, primary and secondary, and ocean dilution.

(iv) Final disposal of sewage or sewage effluent based, on the least cost and environmentally protective alternative: fecal coli limit at the beaches level and coral reef survival.

In the design of the marine outfall, the position and tract of outfall locations shall be clearly indicate, as well as the location, type, dimensions and elevations of outfall pipelines, details of the diffuser or other structures for maximum dispersion, type of joints used, and cleaning/maintenance facilities.

- (d) Description of the components of the system. Appropriate justification for each element of the design shall be required. The selection of pipe will be based on "economic diameter". Adoption of submersible or conventional pumping equipment will be justified taking into account operation and maintenance.
- (e) Plans
 - (i) All plans shall bear a suitable title; they shall be in metric system and shall indicate the North point.
 - (ii) The plans shall be clear and legible and shall be drawn to a scale which shall permit all necessary information to be clearly shown.
 - (iii) It is suggested that 1:1000 scale be used for layouts; 1:50 for profiles; 1:20, 1:25 and 1:50 for detailed plans.
 - (iv) The plans shall show the location of equipment, pipe size and approximate water levels and ground elevations.
- (f) Geology. The Consulting Firm shall carry out the necessary test borings to ascertain the bearing capacity of the soils for the installations of sewers, construction of pumping stations and wastewater treatment plant. Design of the structures of these components will be based on this data. This information shall also be shown in plans.
- (g) Marine Studies. It shall be the responsibility of the Consulting Firm to perform marine studies necessary for the adequate siting of a proposed marine outfall for the disposal of the effluent from the proposed wastewater works. Studies shall include a comprehensive review of earlier studies done on the South and West Coasts, and as required, further field and other studies must be executed to effectively evaluate oceanographic conditions over a twelve month period.

These studies shall also define the bearing capacity of the bedding for the outfall. A quality model of the shore shall be used to measure contours of the nutrients and fecal contamination from the discharge of sewage or sewage effluent.
- (h) Specifications. Complete technical specifications for all components of the project. The specifications accompanying construction drawing shall include, but not be limited to, all

construction information necessary to inform the builder in detail of the design requirements as to the quality of materials and workmanship and fabrication of the project, and the type, size, strength, operating characteristics and rating of the equipment, allowable infiltration, complete replacements of all mechanical and electrical equipment, including machinery, valves, piping, electrical apparatus, wiring, laboratory fixtures, construction materials, operating tests for the complete works, also for laboratory equipment and the maintenance of an approved quality effluent.

- (i) Cost estimates. The Consulting Firm shall prepare the necessary estimates for every component of the project based on recent estimates. These estimates shall clearly indicate cost of labor and materials for every item. The total cost of the project shall include: engineering, administration and supervision, direct costs, concurrent costs, financial costs and unallocated costs, all expressed in the equivalent of United States of America dollars.
- (j) Bidding documents. The Consulting Firm shall prepare bidding documents necessary for the construction of the project.

4.04 Socio-Economic Aspect

The Consulting Firm shall carry out the benefit cost analysis for the investment program utilizing appropriate minimum cost solutions, and the SIMOP model described in Project Analysis Paper No. 5 (IDB, 1980).

4.05 Analysis of Economic Costs

For the selected alternative, the Consulting Firm shall prepare:

- (a) Initial investment costs broken down by expenditure categories, local and import material, equipment, fuel, and skilled and unskilled labour.
- (b) Periodic costs broken down in the same manner as the initial investment costs.
- (c) Operation and maintenance costs broken down by fixed and variable cost components, showing separately in each category, operating costs, the cost of labour, material, chemicals, energy and other overheads by domestic and import content.
- (d) Make detailed calculations and display in appropriate tables the minimum cost analysis of the different alternatives using the discount rate of 12% per annum. Each cost component shall reflect the opportunity costs of resources in Barbados. Divergencies from market prices should be shown explicitly in particular for imported material, other imported goods, and unskilled labour.

4.06 Analysis of Benefits

The Consulting Firm shall estimate the following:

- (a) Base year utilization by different income groups of residential users, commercial, industrial, and public institutions by means of existing sample survey results and/or cross sectional analysis of similar programs.
- (b) Forecast the population, commercial, industrial and public institutional users of the program over the life of the program. Each category should be shown separately, all forecasting assumptions and forecasting procedures should be shown in support of analysis.
- (c) Forecast the annual utilization of the program based on the initial year utilization and demand forecast. These demand estimates should be shown year by year over the 20 year life of the program.
- (d) Consumer's willingness to pay for the service, measured by opportunity cost of alternative methods of disposal, over the project life.
- (e) Annualized cost of maintaining beaches in the area of influence of the project free of contamination. These costs shall be based on engineering risk analysis models of beach contamination and erosion.
- (f) Increase in water consumption of the beneficiaries using the price and income elasticities derived from existing sample surveys and/or statistics from the Barbados Water Authority.

4.07 Benefit Cost Analysis

The Consulting Firm shall prepare for the selected alternative based on the demand analysis a benefit cost analysis, obtaining the net present value of benefits or internal rate of return using a social discount rate of 12%. The study shall also include appropriate sensitivity analysis of different levels of beach contamination and correction costs.

4.08 Low Income Distribution of Benefits

The Consulting Firm shall prepare data required to allocate the benefits of the project to low income beneficiaries. The data shall include frequency distribution tables of income and family size, as well as a summary of the number of families.

V. DOCUMENTATION FOR A LOAN REQUEST

- 5.01 The Consulting Firm shall prepare all supporting technical documentation that will permit the Beneficiary to submit a loan request for the

partial financing of the first stage (year 2005) for the construction of the sanitary sewerage system of the South Coast.

- 5.02 In this regard, the Consulting Firm shall follow the Bank's guidelines for a loan request and shall address to the Bank field office in Barbados and headquarters requests for clarifications as necessary.
- 5.03 Detailed information about the technical, institutional, financial, socio-economic and legal aspects of the investment project shall be prepared by the Consulting Firm, to allow the lending agency to make a complete appraisal of the project.
- 5.04 In addition, based on the experience of the Beneficiary in the execution of the Central Bridgetown Sewerage Project and the nature and characteristics of the South Coast area, the Consulting Firm shall prepare a plan for the promotion of house connections in said area during the execution of the future project, which shall include specific recommendations on possible measures and options to be considered.

VI. REPORTS

- 6.01 The Consulting Firm shall submit to the Executing Agency in 7 copies each (3 for the Executing Agency and 4 for the Bank) the reports indicated in Section 2.05(a) of the Agreement.

ANNEX II

SELECTION AND CONTRACTING OF THE CONSULTING FIRM

In the selection and contracting of the Consulting Firm, the following shall be applicable:

I. DEFINITIONS

- 1.01 A consulting firm is any legally constituted association, composed primarily of professional personnel, for the purpose of offering consulting services, technical advice, expert opinions, and professional services of other kinds.

For purposes of this Annex, non-profit organizations such as universities, foundations, autonomous or semi-autonomous organizations and international organizations which offer consulting services, shall be considered as consulting firms.

II. CONFLICT OF INTEREST

- 2.01 A fully qualified consulting firm which is a subsidiary or affiliate of a construction contractor, equipment supplier, or holding company, can only be accepted if it agrees in writing to limit its role to the provision of professional consulting services, and agrees in the contract to disqualify itself and its associates from any construction work, material or equipment supply or financial participation in the project.

III. ELIGIBILITY AND NATIONALITY REQUIREMENTS

- 3.01 The Beneficiary shall not establish in the implementation of the procedures set forth in this Annex provisions or conditions which may restrict or impede the participation of consulting firms from member countries of the Bank.
- 3.02 For the purpose of the provisions of the Agreement with respect to the use of the Credit, the nationality of the Consulting Firm shall be determined in accordance with the following criteria.
- (a) The country in which the firm is duly established or legally organized.
 - (b) The country in which the firm maintains its principal place of business.

- (c) The nationality of any firms or the citizenship or the bona fide residency of individuals possessing ownership, with the right to participate in profits, or more than fifty percent (50%) of the Consulting Firm, as established by the certification of a duly authorised officer of such firm.
 - (d) The existence of arrangements whereby a substantial portion of the profits or other tangible benefits of the Consulting Firm accrued to firms or individuals of a given nationality.
 - (e) A determination by the Bank that the Consulting Firm constitutes an integral part of the economy of a country, as evidenced by bona fide residency in the country of a substantial portion of the executive, professional and technical personnel of the Consulting Firm; and that the Consulting Firm has available in the country the operating equipment or other elements necessary to provide the services to be contracted.
- 3.03 The nationality requirements established by the Bank shall also be applicable to consulting firms proposed to provide part of the respective services in joint venture with or under sub-contract to a qualified consulting firm which itself meets the nationality requirements.

IV. PROFESSIONAL QUALIFICATIONS

- 4.01 An analysis of the professional qualifications of a consulting firm shall take cognisance of the firm's experience and that of its principals, in providing successful consulting services for projects or programmes of comparable size, complexity and technical speciality as those of the task involved; assigned number of professionally qualified personnel; previous experience in the region and in foreign areas; language capability; financial capacity; present work load; ability to organize sufficient personnel to do the work within the required time; high ethical and professional reputation, and a position completely free of any potential conflict of interest.
- 4.02 The Credit's resources shall not be utilized to hire any consultant from Barbados who:
- (a) Is member of the permanent or temporary staff of a Government of Barbados entity; or
 - (b) Is, or subsequent to the sixth month before the request for technical cooperation, has been a member of the temporary staff of the recipient of the Bank's technical cooperation, or while a member of such staff has participated personally in the project or programme financed by the Bank.

V. PROCEDURES FOR SELECTION AND CONTRACTING

5.01 Selection and contracting:

- (a) Prior to the selection of the firm, the Executing Agency shall submit the following for the approval of the Bank:
 - (i) The procedure to be used in selecting and contracting the Consulting Firm. The selection and contracting shall be advertised in the national press and, if warranted by the complexity and degree of specialization of the advisory assistance requested, in specialized foreign publications. Furthermore, the Bank shall be informed of these advertisements, and clippings thereof shall be sent to it specifying the date and the name of the publication in which they have appeared.
 - (ii) The terms of reference (specifications) describing the work to be done by the Consulting Firm, together with an estimate of the cost; and
 - (iii) A list of at least three and no more than six firms from which proposals for the work would be invited.
- (b) Once the Bank has approved the foregoing requirements, the accepted firms shall be invited to present proposals, in conformity with the procedures and terms of reference approved.
- (c) In the invitations to present proposals the use of one or the other of the following procedures shall be specified, as appropriate:
 - (i) In the first case, a single sealed envelope including only the technical proposal, without a price quotation, shall be used. The Executing Agency shall examine the proposals received and establish their order of merit. If the complexity of the case so requires, the Executing Agency may resort at its own expense to a group of consultants to review the proposals and provide technical and expert advice in establishing the order of merit.

Once an order of merit has been established among the firms, the firm listed as first shall be invited to negotiate a contract. During these negotiations, the details of the terms of reference shall be reviewed completely to assure full and mutual understanding with the firm, the contractual and legal requirements of the agreement shall be reviewed, and finally, detailed costs shall be developed. If agreement cannot be reached with the firm on the terms of the contract, it shall be notified in writing that its proposal has been rejected and negotiations shall be initiated with the second firm, and so on until a satisfactory agreement has been reached.

- (ii) In the second case two sealed envelopes shall be used for presenting proposals, the first containing the technical proposal exclusive of costs and the second containing the proposed costs for the services.

The Executing Agency shall analyze the technical proposals and establish their order of merit. Contract negotiations shall commence with the firm offering the best technical proposal. The second envelope presented by this firm shall be opened in the presence of one or more of its representatives and shall be utilized in the contract negotiations. All the second envelopes presented by the other firms shall remain sealed and, if an agreement is reached with the first firm, they shall be returned to the respective firms. If an agreement on the terms of the contract is not reached with the first firm, it shall be notified in writing of its rejection and negotiations shall be initiated with the second firm, and so on until a satisfactory agreement is reached. Inability to agree on detailed costs or compensation are inappropriate or excessive, shall be sufficient cause for notifying the rejection of the proposal and for the initiation of negotiations with the firm which follows in the order of merit. Once a firm has been rejected it shall not be recalled for further negotiations on the contract.

- (d) The text of the proposed contract negotiated with the Consulting Firm shall be submitted to the approval of the Bank before the Contract is signed and the services are initiated. A true copy of the text as signed shall be promptly sent to the Bank.

- 5.02 Notwithstanding the procedure set forth in paragraph 4.01 above, the Bank, at the request of the Executing Agency, may cooperate in selecting the Consulting Firm and in drafting the respective contract, provided, however, that the Bank will undertake such cooperation only in an advisory capacity and that the final negotiations as well as the actual execution of the respective contract shall be the responsibility of the Executing Agency.

VI. CURRENCIES OF PAYMENT OF THE CONSULTING FIRM

- 6.01 The contract between the Executing Agency and the Consulting Firm shall stipulate that the respective payments shall be made in Canadian dollars.

VII. RECOMMENDATIONS OF THE CONSULTING FIRM

- 7.01 It is understood that the opinions and recommendations of the Consulting Firm obligate neither the Beneficiary nor the Bank, and that they reserve the right to put forward such observations or exceptions as they deem appropriate.

VIII. SCOPE OF COMMITMENT OF THE BANK

- 8.01 It is agreed that the Bank assumes no commitment to finance all or part of any programme or project which, directly or indirectly, might result from the services performed by the Consulting Firm.

IX. REQUIREMENTS AND SPECIAL CONDITIONS

- 9.01 The contract between the Executing Agency and the Consulting Firm shall stipulate that:

- (a) The experts assigned by the Consulting Firms shall work in close coordination with the local professional personnel who, in accordance with the provisions of this Agreement, shall be assigned by the Executing Agency to collaborate with the Consulting Firm in the realization of the Programme; such coordination shall be in order to achieve the technical and operational training of such personnel.
- (b) The final payment for services to the Consulting Firm shall be contingent upon prior acceptance by the Executing Agency and the Bank of the final report of the Consulting Firm. Such payment shall consist of not less than 10% of the total amount to be paid to the Consulting Firms in accordance with its contract.

ANNEX III

DETAILED BUDGET

	<u>Credit of the Bank (in CND\$)</u>	<u>Allocation of the Beneficiary (Equiv. in US\$)</u>
1. <u>Consulting Firm</u>	<u>1,752,000</u>	
1.1. <u>Fees</u>	<u>1,436,000</u>	
1.1.1 Honoraria		
- International Experts (57m/m)	360,000	
- National Experts (26 m/m)	120,000	
1.1.2 Overhead (150%)	720,000	
1.1.3 Business Travel	236,000	
(International Travel and Per Diem)		
1.9 <u>Special Studies</u>	<u>316,000</u>	
- Marine	68,000	
- Geophysical and Geologic	68,000	
- Quality Model	140,000	
- Topography and socio-economic survey	40,000	
6. <u>General Support</u>	<u>40,000</u>	<u>325,000</u>
6.1 Office Space		15,000
6.3 Equipment (Vehicles for Local Transportation)		89,000
6.4 Supplies		10,000
6.6 Support Personnel		141,000
6.7 Publications	40,000	
6.8 Communications		40,000
98. <u>Contingencies (10%)</u>	<u>178,000</u>	<u>30,000</u>
TOTAL	<u>1,970,000</u> =====	<u>325,000</u> =====