PD-AAY-284

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UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WAHSINGTON, D.C. 20523

CARIBBEAN REGIONAL INFRASTRUCTURE EXPANSION AND MAINTENANCE SYSTEMS PROJECT NO. 538-0138

PROJECT PAPER SUPPLEMENT

ADDING

ST. VINCENT INFRASTRUCTURE SUBPROJECT NO. 538-0138.07

AID/LAC/P- 391
CR P-284 P-328 P-356 P-368 P-385

Loan Number: 538-K-031B
Project Number: 538-0138
Subproject Number: 538-0138.07

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AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE C (A = Add, C = Change, D = Delete) — Amendment Number 4

DOCUMENT CODE 3

2. COUNTRY/ENTITY Regional Development Office/Caribbean (RDO/C)

3. PROJECT NUMBER 538-0138

4. BUREAU/OFFICE LAC — 05

5. PROJECT TITLE (maximum 40 characters) Infrastructure Expansion and Maintenance ~~Systems~~

6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM 09 DD 30 YY 93

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 86 B. Quarter 3 C. Final FY 90

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 86 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(1,100)	(100)	(1,200)	(18,000)	(6,000)	(24,000)
(Loan)	(1,800)	( )	(1,800)	(12,000)	(4,000)	(16,000)
Other U.S. 1.						
Other U.S. 2.						
Host Country	0	0	0	0	4,100	4,100
Other Donor(s)	0	0	0	0	0	0
TOTALS	2,900	100	3,000	30,000	14,100	44,100

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. AUTHORIZATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) ESF	770	800	800	23,000	2,300	0	3,000	24,000	8,400
(2) DA		800	800		7,600	0	0	0	7,600
(3)									
(4)									
TOTALS				23,000	9,900	0	3,000	24,000 *	16,000 *

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
A. Code
B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To create an infrastructure environment that will stimulate investment and productive activity in the Eastern Caribbean.

14. SCHEDULED EVALUATIONS
Interim MM 09 YY 88 MM YY Final MM 03 YY 93

15. SOURCE/ORIGIN OF GOODS AND SERVICES
Participating countries of the Eastern Caribbean
☒ 000 ☐ 941 ☐ Local ☒ Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)
The purpose of this PP Supplement is to describe the St. Vincent Infrastructure subproject (538-0138.07) which adds U.S.$3.0 million in ESF loan funds.

* The IEMS Project has an authorization limitation of $40.0 million under which subprojects are being individually authorized.

The RDO/C Controller hereby concurs with the methods of implementation and financing of the proposed activity, which are in accordance with generally accepted AID policies.
Date: 8/27/87

17. APPROVED BY
Signature: Alfred Bissell
Title: Acting Director, RDO/C
Date Signed: MM 08 DD 27 YY 87

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

AID 1330-4 (8-79)

AUTHORIZATION

AMENDMENT NUMBER FOUR

NAME OF COUNTRY: Caribbean Regional

NAME OF PROJECT: Infrastructure Expansion and Maintenance Systems

NUMBER OF PROJECT: 538-0138

1. Pursuant to Section 531 of the Foreign Assistance Act of 1961, as amended, the Infrastructure Expansion and Maintenance Systems Project for the Caribbean Region was authorized on May 6, 1986, and amended on September 16, 1986, February 26, 1987, and June 23, 1987.

2. That Authorization is hereby amended to add the St. Vincent Infrastructure Subproject (538-0138.07) as follows:

(a) Paragraph 1 is deleted and the following new paragraph 1 inserted in lieu thereof: "Pursuant to Sections 531 and 106 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Infrastructure Expansion and Maintenance Systems Project for the Caribbean Region involving obligations of not to exceed Twenty-three Million United States Dollars (US $23,000,000) in grant funds and Twelve Million Nine Hundred Thousand United States Dollars (US $12,900,000) in loan funds over a five year period from date of initial authorization, subject to the availability of funds in accordance with the USAID OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. Subject to future authorizations, the Project Authorization may be increased by an amount not to exceed Four Million One Hundred Thousand United States Dollars (US $4,100,000) in grant and loan funds. The planned life of project is seven years from the date of initial obligation."

(b) Paragraph 2 shall be amended by adding a subparagraph iii as follows:

iii. The St. Vincent Infrastructure subproject which will consist of engineering services, construction services, related commodities and technical assistance to assist the Government of St. Vincent to rehabilitate and maintain selected roads to help create an infrastructure environment that will stimulate investment and productive activity in St. Vincent.

3. A new paragraph 4 is added as follows: "The Government of St. Vincent and the Grenadines for the St. Vincent Infrastructure Subproject shall repay the Loan to A.I.D. in U.S. Dollars within twenty-five (25) years from the date of first disbursement of the loan, including a grace period of not to exceed ten (10) years. The Government of St. Vincent and the Grenadines shall pay to A.I.D. in U.S. Dollars interest from the date of first disbursement of the Loan at the rate

of two percent (2%) per annum during the first five (5) years and three percent (3%) per annum for the next five (5) years and five percent (5%) per annum thereafter, on the outstanding disbursed balance of the Loan and on any due and unpaid interest accrued thereon."

4. Paragraphs 4, 5 and 6 shall be amended as 5, 6 and 7 respectively.

5. Paragraph 6, Section (a) is amended by adding a new Subsection (a i) as follows:

(i) St. Vincent Infrastructure Subproject: Expansion of the Shelf Item Procurement Limitation

Pursuant to A.I.D. Handbook 1, Supplement B, Chapter 20, Section 2 b (1), I hereby approve an expansion of the shelf item procurement limitation from a maximum of twenty-five percent (25%) of the estimated total cost for the commodity element of the Fixed Amount Reimbursement (FAR) road rehabilitation component to eighty percent (80%). A thorough discussion/justification of this approval is presented in Annex D of the St. Vincent Infrastructure Subproject Project Paper Supplement.

6. Paragraph 6, Section (b) is amended by adding a new Subsections [b iv. (1) and b iv. (2)] as follows:

iv. (1) St. Vincent Infrastructure Subproject: Conditions Precedent to Disbursement for Rehabilitation of Selected Roads.

Prior to any disbursement or the issuance by A.I.D. of documentation pursuant to which disbursement will be made for the road construction work component, the Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence of:

(1) Completion of an economic analysis to rank the roads in order of economic benefit to facilitate selection of those eligible for financing under the road rehabilitation component; and

(2) Establishment of a Project Management Unit.

iv. (2) St. Vincent Infrastructure Subproject: Special Covenants

The Cooperating Country shall covenant that, unless A.I.D. may otherwise agree in writing:

(a) The Parties agree to establish an evaluation program as part of the Project funded largely by A.I.D. outside of the Project within the evaluation framework of the A.I.D.-financed Infrastructure

Expansion and Maintenance Systems core activity for the region. The Borrower agrees to participate in this evaluation program and make available appropriate personnel for this purpose, including personnel to participate in traffic surveys to be conducted from time to time on road sections to be rehabilitated under the Project. Except as the Parties otherwise agree in writing, there will be one interim evaluation during the implementation of the Project and a final evaluation. The interim evaluation will examine the Project's potential for contributing to the creation of an infrastructure environment that will stimulate investment and productive activity in St. Vincent and the Grenadines. It will assess the adequacy and efficiency of the implementation arrangements including the performance of contractors, the appropriateness of the road selection criteria, the timeliness of the disbursement of inputs and the progress made toward strengthening the maintenance capabilities of the Borrower. It will also recommend whatever modifications are necessary to facilitate Project implementation. The final evaluation will be a full-impact evaluation to assess inter alia:

(i) the Project's contribution to the A.I.D.-financed infrastructure program objectives in the Eastern Caribbean;

(ii) its impact on the development of productive enterprise;

(iii) the extent to which infrastructure maintenance has been institutionalized; and

(iv) the performance of the contractors.

(b) The Borrower agrees to provide, except as A.I.D. may otherwise agree in writing, the following equipment to be assigned on a priority basis to work on the road rehabilitation component:

(a) Trojan Front-End Loader
(b) Asphalt Distributor
(c) Vibratory Roller
(d) Pneumatic-Tired Roller

(c) The Borrower agrees to manage the road rehabilitation component in such manner as to utilize, to the maximum extent practicable, the private sector for rental of equipment to carry out Loan-financed work.

(d) The Borrower shall, on a priority basis, provide the crushed rock materials required for the Project from both the Government-owned and the Government contractors' rock crushing facilities.

(e) The Borrower agrees to endorse the Project Management Unit's decisions regarding the replacement and/or reassignment of non-performing personnel or GESCO equipment and operators used for Project-funded work.

(f) Except as A.I.D. may otherwise agree in writing, the Borrower agrees to establish and maintain a Project Management Unit, comprised of a Project Manager, Project Engineer, Office Manager, secretarial and accounting staff, and technical staff down to the forman level, supported by necessary office furniture and equipment, to sustain the technical and financial management of the activities funded by the Loan.

7. The Authorization, as previously amended, cited above remains in force, except as hereby amended.

Alfred Bisset
Acting Director

5/15/87
Date

ST. VINCENT INFRASTRUCTURE (538-0138.07)

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GLOSSARY, ABBREVIATIONS AND ACRONYMS

AID	Agency for International Development
AID/W	AID/Washington
CDB	Caribbean Development Bank
CIDA	Canadian International Development Agency
Core Contractor	That firm (Louis Berger International, Inc.) which was awarded IEMS oversight contract
CP	Condition Precedent (to disbursement)
CWASA	Central Water and Sewage Authority (GOSV)
DA	Development Assistance (AID Funding Category)
DEVCO	St. Vincent Development Corporation
DIE	Diamond Industrial Estate
FAR	Fixed Amount Reimbursement (method of AID financing)
GOSV	Government of St. Vincent and the Grenadines
HIAMP	High Impact Agricultural Marketing and Production Project (USAID)
IEMS	Infrastructure Expansion and Maintenance Systems Project
IFB	Invitation for Bids
IPED	Investment Promotion and Export Development Project
LOP	Life of Project (funding level)
MCDD	Mid-Course Decision Document
MCW	Ministry of Communications and Works
ORD	Organization for Rural Development
PIR	Productive Infrastructure Rehabilitation Project
PP Supplement	Project Paper Supplement
PMU	Project Management Unit
RDO/C	Regional Development Office/Caribbean (AID)
USAID	United States Agency for International Development

INFRASTRUCTURE EXPANSION AND MAINTENANCE SYSTEMS PROJECT (538-0138)

ST. VINCENT INFRASTRUCTURE SUBPROJECT

(538-0138.07)

PROJECT PAPER SUPPLEMENT

I. SUMMARY AND RECOMMENDATIONS

A. Recommendations

1. Funding

RDO/C recommends the authorization of a loan of $3,000,000 to the Government of St. Vincent and the Grenadines to finance the St. Vincent Infrastructure Subproject to be included in the Infrastructure Expansion and Maintenance Systems (IEMS) Project 538-0138. Of this 3.0 million, it is recommended that $2.0 million be obligated in FY 87 and the balance in FY 88. It is further recommended that an additional $1.0 million be authorized in FY88 to finance the Diamond Industrial Estate water component which is not yet sufficiently defined for authorization.

As of, and including, this proposed $3.0 million Authorization Amendment, the authorization and obligation status of the IEMS cluster project is as follows:

Project No.	Project Activity	Authorized Amount	Obligated Amount
538-0138.00	Core Management	$ 8,000,000 G	$ 1,500,000 G
538-0138.00	Small Activities	10,000,000 G	0
538-0138.01	St. Kitts Southeast	9,900,000 L	9,900,000 L
	Peninsula	1,000,000 G	790,000 G
538-0138.02	Grenada Infra. III	4,000,000 G	4,000,000 G
538-0138.07	St. Vincent Infra. (To be added herein) (Obl. Est. 8/26/87)	3,000,000 L	2,000,000 L
	TOTAL GRANT	$23,000,000 G	$ 6,290,000 G
	TOTAL LOAN	$12,900,000 L	$11,900,000 L

Based on the most recent IBRD per capita income calculations, dated 9/19/86, St. Vincent falls into income group III ($791-$1,635 GNP/Capita). Therefore the Terms of AID applicable to this subproject are as follows: 25 years with a 10 year grace period on principal, 2% interest for the first half of the grace period, 3% interest for second half of grace period and 5% interest during the 15 year amortization period.

It is proposed that the subproject be implemented over a period of three (3) years. Therefore, a Project Assistance Completion Date (PACD) of July 31, 1990 is proposed.

2. Geographic Code

The IEMS Project Authorization, as amended, specifies that, except as AID may otherwise agree in writing, goods and services financed by AID shall have their source and origin in the United States (AID Geographic Code 000), or in the recipient country. This will hold true for this subproject. However, for the road rehabilitation component, the Fixed Amount Reimbursement (FAR) method of financing will be utilized. Under FAR rules the host country will be permitted to purchase shelf items of non-US source/origin. Because this component will involve intensive use of shelf items (notably asphalt, fuel, cement and reinforcing steel) an approval of the shelf item procurement limitation has been included in the authorization for this subproject. Nevertheless, Ocean shipping funded by AID under the subproject shall be financed only on flag vessels of the United States, except as AID may otherwise agree in writing.

B. Summary Subproject Description

The subproject will fund infrastructure improvements directly related to private agricultural and industrial expansion: the rehabilitation of agricultural feeder roads and, to a lesser extent, roads linking industrial areas.

As a result of the subproject:

1. St. Vincent's potential for expansion and development of agricultural lands and industrial sites will be enhanced through improved road access to agriculturally/industrially productive areas; and

2. road maintenance capability of the GOSV Ministry of Communications and Works (MCW) will be improved.

C. Summary Financial Plan (AID) Funding Millions US $

	FY 87 Auth.	FY 87 Obl.	FY 88 Auth.	FY 88 Obl.
1. Rehabilitation of approximately 14-15 miles of roads	2.340	1.340	0	1.000
2. Procurement of construction equipment	.500	.500	0	0
3. Technical assistance	.110	.110	0	0
4. Maintenance program	.050	.050	0	0
5. Construction of water facilities serving Diamond Industrial Estate*	0	0	1.000	1.000
TOTAL	3.000	2.000	1.000	2.000

* Because this component is not sufficiently definable at this time, it has not been included in the FY 87 Authorization; however, it is anticipated that a FY 88 amendment to this Project Paper Supplement will be submitted to justify an additional $1.0 million authorization, which would bring the subproject LOP funding level to $4.0 million.

D. Summary Subproject Findings

This $3.0 million subproject is ready for authorization and subsequent implementation and is considered to be socially, financially and economically sound as well as and technically and administratively feasible.

E. Contributors to Subproject Design

1. USAID Contributors

a. Design Committee

Robert Fedel	-	IEMS Core Contractor
Michael G. Huffman	-	Project Development Officer
John Williams	-	Financial Analyst
Cecilia Karch	-	Institutional/Social Analyst
Roy Grohs	-	Program Economist

b. Review Committee

Alfred Bisset	-	Deputy Director
James Baird	-	C/INFRA
Kimberly Finan	-	C/Project Development Division
Rodney Johnson	-	RLA
Mark S. Matthews	-	C/CONT
Donnie Harrington	-	Country Coordinator
Stan Heishman	-	RCO

2. Government of St. Vincent Contributors

Mr. Karl John	-	Dep. Director of Finance & Planning (Planning)
Mr. Rudy Matthews	-	Contract Engineer, MCW
Mr. Jeffrey Providence	-	Former General Manager of DEVCO
Mr. Raymond Noel	-	General Manager of Central Water and Sewerage Authority
Mr. Henry Gaynes	-	Dep. Director of Finance & Planning (Finance)

II. SUBPROJECT RATIONALE AND DESCRIPTION

A. Rationale

1. Relationship to Previous Project

For all intents and purposes this IEMS subproject is a phase II activity, continuing the road rehabilitation effort authorized in FY 82 for St. Vincent under the Productive Infrastructure Rehabilitation Project (PIR) (538-0082). The PIR project, whose PACD is 9/30/87, provided St. Vincent with a grant of $3,250,000 to rehabilitate roads which were considered a priority by the GOSV. The proposed St. Vincent Infrastructure IEMS subproject merely continues the road rehabilitation effort, choosing road segments from the same GOSV priority list drawn up years ago.

Because this is essentially a follow-on, or phase II project, the lessons learned under phase I have been incorporated into the design of the present subproject. For instance, a mid-course review of the PIR project indicated that implementation delays were occurring due to inadequate oversight from the Ministry of Communication and Works (MCW). A resultant project amendment added a provision for technical assistance to the MCW and that same technical assistance has been incorporated into the proposed IEMS subproject. Other lessons learned regarding maintenance, equipment availability, subcontracting, road selection, personnel and cash flow have also been incorporated into the proposed subproject.

2. Relationship to CDSS

St. Vincent and the Grenadines, a chain of small islands located at the lower end of the Caribbean, is at a critical stage in its development. One of the least developed OECS states, St. Vincent has the lowest per capita GDP, one of the highest unemployment rates, and one of the highest GDP growth rates for the period 1980 - 1984. Traditionally a monocrop economy based initially on sugar and later on bananas, the economy of St. Vincent has been undergoing major structural adjustments in recent years, with a declining agriculture sector, rapid development of offshore processing industries and an emerging tourism sector. Agriculture is still the predominant productive sector accounting for 16% of both GDP and employment, and over 25% of export earnings. Manufacturing accounts for 11 % of GDP and employment, while tourism contributes only 3 % to GDP despite a high grow rate (16%) over the 1977 to 1983 period.

RDO/C's development goal for St. Vincent and the Grenadines is to enable the country to achieve an economic growth rate that will increase per capita income, reduce unemployment, increase foreign exchange earnings, and provide the basis for

self-sustaining long-term growth. This goal will be achieved through a private sector based, export-oriented strategy focusing on increased production of selected traditional crops and increased diversification in the agricultural sector. Achieving this objective will greatly expand the activity level and effectiveness of the private sector in St. Vincent's key economic sectors, while shifting the role of the government to one more strongly supportive of the private sector and less directly involved in productive sector activities.

RDO/C's funding of road rehabilitation will stimulate new or greater production of non-traditional crops (ground provisions, fruits and vegetables) especially for export to the Caricom region and other markets. Increasing the productivity of these crops is a critical element of RDO/C's strategy since St. Vincent is a high cost agricultural producer.

Manufacturing is expected to lead the growth of the economy by expanding at a rate of 6 percent per year during the next three years. In order to achieve this growth rate, continued emphasis will be placed on attracting enclave industries to St. Vincent since they usually have a short start-up time and can provide a relatively quick payoff in terms of employment. The attraction of these industries will also have the added benefit of providing off-shore markets, investment, technology and management. Although most roads to be rehabilitated under the project will support agricultural development, some segments proposed will link industrial areas and therefore promote manufacturing.

3. Relationship to IEMS Project

The purpose of the IEMS Project is to create an infrastructure environment that will stimulate private investment and productive activity in the Eastern Caribbean. The activities of the proposed St. Vincent subproject are listed as priorities in the IEMS Project Paper and RDO/C's FY 88-89 Action Plan and meet the criteria established for selection and eligibility for financing under the IEMS Project.

4. Relationship to Other RDO/C Projects

The road rehabilitation element of the subproject directly focuses on improving access to areas designated as targets in RDO/C's HIAMP project. HIAMP's targets include establishment or expansion of profitable agricultural production and/or international markets. A major constraint to increased production is the unevenly developed infrastructure and communications, resulting in high operating costs and low productivity. The project will complement HIAMP by improving access to areas of existing and potential agricultural production and opening new marketing possibilities.

RDO/C's PDAP, and other projects supporting private sector investments, will benefit from the subproject's contribution to physical infrastructure linking manufacturing centers.

B. Subproject Objectives

The purpose of the subproject is to improve the physical infrastructure that is directly supportive of productive enterprise and increased investment. More specifically, the proposed subproject, similar to that of the Productive Infrastructure Rehabilitation Project (PIR), will promote economic growth in the agricultural sector through increased crop production and foster industrial growth through improved access to areas involved in industrial endeavors.

C. Subproject Components

1. Road Rehabilitation (Auth:$2.340 Million in FY 87) (Obl:$1.340 Million in FY87 and $1.0 Million in FY88)

a. Background

The PIR Project provided for the rehabilitation of 14 miles of primary and secondary roads serving the highly productive banana area around Mesopotamia. The project also included provision of equipment for use by government forces to carry out the work. Road rehabilitation work under the PIR project was successfully completed in the spring of 1986. Subsequently, most of the equipment and staff were mobilized under a UK grant to construct and rehabilitate six miles of road extending north from Georgetown on the northeast coast.

The GOSV, upon completion of the PIR project, requested RDO/C continuance of the program and 18 road segments were identified along with additional equipment requirements.

b. The Subproject

The GOSV has reiterated its desire for AID's financial assistance to continue its road rehabilitation program. The roads identified (see Annex K) were generally selected on the basis of potential for economic impact primarily in agriculture. The roads serve areas of potential productive tracts of land suitable for growing non-traditional cash crops and expansion of existing banana areas.

For example, in the north leeward area the proposed roads serve areas of high vegetable production with potential for increased production of cocoa, ginger and tumeric for export. Another group of roads in the Vermont area will improve access by

farmers to a proposed vegetable packing plant, funds for which are being requested from HIAMP. Other roads will provide better access for farm land being redistributed from government-owned estates. Roads in the eastern section serve banana lands and areas where the St. Vincent Organization for Rural Development (ORD) operates buying stations for agricultural produce. Although the list is comprised mostly of roads serving agricultural areas, the list also includes roads serving Camden industrial park and other areas of industrial concentration.

As discussed in Section VI.B., an economic evaluation will be done to establish a priority list of roads providing the greatest economic benefits on which subproject funds will be concentrated.

2. Construction/Maintenance Equipment (Auth:$500,000 in FY 87) (Obl:$500,000 in FY 87)

a. Background

The PIR project funded about $550,000 of equipment, including such major items as an asphalt distributor, vibratory roller and two front-end loaders. The loaders, in particular have been in constant service since the summer of 1983. Both the GOSV and AID have financed replacement parts for the AID-financed equipment and that owned by the GOSV.

b. The Subproject

The proposed subproject equipment requirement (Annex K), includes such additional items as grader, bulldozers and replacement loaders. Within total subproject financial constraints, the subproject will finance priority equipment from the list which is considered necessary for the GOSV Ministry of Communications and Works (MCW) to carry out the rehabilitation work in an efficient manner. An adequate supply of spare parts will also be procured with subproject funds.

3. Technical Assistance (Auth:$110,000 in FY 87) (Obl:$110,000 in FY 87)

a. Background

A mid-course review of the PIR project indicated that implementation delays were occurring due to inadequate oversight on the part of the GOSV MCW. A resultant project amendment added a provision for technical assistance to the MCW.

b. The Subproject

As under the PIR project, the services of a senior engineer advisor will be provided to the MCW under the proposed subproject. This assistance is considered critical to the success of the road rehabilitation effort. However, because the senior engineer advisor will work on the Maintenance Component as well as other MCW work, his services are presented as a separate technical assistance component.

4. Maintenance Program (Auth:$50,000 in FY 87) (Obl:$50,000 in FY 87)

a. Background

Under PIR, the Senior Engineer Advisor proposed a pilot road maintenance program which would be based on indigenous cultural patterns utilizing a "small teams" approach relying on villagers residing in sections where the roads traversed. Each team was to be responsible for two miles of road. Program works included: cleaning drains, vegetation control, removal of small slides and patching small potholes along the roadway. Unfortunately, this component was never authorized.

b. The Subproject

However, there is renewed interest in examining various approaches and mixtures of approaches in carrying out maintenance in the Eastern Caribbean. The Basic Needs Trust Fund project has a Maintenance Systems Development program, where various approaches to building maintenance are being explored. However, there is a need to extend this type of program to other construction activities. Interest on the part of the GOSV to establish such a program under this project is laudable. It is hoped that experience gained from this pilot activity can be utilized in other islands in other infrastructure projects.

RDO/C will work with the senior engineer advisor to develop a program for maintenance of the proposed roads for the project and on other feeder and village roads deemed by the GOSV as suitable for this program. US $50,000 is being allocated for this activity.

5. Water Supply/for Diamond Industrial Estate (Auth:$1.0 Million in FY88) (Obl:$1.0 million in FY 88)

a. Background

The Canadian Government (CIDA) has carried out feasibility studies and is proceeding with the design of an Industrial park at Diamond. The existing supply of water serving

the area of the proposed estate is adequate. Although the GOSV and CIDA have discussed the long-term water requirements of southeastern St. Vincent, the water needed to service proposed Phase I light industries is critical and will require a connection with an existing main about 1 1/2 miles from Diamond. A reservoir to store that water for use will be located near a connection with the main water line at McCarthy.

b. The Subproject

The development of the DIE by CIDA is proceeding with an anticipated start up of work in the summer of 1989. Because plans are not now firm enough, this component will not be authorized at this time. It is anticipated that under a FY 88 amendment the proposed subproject will provide for the construction, by GOSV forces, of about 1 1/2 miles of pipeline and a 150/200,000 gallon reservoir. This facility will provide adequate service to the first phase light manufacturing dry-type enterprises settling in the estate.

D. Discussion of Mid Course Decision Document Issues

The Mid-Course Decision Document is on file in RDO/C. The issues raised and their disposition are noted in Annex F.

III. COST ESTIMATE AND FINANCIAL PLAN

A. Summary

The proposed subproject will total $3.0 million of loan funds to be expended over a three year period. (Note: RDO/C plans to amend the project in FY 88 to authorize $1.0 million more to fund a Diamond Industrial Estate water element; this will bring the subproject LOP funding to $4.0 million). Funds for this subproject will be added to the IEMS Authorization. Individual subproject components to be financed with their projected dates of disbursement are noted on the following tables.

B. Host Country Contribution

Because this subproject will be ESF funded, no formal GOSV contribution will be required. Nevertheless GOSV resources will be utilized under the subproject. Most of the GOSV contribution will be in the form of utilization of MCW-owned equipment, staff and project office facilities.

C. Host Country Repayment Capability

Funding for this subproject will be provided to the Government of St. Vincent, who will be responsible for repaying the loans. The subproject is indirectly self-financing because it will increase the government's tax base. The road improvements are selected on the basis of their contribution to increased agricultural, and in at least one case manufacturing, productivity. The government's tax system will generate revenues by taxing a portion of the additional output that will result from the subproject. The EC dollars collected by the government will be presented to the Eastern Caribbean Central Bank (ECCB), which must, on request, convert them into U.S. Dollars. Convertibility is guaranteed by the ECCB's "cover ratio" requirement which mandates that the ECCB hold foreign exchange cover equal to 60 percent of its notes and coins in circulation and other deposit liabilities.

D. Financial Implementation

Financial implementation of the subproject will be carried out by host country contracts and FAR agreements. A project account will be established as was done under the PIR Project (538-0082). FAR agreements will be signed between the GOSV and RDO/C and a fixed amount established for rehabilitating specific segments of selected roads. This amount will be disbursed in tranches by AID based on construction progress. Start-up mobilization advances will also be made. Funds will be deposited in the GOSV project account and disbursed by the project managers, with appropriate accountability by the project accounting staff maintaining records and billings.

Payment for construction equipment ($500,000) to be procured under the Host Country Contract, will be directly disbursed to suppliers by RDO/C upon presentation of documentation.

The technical assistance will be provided through a Host Country contract/direct reimbursement mechanism the maintenance program component will also involve Host Country procurement and direct reimbursement by AID; like the FAR arrangement, advances to the GOSV are contemplated.

Methods of Implementation and Financing

	Method of Implementation	Method of Financing	Amount ($US '000)
1.	Rehabilitation of Roads (Force Account)	Fixed Amount Reimbursement	2,340,000
2.	Construction Equipment (Host Country Contract)	Direct letter of Commitment	500,000
3.	Technical Assistance (Host Country Contract)	Direct Reimbursement	110,000
4.	Maintenance Program (Host Country Procurement)	Direct Reimbursement	50,000
		TOTAL	3,000,000

The subproject requires the GOSV to provide suitable staff and office equipment to manage the project accounts. Most of these costs will be reflected in the FAR agreements. However, some costs will be attributable to the GOSV contribution to FAR agreements.

SCHEDULE OF TOTAL SUBPROJECT COST BY COMPONENT
(SHOWING ESTIMATED FOREIGN EXCHANGE (FX) AND LOCAL CURRENCY SPLIT)

	COMPONENT	AID LC (US$)	AID FX (US$)	TOTAL AID (US$)
1.	Road Rehabilitation	2,340,000	0	2,340,000
2.	Construction Equipment	0	500,000	500,000
3.	Technical Assistance	110,000	0	110,000
4.	Maintenance Program	50,000	0	50,000
	Total	2,500,000	500,000	3,000,000
5.	Construction of Water facilities serving Diamond Industrial Estate (FY 88 amendment)	500,000	500,000	1,000,000
	GRAND TOTAL	$3,000,000	$1,000,000	$4,000,000

NOTE: The above cost estimates are further detailed in Annex I. They are based on road rehabilitation costs experienced on the AID's PIR Project 538-0082. Equipment costs were based on recent AID procurement awards.

ILLUSTRATIVE SCHEDULE OF AID SUBPROJECT LOAN DISBURSEMENTS

	FY88 US$	FY89 US$	FY90 US$	TOTAL US$
1. Road Rehabilitation	600,000	1,200,000	540,000	2,340,000
2. Equipment	450,000	25,000	25,000	500,000
3. Technical Assistance	50,000	50,000	10,000	110,000
4. Maintenance Program	15,000	20,000	15,000	50,000
Total FY 87 authorization	1,115,000	1,295,000	590,000	3,000,000
5. Water Supply (88 auth)	-	550,000	450,000	1,000,000
Total Projected LOP	1,115,000	1,845,000	1,040,000	4,000,000

IV. IMPLEMENTATION PLAN

A. Implementation Analysis

Subproject activities for equipment procurement to be used in road rehabilitation will be initiated upon subproject authorization and GOSV satisfaction of initial C. P.'s. This will permit equipment to be on site for rehabilitation work in February, 1938 when the GOSV MCW rehabilitation work force will be available for mobilization. This timing will also permit the necessary preparation of cost estimates and an economic ranking of road segments.

As reflected in the preceding table "Illustrative Schedule of AID Subproject Loan Disbursements," about seven months of rehabilitation work will be carried out in FY88 with the remaining work done in FY89 and FY90.

The responsible agency of the GOSV directly involved in implementing the subproject activities is the Ministry of Communications and Works (MCW). If the DIA water facility component is added in FY 88, the Central Water and Sewerage Authority (CWASA) will be the GOSV agency responsible for the implementation of this activity.

Work on the subproject element concerning the water facilities for Diamond Industrial Estate will be initiated in FY89 upon assurance that CIDA-financed development of DIE is being implemented. Procurement of pipe and a prefabricated fiber glass tank will be carried out upon receipt of such assurances. Work under FAR contracts with CWASA will then be executed. Eight months of work is anticipated to start in May 1989 and extend into FY90.

The financial management of the subproject will rest with the accounting staff to be established under the subproject for road rehabilitation. Similar accounting by CWASA will control the expenditures for the water facilities. Disbursement of funds against FAR contracts will be controlled by MCW and CWASA project managers, with the concurrence of the IEMS Core Contractor, and approval by RDO/C.

The Core Contractor will prepare equipment/materials specifications and the associated Invitation for Bids (IFB). The award of supply contracts will be on a competitive basis under a Host Country Contract. The procurement process will be administered by the GOSV with advise from the IEMS Core Contractor and oversight by the Chief Engineer, RDO/C. The Core Contractor will also monitor all subproject activities through regular field visits.

B. Implementation Plan

1. Equipment Procurement

The IEAS Core Contractor will prepare specifications and advertisements for solicitation of bids on equipment on behalf of the GOSV. The GOSV will evaluate the bids and RDO/C will approve bid selection in consultation with the Core Contractor.

2. Road Rehabilitation

The Core Contractor will review MOW cost estimates, advise RDO/C on the execution of individual FAR agreements and provide the GOSV with an agricultural/transport economist to carry out the economic ranking of roads to be included in the subproject. All actions will be coordinated with the appropriate RDO/C staff.

3. Technical Assistance

The GOSV will draft a Host Country Contract for the services of the senior engineer advisor. Once this draft is approved by RDO/C, the contract will be executed. The GOSV will then invoice RDO/C for reimbursement of contract costs.

4. Maintenance Program

The GOSV will submit a maintenance program plan to RDO/C for approval. It is anticipated that the plan will be similar to the one designated under the previous PIR project, but never approved. Once the plan has been approved, RDO/C will entertain a request for the advance of funds to initiate the cost reimbursement process.

5. Water Facilities (if added in FY 88)

The Core Contractor will provide for an economic analysis of the water facilities to be provided under the subproject and prepare the specification and IFB's for procurement of materials to be used in constructing the water facilities and conduct an environmental assessment. Designs will be prepared by CWASA in cooperation with a water engineer on the Core Contractor's staff. The Core Contractor will advise RDO/C on the execution of FAR agreements and regularly monitor construction progress on behalf of RDO/C.

C. Project Implementation Schedule

Target Date	Activity	Responsibility
August 24, 1987	$3 million subproject Authorization	PDO & D/DIR
August 28, 1987	$2 million Obligation	D/DIR & GOSV
September 1, 1987	CDB advertisement for equipment purchase placed	Core Cont & INFRA
September 1, 1987	Econ. Eval. of road begins	Core Cont & GOSV
September 1, 1987	CP on Proj. Mgmt. unit met	GOSV & INFRA
September 15, 1987	Initial CP's met	GOSV & INFRA
September 15, 1987	T.A. contract signed	GOSV & INFRA
September 15, 1987	IFB's for equipment purchase issued	Core Cont & GOSV
November 2, 1987	Receive eqmt. Bids	Bidders
November 15, 1987	Award equipment procurement contracts	Core Cont & GOSV & INFRA
March, 1988	Equipment on site	Supplier
March, 1988	First FAR Agreement signed	GOSV & Core Cont INFRA
March, 1988	Road Rehab. work starts	GOSV & Core Cont
April, 1988	CP met for Maint. Program	GOSV & INFRA
April, 1988	Add $1.0 million funding tranche	RDO/C & GOSV
May, 1988	Agreement reached with CIDA on DIE water component	DIR & INFRA
June, 1988	Design work underway for DIE water component, including Environmental Assessment	Core Cont.

Target Date	Activity	Responsibility
August, 1988	Amendment to this PP Supplement to add DIE water component ($1 mill.)	RDO/C
August, 1988	Loan Agreement Amendment ($1 million brings LOP to $4 million)	RDO/C & GOSV
December, 1988	CP's met for DIE water component	GOSV & INFRA
January 1989	Issue water facility IFB's	Core Cont & GOSV
April, 1989	Award water component procurements	GOSV & INFRA Core Cont &
May, 1989	Start const. of water facilities	GOSV & Core Cont
February, 1990	Complete const. of water facilities	GOSV & Core Cont
April, 1990	Complete road rehab. work	GOSV & Core Cont
August, 1990	PACD	INFRA

D. Procurement Plan

1. Road Construction/Maintenance Equipment Procurement

The IEMS Core Contractor will prepare equipment specifications and advertise for bids and advise the GOSV in making awards through the Host Country Contract mode.

2. Road Rehabilitation

Road rehabilitation work will be carried out under FAR agreements. Because of the nature of FAR agreements, the GOSV will be assuming full financial responsibilities for completing all road segments for a fixed amount of AID provided loan funds. Under these arrangements RDO/C will not be approving individual procurement actions resulting from the FAR agreements. However, based on RDO/C's understanding of past FAR activities implemented in St. Vincent, the GOSV will use locally-hired workers supervised by MOW staff. Individual contracts, of standard GOSV form, will be let

by the project managers for concrete, masonry and drainage work. These will be lump sum contracts which form the basis for most of the GOSV public construction.

In view of the limited availability and condition of GOSV-owned equipment, individual contracts will also be let to private owner/operators of trucks and equipment. Unit price rates (value per load of material hauled) will be agreed upon and payment will be made only for actual work units performed.

All locally hired labor will be included in the National Insurance Scheme (NIS) and appropriate amounts of withholding tax deducted from pay. These costs are included in the FAR agreements. Except for MCW supervisors, foremen and equipment operators, all employees are hired with the understanding that they can be fired, if performance is unsatisfactory.

RDO/C has reviewed the procurement policies and procedures of the MCW and is satisfied as to the soundness of those policies and procedures.

3. Technical Management Services

The GOSV will provide a fully staffed Project Management Unit (PMU) for road rehabilitation work. The cost of the PMU will be included in FAR agreement estimates. By way of a separate technical assistance component, AID will be providing the services of a senior engineer advisor to the MCW. This individual will be hired under a two year Host Country Contract. The IEMS Core Contractor will provide subproject oversight on a regular basis and assist the GOSV in technical and administrative matters related to USAID FAR construction procedures.

V. MONITORING PLAN

A. RDO/C Responsibilities

RDO/C staff will undertake the following actions during implementation:

1. Review and approve GOSV submissions for satisfaction of Conditions Precedent.

2. Review and approve equipment specifications and proposed Invitation for Bids and coordinate advertisement for equipment procurement in the CBD with AID/W.

3. Review and approve a priority listing of roads to be rehabilitated and the economic analyses and cost estimates supporting the ranking.

4. Review and approve FAR agreements with the GOSV Ministry of Communication and Works for rehabilitating road segments.

5. Approve and process advances and progress payments for each FAR rehabilitation agreement.

6. Provide such managerial and technical oversight services required during implementation.

B. Core Contractor Responsibilities

The IEMS Core Contractor will provide experienced economists and engineers required to carry out analyses. The permanent Barbados staff will assist both RDO/C and the GOSV in preparing the necessary data required to establish FAR procedures for financing subproject activities. Such technical review and administration include:

1. Cost estimating and equipment specifications.
2. FAR agreement negotiation advise to RDO/C.
3. Reviewing of payment vouchers for RDO/C approval.
4. Construction oversight and monitoring.
5. Assisting the MCW during implementation.
6. Advising GOSV in the evaluation of awards for equipment procurement.
7. Preparing economic analyses for roads.

C. Government of St. Vincent Responsibilities

1. The MCW will provide a project manager, project engineer, office manager, secretarial and accounting staff and technical staff down to the foreman level, as required, for the USAID road rehabilitation program. It will also supply other financial staff adequate to manage the expenditure of project funds. MCW shall also supply necessary office furniture and equipment and make available those essential items of road construction/maintenance equipment owned by the GOSV for use, on a priority basis, by the subproject construction forces.

   Specific MCW responsibilities include:

   a) Prepare detailed cost estimates and traffic counts for all subproject roads.

   b) Prepare required documents for funding requests submitted to USAID.

   c) Coordinate assignment of equipment and materials through the Project Management Unit.

   d) Monitor and ensure the required cooperation of the GOSV General Equipment and Services Corporation with the subproject staff in the utilization, repair, maintenance and fueling of equipment supplied to the project to carry out the work.

   e) Ensure that the subproject is supplied with such major items of materials as crushed rock, asphalt and culverts.

   f) Exercise technical and administrative supervision and guidance to assure that construction specifications and good workmanship are adhered to during subproject activities.

   g) Prepare regular progress reports.

   h) Assure that all rights-of-way and work site access are secured.

VI. SUMMARY ANALYSES

A. Technical Analysis

A.I.D.'s PIR Project (538-0082) contributed to the experience of MCW to undertake rehabilitation work. Since completion of the road rehabilitation work under the PIR project, the MCW has continued to do similar work, most recently, a road extending from Georgetown to Sandy Bay, a distance of 6 miles. This work was financed by a U. K. independence grant. Both projects have demonstrated the ability of the MCW to undertake the subprojects road work. The continued non-availability of major local contractors justifies the continued use of government forces and fixed amount reimbursement procedures for the subproject work.

Roads identified for rehabilitation work will be ranked in accordance with considerations of present road condition, traffic volume, support of agricultural and industrial productivity, and social impact. Roads that have been assigned the highest priority will generally be those whose rehabilitation would not only produce user cost savings for the entire island population, but would provide a direct and measurable economic benefit in improved transport of agricultural or other productive commodities. A list of roads based on these factors has been prepared by the GOSV (see Annex K). Prior to selection of subproject-funded roads from the list, seven-day traffic counts for each road or road segment will be carried out, detailed cost estimates prepared and an economic/agricultural assessment will be made from which a cost benefit analysis performed on each section to insure that those segments yielding the highest return will be funded by AID.

1. Design Standards

Annex J outlines the standards and specifications to be followed in road rehabilitation. From an engineering standpoint most roads break down and deteriorate due to poor drainage, which either erodes the roadway itself or penetrates the soils supporting the surface, rendering the support structure a plastic mass. Therefore, particular attention will be given to improving and rebuilding roadway drainage facilities, such as side drains, culverts, and slopes so that, wherever possible, the level of water in the drains can be kept below the pavement structure.

Surfacing consisting of two successive treatments of asphaltic material, each topped with graded aggregate, has proven satisfactory on the roads rehabilitated in the past and will be continued.

The Government of St. Vincent's Ministry of Communications and Works rehabilitated roads to standards which exceeded those set out in specifications for the PIR Project. Although the higher standard of construction did not account for the entire cost overrun (as discussed below) it was a major contributor. The higher standards were somewhat justified as an attempt to reduce recurring maintenance costs, especially on the Vigie Highway (6 miles) which carries 1000-1300 vehicles per day. However, the objective of the project, as originally conceived, was to bring the roads up to a standard of functional efficiency where the government can perform routine road maintenance with reasonable annual budgetary allocations while encouraging better and increased agricultural production and movement of traffic.

2. Construction Method

Since no local private contractors are available with the capacity required to rehabilitate the mileage proposed, construction will, as in the PIR Project, be carried out by Government forces supported by small contractors. The labor force involved in the rehabilitation work will be about 150. The percentage of Civil Service employees working on the activity will probably be small since MCW funding is short and those employees in the service must be continuously occupied to justify the limited funding. Most of the workers are hired from the general area where rehabilitation will take place. Small contractors (4 or 5 men to a gang) are readily available to undertake fixed price contracts for masonry and drainage work. Other contracts are negotiated with equipment/owner/operator individuals for piece work. Since the PIR project there has been an increase in the number of small contractors and a greater import of construction equipment and trucks. This has improved the private sector's ability to participate in subproject funded rehabilitation.

Extensive use will be made of small contracts which, at government approved rates, are negotiated with private sector individuals. These contractors, with their own helpers, are paid lump sums to carry out specific elements of work such as digging drains, constructing paved ditches, laying culverts, clearing undergrowth and bush, or building masonry walls. Contracts with the owner/operator of equipment and trucks will pay for quantities of work performed. Under this system the driver/owner is paid only for what he does, and if the truck or equipment breaks down or is less efficient, it is at the expense of the driver. Equipment procured with project funds will also be used.

3. Past Aid Experience

An evaluation was performed on AID's earlier PIR Project. Annex E contains the Executive Summary of the findings. The entire report is available in RDO/C files.

(a) Regarding Equipment

Road work on PIR and the UK projects has been inhibited by a shortage of necessary equipment and the delays in getting equipment and crushed rock material to the work sites in a timely manner.

In an effort to remedy a major "bottleneck" to the efficient and cost-effective utilization of government owned equipment, the GFS (Government Funding Scheme) has been reorganized on a quasi-private basis. It still lacks an adequate store of equipment to properly serve the needs of the various GOSV ministries and the supply of spare parts is scarce. The new organization, General Equipment and Services Corporation is functional but its costs are still high compared to private sector rentals and there is no incentive for their operator to work harder since equipment and operator are provided on a daily basis and are paid, regardless of how productive their efforts are. This problem will be somewhat reduced during the subproject construction because over the past two years the amount of MCW work has increased and the private sector has been importing trucks and construction equipment to compete with the Government run organization and is able to perform more work since they are paid for performance. For subproject road work the use of private sector equipment rental will be encouraged. The subproject also includes the provision of needed equipment which will be exclusively used by the subproject and timed for arrival in February when work should start.

(b) Regarding Crushed Materials

Availability of crushed rock for base material and surface dressing in a timely manner was a major deterrent to efficient coordination between equipment/materials/manpower in the MCW's performance on PIR. The more recent experience on the UK financed road work aggrevated the materials supply problem. A small crusher was set up near Georgetown but it kept breaking down and repair and services had to be provided by the Arnos Vale plant. Reportedly, it sometimes took 2 to 3 days before any repair or adjustment could be done by a competent mechanic. Eventually, the crusher site at Georgetown was deemed unreliable and non-productive. Rock materials were trucked in from Arnos Vale, a round trip travel time of 2 - 3 hours.

Obviously, the production and delivery of crushed rock is critical (along with equipment) in attaining planned work progress. Cost overruns on the PIR project were attributed to lack of operational equipment and delays in materials supply and delivery. The crusher problem has been recognized by the GOSV and final arrangements are being made for a Barbados based rock crushing operation (R. M. Construction and Quarries) to equip and operate a

rock crushing facility in St. Vincent to supply the materials on CDB financed MCW work. It is expected that outputs of this operation will be available for work on the USAID subproject.

(c) Regarding Cost Overruns

The first two FAR agreements under PIR turned out to be underestimated. This resulted in the GOSV incurring cost overruns. Insufficient contingency was budgeted for delays in attaining productive coordination in the blending of equipment/materials/manpower to accomplish work tasks. For example; it was not forseen that road gangs would be waiting for the arrival of a broken down or otherwise employed asphalt distributor which could only spray asphalt if the crusher had been operational so as to provide chips hauled on a GSF hired truck to the work site for spreading on the wet asphalt. The roller, conceivably, could also have been directed elsewhere so it couldn't compact the newly laid surface. The above extreme example only serves to illustrate where delays and cost overruns could easily be incurred in a developing country with limited funds and support technicians.

Additional cost overruns were incurred due to the need to construct more culverts, drains and retaining walls. Additional structures were demonstrated to be necessary once rehabilitation work was started. Better cost estimating reduced such overruns. It is technically accepted that to properly maintain a road's life, the main focus is on proper and adequate drainage. Thus, in the later PIR FAR agreements, drainage requirements were concentrated upon and reflected in the cost estimates.

B. Economic Analysis

Evaluating the benefits of a road rehabilitation project starts with the premise that a road is not a road unless it can transport goods and people on vehicles without substantial damage to any of the three. The degrees of assessing the benefits is mitigated in that the existence and use of a road demonstrates its economic and social utility and investments to improve and sustain this utility are usually justified. Most of the roads included in the GOSV list serve existing or potentially productive agricultural areas and, by improving accessibility, benefits through expanded production and reduced damage due to transport will be realized.

The subproject roads list (Annex K) will be economically evaluated to prioritize and rank each road on the basis of its Net Benefit/Investment Ratio, if feasible (alternatively, rankings will be based on Net Present Value) using a 12 percent discount rate. The contractor will be asked to identify the subset of roads that yield the largest sum of Net Benefits/Investment (or Net Present Values), within the constraints of the budget. Sensitivity analyses

will be conducted to ascertain the variability of discounted values with respect to: the discount rate used, the nature of assumed benefits, the nature of assumed costs. An attempt will be made to assess and to describe environmental and other external effects that may alter the economic returns of each road. This work will be carried out by a Core Contractor transport/agricultural economist working closely with RDO/C agricultural staff. The terms of reference for this analysis is noted in Annex L. A C.P. to disbursement of subproject road funds will state that funding is contingent upon conducting this economic evaluation. The final decision on road selection will be made by weighing the economic rankings along with other factors.

Funds will not be authorized for the Diamond Industrial Estate (DIE) water component until assurance is received that CIDA has committed funds for DIE. The addition of the DIE water component to this subproject is projected for August, 1988. This schedule will provide adequate time for the Core Contractor to design waterline and alignment. An economic analysis and environmental assessment will be made by the Core Contractor. The analysis will consider the economic basis for C.I.D.A.'s investment in the DIE and the CDB's investment in factory shells. Discussions at that time will also be held with DEVCO, (the GOSV corporation administering St. Vincent's industrial development), to acquire up to-date data on those industries seeking space in DIE and what provisions have been included in the final design for private sector investment in factories.

C. Financial Analysis

Fixed Amount Reimburseable (FAR) Method of Financing

The procedure used in planning road rehabilitation calls for each road segment to be inspected and evaluated to determine rehabilitation requirements. Agreement is reached by the project management staff and work foremen as to work to be carried out. Cost estimates are then prepared and form the basis of fixed-amount-reimbursement (FAR) agreements between GOSV and AID, stating the amount of project funding to be allocated to each road. Following an initial advance to finance mobilization, the agreed upon FAR amount is disbursed when interim completion targets have been reached. The number of progress payments is dependent on the length of road segment and length of construction period. These targets will be established during negotiation of the FAR agreements. A final percentage of each FAR agreement is withheld until the road has been completed, accepted by the GOSV and inspected by AID engineers.

Any GOSV road segment, which cost less than the FAR amount benefits the GOSV, while any overrun costs become the responsibility of the GOSV. In practice, savings have been used to carry out additional improvements in extending AID funded mileage.

As noted in "Past Aid Experience" (Section VI.A.3), cost overruns on the initial FAR PIR contracts were attributed to a lack of reliable cost estimates and financial management. AID technical assistance was provided to the PIR financial management staff to assure that proper accountability and cost control measures were exercised. This assistance, coupled with a more realistic approach to estimating the cost of MOW forces doing the work and providing materials and equipment, resulted in FAR contracts being fully or less than completely disbursed. Savings were realized over the FAR costs to the extent that project funding remained to carry out rehabilitation of additional road mileage.

The UK representative reports that the MOW crew on the Georgetown road project is experiencing cost overruns. In considering this problem, vis-a-vis cost efficiency on the proposed subproject, it should be pointed out that the UK simply followed a consultant's cost estimate (Roughton and Partners) and deposited funds in a project account which was drawn down as work was performed. Most likely, the availability of a lump sum in the account minimized any incentive for cost effectiveness in construction.

Subproject funding will be tied to individual FAR contracts. The nature of the FAR procedures and the successful experience of AID's PIR project are such as to support the MOW's ability to carry out subproject rehabilitation work within FAR financing constraints.

-- Cost Estimates

Under PIR Project, it cost about $135,000/mile for the GOSV to carry out approximately 14 miles of road rehabilitation. For subproject estimation purposes, about $140,000/mile is the basis for $2.34 million being allocated for the GOSV rehabilitation of about 14 miles of road. This cost includes the financial management staff. Details of costs are shown in Annex I.

D. Social Soundness Analysis

While specific or localized social impacts are difficult to isolate in road rehabilitation projects, it is anticipated that given the size of St. Vincent (150 sq. miles) and the geographic spread of the roads to be rehabilitated, that a high percentage of the island population will benefit both directly (in the form of user cost savings), and indirectly from this project. Improvements in primary and secondary roads permit increased and less costly movement to employment in the capital and industrial estates and in like manner facilitate travel to schools, health care facilities and other services. In economic terms, those who stand to benefit most

are probably the farmers who will be using the improved roads to bring their produce to market and to transport agricultural inputs to their farms. Such goals are the aims of most USAID efforts in such projects as HIAMP (High Impact Agricultural Marketing and Production) which is underway in the Eastern Caribbean.

Communities are typically involved in Government funded road rehabilitation programs as they provide the principal source of unskilled labor. The local residents receive wages for this work, and given the high unemployment rate in St. Vincent (around 25%) road construction work is an important source of income for both men and women. Additionally, road construction projects in St. Vincent in recent years have assisted the development of a number of small contracting firms who are establishing viable small businesses. The growth of the small business sector is a goal of both the GOSV and RDO/C.

Although the purpose of the subproject funded water facilities serves only the establishment of light industries in the Diamond Industrial Estate, the trickle down effect of its benefits will provide increased employment and generate much needed foreign exchange, ultimately, effecting the entire population.

E. Administrative/Institutional Analysis

1. Project Organization and Structure

a. Organization Structure of Ministry of Communications and Works

The Ministry of Communications and Works (MCW) is a large ministry which has responsibility for the Airport, the Harbour, and the Post office in addition to the Public Works Department (PWD). The PWD oversees construction and maintenance of public roads and buildings. Day to day management of this project will be accomplished by the PWD under the supervision of the Senior Chief Engineer Advisor. PWD will procure private contractors for construction of the roads.

The PWD is comprised of two main divisions - Technical Services and Maintenance. The Technical Services division provides technical supervision and advice in respect of construction work undertaken by or on behalf of all other departments and includes planning, construction project evaluation, planning and analysis of engineering design work and cost analysis and control. The division is further sub-divided into: Building and Electrical Department, Roads Department and General Equipment and Services Corporation (GESCO). The functions of the latter corporation are: to organize and manage a stone crushing operation; to provide fuel and oil duty free to Government departments and institutions; to

undertake repairs and maintenance of government vehicles and plant and to provide heavy and light plant on hire, including earth moving machinery.

The Maintenance Division of PWD is divided into a Building Maintenance section, a Roads Maintenance Section and a Miscellaneous Maintenance Section. This management and operations structure is the result of a major restructuring effort which has occurred with the new political administration and under the guidance of the Senior Engineer Advisor. There have been significant management changes in the last three years and much of it was encouraged by the PIR project. The operations divisions of PWD at the administrative level now allow for more efficient road construction and maintenance. However, in actuality, GOSV's fiscal problems continue to impact negatively on PWD's ability to practically effect all the changes envisioned by this reorganization. Hence, the continuing reliance on donor support for funding construction activities and for providing technical assistance and staff to both line personnel and projects.

b. Project Management Unit

A Project Management Unit within the MCW will be created for the duration of the project. A Vincentian construction manager will be hired as will an Office Manager/Accountant and clerical staff. The Senior Engineer Advisor will provide overall project management. All three of these individuals worked in the same respective roles under PIR, a decided advantage for this project.

Under PIR there were delays in construction due to machinery breakdowns and long repair time. PIR used the Government Funding Scheme (now GESCO) to undertake these repairs. Under this project, in order to avoid these problems, it is planned that the project will procure the services of a local mechanic. Spare parts will be kept in stock on the project site.

The project will procure the services of several small contractors with previous road construction experience. As a result of both PIR, and an on-going UK road project, several small contractors have gained the necessary expertise to successfully carry out this project's construction work. While labor should not be a problem, it is also recognized that the project will be limited in the numbers of work crews available simultaneously in various parts of the island and the work load will have to be planned accordingly.

2. Financial Authority and Management

Under PIR, USAID provided technical assistance to the PWD to set up an AID approved project accounting system.

Fortunately, the PIR project accountant will be hired to manage the accounts of this project. Additionally, the former Permanent Secretary of MCW when PIR was constructed, is now the Director of Finance. This individual is very familiar, as is the general staff of the Ministry of Finance, with project accounting and USAID regulations. In this regard, the Mission has confidence in the Government's ability to manage the funds.

With respect to authority, as this is a loan funded project, the practice of the GOSV is to have the project entered as a subvention in the capital estimates and have the monies lodged in one of the Accountant General's capital projects accounts in the National Commercial Bank. RDO/C does not envision that this method of accounting and disbursement will cause delays in the FAR. The Ministry of Finance recently has been totally computerized facilitating tracking of disbursements and payments.

3. Lines of Authority

The GOSV has worked with RDO/C staff on several projects over the last five years. The ministry with primary responsibility for liasing with donor agencies and international organizations is the Ministry of Finance and Planning. Good working relationships have developed with the Central Planning Division and the Director of Planning. This division has full responsibility for the coordination and management of the process of socio-economic and physical development planning, including negotiation of external financial and technical assistance for projects.

Both the Director of Planning and the Director of Finance, the two Chief Technical Officers of the Ministry have historically served as designated representatives. It is not envisaged that there will be any confusion over responsibilities and delegations of authority. Past project performance indicates good working relations between the Ministry of Finance and Planning and the Ministry of Communications and Works.

F. Environmental Analysis

The approved Initial Environmental Examination (IEE) recommended a Negative Determination (See Annex G). The subproject for road rehabilitation consists of rehabilitation activities rather than new construction, and no long-term negative environmental impact is attributable to the activity. Environmental problems associated with the construction work itself will be contained and of short duration.

The road rehabilitation work will be carried out in accordance with the following environmental considerations:

a) Drainage work should reduce erosion potential along the road and will use normal flow patterns;

b) Work will be carried out using existing Government quarries which are being operated in accordance with sound environmental practices.

Before work is undertaken on the provision of water facilities to Diamond Industrial Estate, an Environmental Assessment (EA) will be performed. Because this component is not sufficiently defined for authorization at this time, its authorization has been postponed until FY 88, at which time the EA will be performed.

VII. CONDITIONS PRECEDENT AND COVENANTS

Conditions Precedent and Covenants are presented in the Subproject Authorization, included in this Project Paper Supplement.

VIII. EVALUATION PLAN

The evaluation of this subproject will be carried out in conjunction with the program evaluation planned for the IEMS project as a whole and funded under the cluster project's core operating budget. This evaluation will be planned and implemented under the direction of the RDO/C Evaluation Section, with such outside consultant assistance as may be required. Initial traffic surveys will be conducted by the GOSV on road sections to be funded. This data will be made available to the evaluation team examining the subproject. A Special Covenant for evaluation arrangements has been included in the Subproject Authorization, which forms part of this Project Paper Supplement. The same Covenant will be included in the Loan Agreement.

CERTIFICATION PURSUANT TO SECTION 611(e) OF THE FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I Alfred Bisset, Acting Director of the Regional Development Office/Caribbean of the United States Agency for International Development, having taken into account the maintenance and utilization of projects in St. Vincent and the Grenadines previously financed or assisted by the United States, do hereby certify that in my judgement St. Vincent & the Grenadines have both the financial capacity and human resources capability to effectively utilize and maintain goods and services procured under the proposed capital assistance loan subproject entitled St. Vincent Infrastructure (538-0138.07). This judgement is based upon the implementation record of externally-financed projects, including AID-funded projects, in St. Vincent and the Grenadines, the commitments from the Government of St. Vincent and the Grenadines, and the quality of the planning which has preceded this new project.

(Signed) Alfred Bisset
Alfred Bisset
Acting Director, RDO/C

(Date) 5/26/87

5C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable to: (A) FAA funds generally; (B)(1) Development Assistance funds only; or (B)(2) the Economic Support Fund only.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FY 1987 Continuing Resolution Sec. 526. Has the President certified to the Congress that the government of the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully? No.

2. FAA Sec. 481(h). (This provision applies to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct source of illicit drugs significantly affecting the United States, through which such drugs are transported, or through which significant sums of drug-related profits are laundered with the knowledge or complicity of the government), has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without No.

Congressional enactment, within 30 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (a) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, and to prevent and punish drug profit laundering in the country, or that (b) the vital national interests of the United States require the provision of such assistance?

3. Drug Act Sec. 2013. (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major illicit drug producing country" or "major drug-transit country" (as defined for the purpose of FAA Sec 481(h)), has the President submitted a report to Congress listing such country as one (a) which, as a matter of government policy, encourages or facilitates the production or distribution of illicit drugs; (b) in which any senior official of the government engages in, encourages, or facilitates the production or distribution of illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country? No.

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4. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government? — No.

5. FAA Sec. 620(e)(1). If assistance is to a government, has it (including any government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? — No.

6. FAA Secs. 620(a), 620(f), 620D; FY 1987 Continuing Resolution Secs. 512, 560. Is recipient country a Communist country? If so, has the President determined that assistance to the country is important to the national interests of the United States? Will assistance be provided to Angola, Cambodia, Cuba, Iraq, Syria, Vietnam, Libya, or South Yemen? Will assistance be provided to Afghanistan without a certification? — No.

7. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, damage or destruction by mob action of U.S. property? — No.

8. FAA Sec. 620(l). Has the country failed to enter into an investment guaranty agreement with OPIC? — No.

9. FAA Sec. 620(o); Fishermen's Protective Act of 1967 (as amended) Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel because of fishing activities in international waters? (b) If so, has any deduction required by the Fishermen's Protective Act been made? — (a) No. (b) No.

10. <u>FAA Sec. 620(q); FY 1987 Continuing Resolution Sec. 518</u>. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the FY 1987 Continuing Resolution appropriates funds?	(a) No. (b) No.
11. <u>FAA Sec. 620(s)</u>. If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the percent of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment? (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)	Yes, taken into account by the Administrator at time of approval of Agency OYB.
12. <u>FAA Sec. 620(t)</u>. Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?	No.
13. <u>FAA Sec. 620(u)</u>. What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operating Year Budget? (Reference may be made to the Taking into Consideration memo.)	St. Vincent is currently in arrears to U.N. agencies. Yes, taken into account by Administrator at time of approval of Agency OYB.
14. <u>FAA Sec. 620A</u>. Has the President determined that the recipient country grants sanctuary from prosecution to any individual or group which has committed an act of international terrorism or otherwise supports international terrorism?	No.

15. ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures? No.

16. FAA Sec. 666(b). Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA? No.

17. FAA Secs. 669, 670. Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.) No.

18. FAA Sec. 670. If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device? No.

19. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. on Sept. 25 and 28, 1981, and failed to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.) No.

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20. FY 1987 Continuing Resolution Sec. 528. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States? — No.

21. FY 1987 Continuing Resolution Sec. 513. Has the duly elected Head of Government of the country been deposed by military coup or decree? — No.

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy? — N/A

2. Economic Support Fund Country Criteria

FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest? — No.

5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded from Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1987 Continuing Resolution Sec. 523; FAA Sec. 634A. Describe how authorization and appropriations committees of Senate and House have been or will be notified concerning the project.

   This is a subproject under the IEMS project. A CN for IEMS has been forwarded to Congress.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of $500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

   (a) Yes
   (b) Yes

3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

   No further legislative action is required.

4. FAA Sec. 611(b); FY 1987 Continuing Resolution Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.)

   Yes.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?	Yes, see Annex A.
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.	This is a subproject to a regional project.
7. FAA Sec. 601(a). Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	This subproject provides infrastructure for foreign and local investment by private sector enterprises. It will have a positive effect on (a) intl trade (b) private iniative and competition and (c) improved efficiency in the productive sector.
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	This subproject will indirectly encourage U.S. private trade and investment.
9. FAA Secs. 612(b), 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	The GOSV funds are very limited, however "in kind" contributions will be forthcoming from the GOSV.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	USG does not own excess foreign currency of St. Vincent.

11. FY 1987 Continuing Resolution Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?

Assistance is not being provided for the production of any specific commodity for export.

12. FY 1987 Continuing Resolution Sec. 558 (as interpreted by conference report). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?

(a) No.
(b) No.

13. FY 1987 Continuing Resolution Sec. 559. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?

No.

14. <u>FAA Sec. 118(c)</u>. Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded, by helping to increase production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of

Yes.

U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) utilize the resources and abilities of all relevant U.S. government agencies?

15. FAA Sec. 119(g)(4)-(6). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas? N/A

16. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate sysem for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A

17. FY 1987 Continuing Resolution Sec. 532. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution? No.

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

a. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and N/A

insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries. N/A

b. FAA Secs. 103, 103A, 104, 105, 106, 120-21. Does the project fit the criteria for the source of funds (functional account) being used? N/A

c. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? N/A

d. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to whch the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? N/A

e. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority? N/A

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f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government. N/A

g. FY 1987 Continuing Resolution Sec. 540. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions? N/A

Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?

Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?

h. FY 1987 Continuing Resolution. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization? N/A

If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services?

i. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? N/A

j. FY 1987 Continuing Resolution. How much of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? N/A

k. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity? N/A

l. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? N/A

m. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water N/A

control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?

2. Development Assistance Project Criteria (Loans Only)

a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.	See Subproject Paper, Section III. C.
b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest?	N/A
c. FY 1987 Continuing Resolution. If for a loan to a private sector institution from funds made available to carry out the provisions of FAA Sections 103 through 106, will loan be provided, to the maximum extent practicable, at or near the prevailing interest rate paid on Treasury obligations of similar maturity at the time of obligating such funds?	N/A
d. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?	Yes.

3. Economic Support Fund Project Criteria

a. FAA Sec. 531(a). Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?	Yes.
b. FAA Sec. 531(e). Will this assistance be used for military or paramilitary purposes?	No.
c. ISDCA of 1985 Sec. 207. Will ESF funds be used to finance the construction, operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such country is a party to the Treaty on the Non-Proliferation of Nuclear Weapons or the Treaty for the Prohibition of Nuclear Weapons in Latin America (the "Treaty of Tlatelolco"), cooperates fully with the IAEA, and pursues nonproliferation policies consistent with those of the United States?	No.
d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N/A

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1.	FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?	Yes.
2.	FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?	Yes.
3.	FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?	No.
4.	FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)	N/A
5.	FAA Sec. 604(g). Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those	No.

countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)

6. FAA Sec. 603. Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates? — No.

7. FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? — Yes.

8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? — N/A

9. FY 1987 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? — Yes

10. FY 1987 Continuing Resolution Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)? — N/A

B. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used?	Yes, to extent feasible
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?	N/A
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed $100 million (except for productive enterprises in Egypt that were described in the CP), or does assistance have the express approval of Congress?	Yes

C. OTHER RESTRICTIONS

1. FAA Sec. 122(b). If development loan repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter?	Yes
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?	N/A
3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?	Yes

4. Will arrangements preclude use of financing:

a.	FAA Sec. 104(f); FY 1987 Continuing Resolution Secs. 525, 540. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; or (4) to lobby for abortion?	N/A
b.	FAA Sec. 483. To make reimburse-bursements, in the form of cash payments, to persons whose illicit drug crops are eradicated?	Yes
c.	FAA Sec. 620(g). To compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President?	Yes
d.	FAA Sec. 660. To provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?	Yes
e.	FAA Sec. 662. For CIA activities?	Yes
f.	FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?	Yes
g.	FY 1987 Continuing Resolution Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel?	Yes

h.	FY 1987 Continuing Resolution Sec. 505. To pay U.N. assessments, arrearages or dues?	Yes
i.	FY 1987 Continuing Resolution Sec. 506. To carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)?	Yes
j.	FY 1987 Continuing Resolution Sec. 510. To finance the export of nuclear equipment, fuel, or technology?	Yes
k.	FY 1987 Continuing Resolution Sec. 511. For the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?	Yes
l.	FY 1986 Continuing Resolution Sec. 516. To be used for publicity or propaganda purposes within U.S. not authorized by Congress?	Yes

REF. CPU/USAID PRGM 87

CENTRAL PLANNING UNIT,
MINISTRY OF FINANCE, PLANNING AND DEVELOPMENT,
KINGSTOWN,
ST. VINCENT AND THE GRENADINES.

August 11 1987

ACTION
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12 AUG 1987

Mr James Holtaway
Director
USAID REGIONAL DEVELOPMENT OFFICE/CARIBBEAN
P O Box 302
BRIDGETOWN

Dear Mr Holtaway

USAID DEVELOPMENT ASSISTANCE TO ST VINCENT AND THE GRENADINES

I am pleased to refer to discussions and correspondence over the past few months between the staff of your office and Government officials concerning the nature and scope of a new programme of USAID-funded development activities in St Vincent and the Grenadines. This letter constitutes a formal request for financial and technical assistance from USAID in the following areas:

Road Rehabilitation

The recently completed Productive Infrastructure Rehabilitation (PIR) project through which sixteen (16) miles of primary and secondary roads were upgraded, several bridges repaired and useful technical assistance given to the Ministry of Communications and Works, provided critical support to the implementation of Government's policies and programmes in the transport sector. Government welcomes USAID's continuing interest in this area, and new road rehabilitation proposals have been put forward for USAID's consideration. Government accepts that the selection of roads to be upgraded with USAID's assistance will be on the basis of economic appraisal.

In order to facilitate the implementation of the road rehabilitation project, Government requests that USAID give favourable consideration to the inclusion of project management services. In this connection too, Government requests that USAID continue its support for the services of Mr Rudy Matthews on mutually agreeable terms and conditions.

- 2 -

August 11 1987

Mr James Holtaway

Road Construction Equipment

Serious deficiencies in the availability of road construction equipment is one of the major bottlenecks in the execution of our ongoing road rehabilitation and maintenance programme, and if not rectified will prove a serious constraint to the implementation of any new USAID-funded road rehabilitation programme. Government has identified and prioritized for USAID's consideration a list of urgently required items of equipment, and requests that those items approved for funding should be procured on the basis of host country contracts.

Water Supply System : Diamond Industrial Estate

Government appreciates the interest shown by USAID in the construction of a water supply system for Diamond Industrial Estate and trusts that favourable consideration will be given to providing assistance for its implementation at the appropriate time.

Government looks forward to USAID's early and favourable consideration of this letter of request for development assistance.

Yours sincerely

Karl E V John
Director of Planning

KEVJ:ars

EXPANSION OF THE SHELF ITEM PROCUREMENT LIMITATION

RDO/C recommends approval of an expansion of the shelf item procurement limitation under the Fixed Amount Reimbursement (FAR) funding mechanism for the Road Rehabilitation component of the St. Vincent Infrastructure IEMS Subproject (538-0138.07) for the following reasons:

(1) Without a specific approval of an expansion of the shelf item procurement limitation, procurement of shelf items is limited to "25% of the estimated total cost for the commodity element of the FAR project or subproject". [HB 1.B., Chapter 20, Section A.2.b.(1)].

(2) RDO/C engineers estimate that of the $2.34 million Road Rehabilitation Component (FAR subproject), approximately 60%, or $1.404 million represents the commodity element. They further estimate that approximately 80% of the commodity element represents the shelf item procurement requirements of this FAR subproject. Therefore, approval is required to expand the shelf item procurement limitation from the standard 25% to 80% of the estimated total cost for the commodity element of the FAR subproject.

(3) St. Vincent, a small island economy, does not produce asphalt, cement, fuel or reinforcing steel. Because the authorized Geographic Code for the IEMS umbrella project is U.S. and Cooperating Country, these commodities would only be eligible from U.S. source and origin. However, approval of an exception is justified in this case due to the fact that:

(a) the combined value of these four commodities barely exceeds $1.0 million, which represents only minor purchases given the nature of the commodities involved;

(b) procurement from the United States is outside the normal established trading patterns for St. Vincent and would cause project delay; and

(c) these items are available in St. Vincent on an off-the-shelf basis.

(4) According to HB 1.B., Chapter 20, Section A.2.b.(1), an expansion of the shelf item procurement limitation may be "justified and approved at the PP stage".

For the above reasons, RDO/C recommends approval of an expansion of the shelf item procurement limitation for the St. Vinent Infrastructure Subproject Road Rehabilitation component. This approval may be accomplished by the Acting Mission Director signing Amendment Number Four to the Infrastructure Expansion and Maintenance Systems Authorization, which contains the appropriate shelf item expansion approval language under paragraph five.

An Evaluation of the Productive Infrastructure Rehabilitation Project in St. Lucia and St. Vincent, West Indies

Prepared for the U.S. Agency for International Development under contract no. PDC-0000-I-28-3078-00

C.C. Donato
Alec Hansen
Eric B. Shearer

September 1985

Development Alternatives, Inc. 624 Ninth Street, N.W. Washington, D.C. 20001

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NOTE: The chapter headings PURPOSE and GOALS/SUBGOALS suggested in the PES outline were omitted because Purposes are discussed in Chapters Two and Five, and the Goal stated in the Project Paper is too general to call for discussion.

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EXECUTIVE SUMMARY

OVERALL JUSTIFICATIONS

In view of the basic importance of the road system for the economy and society of St. Lucia and St. Vincent, and the disastrous state of disrepair into which those systems had fallen (partly because of the precarious state of the islands' public finances), this evaluation fully supports the priority given by the U.S. Agency for International Development to the rehabilitation of public roads in St. Lucia and St. Vincent through the Productive Infrastructure Rehabilitation (PIR) Project.

The justifications for choosing to rehabilitate feeder roads, in addition to a few strategic secondary roads, in St. Lucia for a total of 130 miles are clearer than those that led to the selection of 14 miles of secondary roads for rehabilitation in particular locations centered on the Vigie Highway in southeastern St. Vincent, although review of the latter's benefit/cost ratio indicates a very high rate of return. Obviously, the respective choices were closely related to the local institutional capability for road construction as well as to the wise decision of the Regional Development Office for the Caribbean (RDO/C) to employ the force account system, rather than contractors, in both cases. Also, use of the Crown Agent as manager in St. Lucia appears to have been fully justified, especially since only one expatriate employee was involved.

PURPOSE

The PIR project had two explicit purposes: to increase production and productivity (in agriculture, essentially), and to improve access between production areas and consumption and export centers. Achievement of both purposes must be measured in conventional economic terms, that is, the extent to which the investment in road rehabilitation can be shown to have benefited the economy by having made possible (a) greater production of goods for which a demand existed and lowering their cost of production and marketing, and (b) a larger flow of traffic as well as savings in vehicle operating costs. Both types of benefits must, in the final analysis, be related to the costs of the project.

IMPACT

Owing to the short time allotted to the evaluation, the lack of project-specific base-line and follow-up data as well as of any meaningful general statistical series, the fact that road investments typically have a delayed impact, and that the project was not completed, some of the answers are tentative, incomplete, and based largely on personal judgment and inferences rather than on facts and figures. Moreover, the bulk of the short-term benefit had to be sought in the banana export industry, the islands' economic backbone and the only one with both guaranteed demand and guaranteed supply. But measurement of the quantitative contribution of the road rehabilitation to sharply higher banana production and exports and farmer incomes since 1982 -- in addition to lack of data -- is muddied by the rapid spread of field packing precisely in the same years, and by the effects and aftereffects of Hurricane Allen in 1980 and a severe blow-down in 1983.

Nonetheless, discussions with local experts, superficial case studies along the road segments concerned, and review of such hard data as could be utilized, lead to the following conclusions:

1. In St. Vincent, the impact on agricultural production and productivity was slight because the road sections concerned did not in general provide access to hitherto inaccessible areas with larger production potential; the adjacent areas -- known as St. Vincent's breadbasket -- were already intensively cultivated. Field packing was the more important factor here. However, one road segment had already become impassable for trucks and several others were in danger of becoming impassable; hence, one can argue that failure to execute the project at this time would have led to serious economic losses in the near future. Finally, the internal rate of return, reviewed on the basis of benefits accruing from assumed savings in vehicle operating costs and of actual costs, was about 40 percent over a 20-year period -- over 50 percent above the project-paper estimate, assuming normal maintenance expenditures and despite the project's substantial cost overruns.

2. In St. Lucia, rehabilitation of the feeder roads has had a more evident impact on banana growers, even though perhaps not in the way, and to the extent, expected by the original project analysis. There is substantial evidence that rehabilitation of feeder roads, and of connecting secondary roads, has been one main incentive (along with stable prices and substantial premiums from field packing and related practices) for the sizable production increases in many areas, through acreage expansion; replanting, including temporarily abandoned fields; and more intensive cultivation, in particular, greater

use of fertilizer after the bags no longer needed to be head-carried from the nearest passable road. However, with the attainment of virtually 100 percent field packing by mid-1985, benefits in terms of lower rejection rates as a result transport bruising are difficult to attribute to road rehabilitation. The reasons are that:

- Small trucks will call even on very bad roads;
- Proper field packing and load securing, coupled with low speeds, avoids any tangible bruising from the roads for both small and large trucks;
- Where the condition of the feeder track keeps even small trucks away, producers will head-carry the field-packed bananas to where they can be loaded; and
- Road quality is reflected only in overall trucking rates to the extent that these are based on vehicle operating costs; truckers do not discriminate in the rates they charge to farmers or to the Banana Growers Associations for specific bad road segments or for specific improvements.

A few sample reviews of benefit/cost ratios of feeder and secondary road segments, based on a great deal of guesswork, indicate internal rates of return of 18-45 percent (under the same assumptions as for St. Vincent, plus the estimated gross value of new banana production). The Caribbean Development Bank's (CDB) minimum acceptable internal rate of return for investment in feeder road rehabilitation is 14 percent.

OUTPUTS

The project paper calls for two kinds of output: accomplishment of the construction objectives (presumably at the projected cost), and support to the creation of a permanent capacity for road maintenance. The construction objectives are being met, despite some initial delays and substantial cost overruns in St. Vincent. The latter were to a large extent the result of over-optimistic design assumptions regarding institutional capacity, equipment availability and rental costs, and reliability of crushed stone supply.

The output objective of support to the creation of a permanent capacity for road maintenance was designed to help overcome the problem of inadequately maintained roads on both islands, a problem that had led to the road conditions addressed by the construction objective in the first place. Judging from the condition of project and non-project roads, including CDB-financed feeder roads in St. Lucia completed as recently as 1981,

intenance is still not adequately carried out in either island. though official budget and expenditure data indicate that the project agreement covenants are being adhered to in formal, fiscal terms, there are reasons to doubt that funds ostensibly earmarked for maintenance are in fact used fully for that purpose. Moreover, responsible technical officials assert that the real need for funds for maintenance is at least double the budget figure in St. Vincent, and three times the current budget in St. Lucia, even though the nominal allocation there is about twice that of St. Vincent.

The principal unplanned effect (as regards the original project paper -- the Amendment No. 1 does contemplate it) was the apparent increase in new banana plantings. This effect is judged not to be necessarily a net benefit in view of the probable negative environmental impact on some of the steep hillsides where virgin forest land is destroyed in the process. The arguments are complex and in the final analysis beyond the technical capability of the evaluation team. Moreover, it is arguable whether simple feeder road rehabilitation on old alignments is an important contributory factor to either benefits or environmental costs. However, in future projects more than a negative initial determination would be appropriate.

LESSONS LEARNED

Concerning Project Design and Implementation

1. Ideally, appraisal of a road project of any kind on these small (geographically as well as economically) islands should be based on an analysis of the entire system, rather than of more-or-less isolated segments. The basis for such an analysis, it is understood, now exists in St. Lucia in the form of a complete inventory and multi-year plan.

2. Analysis should include transport rate structure and setting.

3. Existence of a detailed, up-to-date land capability and use survey is an essential input to the system analysis; AID should help promote and fund these surveys. Moreover, far greater attention should be paid to environmental issues, and not only in connection with road construction. Thorough environmental assessments covering land and water resources and certain aspects of pollution are recommended for all the islands.

4. Thorough engineering and institutional analyses must be completed prior to final project design, and their results taken into consideration unless they are explicitly shown to be inappropriate or irrelevant.

5. The force account method of construction should continue to be preferred, even at the risk of delays and cost overruns, to help create a local institutional base and avoid the cost of displacing equipment from overseas, including neighboring islands.

6. Road maintenance is the single most important issue uncovered by the evaluation. Reliance on project agreement covenants and on marginal technical assistance and training in this respect is illusory; and distinction between investment and recurrent costs in road reconstruction, rehabilitation, and maintenance is a fiscal artifice. For the future, the evaluation team recommends that AID should.

- Include maintenance in project funding, but on a declining contribution scale;
- Ensure effective technical and financial monitoring of maintenance performance;
- Finance procurement of basic equipment, for exclusive use of maintenance unit;
- Develop cost-effective routine maintenance systems with local participation; and
- Assuming all the above is ensured, provide appropriate technical assistance for planning and execution.

Study of -- and possible participation in -- the projected maintenance project in Dominica, sponsored jointly by the European Development Fund, British Development Divison, and the CDB, is suggested.

7. Consideration should also be given to insistence on the use of crushed stone or gravel surfaces on some feeder roads with low traffic loads (and excepting steep grades) in place of hard surface, as a cost-saving measure.

8. Interest was encountered in St. Vincent in a feasibility study of coastal transport as a low-cost complement to road transport. It is suggested that pre-feasibility studies be commissioned for several islands that might include inter-island marine transport, and on the basis of which feasibility studies might then be called for.

9. In the interest of cost effectiveness, as well as to avoid overburdening the islands' small economies and bureaucracies with assistance missions and projects, it is strongly recommended that inter-donor consultation and collaboration be maximized in a number of ways, including joint

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d systems analyses and construction and maintenance projects; nt environmental assessments; and, if appropriate, a joint study of marine transport.

Concerning Evaluations

1. The nature and scope of the exercise should be unequivocally defined, and the financial and institutional resources made commensurate (or vice versa).

2. Meticulous preparation of documentation and data bases prior to arrival of an evaluation mission can be cost effective.

3. Especially where no base-line or follow-up data exist, a preliminary visit by the team leader would be highly useful.

4. In-depth evaluations should, in general, not be expected in the absence of base-line and follow-up data.

5. Provision should be made in the project for funding host country participation in the evaluation, and the host country institutions should be alerted, with adequate notice, to the arrival of the evaluation mission.

The evaluators have also drawn some lessons from this exercise for the possible benefit of future teams operating under similar constraints:

1. Spend more time on site and less having discussions and collecting and reading documentation at RDO/C.

2. Refrain from making last-minute quantitative surveys with doubtful statistical representativity and little time for analysis. Rather, spend more time with those who know the local realities.

3. Distribute yourselves as much as possible, comparing notes every evening.

4. Try to do the economic analysis on project components (such as, road segments) that were used for this purpose for project analysis, provided they were well chosen initially.

June 18, 1987

ACTION MEMORANDUM FOR THE ACTING MISSION DIRECTOR, RDO/C

FROM: Michael G. Huffman, PDO

Action Requested: That you approve (1) the St. Vincent Infrastructure Subproject Mid-Course Decision Document under the Infrastructure Expansion and Maintenance Systems (IEMS) Project (538-0138) and (2) the issuance of a Work Order to the IEMS Core Contractor to proceed with the preparation of the associated Project Paper Supplement.

Background: On May 6, 1986, the RDO/C Mission Director authorized the IEMS Project consisting of three components: 1) a Small Activities Fund for activities of less than $1 million, 2) a Large Subproject Program for activities over $1 million and 3) a Core Contract for technical and engineering services. The St. Vincent Infrastructure Subproject is the third Large Subproject to be identified under the IEMS Project. It has already been approved by AID/W for development in FY 87 through the Action Plan process. The Core Contractor has submitted the required Mid-Course Decision Document (MCDD) for Mission Review and your approval.

Discussion: The MCDD for the St. Vincent Infrastructure Subproject was reviewed by the Mission on April 30, 1987. Because the review raised significant issues which required a) discussions with the GOSV and b) Mission funding decisions, it is only now that the MCDD is being presented for your approval. The results of the April 30 review and subsequent, less-formal meetings are summarized below:

The MCDD proposed a $4.0 million authorization and obligation in FY 87. Due to OYB funding constraints, it was decided to authorize and obligate only $2.0 million of the $4.0 million subproject in FY 87 and authorize/obligate the remaining $2.0 million in FY 88, subject to availability of funds. Another factor which contributed to the split authorization/obligation decision was the timing of the Diamond Industrial Estate (DIE) component. Further discussions with the GOSV and CIDA, another major donor for the DIE activity, revealed that it is probably premature to authorize and obligate USAID funds for this activity in FY 87. Therefore, based on Mission review of the MCDD, a recommendation was established to develop a $4.0 million subproject split into two $2.0 million authorization/obligation tranches as follows:

		Funding Level	Auth/Obl
A.	Road Maintenance Equipment Purchase	$0.5 million	FY 87
B.	Road Rehabilitation I	$1.5 million	FY 87
C.	Road Rehabilitation II	$1.0 million	FY 88
D.	Diamond Industrial Estate Waterline	$1.0 million	FY 88

Also resulting from the Mission review of the MCDD, several specific recommendations were established as guidance for the preparation of the associated Project Paper Supplement:

1) The entire subproject should be loan financed. Based on the most recent IBRD per capita income calculations, dated 9/19/86, St. Vincent falls into income group III ($791-$1,635 GNP/capita). Therefore the Terms of USAID applicable to this subproject is as follows: A 25 year term with a 10 year grace period on principal; 2% interest for the first half of the grace period; 3% interest for second half of grace period; and 5% interest during the 15 year amortization period. The PP Supplement should include this information.

2) GOSV title to Diamond Industrial Estate land should be a CP to disbursement for this component. USAID should also tie initiation of its DIE activity to (a) demonstrated other donor committment to fund other critical elements of the estate's development and (b) indications of adequate investor demand for factory space in the estate.

3) The PP Supplement should include as detailed an economic analysis for the DIE activity as possible, based on the CIDA study.

4) The PP Supplement should thoroughly address capability of each host country implementing organization to adequately carry out the work proposed.

5) The PP Supplement should address how the subproject will assist the HIAMP project in reaching its targets in St. Vincent.

6) The PP Supplement should expand on the MCDD supposition that although the development of DIE by private investors is not feasible at the present time, some provision should be made for possible private sector participation if interest materializes in the future.

7) An Annex to the PP Supplement should contain a scope of work for the agricultural economist who will evaluate the economic returns of the proposed feeder roads.

8) Becauce the subproject will be DA loan funded, the PP Supplement should recommend that the authorized Geographic Code be 941.

9) The PP Supplement should recommend that the $0.5 million road rehabilitation equipment be procurred through the Core Contractor.

Justification: In accordance with (a) established IEMS procedures, (b) AID/W specific prior concurrence to proceed with the development of the subproject (State 72303) and (c) LAC Bureau Redelegations of Authority to the Field, you, as Acting Mission Director, have the authority to approve (1) the Mid-Course Decision Document and (2) the issuance of the Work Order to the Core Contractor to develop the PP Supplement.

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Recommendation: That you approve (1) the Mid-Course Decision Document for the St. Vincent Infrastructure Subproject of the IEMS project; and (2) the issuance of a Work Order to the IEMS Core Contractor to proceed with the preparation of the associated Project Paper Supplement, taking into account the recommended design guidance presented in this memorandum, by signing below:

Approved: _____

Disapproved: _____

Date: 6/22/87

Info:

Richard Warin, CONT
Stan Heishman, RCO
Don Harrington, ADO

Drafted by;PDO:MGHuffman:ms:0511c:P.63

Clearances:

C/INFRA:JBaird	Draft
C/PDO:KFinan	
PRM:DMutchler	
A/DIR:ABisset	

DESIGN ACTION TAKEN TO ADDRESS MCDD RECOMMENDATIONS

1. References to loan funding have been noted throughout the PP Supplement. The terms of the loan and the basis for such terms are particularly described in Section I., Summary and Recommendations.

2. A C P to disbursement for road rehabilitation requires that evidence be provided that the GOSV has title to the property and further, that the CIDA has initiated development of the estate's infrastructure and that the CDB, other donors, or private developers are proceeding with factory shells. Specific evidence has not been defined except for the title to land. CIDA's timetable notes that IFB's for estate infrastructure will be issued in February 1989 with construction contract award in June 1989. Either of these actions could assure RDO/C that construction is imminent. Similar evidence could be presented if the CDB proceeds with constructing factory shells.

   As noted in the Implementation Plan, development of Diamond will not take place until the spring of 1989. Recent statements of the DEVCO indicate a desire for private investment in factories and intentions to set aside 10 acres for this purpose. The CIDA is proceeding with design of the entire estate, but development will take place in Phases. A C.P. to disbursement for the waterline requires an economic analysis of the pipeline. At that time when development of Diamond is imminent, a list of prospective rentors will be compiled along with an assessment of the climate for private investment.

3. There has been no economic analysis for CIDA's DIE development and contacts with CIDA staff indicate that no analysis is planned except for what might be included in the terms of reference for the engineering firm doing final design. As noted above, an economic analysis will be carried out in the spring of 1989 to support AID's involvement of the DIE.

4. A detailed discussion of the capabilities of GOSV's MCW and CWASA has been made in the Technical and Administrative Analyses of Section VI.

5. The subproject goal and purpose, particularly those relating to road rehabilitation, coincide with targeting efforts of RDO/C's HIAMP project, i.e. improved access to encourage agricultural production and facilitate transport from remote farm areas to markets. Reference to compatibility with HIAMP's objectives is noted in at least two places, Section II.A.3 and Section VI.E.

6. Reference to the need and the means of acquiring data on private investment are discussed in 2. and 3. above.

7. Annex L. sets forth the terms of reference for the economic assessment of benefits expected from rehabilitation of <u>all</u> the roads included in the GOSV list. Based upon this analysis a priority listing will be formulated with AID funds being utilized for rehabilitating those roads having the greatest economic returns.

8. The PP Supplement makes several references to the eligibility of Code 941 countries to provide materials for the project, e.g. pipe and possibly the suppliers of the prefabricated fibre glass reservoir and dumpers for use in road rehabilitation work. Dumpers are not manufactured in the US. A waiver for procurement of UK dumpers was authorized for the earlier P.I.R. Project, but funds were limited and dumpers were not procured.

9. Sections IV. and V., Implementation Plan and Monitoring Plan, among other sections of the Supplement, note that procurement will be carried out through the Core Contractor.

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D.C. 20523

LAC-IEE-87-27

ENVIRONMENTAL THRESHOLD DECISION

Project Location	:	St. Vincent
Project Title and Number	:	IEMS- ST. Vincent Infrastructure 538-0138.07
Funding	:	$4.0 Million, DA
Life of Project	:	3 years
IEE Prepared by	:	James Baird C/Infra, RDO/C Barbados
Recommended Threshold Decision	:	Positive determination for water component; Negative determination for road rehabilitation component
Bureau Threshold Decision	:	Concur with Recommendation
Comments	:	EA required for water component prior to construction of reservoir
Copy to	:	James S. Holtaway, Director USAID/RDO/C Barbados
Copy to	:	James Baird, USAID/RDO/C Barbados
Copy to	:	Eric Zallman, LAC/DR
Copy to	:	IEE File

James S. Hester Date JUL 22 1987

James S. Hester
Chief Environmental Officer
Bureau for Latin America
and the Caribbean

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CLASS: UNCLASSIFIED
CHRGE: AID 07/20/87
APPRV: DIR:JSHOLTAWAY
DRFTD: PDO:MCHUFFMAN:[illegible]
CLEAR: 1.D/DIR:ABISSET
2.C/ENGR:JLBAIR
DISTR: AID AMB DCM

AIDAC

AID FOR JIM HESTER, LAC/DR

E.O. 12356: N/A
TAGS: NONE
SUBJECT: INITIAL ENVIRONMENTAL EXAMINATION ST. VINCENT INFRASTRUCTURE (538-0138.07)

1. THIS IS AN ACTION MESSAGE.

2. THE FOLLOWING IS THE INITIAL ENVIRONMENTAL EXAMINATION FOR THE ST. VINCENT INFRASTRUCTURE ACTIVITY (538-0138.07) WHICH IS AN ELEMENT OF THE INFRASTRUCTURE EXPANSION AND MAINTENANCE SYSTEMS PROJECT (538-0138). RDO/C RECOMMENDS A POSITIVE DETERMINATION FOR THE WATER COMPONENT AND A NEGATIVE DETERMINATION FOR THE ROAD REHABILITATION COMPONENT. PLEASE CABLE PRIORITY YOUR RESPONSE TO THIS RECOMMENDATION AS SOON AS POSSIBLE SO THAT RDO/C MAY AUTHORIZE AND OBLIGATE THE SUBPROJECT BEFORE THE END OF JULY.

- PROJECT LOCATION: ST. VINCENT
- PROJECT TITLE: IEMS--ST. VINCENT INFRASTRUCTURE
- FUNDING: DA, LOP DOLS 4.0 MILLION
- LIFE OF PROJECT: THREE YEARS
- IEE PREPARED BY: JAMES BAIRD, C/INFRA, RDO/C, BARBADOS
- DATE: JULY 20, 1987
- ENVIRONMENTAL ACTION: POSITIVE DETERMINATION FOR
- WATER COMPONENT; NEGATIVE DETERMINATION FOR ROAD
- REHABILITATION COMPONENT.

- THE PROJECT CONSISTS OF THE FOLLOWING ELEMENTS:

- A. EQUIPMENT PROCUREMENT AND REHABILITATION OF APPROXIMATELY 15 MILES OF EXISTING ROAD BY GOSV FORCES.
- B. CONSTRUCTION OF A 200,000 GALLON RESERVOIR AND INSTALLATION OF APPROXIMATELY 1-1/2 MILES OF PIPELINE CONNECTING EXISTING SUPPLY LINE WITH THE PROPOSED DIAMOND INDUSTRIAL ESTATE. DETAILED DESIGN OF THIS FACILITY IS PLANNED FOR FY 88 AND 89 WITH CONSTRUCTION PROGRAMMED TO START O/A JUNE 1989. AN EA WILL BE CARRIED OUT BEFORE COMPLETION OF THE DESIGN.

CONCURRENCE: JAMES S. HOLTAWAY, DIRECTOR, RDO/C
DATE: JULY 20, 1987

- C. AID/W REVIEW GUIDANCE OF CARIBBEAN REGIONAL

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ACTION PLAN [illegible] INDICATED [illegible] WILL [illegible] FOR THE ST. VINCENT [illegible] PROJECT. [illegible] ASSUMES [illegible] REQUIRED IS ONLY FOR WATER COMPONENT, SINCE REHABILITATION OF ROADS IS CONFINED TO EXISTING RIGHT-OF-WAY AND CONSISTS OF IMPROVEMENTS TO ROADWAY STRUCTURE AND PROVISION OF IMPROVED DRAINAGE FACILITIES. REQUEST IEE APPROVAL BY BUREAU ENVIRONMENTAL OFFICER OF A NEGATIVE DETERMINATION FOR THE ROAD REHABILITATION COMPONENT AND A POSITIVE DETERMINATION FOR THE WATER COMPONENT, BASED UPON NEED FOR AN EA TO BE PERFORMED FOR THAT COMPONENT. FLOGLAM
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#5973

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Best Available Document

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DIST: AID

AIDAC FOR BRIDGETOWN FOR RDO/C FOR BAIRD

E.O. 12356: N/A
TAGS:
SUBJECT: IEE FOR ST VINCENT INFRASTRUCTURE PROJECT (538-0138.07)

REF: BRIDGETOWN 05973

1. AS SUGGESTED IN REFTEL LAC CHIEF ENVIRONMENTAL OFFICER HESTER HAS MADE A POSITIVE DETERMINATION FOR WATER COMPONENT OF SUBJECT PROJECT AND A NEGATIVE DETERMINATION FOR ROAD REHABILITATION COMPONENT. POSITIVE DETERMINATION BASED ON POTENTIAL FOR SIGNIFICANT ENVIRONMENTAL IMPACT BY WATER COMPONENT DURING CONSTRUCTION OF RESERVOIR, AND SECTION 216.2(D) OF 22 CFR REQUIRING AN ENVIRONMENTAL ASSESSMENT FOR WATER MANAGEMENT PROJECTS, INCLUDING DAMS AND IMPOUNDMENTS.

2. PLEASE CABLE THE DRAFT STATEMENT OF WORK WHICH RESULTS FROM YOUR EA SCOPING EXERCISE TO HESTER ASAP AS HE MUST REVIEW AND APPROVE IT PRIOR TO PROCEEDING WITH THE EA. HESTER WILL EXPEDITE HIS CONSIDERATION OF THE STATEMENT OF WORK AND THE RESULTING EA.

3. COPIES OF THE APPROVED IEE (IEE NO. 87-27) ARE BEING POUCHED TO MISSION. SHULTZ
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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project:
From FY87 to FY90
Total USAID Funding: $3 million
Date Prepared: 8/14/87

Project Title & Number: St. Vincent Infrastructure (538-0138.07)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATIONS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal (The Broader objective to which this project contributes): Promote economic growth	Measures of Goal Achievement: GDP growth.	Macro-economic statustics	Assumptions for achieving goal targets: No large natural disasters; economic stability
Project Purpose: To improve the physical infrastructure that is directly supportive of productive enterprise and increased investment	Conditions that will indicate that purpose has been achieved. End of project status: 1. increased ag. land under cultivation 2. increased production on land currently under production.	Marketing Board statistics; Agricultural Assn.records; DEVCO records	Assumptions for Achieving Purpose: Government will continue to pursue ag. growth policies.
Project Outputs: 1. Rehabilitation of selected access roads. 2. improved road maintenance	Magnitude of Outputs: 1. Approximately 15 miles 2. to be determined by maintenance program design	1. Physical inspection, project records 2. Project records	Assumptions for achieving outputs: GOSV staff, equipment and materials availability
Project Inputs: 1. road construction/maintenance equipment 2. funded FAR agreements 3. technical assistance 4. maintenance program	Implementation Target (Type and Quantity) 1. $500,000 worth of eqmt. delivered 2. FAR Agreements executed ($2,340,000) 3. Contract executed ($110,000) 4. Program funded ($50,000)	Project records	Assumptions for Providing Inputs: AID funds availability

COST ESTIMTATES

1. ROAD REHABILITATION

Based on experience gained from A.I.D's P.I.R. Project (1982 - 1986) a typical cost for road rehabilitation in St. Vincent is $140,000 per mile.

Proposed mileage to be rehabilitated - 16 miles

15 x $140,000		$2,100,000
10% Contingencies		210,000
TOTAL ESTIMATED COST ROADS		$2,310,000
	say	$2,340,000

2. EQUIPMENT (Manufacturer similar to following Caterpillar Units)

a)	One CAT 930 Wheeled Front End Loaders	- CIF $	85,000
		Parts	17,000
b)	One CAT 120G Motor Powered Grader	- CIF	75,000
		Parts	15,000
c)	One CAT D6H Dozer	- CIF	150,000
		Parts	30,000
d)	10 Ton Steel Wheel Roller		50,000
		Parts	10,000
		Shipping	9,000
e)	Three Front End Dumpers		25,000
f)	Rock Drills & Bits		45,000
		Shipping	9,000
g)	One Water Pump		6,000
		Parts	1,000
		Shipping	1,000
		$	528,000
TOTAL ESTIMATED COST	CIF SAY	$	530,000*

* This amount will be reduced to $500,000 by either lower costs than estimated or elimination of minor pieces of equipment.

DESIGN STANDARDS FOR INTERMEDIATE VOLUME ROADS

1.	Geometrics:	Road rehabilitation will follow existing horizontal and vertical alignment.
2.	Drainage:	Side drains - minimum width 2 feet, minimum depth 1.5 feet. Earth drains where water velocity is less than 4 feet per second; concrete drains where velocity exceeds 4 feet per second.
3.	Culverts:	Minimum diameter for cross drains - 24"; Minimum diameter for side drains - 18".
4.	Road Structural:	6 inch base course - optimum compaction 4 inch sub-base - CBR 8% plus.
5.	Paving:	Prime - MC-0 7 s.y. per gallon; Blot with sand or crusher run. Final - MC-5 5 s.y. per gallon; Chips - 60 to 65 s.y. per c.y.

NOTE: Use DBST on tangents and curves below 10% gradient. On sharp bends and surfaces over 10% gradient use 1 1/2 inch asphaltic concrete.

These standards will be used as a guide to help assure consistency between the estimated cost of road work in the preliminary stage of project development and the final stage of preparing the Fixed Amount Cost Estimates just prior to construction. The standards will be applied to road rehabilitation and can be varied as required for special circumstance, with RDO/C approval.

PROPOSED LIST OF CONSTRUCTION EQUIPMENT

ARRANGED IN ORDER OF PRIORITY

ITEM	QUANTITY	DESCRIPTION	GOSV ESTIMATE US$	RDO/C ESTIMATE US$
1.	1	CAT. 930 is JS manufacture Front-end Loader (wheeled) Powered by CAT. Diesel Engine & Power Shift Transmission, 2yd^3 Heavy Duty Tooth Bucket, 2 years spares. scalding	165,000	102,000
2.	1	Motor Grader Powered by Diesel Engine (CAT. 120 G) 125 HP/93 Kw 2 years spares scalding	120,000	90,000
3.	1	Caterpillar D6H with Angling Blade & Ripper, with Power Shift Transmission. 2 years spares.	140,000	130,000
4.	1	10 Ton Roller-Tandem Steel Wheel; Diesel Engine with 2 years spares	90,000	69,000
5.	3	Front End Dumpers Powered by Diesel Engine; Capacity = 20 CWT,	44,000	25,000
6.	6	Rock Drills and Assorted Bits		
	6	Pneumatic Rock Breaker with Assorted Chisels	45,000	54,000
7.	1	Water Pump 4" Powered by Diesel, (Diaphragm Type) 2 years spares.	5,000	8,000
				$528,000

PROPOSED ROADS FOR PIR 11

	MILES
Bowood and Branch	1 1/2
Questelles Land Settlement	2 1/2
Retreat	
Francois	1
Belle Wood	2 3/4
Vermont/Paradise	1 3/4
Sharpes/Palmyra	2
Creighburn	3/4
Sharpes/Swartz	3/4
Welcome/Hawks Hill	3/4
Green Hill/Fenton	2
Ribbishi/Harmony Hall	3/4
Diamond/Mt. Grenan	1 1/2
Park Hill/Mt. Grenan	2
Colonarie/South Rivers Three Rivers/Mc Cracken	4 1/2
Jarvis	1
Perseverence	2 1/2
St. Sylvans/Victoria Village	3
Calder Road	2
	32 3/4

AV

Terms of Reference - Economic Evaluation of Roads

SCOPE OF WORK

ECONOMIC ANALYSIS OF ST. VINCENT INFRASTRUCTURE IEMS SUBPROJECT

I. PURPOSE

This work order authorizes the preparation of economic analyses of proposed feeder road projects under the St. Vincent Infrastructure Subproject (538-0138.07). A Report, to be completed by the Contractor, will present an analysis of the economic rate of return of each of the proposed feeder road activities and will recommend a priority ranking of the individual road subprojects based on the individual economic returns, and which can be weighed by decision-makers in making subproject selections. The Contractor will identify an optimal feasible subset of these subprojects that can be constructed within the budget constraints of the project.

An expert on the economics of transportation economics will be expected to work closely with the RDO/C Project Development Office, the Infrastructure Office, and the Barbados-based Louis Berger engineering staff (core contractors for the Infrastructure Expansion and Maintenance Systems project) and the RDO/C Agriculture Office in compiling and analyzing the relevant data and in preparing the final report.

II. BACKGROUND

RDO/C's development goal for St. Vincent and the Grenadines is to enable the country to achieve an economic growth rate that will increase per capita income, reduce unemployment, increase foreign exchange earnings, and provide the basis for self-sustaining long-term growth. This goal will be achieved through a private sector based, export-oriented strategy focusing on increased production of select traditional crops, increased diversification in the agricultural sector. Achieving this objective will greatly expand the activity level and effectiveness of the private sector in St. Vincent's key economic sectors, while shifting the role of Government to one more strongly supportive of the private sector and less directly involved in productive sector activities.

RDO/C's funding of road rehabilitation in the northwest sector will stimulate new or greater production of non tradition crops (ground provisions, fruits and vegetables) especially for export to the Caricom region and other markets. Increasing the productivity of these crops will be a critical element of RDO/C's strategy since St. Vincent is a high cost agricultural producer.

Previous RDO/C infrastructure projects in St. Vincent (the P. I. R. Projects of FY 82, 83 and 85) rehabilited 14 miles of primary and secondary roads serving the banana production area around Mesopotamia. The project also included provision of equipment for use by Government

forces to carry out the work. The P. I. R. project was successfully completed in the spring of 1986. Subsequently, most of the equipment and staff were mobilized under a UK grant to construction and rehabilitate six miles of road extending north from Georgetown on the northeast coast.

The Government of St. Vincent and the Grenadines, upon completion of the P. I. R. project, requested RDO/C continuance of the program and 18 road segments were identified along with additional equipment requirements.

The GOSV has recently requested AID's financial assistance to continue its road rehabilitation program. The roads identified (see Annex K of the Project Paper) generally serve some areas of potentially productive tracts suitable for growing non traditional cash crops and some existing banana areas. A potential vegetable growing area lies on the leeward side of the island around Chateaubelair and also Layou. Roads in the eastern section serve banana lands. The list also includes other roads inland of Kingstown and a road serving Camden industrial park.

Funds available for the subproject are sufficient to fund only approximately one half of the mileage requested by the government. It is therefore necessary to identify an economically optimal subset of the government's request in order to establish a priority list of roads providing the greatest net economic benefits and on which subproject funds will be concentrated.

III. SCOPE OF WORK

A. The Contractor shall perform the following tasks:

(1) Become familiar with the agricultural economy of St. Vincent and with the subeconomies of the regions to be served by the proposed roads.

(2) Through consultations with RDO/C and Louis Berger engineers, become thoroughly familiar with the technical aspects of the project and with the cost projections.

(3) Travel to St. Vincent and spend approximately three weeks gathering on-site data in the regions to be served by the proposed roads, including: traffic counts; potential for expanded agricultural acreage and production as well as non-agricultural production that will be made possible by improved road access;, alternatives to the proposed roads; and potential for traffic creation and diversion from other transport modes that will result from road construction.

(4) Determine whether transportation is a binding constraint on agricultural production in each area and whether marketing and other arrangements will permit a production response if roads are improved.

(5) Assess existing traffic counts, vehicular composition and vehicle population in each area to be served by a road. Generate demand forecasts and undertake an economic analysis of each of the proposed subprojects. Each analysis will include consideration of at least the following topics:

(a) Vehicle cost savings (e.g., reduced vehicle wear, fuel consumption, repair of tires and suspension) attributable to the road improvements.

(b) Possible economies in road maintenance (savings in road repairs, implications of construction for increasing or decreasing the need for road maintenance). Special attention will be devoted to the added (or reduced) demands on the maintenance budget of the Government of St. Vincent and the Grenadines that will result from the road projects.

(c) attempt to estimate the value of time savings attributable to road improvements and the potential cost savings compared to other transporation modes.

(d) Identify, and to the extent possible, quantify, auxilliary and external benefits (or costs) to be derived from the road improvements (e.g., changes in accident rates, more rapid access to medical facilities.

(e) Identify and quantify the induced benefits ("generated traffic"). Work closely with agricultural experts to estimate the probable increase in agricultural production, and the proportion of that increase that can be specifically attributable to the road improvements.

(6) Work closely with engineers to determine a cost-effective solution for each route (by examining possible routes over alternate terrain, design speed, and road surface alternatives for projected usage.

(7) Include environmental damage as a cost, and environmental benefits as a benefit, in the analyses. To the extent possible, these should be quantified. Where quantification is not possible, the report should include a qualitative assessment of the effect of environmental factors on the economic analyses.

(8) Calculate measures of net economic benefits to be derived from each proposed subproject. In addition to any other measures that the Contractor may choose to employ (e.g., Internal Rate of Return, Discounted Benefit/Cost Ratio) the analysis must include Net Present Value Calculations and if data permit, Net Benefit/Investment ratios for each subproject.

(a) In evaluating benefits and costs, it is recommended that, as a first approximation, the following discount factor and shadow prices be employed, as appropriate (the Contractor may adjust these as further experience dictates):

(1) A shadow price of 1/2 the market wage rate for unskilled labor.

(2) A shadow price of 1.0 for skilled labor

(3) A discount rate of 12 percent.

(4) A Standard Conversion Factor of 0.85.

(b) A sensitivity analysis will be conducted on each calculation with respect to the discount rate chosen, the value of assumed benefits, and changes in costs (including environmental costs).

(9) Rank the proposed projects according to net economic benefits. If data permit, it is recommended that the activities be ranked by the Net Benefit/Investment ratio, defined as:

Present Value of Net Benefits/Present Value of the Investment.

If data availability does not permit such a calculation, the projects should be ranked according to their Net Present Values. Additional measures and rankings may be undertaken a the discretion of the Contractor.

(10) Based on the ranking, present a list of projects, that can be financed within the budget, that maximize the sum of Net Benefit/Investment (or Net Present Value) for all the the subprojects.

B. Report on Economic Evaluation of the Road Projects

The Contractor will prepare a report which will contain the economic analysis of each individual subproject, the rankings of the projects in terms of the Net Benefit/Investment ratios (or Net Present Values) and, based on the economic analysis, a recommended list of subprojects to be undertaken. The report will also provide sufficient narrative detail about nonquantified variables, such as environmental effects or other external benefits or costs, to permit decision-makers to weigh these factors in making the subproject selections.

IV. REPORTS

The report described above shall constitute the "final report" of the Contractor's work accomplished under this work order. A final draft of the report will be submitted to RDO/C in three (3) copies no later than two weeks after departing RDO/C.

V. RELATIONSHIPS AND RESPONSIBILITIES

Contractor personnel will be responsible to the Mission Director of RDO/C, or to his designee, and will coordinate his activities with Government officials in St. Vincent and the Grenadines.

VI. PERSONNEL

It is anticipated that the performance of this analysis will require approximately three to four person-weeks of effort, requiring the following expertise:

A. Transportation Economist. (3-4 weeks)

This individual must have an advanced degree in transportation economics and extensive experience in evaluating rural road projects. The individual must also have considerable knowledge of agricultural economics in developing countries.

ILLUSTRATIVE BUDGET

A.	Salaries	One (1) p. m. @$5,500	$ 5,500
B.	Overhead	150% of Salaries	8,250
C.	Per Diem	One (1) p. m. @ $3,600	3,600
D.	International and Regional Travel		1,500
		TOTAL	$18,850

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