REQUEST FOR PROPOSALS

FEASIBILITY STUDY FOR THE

PUEBLA INTERNATIONAL AIRPORT EXPANSION PROJECT IN MEXICO

Submission Deadline: **4:00 PM**

LOCAL TIME (PUEBLA, MEXICO)

JUNE 26, 2008

Submission Place: **Operadora Estatal de Aeropuertos, S.A. de C.V.**
Km. 91.5 Carretera Federal México - Puebla
Huejotzingo, Puebla, C.P. 74160
Mexico
Phone: (52-227) 102-5080

SEALED PROPOSALS SHALL BE CLEARLY MARKED AND RECEIVED PRIOR TO THE TIME AND DATE SPECIFIED ABOVE. PROPOSALS RECEIVED AFTER SAID TIME AND DATE WILL NOT BE ACCEPTED OR CONSIDERED.

REQUEST FOR PROPOSALS

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Section 1: INTRODUCTION

The U.S. Trade and Development Agency (USTDA) has provided a grant to Operadora Estatal de Aeropuertos, S.A. de C.V. (OEA) ("Grantee") to conduct a Feasibility Study on the proposed Puebla International Airport Expansion Project ("Project") in Mexico. The Grant Agreement is attached at Annex 4 for reference. The Grantee is soliciting technical proposals from qualified U.S. firms to provide expert consulting services to carry out the Feasibility Study.

1.1 BACKGROUND SUMMARY

In an effort to decongest Mexico City's largest airport, Benito Juarez International Airport (AICM), the Government of Mexico has implemented the Metropolitan Airports System (SMA) initiative to integrate the airports that serve Mexico City and the surrounding metropolitan area. An important airport in SMA initiative is the Puebla International Airport (PBC), which is located near the city of Puebla. The city of Puebla is located approximately 70 miles southeast of Mexico City and has a population of 2.5 million. PBC is currently served by five Mexican carriers and one U.S. carrier (Continental Airlines).

Recently, OEA has seen significant increases in aircraft operations, passenger flow, and cargo operations at PBC. PBC experienced a 151% passenger increase between 2002 and 2005 and an increase in the number of carriers from two in 2003 to six in 2006. OEA's airport expansion plans at PBC include additional ticket counters, passenger seating space, security clearance areas, baggage carousels, customs and immigration processing areas, commercial development, and multimodal transportation service areas.

The Puebla International Airport Expansion Feasibility Study will support the development of PBC's commercial terminal facilities and cargo facilities, and will provide OEA with an updated airport development plan. The Project is expected to improve airport infrastructure, help alleviate airport congestion, attract additional U.S. and Mexican airline and cargo service, and enhance regional growth. The Project supports the objectives of Mexico's 2007-2012 National Infrastructure Program.

A background Definitional Mission report is provided for reference in Annex 2.

1.2 OBJECTIVE

The objective of the Puebla International Airport Expansion Feasibility Study is to develop PBC's commercial terminal facilities and cargo facilities, and to provide an updated airport development plan. The Feasibility Study will assess the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics.

The Terms of Reference (TOR) for this Feasibility Study is attached as Annex 5.

1.3 PROPOSALS TO BE SUBMITTED

Technical proposals are solicited from interested and qualified U.S. firms. The administrative and technical requirements as detailed throughout the Request for Proposals (RFP) will apply. Specific proposal format and content requirements are detailed in Section 3.

Cost will not be a factor in the evaluation and therefore, cost proposals should not be submitted; upon detailed evaluation of technical proposals, one firm will be selected for contract negotiations. The amount for the negotiated contract has been established by a USTDA grant of U.S. $245,580 dollars.

1.4 CONTRACT FUNDED BY USTDA

The negotiated contract will be funded by USTDA in accordance with the terms and conditions of its grant to the Grantee. The contract must include certain USTDA mandatory clauses relating to nationality, taxes, payment, reporting, and other matters. The USTDA nationality requirements and the USTDA mandatory clauses are attached at Annexes 3 and 4 for reference.

Section 2: INSTRUCTIONS TO PROPOSERS

2.1 PROJECT TITLE

The project is called the "Puebla International Airport Expansion Project."

2.2 DEFINITIONS

Please note the following definitions of terms as used in this RFP.

The term "Request for Proposals" means this solicitation of a formal technical proposal including qualifications statement.

The term "Offeror" means the U.S. individual, or U.S. firm, including any and all subcontractors, which responds to the RFP and submits a formal proposal and which may or may not be successful in being awarded this procurement.

2.3 DEFINITIONAL MISSION REPORT

USTDA sponsored a Definitional Mission to address technical, financial, sociopolitical, environmental, and other aspects of the proposed Project. A copy of the Report is attached at Annex 2 for background information only.

2.4 EXAMINATION OF DOCUMENTS

Offerors should carefully examine this RFP. It will be assumed that Offerors have done such inspection and that through examinations, inquiries and investigation they have become familiarized with local conditions and the nature of problems to be solved during the execution of the Feasibility Study.

Offerors shall address all items as specified in this RFP. Failure to adhere to this format may disqualify an Offeror from further consideration.

Submission of a proposal shall constitute evidence that the Offeror has made all the above mentioned examinations and investigations, and is free of any uncertainty with respect to conditions which would affect the execution, and completion of the Feasibility Study.

2.5 PROJECT FUNDING SOURCE

The Feasibility Study will be funded under a grant from USTDA. The total amount of the grant is not to exceed U.S. $245,580 dollars.

2.6 RESPONSIBILITY FOR COSTS

Offeror shall be fully responsible for all costs incurred in the development and submission of the proposal or any other cost incurred by Offeror prior to issuance of an agreement or contract. Neither USTDA nor the Grantee assumes any contractual obligation as a result of the issuance of this proposal request, the preparation or submission of a proposal by an Offeror, the evaluation of proposals, or final selection.

2.7 TAXES

Offerors should submit proposals which note that in Annex 4, USTDA Mandatory Contract Provisions, USTDA funds are not to be used to pay taxes or duties under the laws of host country.

2.8 CONFIDENTIALITY

The Grantee will use its best efforts to preserve the confidentiality of any business proprietary or confidential information submitted by the Offeror, which is clearly designated as such by the Offeror.

2.9 ECONOMY OF PROPOSALS

Proposal documents should be prepared simply and economically, providing a comprehensive and concise description of the Offeror's capabilities to satisfy the requirements of the RFP. There is no necessity for expensive bindings, colored displays, or other promotional material unless such material is absolutely pertinent to the proposal. Emphasis should be placed on completeness and clarity of content.

2.10 SUBSTANTIVE PROPOSALS

The Offeror shall certify (a) that its proposal is genuine and is not made in the interest of, or on the behalf of, any undisclosed person, firm, or corporation, and is not submitted in conformity with, and agreement of, any undisclosed group, association, organization, or corporation; (b) that it has not directly or indirectly induced or solicited any other Offeror to put in a false proposal; (c) that it has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and (d) that it has not sought by collusion to obtain for himself any advantage over any other Offeror or over the Grantee or USTDA or any employee thereof.

2.11 CONDITIONS REQUIRED FOR PARTICIPATION

Only U.S. firms are eligible to participate in this tender. However, U.S. firms may utilize subcontractors from host country for up to twenty percent (20%) of the amount of the USTDA grant. USTDA nationality requirements are detailed in Annex 3.

2.12 LANGUAGE OF PROPOSAL

All proposal documents shall be prepared and submitted in English and Spanish.

2.13 PROPOSAL SUBMISSION REQUIREMENTS

The cover letter in the proposal must be addressed to:

C.P. Fernando Ramírez Elizalde
Director General
Operadora Estatal de Aeropuertos, S.A. de C.V.
Km. 91.5 Carretera Federal México - Puebla
Huejotzingo, Puebla, C.P. 74160
Mexico
Phone: (52-227) 102-5080

An original in English, an original in Spanish, one (1) copy in English, and three (3) copies in Spanish of your proposal must be received at the above address no later than 4:00 PM (local time in Puebla, Mexico), on June 26, 2008.

Proposals may be either sent by mail, overnight courier, or hand-delivered. Whether the proposal is sent by mail, courier or hand-delivered, the Offeror shall be responsible for actual delivery of the proposal to the above address before the deadline. Any proposal received after the deadline will be returned unopened.

Upon timely receipt, all proposals become the property of the Grantee.

2.14 PACKAGING

Each proposal must be sealed to ensure confidentiality of the information. The proposals should be individually wrapped and sealed, and labeled for content including "original" or "copy number x"; the original in English, the original in Spanish, one (1) copy in English, and three (3) copies in Spanish should be collectively wrapped and sealed, and clearly marked for content.

Neither USTDA nor the Grantee will be responsible for premature opening of proposals not properly labeled.

2.15 AUTHORIZED SIGNATURE

The proposal must contain the signature of a duly authorized officer or agent of the Offeror empowered with the right to bind the Offeror.

2.16 EFFECTIVE PERIOD OF PROPOSAL

The proposal shall be binding upon the Offeror for sixty (60) days after the proposal due date, and Offeror may withdraw or modify this proposal at any time prior to the due date upon written request, signed in the same manner and by the same person who signed the original proposal.

2.17 EXCEPTIONS

Firms agree by their response to the RFP announcement to abide by the procedures set forth therein. Material modifications in the TOR or responsibilities of the parties will not be accepted.

Any exceptions in the proposal shall be clearly identified, and shall include the scope of such exception, and its impact, on the procurement. The Grantee shall make final determination as to the responsiveness of such exceptions and their acceptability.

2.18 OFFEROR QUALIFICATIONS

As provided in Section 3, Offerors shall submit evidence that they have relevant past experience and have previously delivered advisory and Feasibility Study services similar to those required in the TOR.

2.19 RIGHT TO REJECT PROPOSALS

The Grantee reserves the right to reject any and all proposals and to accept or reject any or all of the items in the proposal, and to award the contract in whole or in part if it is deemed in the best interest of the Grantee.

2.20 PRIME CONTRACTOR RESPONSIBILITY

Offerors have the option of subcontracting parts of the services they propose. The Offeror's proposal must include a description of any anticipated subcontracting arrangements, including the name, address, and qualifications of consultants and subcontractors. USTDA nationality provisions are set forth in detail in Annex 3. The successful Offeror shall cause appropriate provisions of its contract, including all mandatory USTDA clauses, to be inserted in all subcontracts ensuing to ensure fulfillment of all contractual provisions by subcontractors.

2.21 AWARD

An award resulting from this RFP shall be made to the best qualified Offeror, taking into consideration the evaluation factors set forth herein; however, the right is reserved to reject any and all proposals received and, in all cases, the Grantee will be the judge as to whether a proposal has or has not satisfactorily met the requirements of this RFP.

2.22 COMPLETE SERVICES

The successful Offeror shall be required to (a) furnish all supplies, supervision, transportation, and other execution accessories, services, and facilities; (b) provide and perform all necessary labor; and (c) in accordance with good technical practice, with due diligence, and in accordance with the requirements, stipulations, provisions and conditions of this RFP and the resultant contract, execute and complete all specified work to the satisfaction of the Grantee.

2.23 INVOICING AND PAYMENT

Deliverables under the contract shall be delivered on a schedule to be agreed upon in a contract with the Grantee. The Contractor may submit invoices to the designated Grantee Project Director in accordance with a schedule to be negotiated and included in the contract. Upon approval of each invoice, the Grantee will forward the invoice to USTDA which will process payment to the Contractor. All payments by USTDA under the Grant Agreement will be made in U.S. currency.

Section 3: PROPOSAL FORMAT AND CONTENT

To expedite proposal review and evaluation, and to assure that each proposal receives the same orderly review, all proposals must follow the format described in this section.

Proposal sections and pages shall be appropriately numbered and the proposal shall include a Table of Contents. Offerors are encouraged to submit concise and clear responses to the RFP. Proposals shall contain all elements of information requested without exception. Instructions regarding the required scope and content are given in this section. The Grantee reserves the right to include any part of the selected proposal in the final contract.

The proposal shall consist of a technical proposal only. No cost proposal is required as the value of the USTDA grant is established at U.S. $245,580 dollars.

Offerors shall submit one (1) original in English, one (1) original in Spanish, one (1) copy in English, and three (3) copies in Spanish of the proposal. Proposals received by fax cannot be accepted.

The following sections and content are required for each proposal:

Transmittal Letter,
Cover/Title Page,
Table of Contents,
Introduction and Executive Summary,
Company Information,
Organizational Structure, Management Plan, and Key Personnel,
Technical Approach and Work Plan,
Experience and Qualifications, and
Miscellaneous.

Detailed requirements and directions for the preparation of each section are presented below.

3.1 SECTION 1: INTRODUCTION AND EXECUTIVE SUMMARY

An Executive Summary should be prepared describing the major facts or features of the proposal, including any conclusions, assumptions, and generalized recommendations the Offeror desires to make. Offerors are requested to make every effort to limit the length of the Executive Summary to no more than five (5) pages.

3.2 SECTION 2: COMPANY INFORMATION

3.2.1 Company Profile

Provide the information listed below relative to the Offeror's firm. If the Offeror is proposing to subcontract some of the proposed work to another firm(s), similar information must be provided for each subcontractor. Offerors are requested to limit the length of the Company Profile Information to one (1) page per firm.

1. Name of firm and business address, including telephone and fax numbers.

2. Year established (include former firm names and year established, if applicable).

3. Type of ownership and parent company, if any.

4. Project Manager's name, address, telephone and fax number, if different from (1).

3.2.2 Offeror's Authorized Negotiator

Provide name, title, address, telephone and fax number of the Offeror's authorized negotiator. The person cited shall be empowered to make binding commitments for the Offeror and its subcontractors, if any.

3.2.3 Negotiation Prerequisites

1. Discuss any impact of any current or anticipated commitments which may impact the ability of the Offeror or its subcontractors to complete the Feasibility Study as proposed and within the Project schedule.

2. Identify any specific information which is needed from the Grantee before commencing contract negotiations.

3.3 SECTION 3: ORGANIZATIONAL STRUCTURE, MANAGEMENT, AND KEY PERSONNEL

Describe the Offeror's proposed Project organizational structure. Discuss how the Project will be managed including the principal and key staff assignments for this Feasibility Study. Identify the Project Manager who will be the individual responsible for this Project. The Project Manager must have the responsibility and authority to act on behalf of the Offeror in matters related to the proposed Feasibility Study.

Provide a listing of personnel (including subcontractors and consultants) to be engaged in the Project, either U.S. or local with the following information for key staff: position in the Project; pertinent experience, curriculum vitae; other relevant information. If subcontractors are to be used, the organizational relationship between the firms must be described.

A manpower schedule and the level of effort for the Project period, by activities and tasks, as detailed under the Work Plan shall be submitted. A statement confirming the availability of the proposed Project Manager and key staff over the duration of the Project must be included in the proposal.

3.4 SECTION 4: TECHNICAL APPROACH AND WORK PLAN

Describe in detail the proposed technical approach and work plan. Discuss the Project requirements as perceived by the Offeror. Include a brief narrative of tasks within each activity series. Begin with the information gathering phase and continue through delivery and approval of all required reports.

Prepare a detailed schedule of performance that describes all activities and tasks within the Technical Work Plan, including periodic reporting or review points, incremental delivery dates, and other Project milestones.

Based on the Technical Work Plan, and previous project experience, explain when and where Offeror will require support from the Grantee. Detail the amount of staff time required by the Grantee or participating agencies and any work space or facilities needed to complete the Feasibility Study.

3.5 SECTION 5: EXPERIENCE AND QUALIFICATIONS

Provide a discussion of the Offeror's experience and qualifications which are relevant to the objectives and TOR for the Feasibility Study. If a subcontractor(s) is being used, similar information must be provided for the prime and each subcontractor firm proposed for the Project. Relevant experience and qualifications of key staff proposed shall be provided including letters of commitment from the individuals proposed concerning their availability for contract performance.

As many as possible but not more than six (6) relevant and verifiable project references must be provided, including the following information:

Project name,
Name and address of client (indicate if joint venture),
Client contact person (name/ position/ current phone and fax numbers),
Period of Contract,
Description of services provided,
Dollar amount of Contract, and
Status and comments.

Offerors are strongly encouraged to include in their experience summary primarily those projects that are similar to or larger in scope than the Feasibility Study as described in this RFP.

Section 4: AWARD CRITERIA

Individual proposals will be initially evaluated by a Procurement Selection Committee of representatives from the Grantee. The Committee will then conduct a final evaluation and completion of ranking of qualified Offerors, and the Grantee shall promptly negotiate a contract with the best qualified Offeror. If a satisfactory contract cannot be negotiated with the best qualified Offeror, negotiations will be formally terminated. Negotiations shall then be undertaken with the second most qualified Offeror and so forth.

The selection of the Contractor will be based on the following criteria and their corresponding assigned weights:

1. Offeror's Experience and Proposed Personnel (45%) – The Offeror shall demonstrate a minimum of ten (10) years of experience in planning, designing, and developing passenger and cargo aviation facilities, aviation market analyses, demand/capacity studies, traffic forecasting, facility requirements analyses, airport layout plan development, and environmental studies. In addition, the Offeror shall demonstrate relevant experience in the development of airport master plans, airport business plans, and airport project financing. The Offeror shall propose a team that is fully qualified to execute the entire Terms of Reference. The proposed team should have experience and qualifications in airport master planning; regulatory assessment; airport development and design (including CAD experience); passenger and cargo market assessment and forecasting; airside, landside, and cargo facility planning, design, and engineering; environmental assessment; airport business planning; and project implementation and financing.

2. Proposed Technical Work Plan (40%) – The Offeror shall demonstrate an understanding of all tasks in the Terms of Reference. Proposed efforts shall be responsive to the requirements outlined in the Terms of Reference.

3. Offeror's International Experience (15%) – The Offeror shall demonstrate international experience and capability to perform similar feasibility studies in Latin America, preferably in Mexico. The Offeror shall demonstrate experience working with international transportation ministries, civil aviation administrations, environmental regulatory agencies, and air traffic control agencies. The Offeror shall demonstrate its experience and ability to work in the Spanish language.

Proposals which do not include all requested information may be considered non-responsive.

Price will not be a factor in contractor selection.

ANNEX 1

FEDBIZOPPS ANNOUNCEMENT

C.P. Fernando Ramírez Elizalde, Director General, Operadora Estatal de Aeropuertos, S.A. de C.V., Km. 91.5 Carretera Federal México – Puebla, Huejotzingo, Puebla, C.P. 74160, Mexico, Phone: (52-227) 102-5080, Fax: (52-222) 774-2805.

B – Mexico: Puebla International Airport Expansion Project Feasibility Study

POC Evangela Kunene, USTDA, 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901, Tel.: (703) 875-4357, Fax: (703) 875-4009. Puebla International Airport Expansion Project, Mexico. The Grantee (Operadora Estatal de Aeropuertos, S.A. de C.V.) invites submission of qualifications and proposal data (collectively referred to as the "Proposal") from interested U.S. firms that are qualified on the basis of experience and capability to conduct a Feasibility Study for the Puebla International Airport Expansion Project in Mexico.

The objective of the Puebla International Airport Expansion Feasibility Study is to develop Puebla International Airport's commercial terminal facilities and cargo facilities, and to provide an updated airport development plan. The Feasibility Study will assess the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics.

The Terms of Reference (TOR) for the Feasibility Study include the following tasks: 1) Data Collection; 2) Airport Assessment and Analysis; 3) Passenger and Cargo Demand Forecast; 4) Facility Requirements; 5) Economic and Financial Analysis; 6) Airport Development Plan; 7) Environmental Analysis; 8) U.S. Sources of Supply; and 9) Final Report.

The U.S. firm selected will be paid in U.S. dollars from a $245,580 grant to the Grantee from the U.S. Trade and Development Agency (USTDA).

A detailed Request for Proposals (RFP), which includes requirements for the Proposal, the TOR, and a background Definitional Mission report is available from USTDA, at 1000 Wilson Boulevard, Suite 1600, Arlington, VA 22209-3901. To request the RFP in PDF format, please go to: https://www.ustda.gov/businessopps/rfpform.asp. Requests for a mailed hardcopy version of the RFP may also be faxed to the IRC, USTDA at 703-875-4009. In the fax, please include your firm's name, contact person, address, and telephone number. Some firms have found that RFP materials sent by U.S. mail do not reach them in time for preparation of an adequate response. Firms that want USTDA to use an overnight delivery service should include the name of the delivery service and your firm's account number in the request for the RFP. Firms that want to send a courier to USTDA to retrieve the RFP should allow one hour after faxing the request to USTDA before scheduling a pick-up. Please note that no telephone requests for the RFP will be honored. Please check your internal fax verification receipt. Because of the large number of RFP requests, USTDA cannot respond to requests for fax verification. Requests for RFP's received before 4:00 PM will be mailed the same day. Requests received after 4:00 PM will be mailed the following day. Please check with your courier and/or mailroom before calling USTDA.

Only U.S. firms and individuals may bid on this USTDA-financed activity. Interested firms, their subcontractors and employees of all participants must qualify under USTDA's nationality requirements as of the due date for submission of qualifications and proposals and, if selected to carry out the USTDA-financed activity, must continue to meet such requirements throughout the duration of the USTDA-financed activity. All goods and services to be provided by the selected firm shall have their nationality, source, and origin in the U.S. or host country. The U.S. firm may use subcontractors from the host country for up to 20 percent of the USTDA grant amount. Details of USTDA's nationality requirements and mandatory contract clauses are also included in the RFP.

Interested U.S. firms should submit their Proposal in English and Spanish directly to the Grantee by 4:00 PM (local time in Puebla, Mexico), June 26, 2008, at the above address. Evaluation criteria for the Proposal are included in the RFP. Price will not be a factor in contractor selection, and therefore, cost proposals should NOT be submitted. The Grantee reserves the right to reject any and/or all Proposals. The Grantee also reserves the right to contract with the selected firm for subsequent work related to the project. The Grantee is not bound to pay for any costs associated with the preparation and submission of Proposals.

ANNEX 2

BACKGROUND DEFINITIONAL MISSION REPORT

FINAL REPORT

Definitional Mission for Airport Expansion Projects in Mexico

Order No: TDA-CO2007510008

Puebla International Airport

San Luis Potosi International Airport

Querétaro International Airport

February 2008

Prepared by

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Phone: 703-875-4357 Fax: 703-875-4009 Web site: www.ustda.gov email: info@ustda.gov

1 EXECUTIVE SUMMARY

1.1 Project Overview

This report is intended to satisfy the requirements set forth by the United States Trade and Development Agency (USTDA) Order No: TDA-CO2007510008. The order is for a Definitional Mission (DM) entitled: "Airport Expansion Projects in Mexico". As stated in the Project Profile Background Information contained in Annex VII of the DM Scope of Work (SOW), the USTDA received requests for three airport expansion projects at the following airports: San Luis Potosí International Airport (SLP), Puebla International Airport (PBC), and Querétaro International Airport. These project requests are aimed to decentralize and further relieve Benito Juárez International Airport (Mexico City, AICM) as part of the newly created Metropolitan Airport System (SMA).

USTDA contracted with aviatDesign, Inc. (AVIAT) to conduct a Definitional Mission to Mexico to determine if these projects are technically, economically, and financially feasible, and provide economic opportunities for sector related Mexican and U.S. companies. In addition, AVIAT has also been tasked to develop the term of references (TOR) and budgets for Feasibility Studies resulting from the definitional mission analyses. Furthermore, as part of the DM, AVIAT has analyzed other potential airports that may provide relief to the SMA and has made recommendations for further USTDA studies.

This report is intended to comply, where feasible, with the report format guidelines presented by the USTDA. As such, the report is divided into the following main sections:

- Project Background
- Assessment of San Luis Potosí International Airport (SLP)
- Assessment of Puebla International Airport (PBC)
- Assessment of Querétaro International Airport (QRO)
- SLP Terms of Reference
- PBC Terms of Reference
- QRO Terms of Reference

It was evident from onsite visits and all of the research and analyses conducted during this project that the Mexican Aviation System is thriving and increasing significantly in volume. The SMA initiative to relieve congestion in Mexico's busiest metropolitan area is a concept that has enabled the system to cope with these increases in demand. However, as the system is reaching critical levels of saturation, the Mexican Federal and State governments have seen the need to further enhance the SMA's immediate airport infrastructure. This report indicates that there has not been significant expansion at the surrounding airports to coincide with the tremendous growth. AVIAT has therefore recommended that all three DM airports be considered for USTDA funding.

The following passages aim to provide an overview of the major report sections and an overview of the recommendations for each airport within the DM.

1.2 Project Background

The project background information includes an analysis of the current boom state of the Mexican Aviation System, a general airport overview and location analysis, and an analysis of the Mexican economy and related U.S. interests. Additionally, the newly emerging Mexican low cost carrier airline market is analyzed, including its effect on the need for new facilities at airports.

The projects background portion of the project also includes a detailed analysis of the system's major operators and shareholders, including Mexican private airport operator companies, the involvement of government agencies (SCT and ASA), and an analysis of the current situation at the Mexico City's Benito Juárez International Airport and its effort to further establish the SMA. Based upon the analyses conducted of the various airports within the SMA as part of the project background, AVIAT has recommended that Toluca International Airport and Cuernavaca International Airport be studied in further detail to determine if USTDA would be beneficial for U.S. interests and additional relief to the Mexican SMA. It is recommended that Desktop Studies be initiated to study these potential opportunities.

1.3 San Luis Potosí International Airport Recommendations

Based on the findings of the Definitional Mission, AVIAT recommends developing a Feasibility Study for the airport with emphasis on the expansion of the existing Runway 14-32. The expansion of the runway is intended to accommodate new and larger aircraft that can facilitate the current and projected passenger and cargo traffic volumes. This runway extension is anticipated to foster the interests of a number of larger airlines and cargo companies that will enhance the regional industrial growth. Moreover, the runway extension is expected to enhance the following items:

- The opening of airport-affiliated industrial parks to complement the integrated logistics center.
- Supplement the growth of Estafeta's capabilities as Mexico's largest express package service provider.
- A significant growth in employment related to passenger traffic growth.
- U.S. companies interests in the region.
- An increase in competition among regional operators to obtain affordable domestic travel for the traveling public.

1.4 Puebla International Airport Recommendations

Based on the findings of the Definitional Mission, AVIAT recommends the following:

To develop a Feasibility Study for Puebla International Airport for the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics. These expansion projects are anticipated to foster the continued interests of domestic and U.S. airlines, and cargo companies that will enhance the regional industrial growth. Moreover, these proposed developments are expected to enhance the following items:

- Significant potential growth in employment related to passenger traffic growth.
- U.S. companies interests in the region.
- Incentives for all-cargo airline companies to use PBC as a cargo destination/hub.

1.5 Querétaro International Airport Recommendations

Based on the findings of the Definitional Mission, AVIAT recommends the following:

To develop a Feasibility Study for Querétaro International Airport for the development of the airport's commercial terminal facilities, cargo facilities, and a master market and development plan. These expansion projects are anticipated to foster the continued interests of domestic and U.S. airlines, and cargo companies that will enhance the regional industrial growth. Moreover, these proposed developments are expected to foster the following items:

- Significant potential growth in employment related to passenger traffic growth.
- U.S. companies interests in the region.
- Incentives for all-cargo airline companies to use QRO as a cargo destination/hub.
- The opening of airport-affiliated industrial parks to complement the airport's link to multi-modal transportation modes.

2 SUMMARY PAGE

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4 PROJECT BACKGROUND

4.1 Introduction

The United States Trade and Development Agency (USTDA) contracted aviatDesign, Inc. (AVIAT) to conduct a Definitional Mission (DM) in order to determine the viability for further funding by the USTDA to support the preparation of Feasibility Studies for airport expansion projects in Mexico. This request for USTDA funding is primarily the result of an effort to decongest Mexico City's largest and most crowded airport, Benito Juárez International Airport (AICM) and to continue to foster efficient and safe operations for the newly designated Metropolitan Airports System (SMA) created by the Government of Mexico. In addition, with the continued investment and interest in the region by U.S. companies, it is evident that these types of projects will promote economic trade of goods and services between the U.S. and Mexico.

The requests for USTDA funding for this DM are for runway expansion, cargo expansion, and a Master Market and Development Plan.

The primary objectives for this Definitional Mission are to:

- Evaluate each of the aforementioned airports in terms of expansion possibilities and justify funding for USTDA development studies.
- Explore alternatives and activities which may prove to have better trade, development and expansion opportunities.
- Assess how each funding request fits within the Metropolitan Airport System (SMA).
- Prepare Terms of Reference for recommended studies.

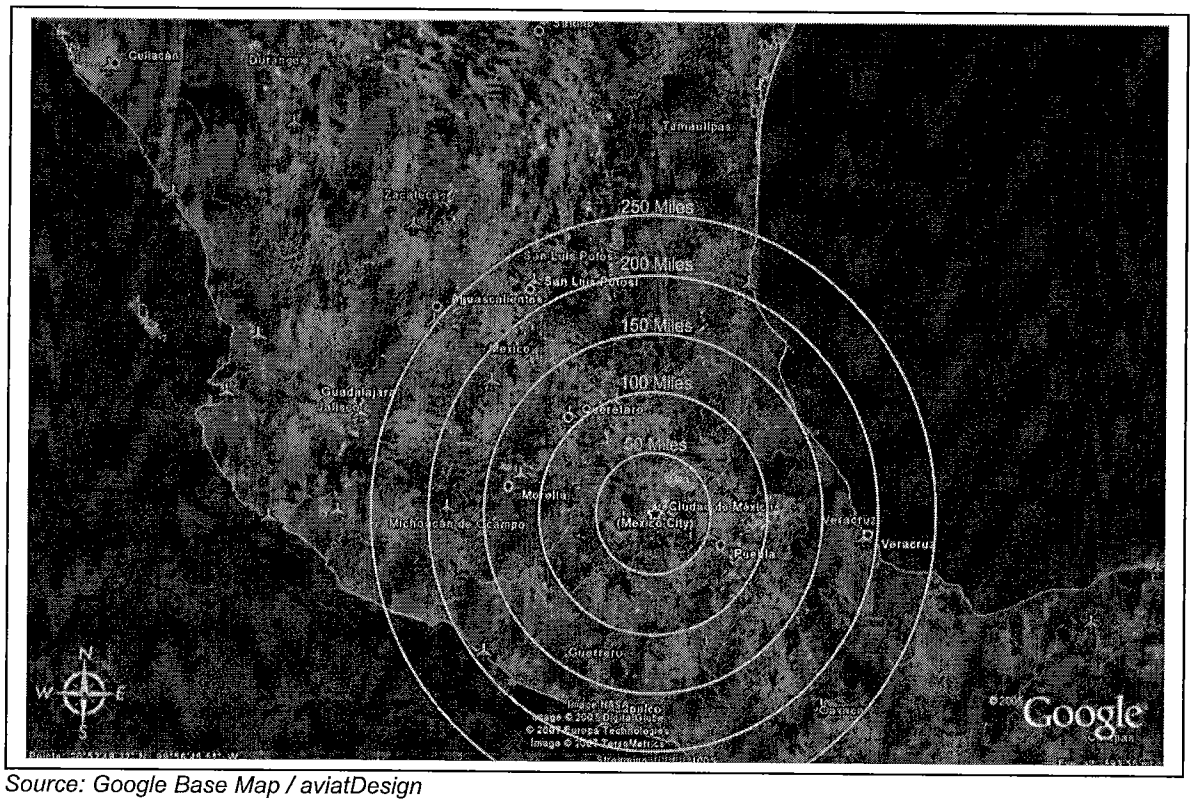
4.2 General Airport Overview

This DM focuses on three airports which were determined through a preliminary study to have potential for further development and expansion opportunities. These three airports include San Luis Potosí International Airport (SLP), Puebla International Airport (PBC), and Querétaro International Airport (QRO).

As illustrated in **Figure 1: Airport Location Map**, San Luis Potosí International Airport (SLP) is located approximately 263 miles (225 air miles) northwest of the Mexican capital of Mexico City. SLP handles passenger and cargo flight operations throughout the region and provides Estafeta, Mexico's larger provider of air express services, a hub for domestic and international small package deliveries. Despite the fact that the San Luis Potosí region is experiencing very significant growth in direct foreign investment of its manufacturing industry, the SLP airport has not been able to make the necessary changes to its airfield facilities to accommodate this growth, provide for additional aircraft movements, and larger aircraft.

Any development at SLP is intended to complement the area's multi-modal transportation capabilities including the intermodal services of the nearby railroad company Kansas City Southern of Mexico, which provides direct links to the southern parts of the U.S. from San Luis Potosí.

Figure 1: Airport Location Map
(Distance in Air Miles)



Source: Google Base Map / aviatDesign

Puebla International Airport (PBC) is considered a key reliever airport for Benito Juárez International Airport (AICM) for passenger and cargo traffic. Located only 70 miles (52 air miles) southeast of Mexico City (See **Figure 1: Airport Location Map**), PBC is also close to becoming saturated as no significant improvements have occurred since the previous USTDA study conducted in 2002. According to Annex VII in the DM SOW, PBC experienced a 151% passenger increase between 2002 and 2005, and a dramatic growth in the number of carriers from two in 2003 to six in 2006. For the physical size of this airport, with its single runway operation and lack of a cargo apron, this represents a very significant increase and is further evidence that the main airport in Mexico City is also at a saturation point. Despite the recent terminal improvements at AICM, it is highly likely that PBC will continue to see increases in traffic and airlines as AICM does not have the room to expand airfield facilities.

Querétaro International Airport (QRO) is located approximately 120 miles (105 air miles) northwest of the Mexican capital of Mexico City (See **Figure 1: Airport Location Map**). It is the newest and most recently constructed airport in the area. It is therefore a vital part of the SMA initiative to relieve traffic congestion at AICM. The general site construction of the new Querétaro Airport began in 1999 and the new passenger terminal construction began in 2002. The new QRO became fully operational in November 2004, followed immediately by the closure of the "Fernando Espinosa Gutiérrez" Airport[1]. Since its opening, the new airport has attracted private, cargo and commercial passenger operations but still maintains a largely underdeveloped and underutilized business and recreational traveler air service market. QRO has requested USTDA funding for the creation of a Master Market and Development Plan.

In order to understand the foundation for the proposed projects it is pertinent to review the current Mexican economy, the aviation system (including the current airline situation and airport development), and the Metropolitan Airport System in Mexico City.

4.3 Mexican Economy and U.S. Interests

Mexico has a free market economy that recently entered the trillion dollar level. It contains a mixture of modern and outmoded industry and agriculture, increasingly dominated by the private sector. Recent administrations have expanded competition in seaports, railroads, telecommunications, electricity generation, natural gas distribution, and airports. Per capita income is one-fourth that of the US; income distribution remains highly unequal. Trade with the US and Canada has tripled since the implementation of NAFTA in 1994. Mexico has 12 free trade agreements with over 40 countries including, Guatemala, Honduras, El Salvador, the European Free Trade Area, and Japan, putting more than 90% of trade under free trade agreements. The new President Felipe Calderon Administration, which took office in December 2006, faces many of the same challenges that former President Fox tried to tackle, including the need to upgrade infrastructure, modernize the tax system and labor laws, and allow private investment in the energy sector. With inflation under control, foreign direct investment continuing to grow and relatively stable debt and equity markets, Mexico's macro-economic picture is a healthier one than in early years of this decade. (BuyUSA.gov)

The North American Free Trade Agreement (NAFTA), which was enacted in 1994 and created a free trade zone for Mexico, Canada and the United States, is the most outstanding feature in the U.S. – Mexico bilateral relationship. Since the implementation of NAFTA, Mexican imports from the U.S. have increased exponentially, totaling over $120 billion in 2005. Through October 2006, U.S. exports to Mexico were $112.3 billion, up 13.3% over the same period in 2005. U.S. – Mexico bilateral trade has increased 232%: from $88 billion in 1993 to $292 billion in 2005, although China just surpassed Mexico as the U.S.'s second-largest trading partner. In 2006, the economy grew by 4.5%, the highest figure since 2000, although the Treasury predicts growth slowing in 2007 to 3.6% due to slowdowns in U.S. growth and Mexican industrial production. (BuyUSA.gov)

[1] Source: Aeropuertos y Servicios Auxiliares (ASL) Retrieved from www.asa.gob.mx, July 10, 2007.

In addition to industry growth, several large banks, including the World Bank, have also been providing financial assistance and investment in Mexico's infrastructure and socioeconomic health, including projects such as energy conservation/renewable energy, judicial modernization, education and environmental protection. Such interest shows that Mexico is viewed as an opportunity for internal and external growth in all sectors. (World Bank)

In terms of aviation related business, Mexican businesses bought significantly more U.S. aerospace products and services in 2006 than during the past fifteen years. Also, many companies are choosing Mexico as their aerospace manufacturing site due to the quality of its workers, the proximity to the United States, and the benefit of the North American Free Trade Agreement. Currently, 125 firms and 16,500 workers are employed in this industry. Efforts are being made to improve the education of Mexican aerospace workers. As the aerospace market expands in Mexico, there is a higher demand for products and services related to this industry. (BuyUSA.gov)

The primary U.S. industry in Mexico remains the automotive sector. There are approximately one thousand auto parts manufacturers in Mexico and about 70% of them are subsidiaries of foreign corporations, mainly from the United States. Mexico's auto part industry is relatively healthy as evidenced by its main performance indicators. There was an increase of 17% in the year 2004 compared to 2003, which attests to the robustness of Mexico's foreign auto parts trade. Mexico's main trade partner is the United States, where 75% of the goods are exported and 71% of the goods are imported. Fifty-eight percent of the automobiles sold in Mexico are imported, of which, 75% come from the United Sates. During 2000, automotive production reached a record high of 1,889,486 units. By 2004, that amount was reduced to 1,568,430 vehicles. The Mexican Association of the Automotive Industry (AMIA) stated that exports were over 1,434,110 units in 2000 and 1,132,504 in 2004. During the first semester of 2005, vehicle production was 7.1 % lower compared to the same period in 2004. U.S. exports of parts, equipment, and first and second tier components have experienced a slowdown in the first part of the year 2004. However, increased Mexican production of new models that have shifted from U.S. assembly plants is now also increasing U.S. exports for auto parts. (BuyUSA.gov)

It was evident from the site visits and research conducted for this DM that the automotive industry, including many U.S. manufacturers, was present at every city and airport included in the study. Additionally, it was found that many more U.S. companies have either planned, or are opening new manufacturing sites towards the end of 2007 and the beginning of 2008. Perhaps the largest of these companies is General Motors, which plans on opening a new manufacturing plant in San Luis Potosí.

4.4 Mexican Aviation System: Low Cost Carrier Airlines

The most significant and current issue that is being experienced by the Mexican Aviation System is the introduction and operation of low cost carrier (LCC) airlines that are operating domestic routes that were previously reachable only by bus. This introduction of the LCC mirrors the current situation within the United States and Europe where the resulting

competition has promoted major ticket price decreases, and in turn, allowed more budget travelers to use airlines for easier travel to closer destinations. The result has also seen a major development in the airport industry to accommodate these new influxes of airline passenger travel. Along with U.S. and foreign interest in Mexico, the potential influxes in Mexican domestic travel will warrant major increases in airport facilities as well.

Prior to 2006, the Mexican government had a virtual lock on domestic air travel through two state-owned airlines, Aeromexico and Mexicana Airlines. Fares were kept high enough that only wealthier people could afford to fly, as the rest of the population was using the extensive Mexican bus system. This changed significantly as the government sold the two national airlines, offering them separately to create competition between them for the first time in more than a decade. Since this occurrence, there have been ten (10) major low cost carriers competing in the Mexican aviation system, including:

- Volaris
- Alma de México
- A Volar
- Mexicana's Click
- Aeromar
- ABC Interjet
- Aviacsa
- AeroCalifornia
- Republic Air
- VivaAerobus

From the research conducted for this definitional mission, it has become evident that these new low cost carriers have put an additional strain on capacity within the Mexican aviation system, especially in the Mexico City SMA. As such, this increase in domestic travel has been taken into account to justify the possible expansion for the DM projects.

4.4.1 Low Cost Carrier Competition: The Mexican Bus System

It is also important to note that in parallel with Mexico's investment in its road network, the Mexican bus companies invested heavily in new, executive-style buses that cover virtually the entire country (the Baja California Peninsula is the exception) and transport their customers in comfort and safety, on high-specification, quiet, modern air-conditioned buses. First-class buses only travel on the toll-roads, making the journey fast and efficient. The Mexican long-range bus system is a highly organized and efficient system that puts it in direct competition with the new low cost carrier airlines. The Mexican bus system consists of a conglomeration of syndicates that may very well prove to be a hindrance in the future with regard to domestic travel competition.

4.5 Mexican Aviation System: Airport Development

The development of airports in Mexico has been a high priority for Mexico's Federal Government. According to U.S. Commercial Service research, total airport demand for imported equipment and services increased by 9.8% from 2003 to 2005. In addition, U.S. exports increased by 9.7% with the main competitors being French, British, German, and Canadian companies. Furthermore, thanks to an improved economy and a stronger internal market's demand, expectations for airlines serving Mexican airports have also improved, with national forecasts depicting seat utilization rate increases of 15% in the next few years. This is also primarily a result of the LCC.

The investment for the modernization of the SMA, consisting of AICM and the peripheral terminals of Toluca, Cuernavaca, Puebla, and Querétaro, will add up to USD 1 billion. Aeropuertos y Servicios Auxiliares (ASA), one of the stakeholders of the airports, has stated that together these airports handle 60 million passengers and more than 700,000 aircraft movements a year. These numbers are forecast to increase steadily over the years.

As a result of these increases in air traffic and market demand, along with the subsequent development plans, the U.S. Department of Commerce's Commercial Service has indicated that the prospects for investment in this aviation sector include the following:

- Electronic Integrators
- Printed Circuits
- Parts for Engines
- Electric Capacitors
- Lamps and Airfield Lighting
- Radar Apparatus and Navigation Systems/Aids
- Baggage and Cargo Lifting (Handling Systems)
- Conveyors and Equipment
- Air-Conditioning
- Control, Regulation, and Energy Conversion Systems
- Airport Security Sound and Camera Systems
- Cargo Loaders and Fork Lifters
- Work Trucks and Self-Propelled Passenger Carriers
- Aircraft Launch Gear
- Management Consulting Services
- Aircraft Sales
- Establishment of Free Trade Zones (FTZ)

All of the aforementioned items can be provided by an array of U.S. companies, especially within the technology and security fields as the after effects of the September 11th terrorist attacks have proven. Additionally, as the Mexican Federal Government has also developed plans to increase national security, certain U.S. defense companies may also benefit from the growth experienced in the Mexican aviation sector. These opportunities may include but are not limited to:

- Exporting Aircraft (helicopters, surveillance aircraft, personnel and cargo airships)
- Surface Personnel Transports
- Telecommunications Devices
- Logistics Material
- Dual-Use Equipment, Parts, Components, and Maintenance Services

All of the abovementioned opportunities may also lead to other opportunities in other procurement areas of the Mexican Government.

4.5.1 Mexican Aviation System Operators and Stakeholders

4.5.1.1 Government Agencies

The Mexican Aviation System is under the control of the Secretariat of Communications and Transport (SCT). To enhance and assure the effective management and organization of the various aviation sectors, the Mexican Government instituted an aviation policy in 2001, guaranteeing operational security, greater public access to air transport services, and upgrade standards to global levels. As such, several agencies were given to task through the SCT to run the system; these agencies include:

- Dirección General de Aeronáutica Civil (DGAC)
- Aeropuertos y Servicios Auxiliares (ASA)
- Servicios a la Navegación en el Espacio Aéro Mexicano (SENEAM)

The DGAC is the equivalent of the Federal Aviation Administration (FAA) in the United States and is the Mexican Government authority responsible for the control, safety, and security of domestic and international air transportation. The DGAC is therefore also responsible for developing policies and enforcing regulation of airlines, airport, and air traffic control and navigation within the Mexican national airspace system.

ASA is an independent government agency with equity capital and legal identity. Created in 1965, ASA has contributed to the building of the airport industry in Mexico for over 42 years. The main functions of the company are to design, build and operate airport terminal, and provide auxiliary airport services such as fuel and ground equipment. Currently, ASA is involved in the operation of 21 airports within Mexico,

including the Mexico City International Airport Benito Juárez (AICM), as well as 62 fuel stations throughout the country. It is important to note that it was found during this project that ASA has recently lost significant operating power within the Mexican aviation system due to political issues. ASA now primarily provides services only and is not involved in any SCT or DGAC decision-making for airport development in Mexico.

SENEAM is the Mexican agency responsible for the operation of the air traffic control system. This includes airport meteorological services, maintenance and operation of the communication systems between airports, and navigational aid systems.

4.5.1.2 Airport Ownership and Concession Groups

The world-wide financial crisis during the late 1980s and early 1990s, and the creation of an economic model based on streamlining government functions, had considerable impact on airport development in Mexico. The Federal Government decided that the expansion and updating of the airport network in the country would call for the participation of private capital and asked for a new legal framework targeted at the promotion of airport development by means of private investment based on clear and transparent rules as well as on competitive and non-discriminatory terms. In 1989, Mexico had a network of 58 airports administrated by ASA only. This number was reduced to 21 upon initiation of the privatization process of the 35 most profitable airports in 1998. These airports were divided into three (3) packages/regions and three multinational airport concession groups. Each concession is under a 50-year concession agreement, with an option to extend the concession for an additional 50 years. These groups are:

- Aeropuertos del Grupo Aeropuertario del Sureste (ASUR)
- Aeropuertos del Grupo Aeropuertario de Pacifico (GAP)
- Aeropuertos del Grupo Aeropuertario de Centro Norte (OMA)

The Mexican government granted ASUR the right to operate and develop nine (9) airports in south-eastern Mexico. The nine airports in the ASUR group are located in six (6) different Mexican states whose populations, to a great extent, earn their living from tourism. These airports are in the cities of Cancún, Cozumel, Huatulco, Mérida, Minatitlán, Oaxaca, Tapachula, Veracruz, and Villahermosa. The original consortium included GTM of France, Cintra from Spain, Copenhagen Airports, and Tribasa (Mexican construction company). Currently 15% of ASUR's capital is held by Inversiones y Técnicas Aeroportuarias, S.A. de C.V. (ITA) which is co-owned by Fernando Chico Pardo and Copenhagen Airports. The remaining 85% is publicly traded; ASUR is listed on the New York Stock Exchange (NYSE) and the Mexican Stock Exchange (Bolsa Mexicana de Valores).

GAP administers, operates, maintains, and develops 12 airports in the Pacific and Central regions of Mexico. The main airports are in the cities of Guadalajara,

Hermosillo, Puerto Vallarta, Aguascalientes, La Paz, Tijuana, and Leon. GAP has developed a comprehensive plan of airport development that is described in the Development Master Plan for 2005-2009, depicting the investment of approximately 165 million USD (1,800 million Pesos) for the period. In terms of ownership of GAP, AENA Internacional is the operator partner, holding a 25.5% share. AENA is a major Spanish airport operator, managing and operating 47 airports in Spain. APN is the Mexican partner, holding a 25.5% share as well. APN is a consortium composed of Holdinmex, S.A. de C.V., and Inversora del Noroeste, S.A de C.V. (Unión Fenosa). Inversora del Noroeste, S.A de C.V. hold a 20.84% share and is a Mexican company controlled by Union Fenosa, a Spanish energy group. Dragados holds the remaining 18.16% share of GAP, Dragados is one of the main construction companies of Spain. In February 2006, GAP's shares were listed on the New York Stock Exchange under the ticker symbol "PAC" and on the Mexican Stock Exchange under the ticker symbol "GAP".

OMA operates and manages 13 international airports in the north and central regions of Mexico. OMA's airports serve Monterrey, México's third largest metropolitan area, the tourist destinations of Acapulco, Mazatlan, and Zihuatanejo, and nine (9) other regional centers and border cities. OMA's master development program includes investments of approximately 183 million USD (2 billion Pesos) between 2006 and 2010. Of the total, 42 million USD (457.5 million Pesos) will be assigned to the construction and remodeling of terminals starting with Monterrey International Airport's Terminal B. OMA's strategic shareholder members are ICA, Mexico's largest engineering, procurement, and construction company (owning 48.5% of OMA), and Aéroports de Paris Management (strategic partner), subsidiary of Aéroports de Paris, the second largest European airports operator. Forty-eight percent of OMA was sold to the public in 2006 and is publicly traded. OMA is listed on the Mexican Stock Exchange (OMA) and on the NASDAQ Global Select Market (OMAB). Additionally, OMA is the operator of San Luis Potosí International Airport and is included in this DM.

4.5.2 Mexico City Benito Juárez International Airport (AICM)

In order to assess the DM airports in question, it is considered essential to first look at the reason for the proposed expansion, the congestion of Mexico's main airport. Due to the lack of available land for expansion, the increasing Mexico City population, and the consistent increase in Mexican air travel, Benito Juárez International Airport (Mexico City International Airport) is one of the most congested airports in the world. However, it is considered to be one of Latin America's most important airports as it links the Mexican capital to 48 cities nationwide and to 55 cities abroad[2]. The Airport was formerly operated by ASA, but due to political issues and events, ASA only serves as an airport services support entity and has minority shareholder status. The airport is currently operated by the Aeropuertos del Grupo Aeropuertario de la Ciudad de México (GACM) with the "AICM" name as the operating authority.

[2] Source: Aeropuertos y Servicios Auxiliares (ASL) Retrieved from www.asa.gob.mx, July 10, 2007.

Current expansion at AICM has primarily consisted of the addition of a new domestic terminal (Terminal 2). ASA has stated that construction of the new Terminal 2 has cost more than 600 million USD, of which over 200 million USD were provided by the Federal Government, while the other 400 million USD were obtained from a syndicated credit granted by four banks: Citi Group- Banamex, BBVA Bancomer, Inbursa, and HSBC, through Nacional Financiera. This financing was part of the first credit obtained by the Federal Government that will not be converted into public debt since it will be paid off with a portion of the annual passenger facility charges/airport user taxes (Tarifa de Uso Aeroportuario, TUA) to be collected during that period.[3]

With the expansion of Mexico City International Airport, the terminals combined will have an annual capacity to serve 32 million passengers, 20 million at Terminal 1 currently in operation, and 12 million at the new Terminal 2, up from nearly 25 million at its present capacity. No plans for further runway expansion are in development due to the lack of available physical space.

4.5.3 The Metropolitan Airport System (SMA)

The Mexican Government and the SCT have developed a strategic plan to decentralize the operations of the Mexico City Benito Juárez International Airport (AICM), through a Metropolitan System of Airports integrated by the peripheral airports in Toluca, Puebla, Cuernavaca and Querétaro. Puebla and Querétaro are included in this DM. Other airports, such as San Luis Potosí Airport, will also receive investment to increase capacity and improve cargo and passenger services. The Metropolitan Airport System (SMA) is seeking to utilize the existing airport infrastructure in the surrounding states, to distribute and decentralize the demand for operations, which used to be concentrated in one air Terminal at AICM. Over the last five years more than a billion dollars have been invested to expand and improve SMA facilities. Additionally, the SMA consolidation has fostered the decentralization of passengers and cargo from the AICM and stimulates the development of business and the industry in the states of Puebla, Mexico, Morelos, and Querétaro. Currently, the SMA as a whole is able to handle 700,000 operations and move 60 million passengers per year.

4.5.4 Discussion of Toluca International Airport

Toluca International Airport (TIA) is part of the official SMA initiative and is perhaps the most immediate contributor to the decentralization of Mexico City International Airport (AICM) due to its close location and cargo capabilities. TIA has recently completed its modernization and expansion and will now be able to process 1,850 passengers during peak hours and handle 4.1 million passengers annually. The Mexican Federal Government invested 60 million USD in this expansion. The airport serves six (6) airlines and also allows for airplanes to land under adverse weather conditions as a result of upgraded navigational aid facilities (IL CAT III capability). This ability makes

[3] Source: Society of British Aerospace Companies (SBAC), June 11, 2007.

Toluca a great alternative for commercial airlines as any upgraded navigational aids at an airport ensure enhanced safety.

According to information gathered by the U.S. Commercial Service in Mexico City, Federal Express (FedEx) has a cargo and logistics center near the customs offices at the airport. The company was there before the airport was built and is distributing cargo and packages from Toluca to the rest of the country. The FedEx facility encompasses approximately 107,600 square feet (10,000 square meters) and handles a daily average cargo volume of 100,000 - 110,000 pounds for inbound and outbound operations combined.

It is important to note that Toluca is considered a "getaway" destination for Mexico City inhabitants and does not constitute a complete "reliever" airport. It is also located in the higher mountainous area of the immediate Mexico City environment. The weather in this location is notoriously adverse. Additionally, vehicular transportation to and from Toluca is time consuming and difficult, again due to its higher altitude location and winding, indirect roadways. As such, to re-route international or domestic air traffic to Toluca in order to accommodate Mexico City bound passengers is therefore not efficient.

Even though TIA is part of the SMA initiative and does provide some sort of relief in terms of cargo operations, it cannot be considered a passenger relief on AICM's congestion issues. It is recommended that the USTDA conduct a desktop study to consider the potential U.S. interests in further enhancing cargo operations in this area.

4.5.4.1 Recommendations for Further Study

According to the information presented above, Toluca International Airport (TIA) has experienced significant investment in its infrastructure to accommodate increasing levels of passenger and cargo activity. The main difference between TIA and the other airports of this DM is that Toluca is not considered to be a specific industrial center or business center. However, with FedEx using the airport as a package transfer facility, the airport's current infrastructure development, and the fact that it is part of the SMA initiative, warrants further study of potential investment and business opportunities for enhanced cargo operations, tourist facilities, and business infrastructure development. It is therefore recommended that a Desktop Study be conducted to detail the airport's effects on the Mexican SMA and assess the potential contribution of the airport improvements to the Toluca vicinity in terms of business opportunities.

4.5.5 Cuernavaca Airport

Cuernavaca Airport is located 50 miles (85 kilometers) south of Mexico City and is also part of the SMA. Although it is not part of this DM, the airport's impact and location should be taken into account when referring to the overall traffic congestion relief for AICM. According to ASA, its current operator, the Federal Government invested 6.6 million dollars to refurbish pavements and construct operational zones in Cuernavaca's passenger Terminal. The airport construction works included a complete rehabilitation

of the 9,180 foot (2,800 meter) long and 150 foot (45 meters) wide runway, rehabilitation of taxiways and the commercial aviation apron, and the construction of a new general aviation apron.

According to conversations held with SCT representatives, Cuernavaca is considered to be primarily a general aviation airport that is not conducive to larger commercial aircraft operations. However, with the vested interest in Cuernavaca as mentioned above, and its close location to AICM, it is recommended that a Desktop Study be conducted to gauge the airport's importance within the SMA and its potential to expand the surrounding area in terms of industry, business, and tourism.

5 SAN LUIS POTOSÍ INTERNATIONAL AIRPORT

5.1 Project Description

San Luis Potosí International Airport (SLP), by the direction of Grupo Aeroportuario Centro Norte (OMA), has requested USTDA funding to support a Feasibility Study for expansion of existing runways in order to receive new larger aircraft to accommodate the current and projected passenger and cargo traffic volumes. More specifically, the extension of the main runway is to accommodate the following:

- a larger number of airlines and cargo companies to choose SLP as a destination,
- the integration of a multimodal logistics center,
- the significant growth experienced by Estafeta (small package cargo service),
- the opening of airport-affiliated industrial parks to complement the integrated logistics center,
- a significant growth in employment related to passenger traffic growth,
- U.S. companies interest in the region,
- An increase in competition among regional operators to obtain affordable domestic travel for the traveling public.

5.1.1 Airport Setting

San Luis Potosí is located approximately 263 miles (424 kilometers) northwest of Mexico City and has a population of approximately 2.5 million. The State of San Luis Potosí is one of the most important industrial centers of Mexico, primarily because of its central location in Mexico and its proximity to other industrial cities such as Mexico City, Monterrey, and Guadalajara, with the primary products being automotive and construction materials and technical services. Additionally, San Luis Potosí boasts 19 technical schools and institutes to enhance Mexican employment in the industrial sectors.

The "Ponciana Arriaga" San Luis Potosí International Airport (SLP) is located 4.5 miles (15 kilometers) northeast of the City of San Luis Potosí and has an elevation of 6,070 feet (1,850 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 81°F and 86°F (27°C and 30°C). The airport can be accessed from the Matehuala Highway at kilometer marker 9.5, which connects to the city's main circular beltway, the Anillo Periferico, which in turn connects to the main arterial highways that connect to Mexico City, Zacatecas, and Guadalajara.

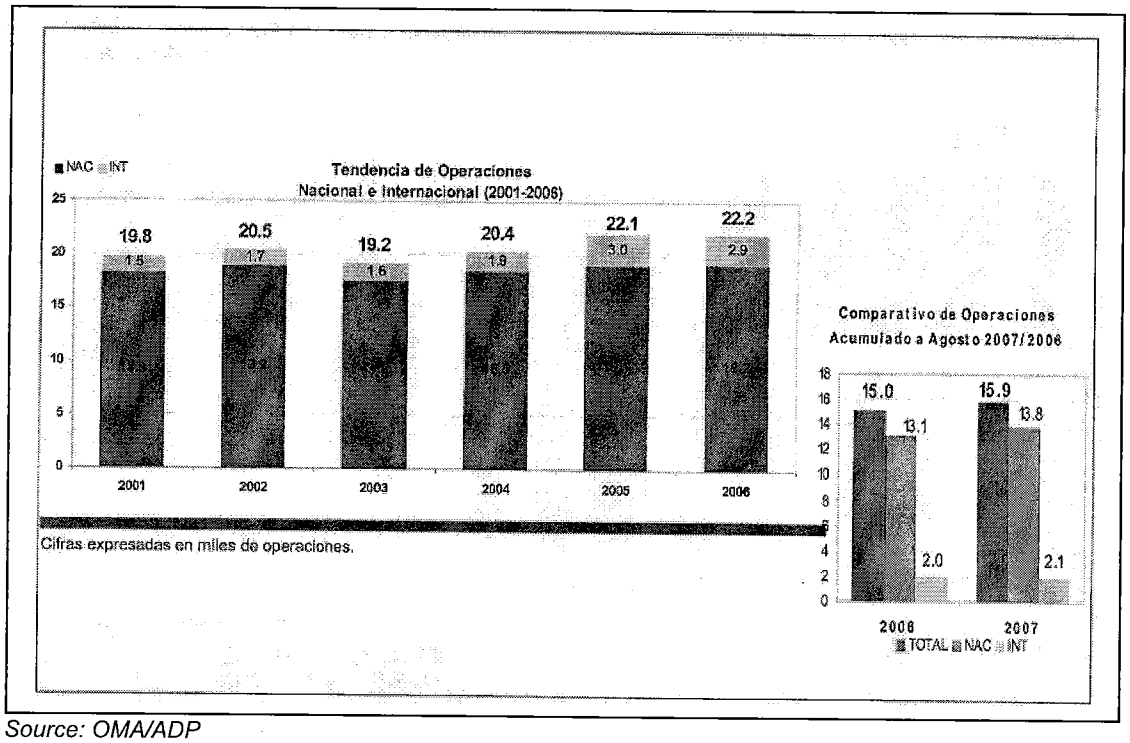
It is important to note that SLP is not part of the SCT designated Metropolitan Airport System (SMA) aimed to relieve congestion at Mexico City Benito Juárez International

Airport (AICM). However, the airport is considered close enough for air transport to provide relief to AICM in terms of both passengers and cargo.

5.1.2 Airport Operations and Passenger Statistics

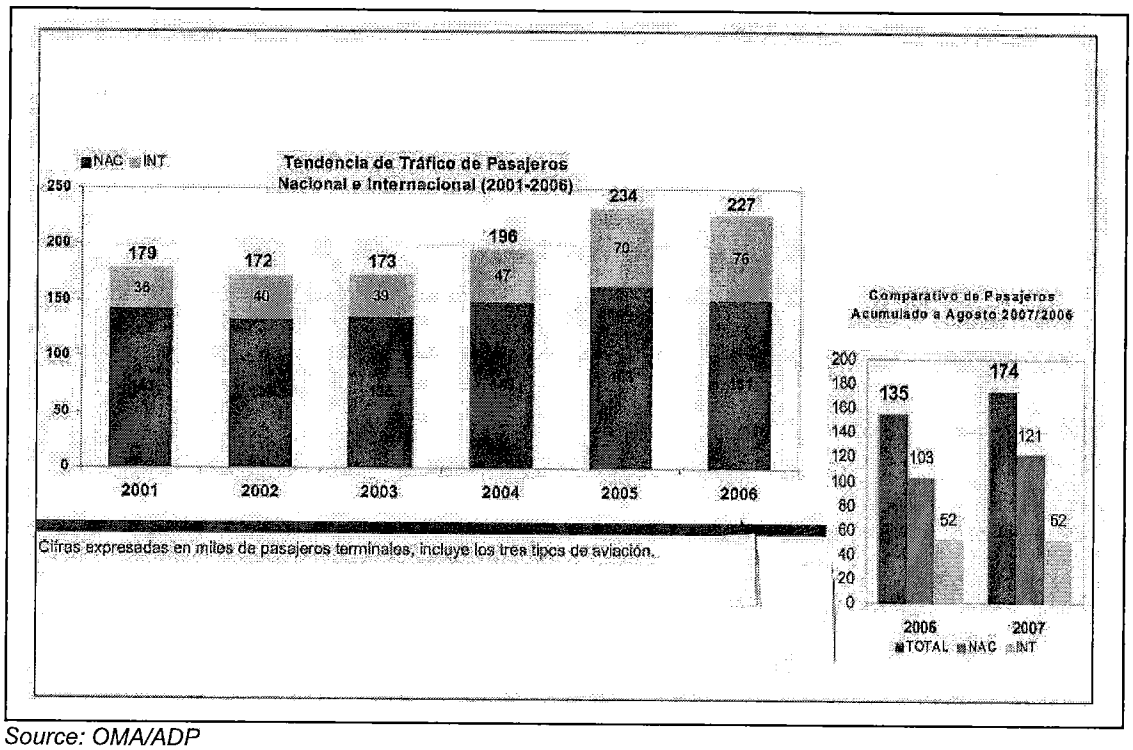
Figure 2: SLP Historical Aircraft Operations and **Figure 3: SLP Historical Passenger Traffic** represent SLP's historical and current airport operations and passenger statistics. It is evident from this data that both aircraft operations and passenger traffic has been increasing significantly since 2004 with even higher trends occurring in 2007.

Figure 2: SLP Historical Aircraft Operations



Source: OMA/ADP

Figure 3: SLP Historical Passenger Traffic



Source: OMA/ADP

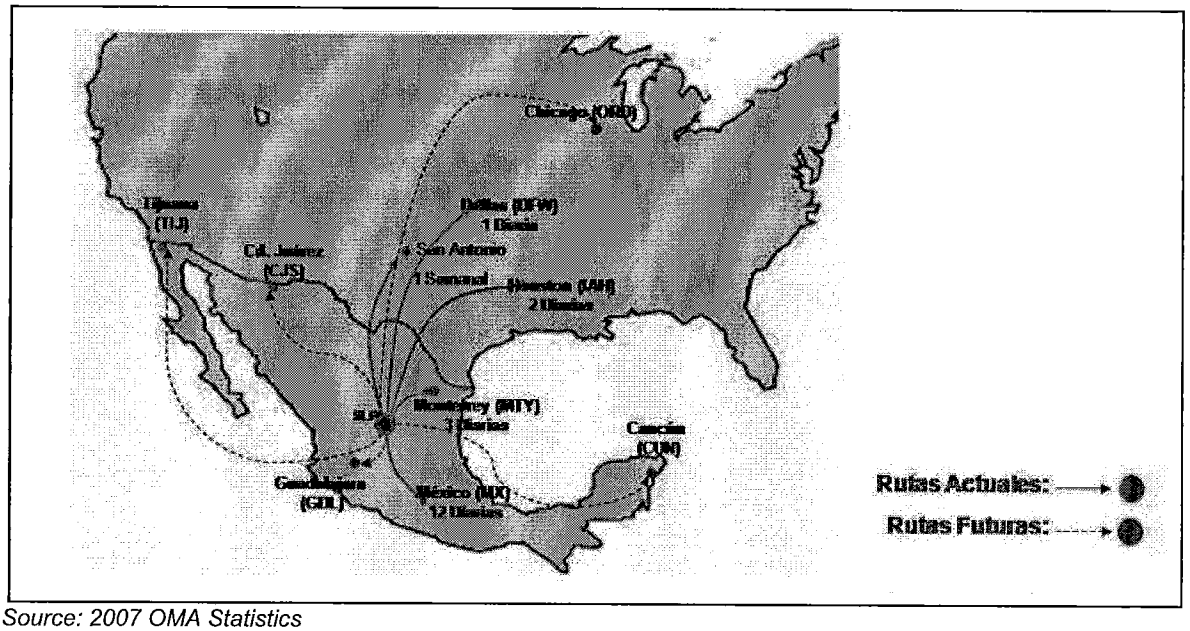
5.1.3 Commercial Airlines Serving SLP

SLP is currently served by three (3) domestic carriers and two U.S. carriers. The three domestic carriers include the following:

- Aero Mexico
- Aeromar
- Mexicana

These carriers provide service from San Luis Potosí to cities including Mexico City, Monterrey, Guadalajara, Tampico, Querétaro, and Tijuana. The U.S. carriers are Continental Airlines and American airlines which provide daily service to Chicago, Houston, San Antonio, and Dallas. These U.S. cities represent the main points for travel of emigrant workers residing or working in the U.S. **Figure 4: SLP Airline Route Map** depicts SLP's existing and future airline routes based on an expressed airline interest.

Figure 4: SLP Airline Route Map
(Existing and Proposed)



Source: 2007 OMA Statistics

5.1.4 Airport Physical Facilities Overview

5.1.4.1 Airfield

The SLP airport property encompasses approximately 1,302 acres (527 hectares). The ICAO Airport Reference Code (ARC) is 4C, and the airfield consists of two runways. Runway 14-32 is oriented in a northwest-southeast direction, is the primary runway, and is 9,850 feet (3,000 meters) long and 150 feet (45 meters) wide. Runway 14 is used 70% of the time. The secondary runway, Runway 04-22 is oriented in a northeast-southwest direction and is 3,280 feet (1,000 meters) long by 100 feet (30) meters wide. Runway 14-32 is anticipated to be lengthened by 3,937 feet (1,200 meters) to accommodate larger aircraft. Currently, the airport only has sufficient land to extend the runway by 2,300 feet (700 meters). This limitation is due to the existing airport property lines. The acquisition of land to accommodate the 3,937 feet is currently being procured. Preliminary analyses indicate that the land needed is owned by the Federal Government and the transfer of property to the airport is to occur without any problems. See **Figure 5: SLP Existing Facilities** for a depiction of SLP's existing facilities.

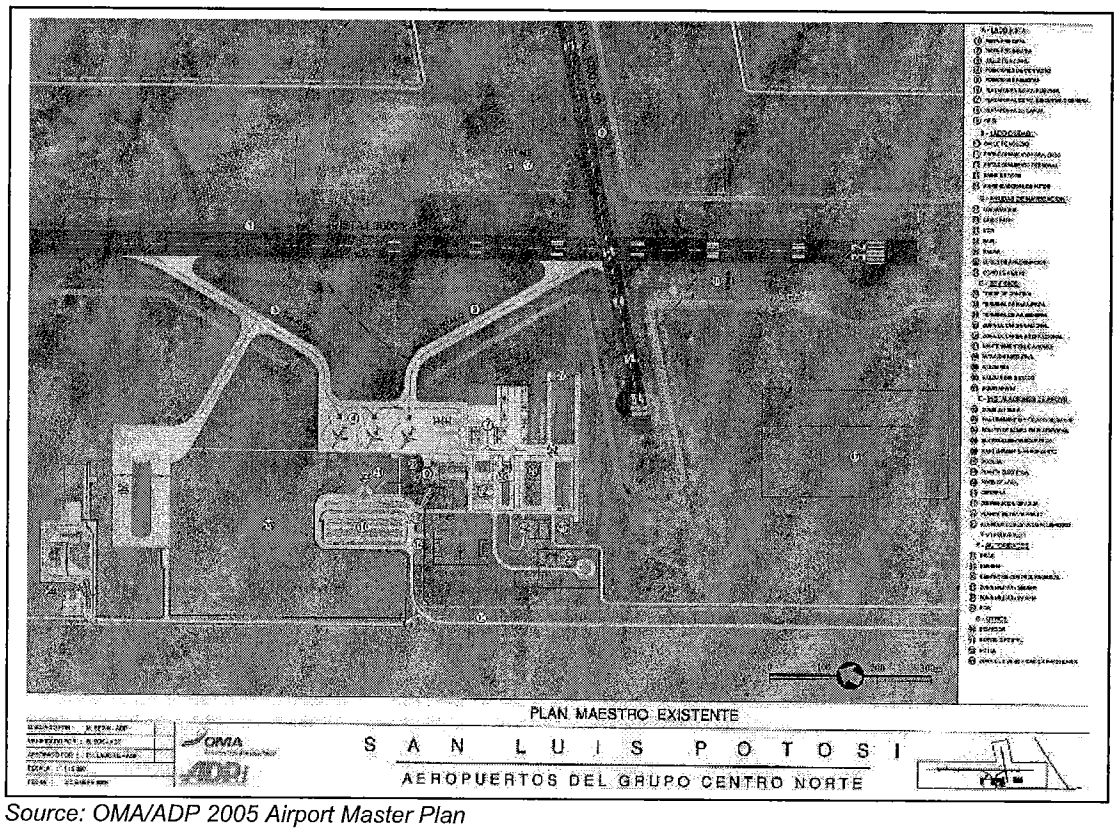
Both runways are served by two 45-degree high speed exit taxiways that lead directly to the commercial and general aviation aircraft parking aprons. The exits are not located properly to serve larger aircraft using the runway. As such, these types of

aircraft have to taxi the full length of the runway to make a turn at the p-turn area at the end of the runway and return to the apron. This represents a potential problem as such an operation significantly hinders runway capacity. The addition of a parallel taxiway and newly located high-speed exit taxiways would significantly enhance runway capacity. The runways currently experience 22 operations during the peak hour.

The commercial aircraft parking apron is located parallel to the primary runway's center and can accommodate four (4) Boeing 737-700 aircraft. The aircraft parking operation consists of a power-in/power-out operation with no passenger boarding bridges. The general aviation parking apron is located adjacent and to the southeast of the commercial parking apron and can accommodate approximately 25 general aviation aircraft of various sizes.

The Aircraft Classification Number (ACN) of the airport pavement is 58/F/A/X/T and can handle aircraft up to the weight of a Boeing 747. However, the length and width of the runway and taxiways were designated for the design aircraft, the Boeing 737-700. The ARC 4C designation requires that the airplanes serving the airport have a wingspan no longer than 79 feet (24 meters). The 2005 Airport Master Plan depicts an eventual ability to handle an ICAO ARC of 4E, which coincides with the extension plans for the runway.

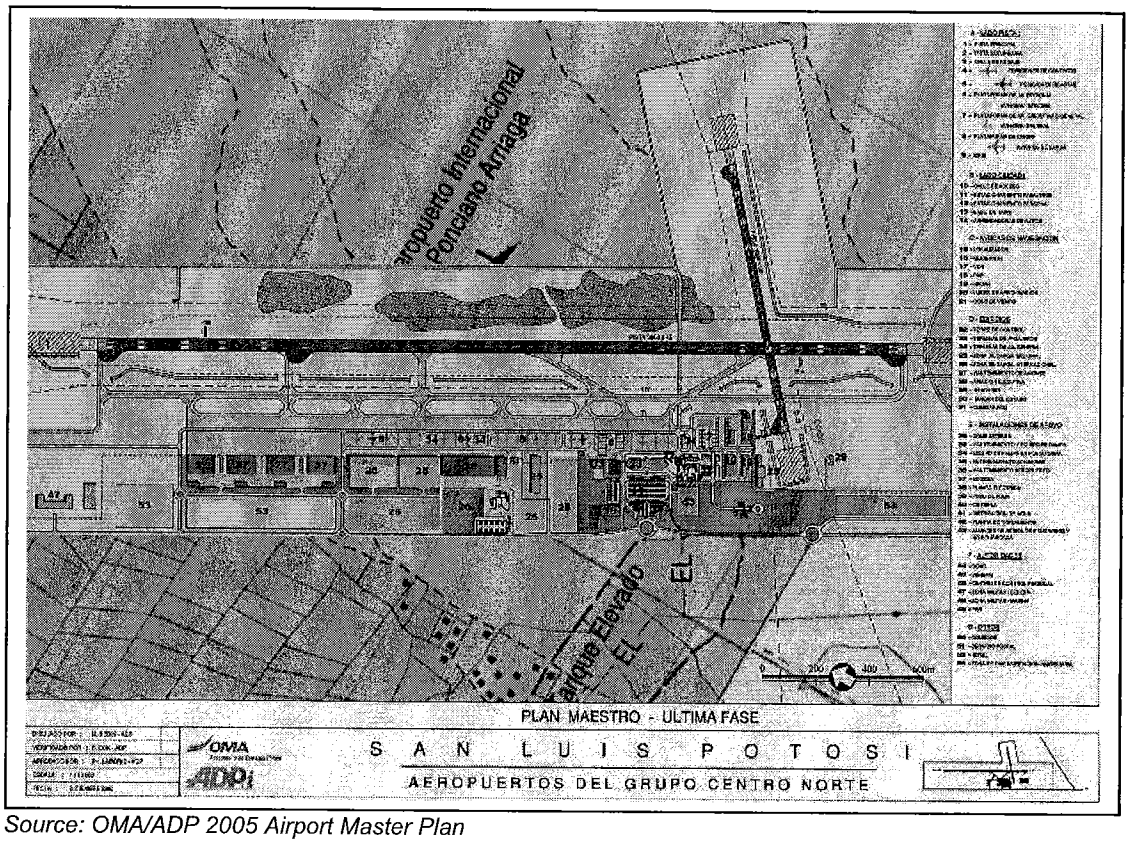
Figure 5: SLP Existing Facilities



Source: OMA/ADP 2005 Airport Master Plan

The ultimate phase of the airport master plan depicts a full-length parallel taxiway and an expansion area suited for cargo and industrial activities (See **Figure 6: SLP Ultimate Development**).

Figure 6: SLP Ultimate Development



Source: OMA/ADP 2005 Airport Master Plan

5.1.4.2 Air Traffic Control and Navigational Aids

SLP has an air traffic control tower located directly southeast of the passenger terminal. The control tower operates 7 days a week and is open 24 hours a day. It is currently of sufficient height to accommodate ICAO requirements. It is important to note that the tower is in fair to poor condition and may need to be replaced by a higher tower once a new terminal is built.

The airport is currently equipped with a VOR/DME facility that provides a non-precision approach capability and a new CAT-I Instrument Landing System (ILS) that was installed in August, 2007 for Runway 14. The CAT-I ILS allows the airport to enhance capacity with a precision approach during adverse weather conditions. The ILS was installed as SLP experiences fog during the autumn and winter seasons. In addition, the airport is equipped with an approach lighting system (ALS) for Runway 14 and Precision Approach Path Indicators (PAPI) at each runway end for Runway 14-32. Runway 04-22 is not equipped with any type of visual approach aid.

5.1.4.3 Passenger Terminal

The current passenger terminal encompasses 26,860 square feet (2,495 square meters) and consists of international and domestic processing facilities that are located on opposite ends of the building. The building was designed to handle approximately 400 passengers during the peak hour. SLP experienced a 23% passenger increase between mid 2006 and mid 2007. This annual growth rate has not changed much since 2003. For the physical size of this airport with its single runway operation, this represents a significant increase and is further evidence that the domestic airlines have increased accessibility to SLP. Terminal expansion is forecast to occur in the short-term (5-year) phase of the 2005 master plan.

5.1.4.4 General Aviation

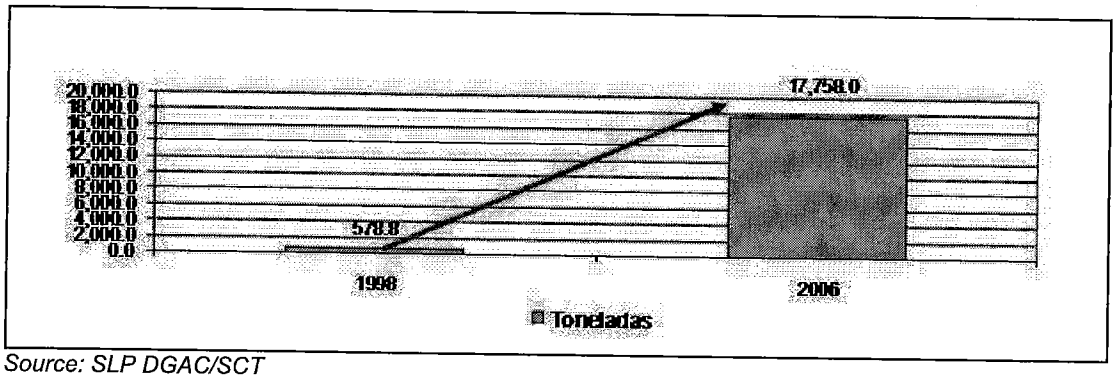
The General Aviation area consists of an apron encompassing 18,238 square yards (15,250 square meters) and seven (7) private aircraft hangars capable of housing small jets and propeller airplanes. There currently is no main general aviation administration facility nor is there an FBO. It was evident from conversations with airport personnel that there is a demand for such facilities. The airport has the available land for such an addition.

5.1.4.5 Cargo Facilities

SLP's cargo tons handled has risen from 578.8 tons in 1998 to 17,758 tons in 2006, an increase of 31% as illustrated in **Figure 7: SLP Historical Cargo Activity**. This makes SLP the 7th largest cargo operation in Mexico behind major cities such as Mexico City, Toluca, Tijuana, and Monterrey. The master plan forecast depicts a similar growth rate throughout the planning horizon. This increase is in large part due to Mexico's largest provider of air express small package services, Estafeta. Estafeta uses SLP as a hub for its operations and operates five (5) Boeing 737 all cargo aircraft, three of which are based at SLP. On a daily basis, Estafeta delivers approximately 120,000 shipments to more than 2,500 destinations in Mexico and the Unites States. The company employs 3,500 people and has over 25 interline agreements providing service to the Americas, Europe, and Asia. The current domestic routes are depicted in **Figure 8: Estafeta Domestic Cargo Routes**.

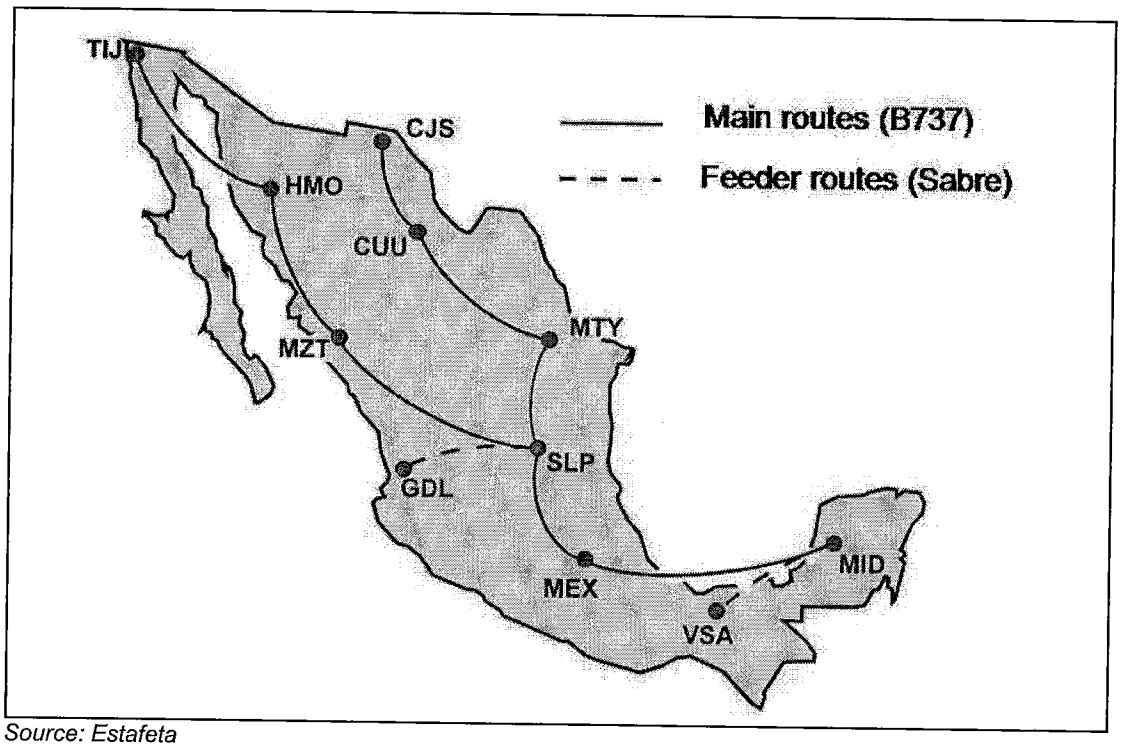
The Estafeta facility is a modern facility that includes a storage facility, customs facility, truck access area, a fully automated package sorting facility, and its own cargo aircraft parking area. The Estafeta cargo apron and its facilities are leased, maintained and operated by Estafeta. This includes the taxiway that stems from the northern commercial apron taxiway to the cargo apron. The cargo apron can park three (3) Boeing 737 all cargo aircraft. The cargo carried to and from SLP primarily consists of small mail packages.

Figure 7: SLP Historical Cargo Activity



Source: SLP DGAC/SCT

Figure 8: Estafeta Domestic Cargo Routes



Source: Estafeta

It is the intention of the OMA and Estafeta to eventually attract Boeing 747 traffic for import and export of large items and automobiles. Estafeta aims to market their facilities for use by the larger all-cargo companies such as CargoLux, Martin Air, and Atlas. In addition, it has become evident that General Motors of the United States will open a massive manufacturing plant in June, 2008 and is interested in such a cargo operation. As such, a runway extension would be needed to accommodate a fully

loaded Boeing 747 aircraft. The total envisioned extension to 13,780 feet (4,200) meters also takes into account the high elevation and hotter temperatures present at SLP.

5.2 Project Sponsor's Capability and Commitment

OMA operates and manages 13 international airports in the north and central regions of Mexico. OMA's airports serve Monterrey, Mexico's third largest metropolitan area, the tourist destinations of Acapulco, Mazatlan, Zihuatanejo, and San Luis Potosí, and eight (8) other regional centers and border cities. OMA's airports fulfill international safety norms and have received environmental compliance certificates. In 2006, OMA served 11.8 million terminal passengers, 11.2% more than 2005. Since 2000, OMA has had the support of two strategic investors with significant experience in the operation of infrastructure and airport services: Empresas ICA, Mexico's largest engineering, procurement, and construction company and Aéroports de Paris, a European airport operator. OMA's presence in major industrial centers and tourist destinations, the development of new regional routes, the fast growth in Mexico's airport market, and a solid business plan create tremendous growth opportunities.

OMA's integral plan includes first class air cargo facilities at key airports, the first system of its kind in Mexico. This will include customs, free trade zones, offices for cargo companies, additional taxiways, cargo aprons, and parking lots for trucks and automobile access. This project is currently being conducted for the airports in Ciudad Juárez, Chihuahua, Monterrey, Reynosa, Torreón, and San Luis Potosí. It is important to note that companies other than OMA are also involved in the development of three cargo centrals, one of these being Estafeta in SLP. Estafeta's expansion is a critical part of the overall OMA cargo expansion plan and as such, a runway expansion to enhance business and airport operations is fully endorsed by OMA and its shareholders.

Additionally, OMA has worked closely with the San Luis Potosí State Government and the SCT. Both organizations have shown support and approval of such expansion. According to conversations had with SCT representatives, SLP will also aid in the decongestions of AICM and the SMA, even though SLP is not officially part of the SMA.

5.3 Implementation Financing

The demand for goods and services for this project could range from planning, engineering, construction and surveying, to airport ground equipment and passenger boarding bridge supply. Such goods can be imported from the U.S., especially the ground equipment and boarding bridges. It is estimated that approximately 65% or more of these goods can be imported from the U.S. and other foreign sources. Financing for this project should be a combination of internal (local) and international financing. Such internal sources may come from airport shareholders, i.e. OMA, ADP, ICA, or the State of San Luis Potosí. Furthermore, additional airport user fees or passenger facility charges (PFC) can be levied in order to offset overall development and construction costs. In addition, the airport may be able to issue bonds to the public. Furthermore, the Mexican development banks Banco Nacional de Obras y Servicios Públicos (Banobras) and Nacional Financiera (NAFIN) may be able to provide loan and equity support.

Internationally, projects can be financed through sources such as the Export-Import Bank of the United States (Ex-Im Bank), the Inter-American Development Bank (IADB), the World Bank, or the Overseas Private Investment Company (OPIC).

- The Ex-Im Bank: Ex-Im Bank has had a long-standing relationship with Mexico for more than 60 years. In fiscal year 2004, Ex-Im Bank approved $2.2 billion in support of U.S. exports to Mexico. Ex-Im Bank finances purchases for a wide range of sectors, including energy, agriculture, transportation, telecommunications, and manufacturing. Ex-Im will provide export credit insurance, working capital guarantees and loan guarantees. Direct loans may also be provided in certain circumstances where private lenders are reluctant to enter a regional market. Ex-Im Bank's foreign currency agreement will enable NAFIN to offer peso-denominated loans, guaranteed by Ex-Im Bank, to Mexican small- and medium-sized enterprises buying U.S. goods and services. NAFIN became the first bank in the world to sign a foreign currency supplement to Ex-Im Bank's master guarantee agreement.

  Through meetings and discussions held with Ex-Im representatives, Ex-Im Bank expressed interest in any aviation development project. Although Ex-Im will still consider financing for U.S. goods and services on government funded development projects, it was expressed that Ex-Im favors financing opportunities in which there is a large private investment. Ideally, 85% of Ex-Im supported financing should directly benefit the export of U.S. services and goods in which 15% of the financed amount may be used to for local materials, goods and services.

- The IADB: The Inter-American Development Bank has been involved with Mexico for quite some time. Recently, it is has launched its 2007 call for proposals to support regional solutions for common or cross-border challenges in Latin America and the Caribbean. The program supports collective action among the countries in Latin America and the Caribbean to respond to challenges and opportunities that can be dealt with more effectively in a regional context. Examples of regional public goods include cooperation in opening markets, controlling cross-border contagion of financial crises and of diseases, and the preservation of shared ecosystems. In addition, one of the IADB's primary goals is the integration of Mexico with the rest of North America through NAFTA.

- World Bank: Over five decades, the World Bank has provided crucial expertise and financial support to Mexico. Presently, the Bank is financing 27 projects in the country, with an average annual commitment of up to 1 billion USD. The projects are divided in lending operations and grants. In addition, the Bank's Country Partnership Strategy (CPS) program with Mexico has established a programmatic series of economic and sector work in key thematic areas, such as poverty, competitiveness and governance, combined with intensive dialogue and informal technical assistance. About 40% of the Bank's program budget in Mexico between 2005 and 2007 was invested in these areas. Currently, San Luis Potosí is not involved with the World Bank, but could very well be involved based on its desire to remain competitive in

economic interests within Mexico. The airport is a crucial component of this competitive strategy.

- OPIC: OPIC Financing provides medium- to long-term funding through direct loans and loan guaranties for projects in developing countries and emerging markets. By complementing the private sector, OPIC can provide financing in countries where conventional financial institutions often are reluctant or unable to lend on such a basis. In response to the critical shortfall of private equity capital in developing countries, OPIC provides support for the creation of privately-owned and managed investment funds. These funds make direct equity and equity-related investments in new, expanding or privatizing emerging market companies. OPIC- supported funds assist emerging market economies to secure long-term growth capital, access management skills, and secure the financial expertise, all of which are key factors in expanding economic development. OPIC-supported funds are among the largest providers of private equity capital to emerging markets. Since 1991, OPIC has committed (as of FY 2006) nearly $3 billion in funding to over 35 private equity funds. These funds in turn have invested $2.9 billion in more than 400 privately-owned and managed companies, the vast majority of which are small and medium-sized entities located across 53 developing countries in emerging market regions eligible for OPIC support. The beneficial impact of OPIC's credit support of funds that invest in companies is significantly greater than the amount of capital that OPIC contributes directly to the funds: private equity direct investment creates a multiplier effect as new capital attracts additional investment and financing in companies. OPIC also provides political insurance coverage for business interest in foreign work. In order for development projects to be considered for direct OPIC financing, a credible debt-to-equity ratio of at least 60/40 should be foreseen.

U.S. developers may also be a source for financing. From the information gathered during the site visits, it was found that FedEx is currently analyzing investment into facilities and hubs at several Mexican interior airports. Furthermore, there is also the Latin American Infrastructure Fund (LAIF). The AIG-GE Capital Latin American Infrastructure Fund (LAIF) is a $1.01 billion fund established in 1996 to make equity investments in South America, Mexico, Central America, and the Caribbean. At its establishment, it was the largest private equity fund operating exclusively in the Latin American and the Caribbean Region. EMP Latin American Management LLC is the principle advisor to LAIF. The sponsors of LAIF are American International Group ("AIG") and GE Capital Corporation ("GE"), whose combined investments comprise 30% of LAIF's capital. Between 1997 and 2002, LAIF made 23 investments totaling $803 million. The Fund targeted minority stakes in infrastructure related businesses, often in sectors which had recently been deregulated or privatized. Investments spanned the entire region, with a focus on Argentina, Mexico, and Brazil. LAIF invested in companies operating in fixed and wireless telephony, cable TV, transportation, petrochemicals, and power generation and distribution. As the Mexican airport system is largely privatized, this fund should be of high interest to potential funding for airport projects.

It is important to note that the SLP airport is included in the 2004-2009 San Luis Potosí State Economic Development Plan and is considered an integral part of its multi-modal system. Other major modes of transportation included in the plan are road and railway improvements. Kansas City Railroad Company has recently invested heavily in the State transportation system.

5.4 U.S. Export Potential

The primary U.S. exports envisioned for the proposed airport expansion includes airport engineering and construction services and equipment, airport supplies (general service equipment, communications equipment, and passenger boarding bridges), ground equipment (tugs for pushback operations, fuel and fire-fighting vehicles), FBO services, and industrial parts to SLP-based manufacturers. It is noted in OMA letters that SLP intends to use U.S. suppliers for airport equipment such as lighting, communications, and general furnishings. As outlined in **Figure 10: Estimated Capital Expenditures - SLP**, 65% of the overall development costs, estimated at US$ 283.8 million, is intended to be provided through U.S. firms and comprises U.S. labor, equipment, materials and professional services.

5.5 Foreign Competition

Foreign competition for this project may include airport planning, construction and development, airline competition, suppliers of technology, and most importantly, cargo specific operators.

In terms of airport planning, construction, and management, there are a large number of international companies that provide such services. Already present in Mexico at San Luis Potosí is Aeroports de Paris (ADP). ADP is an OMA shareholder and is also responsible for all technical airport related matters, including airport planning. According to conversations with ADP and OMA representative, it was evident that ADP only functions as the airport planning/technical advisory entity. This means that any construction or engineering can be conducted by outside companies. SLP has expressly urged the USTDA to provide funding for a feasibility study that would include U.S. construction engineering firms as preferred bidders.

Competition for such services should also keep in mind that ICA, Mexico's largest construction company, is a stakeholder in OMA, and therefore SLP as well. The involvement of ICA could potentially include the equipment for such services, or even partial involvement with an overseas firm.

Airline competition for SLP is primarily envisioned in the cargo market as Estafeta envisions the use of its facilities by multiple foreign operators. Since large European and Asian automotive companies such as Scania and Toyota are well established in SLP, it is foreseen that cargo airlines such as Lufthansa, Martin Air, Cargo Lux, Korean Airlines, and others will operate out of SLP, provided that there will be ample runway available to support such operations. In terms of U.S. companies, General Motors' anticipated manufacturing plant is anticipated to increase this foreign competition for cargo usage at SLP. Commercial airline

competition is primarily occurring in the domestic market as is evident with most SMA airports; however, as several U.S. airlines conduct operations out of SLP and more U.S. companies are investing in SLP (60% of investments in San Luis Potosí are U.S. based) more U.S. airlines and Mexican airlines may add service to SLP from the United States.

Technology and equipment supplier foreign competition is expected to be extremely intense. This is due in large part to the large amount of such companies vying for international work. Such companies are also typically backed by airport consortiums. The main competition to the large amount of U.S. providers is expected come primarily from Siemens (Germany and U.S.), Heiman Systems (Germany), Thyssen Krupp (Germany), SPEA Airport Systems (Italy), and BAE Automated Systems (England). It is important to note that Thyssen Krupp have manufacturing facilities located in San Luis Potosí.

5.6 Developmental Impact

The USTDA has a dual mission of promoting U.S. exports and advancing economic development in the host country and measures developmental impact in four categories of These four categories, as defined by the USTDA, include:

- Infrastructure
- Market Oriented Reform
- Human Capacity Building
- Technology Transfer and Productivity Improvement

5.6.1 Primary Developmental Benefits

The primary impacts associated with development in San Luis Potosí are the enhancement of its transportation and industrial sectors, market oriented reform, and technology transfer and productivity improvement. In terms of infrastructure, any improvements to the airport's facilities will create greater efficiency of operations and attract more aircraft and passenger traffic, thus directly fostering opportunities for the industrial zones surrounding the airport to utilize these facilities for the shipping of their goods. In addition, by providing enhanced levels of passenger services to attract more domestic and international airlines, air travel to and from the region will become more affordable and the region itself more easily accessible. This should coincide with the proposed runway extension.

Due to San Luis Potosí Airport's vision to further enhance its existing cargo operations to allow for larger product shipment it can be expected that such industry will enhance the skills and abilities of local labor forces and provide large regional manufacturers with the opportunity to export and import larger air cargo products. The existing Estafeta facilities implement the latest technological cargo and security processing systems which have already allowed for an increase in skilled labor. The envisioned impacts of the cargo operations at SLP are anticipated to reorient the existing small

package service to include all-cargo service by other cargo operators. This is anticipated to attract multiple foreign cargo companies which will also allow for a certain amount of technology transfer. An all-cargo operation will also fit in with the region's multimodal abilities and will have a significant effect on the overall goods transportation industry in the region. Additionally, as there are a large number of technical schools in the area that can aid in developing technical labor skills for the local workforce, it is expected that the technology oriented business and the local workforce will benefit equally.

The direct impact of the transfer of technology is envisioned to have a very positive effect on human capacity building in the San Luis Potosí region. As Mexico is also entering the digital age, any technology transfer related to computer-manufactured products, i.e. the automobile industry, will enhance the local workforce's ability to use digital technology. With the vested interest of U.S. and multiple foreign companies in the region that manufacture technological products, it was evident during the on-site visits that human capacity building and technology transfer in San Luis Potosí has already led to the establishment of a very modern city with a technology-minded population.

5.7 Impact on the Environment

Based upon meetings with the airport and planning staff, any proposed expansion or development will be assessed for environmental compliance under Mexican laws prescribed by the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT). SEMARNAT is responsible for developing a state policy of environmental protection that reverses ecological deterioration and promotes sustainable use. SEMARNAT issues the Environmental Regulations for the Environmental laws. Through research AVIAT determined that PROFEPA is the Prosecutor for the Protection of the Environment. Environmental Standards (NOM-SEMARNAT previously marked NOM-ECOL) are issued with the coordination of SEMARNAT and the DGN (Secretary of Economy department). These agencies and authorities should be involved in any airport planning and design project.

According to OMA, the impact on the environment resulting from the extended runway at SLP is that it will significantly reduce the use of large semi-trucks for exporting and importing industrial parts and express packages from far away destination throughout Mexico. The reduction in emissions from highly pollutant trucks will have a reduced impact on the environment.

5.8 Impact on U.S. Labor

As outlined in **Figure 10: Estimated Capital Expenditures - SLP**, 65% of the overall development costs are estimated to be completed by U.S. companies for goods and services. Furthermore, information provided by the San Luis Potosí State Government Department of Economic Planning indicated that 60% of the companies and investments in

the region are from the United States. Hence, it is reasonable to assess that this U.S. interest in the region has a direct effect on U.S. labor. Any foreseeable increases in this market will therefore also increase U.S. labor involvement as exports in service and equipment will continue to be required. The same types of rates that are evident from NAFTA's economic success for the U.S. can be applied to the potential impact on U.S. labor markets. According to NAFTA statistics, U.S. employment rose from 112 million in 1993 to 134.8 million in 2006, an increase of 20.1%. Unemployment also decreased from 7.1% in to 5.1% during this period. Such successes are marked by the investment of U.S. companies in foreign markets such as Mexico.

5.9 Project Justification

SLP handles both passenger and cargo flight operations throughout the region and provides Estafeta, Mexico's largest provider of air express services, a hub for both national and international small package deliveries. According to information gathered during on-site visits, there has been significant growth in foreign and U.S. direct investment to the manufacturing center of the city of San Luis Potosí; however, the airport has not made the necessary adjustments and improvements to handle this increase in economic activity. According to OMA statistics, domestic passenger enplanements increased by 21.6% from June of 2006 to June of 2007. This can be directly attributed to the saturation of Mexico City Benito Juárez International Airport, and an increase in economic activity in the State of San Luis Potosí.

The capacity issues are primarily related to SLP's older airfield facilities, in particular the current runway system. The current runway cannot handle the certain types of expected larger airplanes that are needed to export and import larger products by modern businesses. The need for such facilities is also amplified by the fact that large U.S. companies such as General Motors and Wal-Mart have a vested interest in the region for such cargo activity.

General Motors (GM) is constructing a major automobile manufacturing plant with the capacity to produce 30 vehicles per hour, generating between 1,800 to 2,300 potential jobs. The investment totaled 650 million USD and establishes GM as one of the largest automobile manufacturers in Mexico. This investment in Mexico by GM is anticipated to foster growth of the company, which in turn will also have a positive effect on the company's U.S. market by providing better costs for its products and potential export capabilities throughout the North American Continent.

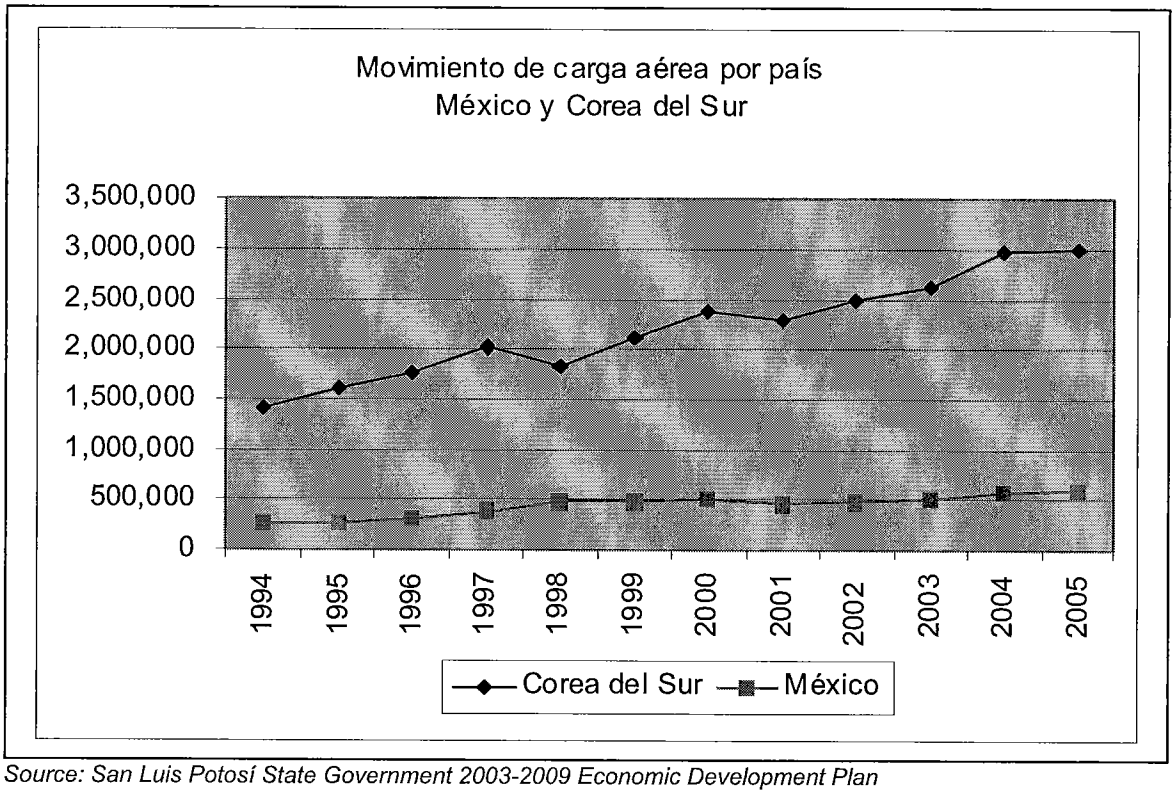
According to airport staff and Estafeta representatives, cargo and airline companies are continually approaching them for requests to use larger aircraft. Estafeta already has the facilities to handle such cargo volumes and land has been set aside by OMA to further develop this need. As such, a runway expansion will have a positive effect for all SLP business, Estafeta, other cargo companies, and U.S. companies in the region. Essentially, SLP is set up to be primarily a cargo/multi-modal airport. This can be further evidenced by the increase in cargo in Mexico's Southern Corridor compared to Mexico's overall cargo expansion (See **Figure 9: Mexico Country Cargo vs. Southern Corridor Cargo**)

It is also important to understand that a runway expansion also warrants navigational aid improvements and taxiway expansion. Currently, SLP does not have a parallel taxiway. The addition of a parallel taxiway can increase capacity significantly. Such an airfield improvement would also warrant expertise from foreign or U.S. companies.

In addition to the benefits mentioned previously, it is also important to note that any cargo expansion or ability to handle more aircraft at SLP will relieve congestion at AICM, even though SLP is not officially part of the SMA initiative. The central location of SLP, its attractiveness to foreign and domestic business interests due to a very modern infrastructure and an economically aggressive State Government, along with the potential for larger companies to locate headquarter facilities in the region as an alternative to Mexico City, makes SLP the ideal alternative for Mexican transportation logistics and industry expansion.

With infrastructure already in place, existing U.S. company interest, and strong financial backing from OMA and the State of San Luis Potosí, it is recommended that this funding request for a runway expansion feasibility study be approved by the USTDA.

Figure 9: Mexico Country Cargo vs. Southern Corridor Cargo



Source: San Luis Potosí State Government 2003-2009 Economic Development Plan

5.10 Recommendations for Additional Airport Development

It is evident from the research conducted for this DM that San Luis Potosí is a fast growing industrial manufacturing region with a very supportive and well-budgeted State Government. Additionally, the recent and anticipated future investment by U.S. companies is a significant part of the ongoing industrial and regional growth. The airport is therefore an important asset to the growth of the region, and the proposed future development depicts SLP as being a major cargo hub airport and a facility that has the available infrastructure to accommodate the planned expansion. As such, it is recommended that future funding for airfield expansion be considered. More specifically, cargo apron development and the addition of a full-length parallel taxiway. This type of development should be complimentary to the proposed runway extension. Such development may also require heavy involvement from U.S. consultant and construction expertise or associated companies. In addition, this new infrastructure will allow for even more operations at the airport, resulting in more business/transportation opportunities for the region, including opportunities for U.S. non-aviation business such as Wal-Mart and General Motors.

It is further recommended that a master plan update be initiated to more accurately apply current growth rates being experienced at the airport. In addition, an updated master plan should also provide an updated overview of potential funding possibilities.

In addition to the cargo and commercial expansion, it recommended that the airport solicit interest in establishing FBO facilities as there are currently no such facilities at the airport. Such facilities may be developed or operated by U.S. entities. FBO facilities would also require infrastructure development that can be conducted by U.S. expertise companies.

The following outlines the recommendations for SLP expansion (in order of priority):

- Runway Expansion
- Master Plan Update
- Taxiway Expansion
- Commercial Terminal Expansion
- FBO Facility Implementation
- Cargo Facility and Industrial Park Infrastructure Development

5.11 Estimated Capital Expenditures – San Luis Potosí International Airport

Figure 10: Estimated Capital Expenditures - SLP illustrates the proposed development costs associated with the envisioned development at San Luis Potosí International Airport including the estimated cost of U.S. supplied goods and services.

Figure 10: Estimated Capital Expenditures - SLP

Item	Description	Unit Cost	Area	Unit	Total
1.0 - Runway Expansion					
1.1	Pavement, Markings, Lighting	$300	31,500	m²	$9,450,000
1.2	Navigational Aids - ASR Radar	$7,000,000	1	Unit	$7,000,000
				Total	**$16,450,000**
2.0 - Taxiway Expansion					
2.1	Pavement, Markings, Lighting	$180	85,100	m²	$15,318,000
				Total	**$15,318,000**
3.0 - Terminal Expansion					
3.1	Terminal Expansion	$2,000	11,500	m²	$23,000,000
3.2	Terminal Apron	$110	30,000	m²	$3,300,000
				Total	**$26,300,000**
4.0 - Air Traffic Control Tower					
4.1	New ATC Tower	$8,000,000	1	Unit	$8,000,000
				Total	**$8,000,000**
5.0 - Cargo Facility					
5.1	Cargo Terminal	$700	255,000	m²	$178,500,000
5.2	Cargo Apron, Markings, Lighting	$110	50,000	m²	$5,500,000
				Total	**$184,000,000**
6.0 - Landside Expansion					
6.1	Roadways	$500	3,000	lm	$1,500,000
				Total	**$1,500,000**
7.0 - General Aviation Expansion					
7.1	GA Terminal	$2,500	1,000	m²	$2,500,000
7.2	Apron Pavement	$110	16,000	m²	$1,760,000
7.3	GA Hangars	$750	12,600	m²	$9,450,000
				Total	**$11,210,000**
				Total Development	**$262,778,000**
8.0 - Design, Engineering, Construction and Supervision Services				8%	$21,022,240
				Grand Total	**$283,800,240**
9.0 - Estimated U.S. Exports of Goods and Services				**65%**	**$184,470,156**

NOTE The current runway extension possibility is 700 meters. Ultimately, a 1200 meter extension is requested but is dependent on land acquisition.

6 PUEBLA INTERNATIONAL AIRPORT

6.1 Project Description

Puebla International Airport (PBC), in conjunction with the State of Puebla's Operadora Estatal de Aeropuertos (OEA) has requested funding for airport development in support of previously funded development plans by the USTDA in June 2002. PBC has seen significant increases in airport aircraft operations, passenger flow, and cargo operations. According to the information gathered during the on-site visit, the airport administration's primary goal is to update and adjust the existing airport master plans to accommodate the current airport traffic growth and develop a realistic implementation and expansion plan that includes the recent completion of the WTC Cargo Facility and the proposed terminal modernization and expansion.

6.1.1 Airport Setting

Puebla is the capital of the State of Puebla and was founded in 1531. The City of Puebla is located approximately 70 miles (113) kilometers southeast of Mexico City and has a population of 2.5 million. The State of Puebla is one of the most important agricultural, industrial, and cultural centers of Mexico, with the primary products being automotive and textile. Additionally, Puebla is also Mexico's second largest center for education, providing over 20 universities.

The "Hermanos Serdán" Puebla International Airport (PBC) is located 12.5 miles (20 kilometers) northeast of the City of Puebla and has an elevation of 7,353 feet (2,241 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 60°F and 70°F (18°C and 20°C). PBC is located in the municipalities of Huejotzingo and Juan C. Bonilla and is adjacent to the Municipality of Tlaltenango. The airport can be accessed through the Airport Boulevard, which connects to the Mex-150 highway to the north (the Mexico – Puebla Turnpike) and the Mex-190 (Puebla Federal Highway) highway to south. The latter provides access to the town of Huejotzingo. Furthermore, due to its location and road access, PBC has a geographical transport influence that spans the western-central part of Veracruz, the northern portion of Oaxaca, Morelos, and the western and southern areas of the Metropolitan Area of Mexico City.

PBC is officially part of the SCT designated Metropolitan Airport System (SMA) aimed to relieve congestion at Mexico City Benito Juárez International Airport.

6.1.2 Airport Operations and Passenger Statistics

Figure 11: PBC Historical Aircraft Operations and **Figure 12: PBC Historical Passenger Traffic** represent PBC's historical and current airport operations and passenger statistics. It is evident from this data that both aircraft operations and passenger traffic has been increasing significantly since 2004 with even higher trends occurring in 2007.

Figure 11: PBC Historical Aircraft Operations

Operations	2002	2003	2004	2005	2006	2007
JANUARY	1,182	978	966	1,096	1,088	1,674
FEBRUARY	948	841	990	1,037	1,219	1,581
MARCH	965	975	1,135	1,029	1,419	1,986
APRIL	1,073	881	1,033	1,021	1,252	1,666
MAY	1,037	823	942	1,059	1,177	1,977
JUNE	880	804	896	998	1,226	2,026
JULY	947	910	1,097	1,172	1,181	2,161
AUGUST	1,092	974	1,203	1,173	1,304	1,843
SEPTEMBER	852	851	1,072	1,110	1,390	
OCTOBER	1,120	1,027	1,217	1,082	1,636	
NOVEMBER	1,000	920	1,302	986	1,740	
DECEMBER	1,021	1,022	876	1,019	1,696	
Total	12,117		11,006	12,729	12,782	16,328
Change %		-9%	16%	0%	28%	22%

Source: AIP Airport Statistics, 2007

Figure 12: PBC Historical Passenger Traffic

Passengers	2002	2003	2004	2005	2006	2007
JANUARY	7,400	6,306	5,575	8,723	13,255	28,087
FEBRUARY	7,403	5,097	5,941	7,441	12,231	24,557
MARCH	7,444	5,887	6,050	8,898	14,362	29,334
APRIL	7,140	5,574	5,486	8,591	10,155	27,669
MAY	7,291	5,256	7,499	8,602	10,621	32,603
JUNE	6,915	5,105	7,331	8,392	13,490	31,969
JULY	7,774	6,766	9,548	11,840	20,194	51,803
AUGUST	7,924	8,621	9,273	10,146	19,733	48,397
SEPTEMBER	6,644	5,471	8,112	8,494	18,991	
OCTOBER	7,508	5,823	8,072	10,099	22,889	
NOVEMBER	7,073	5,720	8,919	10,898	23,781	
DECEMBER	6,644	6,036	8,607	13,003	28,296	
Total	87,160	71,662	90,413	115,127	207,998	274,419
Change %		-18%	26%	27%	81%	32%

Source: AIP Airport Statistics, 2007

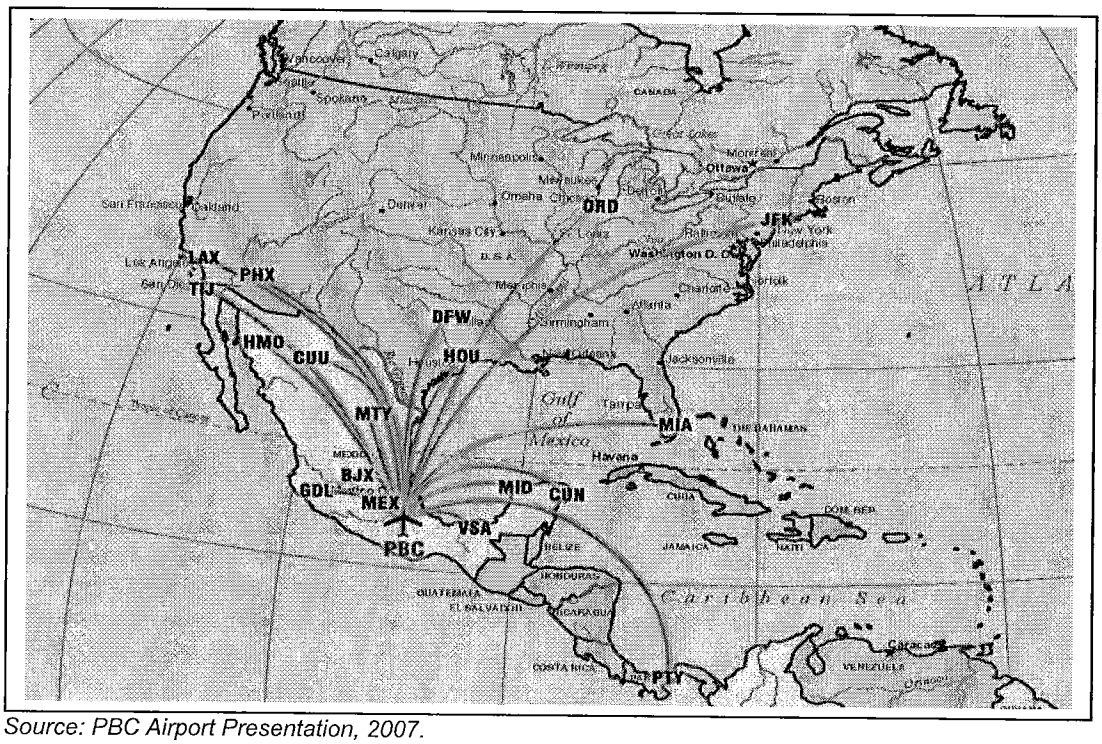
6.1.3 Commercial Airlines Serving PBC

PBC is currently served by six (6) domestic carriers and one U.S. carrier. The five domestic carriers include the following:

- Aero California
- Aladia
- Alma
- Avolar
- Volaris
- AeroMexico

These carriers provide service from Puebla to five main destination including Mexico City, Cancun, Hermosillo, Guadalajara, Tijuana, Monterrey, and Villahermosa. The U.S. carrier is Continental Airlines which provides daily service to Houston. These U.S. cities represent the main points for travel of emigrant workers residing or working in the U.S. Additionally, Delta Airlines has recently expressed interest in providing routes to and from Puebla. Current and future airlines routes are depicted in **Figure 13: PBC Current and Future Airline Route Map**.

Figure 13: PBC Current and Future Airline Route Map



Source: PBC Airport Presentation, 2007.

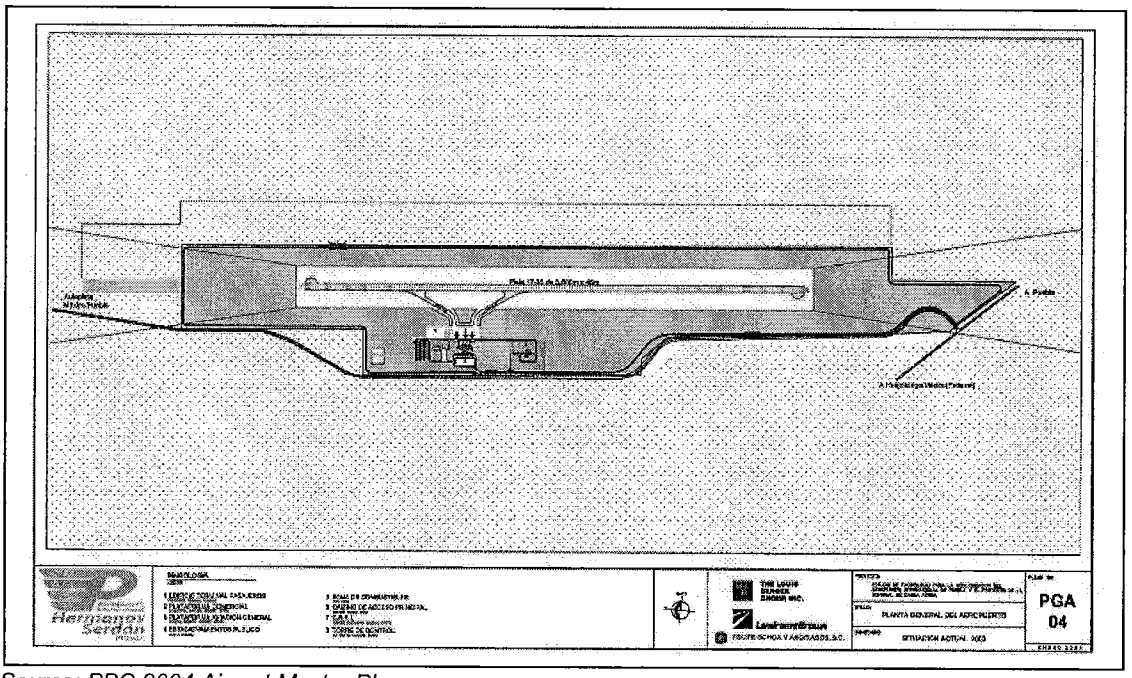
6.1.4 Airport Physical Facilities Overview

6.1.4.1 Airfield

The PBC airport property encompasses approximately 979 acres (396 hectares), with 148 acres comprised of physical airport facilities. The ICAO Airport Reference Code (ARC) is 4C. The airfield consists of a single runway operation. Runway 17-35 is oriented in a north-south direction and is 11,810 feet (3,600 meters) long and 150 feet (45 meters) wide. Runway 17 is the primary runway and is used 85% of the time. The runway is served by two 45-degree high speed exit taxiways that lead directly to the commercial and general aviation aircraft parking aprons (see **Figure 14: PBC Existing Facilities** for an existing facilities layout). The exits are not located properly to serve larger aircraft using the runway. As such, these types of aircraft have to taxi the full length of the runway to make a turn at the p-turn area and return to the apron. This represents a potential problem as such an operation significantly hinders runway capacity. The addition of a parallel taxiway and newly located high-speed exit taxiways would significantly enhance runway capacity.

The commercial aircraft parking apron is located parallel to the runway's center and can accommodate three (3) Boeing 727 aircraft. The aircraft parking operation consists of a power-in/power-out operation with no passenger boarding bridges. The general aviation parking apron is located adjacent and to the north of the commercial parking apron and can accommodate approximately 23 general aviation aircraft (12,500 pounds or less).

Figure 14: PBC Existing Facilities

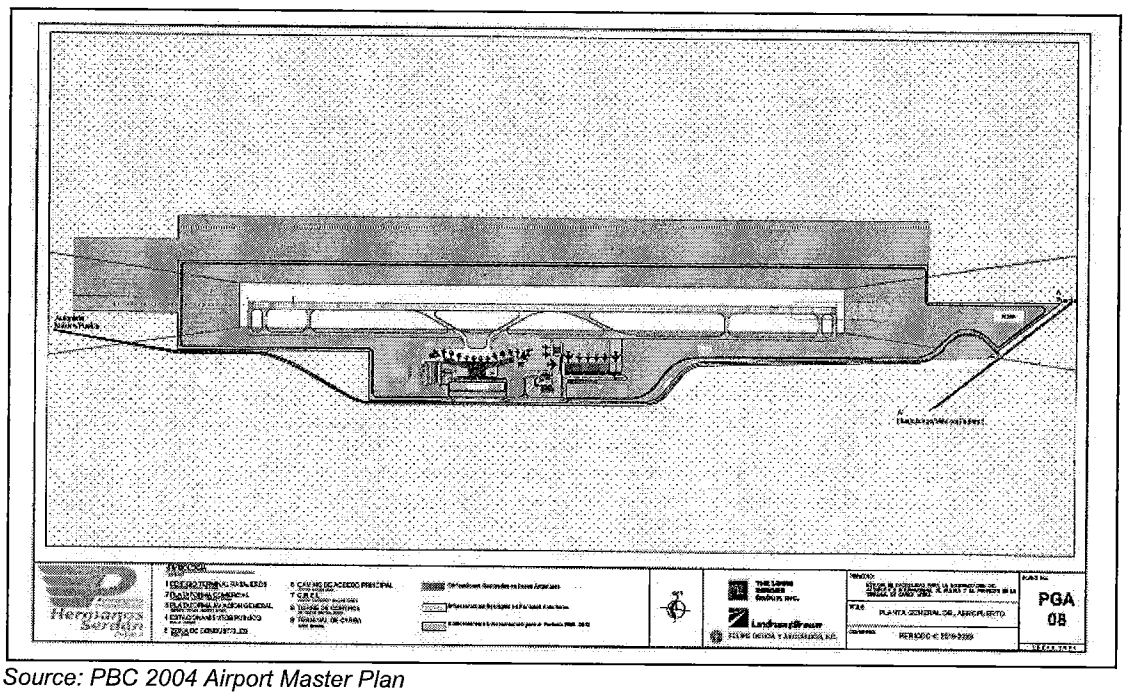


Source: PBC 2004 Airport Master Plan

The Aircraft Classification Number (ACN) of the airport pavement is 50/F/C/X/T and can handle aircraft up to a Boeing 757. However, the length and width were designated for the design aircraft, the Boeing 727. The ARC 4C designation requires that the airplanes serving the airport have a wingspan no more than 79 feet (24 meters).

The ultimate development phase includes a full length parallel taxiway with additional high speed exit taxiways as illustrated in
Figure 15: PBC Ultimate Development.

Figure 15: PBC Ultimate Development



Source: PBC 2004 Airport Master Plan

6.1.4.2 Air Traffic Control and Navigational Aids

PBC has an air traffic control tower located directly north of the passenger terminal. The control tower operates 7 days a week from 7 am to 7 pm and is currently of sufficient height to accommodate ICAO requirements. It is important to note that the tower is in fair to poor condition and may need to be replaced by a higher tower once the new terminal is built.

The airport is currently equipped with a VOR/DME facility that provides a non-precision approach capability. In addition, the airport is equipped with Precision Approach Path Indicators (PAPI) at each runway end.

6.1.4.3 Passenger Terminal

The current passenger terminal encompasses 38,750 square feet (3,600 square meters) and consists of international and domestic processing facilities that are located on opposite ends of the building. The building was designed to handle 450 passengers during the peak hour. PIA experienced a 151% passenger increase between 2002 and 2005. This growth rate has continued from 2006 to 2007, depicting 120% average growth rates when compared month to month. For the physical size of this airport with its single runway operation, this represents a very significant increase and is further evidence that the main airport in Mexico City is also at a saturation point. Despite the recent terminal improvements (re-organization of counter space) at AICM, it is highly likely that PIA will continue to see increases in passenger flow congestion as AICM does not have the room to expand airfield facilities. As denoted by the USTDA, this type of saturation may lead to noncompliance with FAA international standards for national and international flights.

During the on-site visit it was evident that PBC had hired an architect to design a passenger building utilizing the current facility as a base structure. The new design included a re-design for the international and domestic check-in areas, new and larger passenger holding lounges, a larger and better organized vehicular parking area, passenger boarding bridges, and an aesthetically modern facade. The architect was essentially hired to design a terminal based on realistic and current passenger levels and the potential to expand to the north or south for future development. The original master plan terminal layout drawings (as depicted in
Figure 15: PBC Ultimate Development) were considered to be too excessive for the current and future airport operations.

6.1.4.4 General Aviation

The General Aviation area consists of an administrative building, private aircraft hangars (including private charter companies), and a public vehicular parking area with 95 spaces. The hangars include a total of 39 units, three of which are T-hangars and two conventional hangars. It was assessed that the administration building is very old and insufficient to handle FBO type services. The airport currently has no full-service FBO facility. It was evident from conversations with airport personnel that there is a demand for such facilities. The airport has the available land for such an addition.

6.1.4.5 Cargo Facilities

PBC airport handles approximately 2,000 tons of cargo annually. The cargo carried to and from Puebla primarily consists of textile products, automobile parts, machinery, mail, air courier services and perishable products like fruit and flowers. This cargo is carried as belly-haul cargo only through the airport's commercial airlines. There is no all-cargo operation at the airport. However, the Consorcio Productivo S.A. de C.V, a branch of the World Trade Center (WTC) of Guadalajara, has recently completed the construction of an airport cargo facility that is now considered to be operational. These buildings are intended to be able to process all of the belly-haul cargo and future all-

cargo operations for the master planning 20-year horizon. The facility includes a full customs area, processing area, storage area, truck access area, and state-of-the-art modern security measures.

Currently, the cargo facility does not have a cargo specific aircraft parking apron for all-cargo operations. The belly-haul cargo or other cargo must be transported to the cargo facility that is located approximately 500 yards south of the commercial terminal building. The commercial aircraft parking apron is connected to the cargo facility by a two-lane access road.

As cargo tonnage handled at PBC has essentially doubled every year and the amount of commercial airplane traffic is following similar trends (see **Figure 16: PBC Cargo Statistics**), the need for an all-cargo facility serving all-cargo aircraft is very apparent. During conversations with WTC representatives it was evident that Puebla will require the addition of larger cargo specific aircraft. This is primarily due to the interest from the automobile industry. Volkswagen is the primary vehicle manufacturer and has expressed serious interest in using PBC as a cargo base for import and export of auto parts and automobiles. In addition, U.S. companies such as Wal-Mart and Pfizer are also in the region and have expressed similar interests.

Figure 16: PBC Cargo Statistics

Cargo (Tons)	2002	2003	2004	2005	2006	2007
JANUARY	132	130	102	123	206	495
FEBRUARY	109	82	84	135	156	395
MARCH	116	33	123	126	200	487
APRIL	154	96	174	179	143	442
MAY	130	107	107	125	143	494
JUNE	122	88	105	130	191	458
JULY	136	118	145	174	268	754
AUGUST	188	148	131	167	296	613
SEPTEMBER	135	112	109	155	251	
OCTOBER	172	89	204	262	362	
NOVEMBER	146	97	133	163	378	
DECEMBER	168	117	148	204	439	
Total	1,707	1,216	1,567	1,943	3,033	4,138
Change %		-29%	29%	24%	56%	36%

Source: AIP Airport Statistics, 2007

6.2 Project Sponsor's Capability and Commitment

The concession of the Puebla International Airport (PIA) was given to the State Airport Operator comprised of the State Government, Aeropuertos y Servicios Auxiliares (ASA) and the private sector which have a 26, 25 and 49% share, respectively. During the onsite visits,

the airport management staff indicated that the funding for expansion is available and within the current and future budget as designated by each shareholder. The majority of the push for funding comes directly from the State of Puebla as the upgrading of the airport is included within the State's mission of fostering economic growth through transportation. The evidence of such financing capability can be found in the fact that the airport has hired an architect to design the new terminal building. This funding for development has already been approved.

6.3 Implementation Financing

The demand for goods and services for this project could range from planning, engineering, construction, surveying, to airport ground equipment and passenger boarding bridge supply. Such goods can be imported from the U.S., especially the ground equipment and boarding bridges. It is estimated that approximately 65% or more of these goods can be imported from the U.S. and other foreign sources. Financing for this project should be a combination of internal (local) and international financing. Such internal sources may come from airport shareholders, i.e. ASA, the OEA, or the private investor(s). Additional airport user fees or taxes (passenger facility charges) can be imposed for construction financing. Partial funding of the cargo apron may come from the WTC itself. In addition, the airport may able to issue bonds to the public. Furthermore, the Mexican development banks Banco Nacional de Obras y Servicios Públicos (Banobras) and Nacional Financiera (NAFIN) may be able to provide loan and equity support.

Internationally, projects can be financed through sources such as the Export-Import Bank of the United States (Ex-Im Bank), the Inter-American Development Bank (IADB), the World Bank, or the Overseas Private Investment Company (OPIC).

- The Ex-Im Bank: Ex-Im Bank has had a long-standing relationship with Mexico for more than 60 years. In fiscal year 2004, Ex-Im Bank approved $2.2 billion in support of U.S. exports to Mexico. Ex-Im Bank finances purchases for a wide range of sectors, including energy, agriculture, transportation, telecommunications, and manufacturing. Ex-Im will provide export credit insurance, working capital guarantees and loan guarantees. Direct loans may also be provided in certain circumstances where private lenders are reluctant to enter a regional market. Ex-Im Bank's foreign currency agreement will enable NAFIN to offer peso-denominated loans, guaranteed by Ex-Im Bank, to Mexican small- and medium-sized enterprises buying U.S. goods and services. NAFIN became the first bank in the world to sign a foreign currency supplement to Ex-Im Bank's master guarantee agreement.

  Through meetings and discussions held with Ex-Im representatives, Ex-Im Bank expressed interest in any aviation development project. Although Ex-Im will still consider financing for U.S. goods and services on government funded development projects, it was expressed that Ex-Im favors financing opportunities in which there is a large private investment. Ideally, 85% of Ex-Im supported financing should directly benefit the export of U.S. services and goods in which 15% of the financed amount may be used to for local materials, goods and services.

- The IADB: The Inter-American Development Bank has been involved with Mexico and, more specifically, Puebla with infrastructure development in 1995 and 2001. Recently, it is has launched its 2007 call for proposals to support regional solutions for common or cross-border challenges in Latin America and the Caribbean. The program supports collective action among the countries in Latin America and the Caribbean to respond to challenges and opportunities that can be dealt with more effectively in a regional context. Examples of regional public goods include cooperation in opening markets, controlling cross-border contagion of financial crises and of diseases, and the preservation of shared ecosystems. In addition, one of the IADB's primary goals is the integration of Mexico with the rest of North America through NAFTA and the implementation of the Puebla-Panama Plan, which proposes that regional integration be expanded toward Central America, emphasizing the role of the states in the south of Mexico.

- World Bank: Over five decades, the World Bank has provided crucial expertise and financial support to Mexico. Presently, the Bank is financing 27 projects in the country, with an average annual commitment of up to US$1billion. The projects are divided in lending operations and grants. In addition, the Bank's Country Partnership Strategy (CPS) program with Mexico has established a programmatic series of economic and sector work in key thematic areas, such as poverty, competitiveness and governance, combined with intensive dialogue and informal technical assistance. About 40% of the Bank's program budget in Mexico between 2005 and 2007 was invested in these areas. Currently, Puebla is not involved with the World Bank, but could very well be involved based on its desire to remain competitive in economic interests within Mexico. The airport is a crucial component of this competitive strategy.

- OPIC: OPIC Financing provides medium- to long-term funding through direct loans and loan guaranties to eligible investment projects in developing countries and emerging markets. By complementing the private sector, OPIC can provide financing in countries where conventional financial institutions often are reluctant or unable to lend on such a basis. In response to the critical shortfall of private equity capital in developing countries, OPIC provides support for the creation of privately-owned and managed investment funds. These funds make direct equity and equity-related investments in new, expanding or privatizing emerging market companies. OPIC-supported funds assist emerging market economies to secure long-term growth capital, access management skills, and secure the financial expertise, all of which are key factors in expanding economic development. OPIC-supported funds are among the largest providers of private equity capital to emerging markets. Since 1991, OPIC has committed (as of FY 2006) nearly $3 billion in funding to over 35 private equity funds. These funds in turn have invested $2.9 billion in more than 400 privately-owned and managed companies, the vast majority of which are small and medium-sized entities located across 53 developing countries in emerging market regions eligible for OPIC support. The beneficial impact of OPIC's credit support of funds that invest in companies is significantly greater than the amount of capital that OPIC contributes directly to the funds: private equity direct investment creates a

multiplier effect as new capital attracts additional investment and financing in companies. OPIC also provides political insurance coverage for business interest in foreign work. In order for development projects to be considered for direct OPIC financing, a credible debt-to-equity ratio of at least 60/40 should be foreseen.

U.S. developers may also be a source for financing. From the information gathered during the site visits, it was found that two major U.S. planning and design firms have worked with PBC (URS and the Louis Berger Group) and may also be able to be involved in projects as developers. Furthermore, there is also the Latin American Infrastructure Fund (LAIF). The AIG-GE Capital Latin American Infrastructure Fund (LAIF) is a $1.01 billion fund established in 1996 to make equity investments in South America, Mexico, Central America and the Caribbean. At its establishment, it was the largest private equity fund operating exclusively in the Latin American and the Caribbean. EMP Latin American Management LLC is the principle advisor to LAIF. The sponsors of LAIF are American International Group ("AIG") and GE Capital Corporation ("GE"), whose combined investments comprise 30% of LAIF's capital. Between 1997 and 2002, LAIF made 23 investments totaling $803 million. The Fund targeted minority stakes in infrastructure related businesses, often in sectors which had recently been deregulated or privatized. Investments spanned the entire region, with a focus on Argentina, Mexico and Brazil. LAIF invested in companies operating in fixed and wireless telephony, cable TV, transportation, petrochemicals, and power generation and distribution. As the Mexican airport system is largely privatized, this fund should be of high interest to potential funding for airport projects.

6.4 U.S. Export Potential

The primary U.S. exports envisioned for the proposed airport expansion includes airport planning services (master planning updates), airport equipment (general service equipment and passenger boarding bridges), navigational aid equipment (ILS, runway lighting), ground equipment (tugs for pushback operations, fuel and fire-fighting vehicles), construction services (cargo aircraft parking area), FBO services, and industrial parts to Puebla-based manufacturers (Wal-Mart, VW, Pfizer). As outlined in

Figure 17: Estimated Capital Expenditures - PBC, 65% of the overall development costs, estimated at US$ 74.2 million, is intended to be provided through U.S. firms and comprises U.S. labor, equipment, materials and professional services.

6.5 Foreign Competition

As Mexico has developed in virtually all export and import markets related to industry, transport and manufacturing, the involvement of foreign competition is inherent. Foreign competition for this project may include airport planning, construction and development, airline competition, suppliers of technology, and cargo specific operations.

In terms of airport planning, construction, and management, there are a large number of international companies that provide such services. Already present in Mexico and at other airports are Aeroports de Paris (ADP), Copenhagen International Airport, and Aeropuertos Españoles y Navegación Aereas (AENA). These are primarily contracted with the large airport groups established by private concessions (ASUR, OMA, and GAP) and act as investors and technical advisors. As Puebla is not part of such a private concession, interest to provide such services by these types of foreign companies can prove to be high. However, from the information gathered during the site visit, it is evident that U.S. companies have already been involved in planning and development activities at Puebla. Puebla has already expressed interest in working with smaller U.S. firms to continue development.

Airline competition for Puebla is primarily envisioned in the cargo market as the WTC cargo facility has come online. Since large European and Asian automotive companies are well established in Puebla, it is foreseen that cargo airlines such as Lufthansa, Martin Air, Cargo Lux, Korean Airlines, and others will operate out of Puebla. In terms of U.S. companies, the PBC staff stated that DHL and FedEx have also shown an interest in operating to and from PBC. Commercial airline competition is primarily occurring in the domestic market. Since there is no open-skies agreement in Mexico, the primary U.S. airlines at PBC do not have competition from foreign airlines as they serve the U.S. market only. However, as a majority of the U.S. flights to PBC are primarily used by immigrant traffic (traffic of U.S. passport holding Puebla natives), Mexicana or AeroMexico may also provide competition in the same routes for the future.

Foreign technology and equipment supplier competition is expected to be extremely intense. This is due in large part to the large amount of such companies vying for international work. Such companies are also typically backed by airport consortiums. The main competition to the U.S. providers is expected to come primarily from Siemens (Germany and U.S.), Heiman Systems (Germany), Thyssen Krupp (Germany), SPEA Airport Systems (Italy), and BAE Automated Systems (England).

6.6 Developmental Impact

The USTDA has a dual mission of promoting U.S. exports and advancing economic development in the host country and measures developmental impact in four categories of These four categories, as defined by the USTDA, include:

- Infrastructure
- Market Oriented Reform
- Human Capacity Building
- Technology Transfer and Productivity Improvement

6.6.1 Primary Developmental Benefits

The primary impacts associated with development in Puebla are the enhancement of its transportation and industrial sectors, market oriented reform, and technology transfer and productivity improvement. In terms of infrastructure, any improvements to the airport's facilities will create greater efficiency of operations and attract more aircraft and passenger traffic, thus directly fostering opportunities for the industrial zones surrounding the airport to utilize these facilities for the shipping of their goods. In addition, by providing enhanced levels of passenger services to attract more domestic and international airlines, air travel to and from the region will become more affordable and the region itself more easily accessible.

Due to Puebla's vision to enhance its cargo operations, as is evident from the addition of the recently opened WTC facility, it can be expected that such industry will enhance the skills and abilities of local labor forces and provide large regional manufacturers with the opportunity to export and import larger air cargo products. The envisioned impacts of the cargo operations at Puebla are anticipated to reorient the existing belly-haul only air cargo operation. An all-cargo operation will also fit in with the region's multimodal abilities and will have a significant effect on the overall goods transportation industry in the region. Additionally, as there are a large number of technical schools in the area that can aid in developing technical labor skills for the local workforce, it is expected that the technology oriented business and the local workforce will benefit equally.

The direct impact of the transfer of technology is envisioned to have a very positive effect on human capacity building in the Puebla region. As Mexico is also entering the digital age, any technology transfer related to computer-manufactured products, i.e. the automobile industry, will enhance the local workforce's ability to use digital technology. With the vested interest of U.S. and multiple foreign companies in the region that manufacture technological products, it is expected that the transfer of technology and human capacity building will continue.

6.7 Impact on the Environment

Based upon meetings with the airport and planning staff, any proposed expansion or development will be assessed for environmental compliance under Mexican laws prescribed by the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT). SEMARNAT is responsible for developing a state policy of environmental protection that reverses ecological deterioration and promotes sustainable use. SEMARNAT issues the

Environmental Regulations for the Environmental laws. Through research aviatDesign determined that PROFEPA is the Prosecutor for the Protection of the Environment. Environmental Standards (NOM-SEMARNAT previously marked NOM-ECOL) are issued with the coordination of SEMARNAT and the DGN (Secretary of Economy department). These agencies and authorities should be involved in any airport planning and design project.

The only environmental concern at PBC is the Popocatepl Volcano located 10 miles (30 kilometers) from the airport. The concern is related to potential amount of ash in the air that may affect aircraft navigation and operations. The local authorities consider Puebla to be a low-risk area for contamination from volcanic eruption.

6.8 Impact on U.S. Labor

As outlined in

Figure 17: Estimated Capital Expenditures - PBC, 65% of the overall development costs are estimated to be completed by U.S. companies for goods and services. Any increase in U.S. exports will have a direct positive impact on U.S. labor. The same types of rates that are evident from NAFTA's economic success for the U.S. can be applied to the potential impact on U.S. labor markets. According to NAFTA statistics, U.S. employment rose from 112 million in 1993 to 134.8 million in 2006, an increase of 20.1%. Unemployment also decreased from 7.1% in to 5.1% during this period. Such successes are marked by the investment of U.S. companies in foreign markets such as Mexico.

6.9 Project Justification

The main sources of the justification for the development of Puebla International Airport are: the effort to decongest Mexico City Benito Juárez International Airport (AICM); to contribute to the Metropolitan Statistical Area (SMA), and the extraordinary industrial growth currently experienced within the region. As a result of AICM's inability to expand facilities, the air carriers and cargo companies are actively seeking alternative locations outside of the main airport. It is evident from the onsite visits that such investment in Puebla is already occurring, i.e. the newly constructed and operational WTC cargo facility. To foster this growth correctly for Puebla, a solid transportation system must be in place. The airport is clearly operating at levels higher than expected and has also made plans for terminal expansion. The airport administrators stated that the most important part of the airport's development is to have updated plans and a realistic implementation and cost schedule, along with the hiring of specialized firms to carry out the development.

Discussions with the SCT, DGAC, and ASA indicated that the Federal Government's intentions are to relocate cargo carriers to satellite airports within the SMA and support the major business and financial centers surrounding Mexico City. In addition, there were discussions and implications that AICM may become a large airplane airport only in the mid-term planning horizon. As such, more international flights will occur at the satellite airports, including Puebla.

In addition to the need for expansion at the airport, the State of Puebla has also invested in multi-modal facilities to foster further economic growth. Two major projects are currently being promoted, the Puebla Dry Port (PDP) and the Puebla International Center of Logistics (PICL). The Dry Port is located on a 74-acre (70 hectares) tract of land on the access road to the airport and next to the Mexico-Puebla Railroad. The PDP has been completed and is operational. The marketing campaign is ongoing to attract further business. The new multi-modal facilities and consolidation facilities are expected to handle automobile, textile, non-ferrous metals, poultry, food and beverage, and material for manufacturing industries. This multi-modal link is attractive for all foreign investors as it links Puebla directly to Mexico City. The PICL is currently under construction and is located in Puebla's "Textile City". This new facility will also add to enhance transportation within the State of Puebla.

During the site visits and meetings with government officials, it has become clear that the Mexican local, State and Federal governments are aggressively pursuing infrastructure changes to accommodate the new economic demands on all levels. The change can also be seen in Mexico City itself. Efforts to decongest the main highway transport routes that

lead to Puebla and other cities within are occurring in the form of major bypass systems. Such commitment from the current government can be seen as a positive incentive for foreign investment. All future plans for Mexico and the State of Puebla confirms that this expansion is slated to continue for the next 20 years or more.

Current development at PBC, since the creation of the master plan by Louis Berger in 2002, has been stagnant compared to regional and national economic development. The airport and its shareholders realize the need to implement development as soon as practical. The opportunities for economic success and the investment opportunities are favorable to the expansion of PBC. As the large increases in current passenger and cargo operations have shown, PBC needs to accommodate this growth in order to avoid its own saturation which in turn could affect the local economy, the airport's safety, and could provide a barrier to future foreign and domestic investment. As such, any financial aid in the development of this airport will benefit U.S. companies that are not only involved in the airport development industry, but also in the Puebla and Mexican industry as a whole. **It is therefore recommended that the USTDA provide funding for this request and to move forward as quickly as possible to avoid any missed opportunities for immediate U.S. interest and investment.**

6.10 Recommendations for Additional Airport Development

As PBC has recently constructed a new air cargo facility and has plans to expand its terminal facilities to handle all-cargo operations, it can be established that the airport will also require changes in its airfield layout and its associated elements. In terms of cargo operations, it is recommended that an all-cargo aircraft parking apron be considered for future funding to accommodate the new large WTC facility. Currently this facility can only be accessed by a vehicle road and is only used to process belly-haul cargo. If PBC is intended to provide a significant relief role for the SMA initiative, especially in cargo, an aircraft parking apron and its associated access to the runway environment should be a priority. In addition, as this will consist of significant airfield expansion, it should also be considered that a full length or partial parallel taxiway with appropriate exit taxiway locations is implemented to compliment such operations. Furthermore, any type of improved airfield facilities typically warrant additional safety measures in the form of upgraded navigational aid systems. Such airfield improvements require technical expertise by consultants and construction companies, and may be very attractive to U.S. business in this field.

In addition to immediate airfield and terminal facility expansion, it is highly recommended that a master plan update be conducted prior to such expansion to reflect the significant growth that is currently being experienced at PBC.

Lastly, it is also recommended that PBC strongly consider improving its general aviation facilities. It has become evident from the research conducted for this DM that the airport is very attractive to general aviation operators and presents an excellent opportunity for FBO development. Currently, there is no full service FBO facility at the airport.

The following outlines the recommendations for PBC expansion (in order of priority):

- Commercial Terminal Expansion
- All Cargo Aircraft parking Apron
- Taxiway Expansion
- General Aviation Facility Development
- Airfield Navigational Aid Improvement

6.11 Estimated Capital Expenditures – Puebla International Airport

Figure 17: Estimated Capital Expenditures - PBC illustrates the proposed development costs associated with the envisioned development at Puebla International Airport including the estimated cost of U.S. supplied goods and services.

Figure 17: Estimated Capital Expenditures - PBC

Item	Description	Unit Cost	Area	Unit	Total
1.0 - Runway Expansion					
1.1	Pavement, Markings, Lighting	$300	18,000	m²	$5,400,000
1.2	Pavement Resurfacing	$30	162,000	m²	$4,860,000
1.3	Navigational Aids - ILS & ASR	$9,000,000	1	Unit	$9,000,000
				Total	**$19,260,000**
2.0 - Taxiway Expansion					
2.1	Pavement, Markings, Lighting	$180	82,800	m²	$14,904,000
				Total	**$14,904,000**
3.0 - Terminal Expansion					
3.1	Terminal Expansion	$2,000	7,000	m²	$14,000,000
3.2	Terminal Apron	$110	30,000	m²	$3,300,000
				Total	**$17,300,000**
4.0 - Cargo Facility					
4.1	Cargo Terminal Expansion	$700	5,000	m²	$3,500,000
4.2	Cargo Apron, Markings, Lighting	$110	20,000	m²	$2,200,000
				Total	**$5,700,000**
5.0 - Landside Expansion					
5.1	Roadways	$500	4,500	lm	$2,250,000
				Total	**$2,250,000**
6.0 - General Aviation Expansion					
6.1	GA Terminal	$2,500	1,000	m²	$2,500,000
6.2	Apron Pavement	$110	50,000	m²	$5,500,000
6.3	GA Hangars	$750	5,000	m²	$3,750,000
				Total	**$9,250,000**
				Total Development	**$68,664,000**
7.0 - Design, Engineering, Construction and Supervision Services				8%	$5,493,120
				Grand Total	**$74,157,120**
8.0 - Estimated U.S. Exports of Goods and Services				**65%**	**$48,202,128**

7 QUERÉTARO INTERNATIONAL AIRPORT

7.1 Project Description

Querétaro International Airport (QRO) is the newest and most recently constructed airport in the SMA. It has the airfield facilities to support a multitude of operations. QRO is also considered to a vital part of the SMA initiative to relieve traffic congestion at AICM. The construction of the new Querétaro Airport began in 1999 and became operational in November, 2004, followed by the closure of the "Fernando Espinosa Gutiérrez" Airport[2], located adjacent to the City, which is now being used primarily as a military training base and helicopter facility. The new airport has attracted private, cargo and commercial passenger operations but still maintains a largely underdeveloped and underutilized business and recreational traveler air service market. QRO has requested USTDA funding for the creation of a Master Market and Development Plan including the following tasks and priorities.

- A review of the existing master plan to determine facility planning consistency with market development plan objectives and passenger and cargo growth trend.
- An in-depth analysis and identification of existing U.S. traffic patterns within the Querétaro region in terms of passenger traffic and cargo operations, including travel on the Mexican bus system.
- An analysis of U.S. passenger traffic to the nearby city of San Miguel de Allende, an area famous for American settlement.
- An analysis of corporate U.S. general aviation in the Querétaro region.
- Updated forecasts of passenger and cargo market growth trends and identify related airport terminal and airfield infrastructure requirements.

The airport authorities at QRO have seen the successful effects of USTDA funding for such a plan with Puebla International Airport and believe that such a plan will greatly promote business for both U.S. and foreign interested parties within the region. Moreover, due to its short lifespan thus far, QRO essentially has no previous market and traffic history. In addition, as QRO is part of the SMA initiative, such a plan would also quantify QRO's role in the overall Mexican aviation system and the decongestion of traffic and cargo operations at AICM.

It has been evident from interviews with State Government authorities and airport authorities that QRO has the financial backing required to conduct the study and future development.

[2] Source: Aeropuertos y Servicios Auxiliares (ASL) Retrieved from www.asa.gob.mx, July 10, 2007.

7.1.1 Airport Setting

Querétaro City is the capital of the State of Querétaro and was founded in 1531, the same time as the City of Puebla. The City of Querétaro is located in the municipalities of Colón and El Marqués, 120 miles (193) kilometers northwest of Mexico City with a population of approximately 920,000. Querétaro's location along the main NAFTA corridor has produced increased industry diversification and strong economic growth. Its industrial and economical activity, which originally developed in the agricultural and livestock sectors in the mid 70's, is now surpassed by the manufacturing and trade activities. The leading manufacturing activities are focused on the food processing (dairy products, canned fruit and vegetables), chemical (fertilizers), metal, mechanics and auto parts, and electrical and electronics industries. Additionally, the region has seen investment in the aerospace and aeronautics industry with major production plants being operated by Bombardier, GE, and ITR. Most of the export manufacturing companies in Querétaro have significant vested foreign capital and are benefitting from the high investments in technology. It is important to note that the related steel and auto parts industries account for 66% of all industrial activity in the city. Querétaro's proximity to Mexico City coupled with an excellent road network facilitates the relocation of export manufacturing companies from the congested Mexico City metropolitan area.

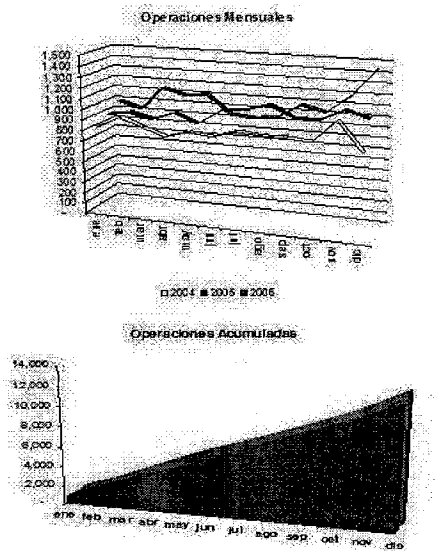
In addition to the industrial importance, Querétaro is also the city where the Mexican Constitution was ratified and signed. San Miguel de Allende, a popular destination and settlement for Americans, is located approximately 55 miles (100 km) west of QRO. Furthermore, Querétaro boasts over 50 higher education facilities within the region.

The Querétaro International Airport (QRO) is located 15 miles (24 kilometers) east of the City of Querétaro and has an elevation of 6,250 feet (1,905 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 45°F and 86°F (7°C and 30°C) and averaging 70°F (20°C). The airport can be accessed through the main Airport Boulevard, which connects to the Federal Highway MEX-57D. MEX-57D connects to Mexico City and is also the main highway that connects to San Luis Potosí and Guadalajara.

7.1.2 Airport Operations and Passenger Statistics

Figure 18: QRO Historical Aircraft Operations and **Figure 19: QRO Historical Passenger Traffic** illustrate QRO's historical and current airport operations and passenger statistics. It is evident from this data that both aircraft operations and passenger traffic has been increasing significantly since 2005 at percentage rates ranging from 23% to 78%, with the same trends occurring in 2007.

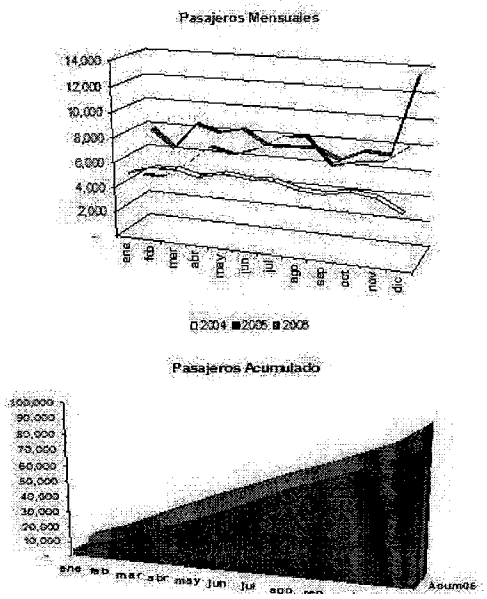
Figure 18: QRO Historical Aircraft Operations



Operaciones	2004	2005	2006	Var. Acum
ene	825	900	983	9.22%
feb	938	930	918	3.88%
mar	860	884	1,141	12.09%
abr	787	961	1,080	12.16%
may	851	879	1,106	14.80%
jun	824	1,020	937	10.60%
jul	893	1,037	915	7.09%
ago	871	1,105	943	3.98%
sep	869	998	1,074	4.40%
oct	853	994	1,018	4.19%
nov	1,066	1,105	1,184	4.49%
dic	801	1,046	1,435	7.38%
Suma	10,438	11,859	12,734	
Promedio/mes	870	988	1,061	
Variacion	-	13.61%	7.38%	

Source: QRO Administration

Figure 19: QRO Historical Passenger Traffic



Pasajeros	2004	2005	2006	Var. Acum
ene	5,137	4,322	7,694	78.02%
feb	5,711	4,488	6,277	58.58%
mar	5,764	5,651	8,428	54.89%
abr	5,320	7,239	7,852	39.41%
may	5,847	6,767	8,323	35.50%
jun	5,579	7,370	7,210	27.76%
jul	5,617	8,529	7,247	19.53%
ago	5,116	8,596	7,346	14.00%
sep	5,006	6,568	6,543	12.41%
oct	5,404	7,086	7,407	11.58%
nov	5,157	7,203	7,312	10.59%
dic	4,149	8,664	13,403	15.23%
Suma	63,807	82,483	95,042	
Promedio/m	5,317	6,874	7,920	106,0042
Variacion	-	29.27%	15.23%	

Source: QRO Administration

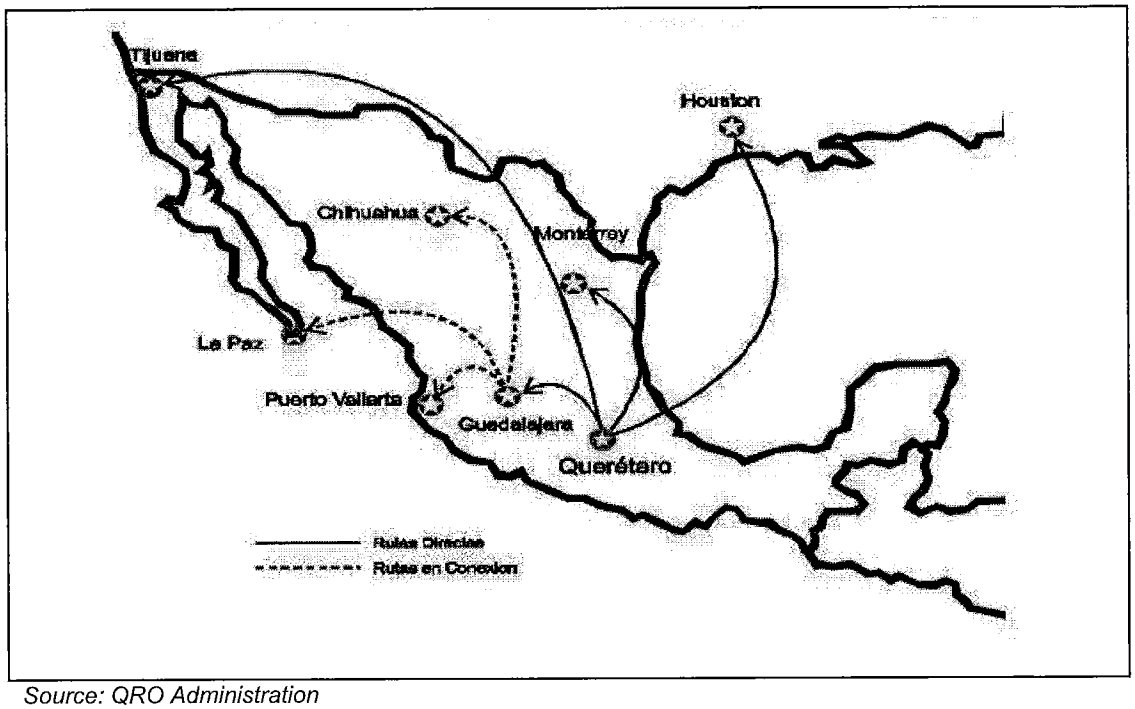
7.1.3 Commercial Airlines Serving QRO

QRO is currently served by five (5) domestic carriers and one (1) U.S. carrier. The five domestic carriers include the following:

- Aeromar
- Alma
- Avolar
- Republic Air
- Viva Aerobús

These carriers provide service from Querétaro to seven main destinations including Mexico City, Guadalajara, Tijuana, Monterrey, La Paz, Chihuahua, and Puerto Vallarta. The U.S. carrier is Continental Airlines which provides daily service to Houston. These U.S. cities represent the main points for travel of emigrant workers residing or working in the U.S. Additionally, Delta Airlines has recently expressed interest in providing routes to and from Querétaro. See **Figure 20: QRO Airline Route Map** for a depiction of the QRO airline route map.

Figure 20: QRO Airline Route Map



Source: QRO Administration

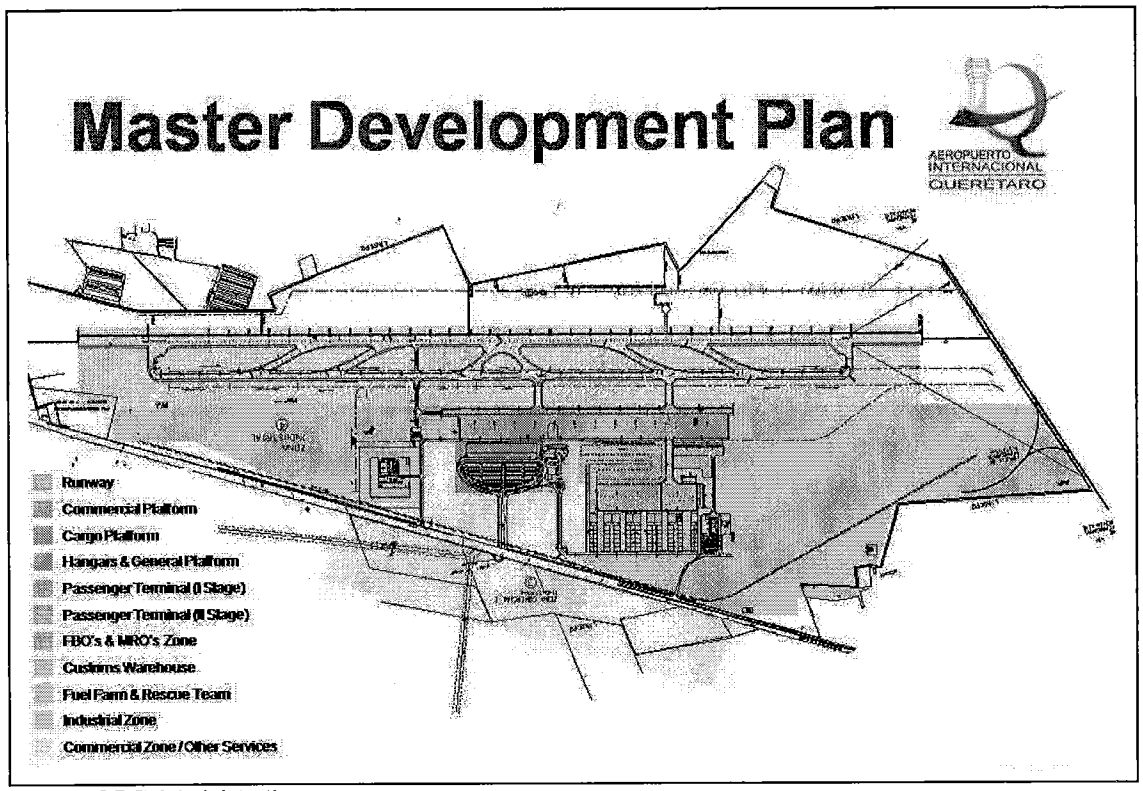
7.1.4 Airport Physical Facilities Overview

7.1.4.1 Airfield

The QRO airport property encompasses approximately 1,700 acres (688 hectares). The ICAO Airport Reference Code (ARC) is 4E. The airfield consists of a single runway operation. Runway 09-27 is oriented in an east-west direction and is 13,780 feet (4,200 meters) long and 150 feet (45 meters) wide. The runway can handle 45 operations during the peak hour and is served by a full-length parallel taxiway that includes six (6) 45-degree high speed exit taxiways, two of which lead directly to the commercial and general aviation aircraft parking aprons. Additionally, there are two (2) 90-degree exits at the runway ends. **Figure 21: QRO Airfield Facilities** provides a depiction of the airport facilities and existing master development plan.

The commercial aircraft parking apron is located parallel to the runway's center and encompasses approximately 149,500 square yards (125,000 square meters). The

Figure 21: QRO Airfield Facilities



Source: QRO Administration

apron can accommodate 14 contact positions and one (1) remote position suitable for aircraft up to the Boeing 747 and the Airbus A340. The aircraft parking operation

currently consists of a power-in/power-out operation with no passenger boarding bridges. The commercial parking apron has a hydrant fueling system.

The Aircraft Classification Number (ACN) of the airport pavement is 80/F/C/X/T and can handle aircraft up to Boeing a 747. The ARC 4E designation requires that the airplanes serving the airport have a wingspan no longer than 213 feet (65 meters).

7.1.4.2 Air Traffic Control and Navigational Aids

QRO has an air traffic control tower located directly west of the passenger terminal. The control tower operates 7 days a week from 7 am to 10 pm and is currently of sufficient height to accommodate ICAO requirements. It is important to note that the tower is in fair to poor condition and may need to be replaced by a higher tower once a new terminal is built.

The airport is currently equipped with a VOR/DME facility that provides a non-precision approach capability. In addition, the airport is equipped with Precision Approach Path Indicators (PAPI) at each runway end.

7.1.4.3 Passenger Terminal

The current passenger terminal encompasses 18,300 square feet (1,700 square meters) and consists of international and domestic processing facilities that are located in the same building area. The building was designed to handle approximately 400 passengers during the peak hour. SLP experienced a 15.3% passenger increase between 2005 and 2006. This annual growth rate is also being experienced thus far in 2007. For the physical size of this airport with its single runway operation, this represents a significant increase and is further evidence that the domestic airlines have increased accessibility to QRO. QRO currently serves five (5) domestic airlines and one international airline, Continental (flights to Houston).

QRO's terminal was originally designed as a general aviation terminal and is considered to be extremely small for the type of operations being encountered at the airport. With only one security area/line with one passenger holding lounge, and no more room for accommodating concessions, rental cars, and other facilities, the terminal is at capacity during peak hours. Terminal expansion should be one of the top priorities in the proposed market and development plan.

It is important to note that the building is quite new and is a very modern building with all modern passenger amenities. It also houses the Airport's administrative staff, the State's SCT representatives and DGAC staff. Nonetheless, its size for its current operations and future operations is completely inadequate.

7.1.4.4 General Aviation

The general aviation parking apron is located to the southeast of the terminal and does not connect to the main commercial apron. It is connected via an access taxiway. It

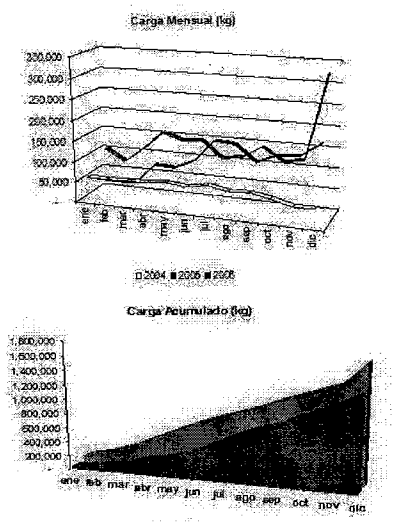
encompasses approximately 17,200 square yards (14,400 square meters) and can accommodate 24 tie-down parking positions (with the space and strength to handle a large business jet) and an additional 60 in the hangar facilities.

There is one primary FBO facility, Bussinair, located east and adjacent to the passenger terminal. The FBO is a full-service facility with maintenance capabilities and a large business jet sized hangar. During conversations with the airport authorities, it has become evident that Universal Weather Inc., a U.S. firm is in the process of soliciting for an FBO facility at QRO.

7.1.4.5 Cargo Facilities

Currently QRO has no existing cargo-specific facility. Any cargo that comes into the airport is handled by a small customs facility on the east side of the terminal. There are two small warehouses that are used as a storage facility. However, plans for a full cargo facility east of the current FBO facility are currently being implemented and will become operational by the spring of 2008. It is important to note that the current aircraft parking apron is sufficient to handle the parking of all-cargo aircraft for the planned facility. The cargo facility will be operated by Terminal Logistics Mexico City. **Figure 22: QRO Historical Cargo Activity** depicts historical and current cargo activity at QRO. As depicted, QRO experienced significant cargo increases ranging from 26 to 150% from 2005 to 2006. According to data collected during the onsite visit, this trend has continued into 2007, thus warranting the proposed cargo facility. The current master plan forecasts do not reflect these current trends.

Figure 22: QRO Historical Cargo Activity



Carga	2005	2006	Var. Acum
ene	40,228	101,691	152.79%
feb	38,086	73,907	124.22%
mar	40,210	111,579	142.29%
abr	89,902	156,735	112.90%
may	87,338	141,671	97.99%
jun	109,080	146,430	80.81%
jul	161,905	106,174	47.89%
ago	156,960	113,297	31.47%
sep	119,293	142,698	29.80%
oct	140,694	112,431	22.66%
nov	143,745	121,054	17.76%
dic	176,187	325,693	26.83%
Suma	1,303,628	1,653,360	
Promedio/me	108,636	137,780	
Variacion	84%	26.83%	

Source: QRO Administration

7.1.4.6 Bombardier Facilities

Canadian aircraft manufacturer, Bombardier Aerospace, is in the process of completing construction of facilities to house a major manufacturing facility at QRO. Bombardier is a world-leading manufacturer of transportation solutions in items ranging from business jets to rail transportation equipment. Bombardier has already invested 200 million USD in equipment, buildings, and start up costs that will span a seven (7) year period. The manufacturing capabilities of the facilities will initially start with the manufacture and assembly of wiring harnesses for Bombardier aircraft and then expand into manufacturing major aircraft structural components. Interviews with airport representatives indicated that full aircraft assembly and testing is the long-term goal of Bombardier. The type of aircraft expected to be built is the regional jet (CRJ).

Due to Querétaro's industrial strength, workforce availability, and the technical education facilities, Bombardier's presence will greatly influence the Mexican economy, the transfer of technology, and foster opportunities for other aerospace and industrial companies as well. This may very well include investment from U.S. manufacturers as there are U.S. companies that supply various parts (i.e. electronic cockpit components/avionics) to Bombardier.

The addition of Bombardier facilities to QRO will see an increase in operations and an increase in airport revenues, thus fostering added opportunities for airport expansion and providing a greater transportation influence to the region and its industrial centers.

7.2 Project Sponsor's Capability and Commitment

The concession of the Querétaro International Airport was given to the State Airport Operator comprised of the State Government and Aeropuertos y Servicios Auxiliares (ASA) with a 75% and 25% share respectively. During the onsite visits, the airport management staff indicated that the funding for expansion is available and within the current and future budget as designated by each shareholder, primarily by the State. The majority of the push for funding comes directly from the State of Querétaro as the upgrading of the airport is included within the State's mission of fostering economic growth through transportation, especially the multi-modal transportation aspect.

7.3 Implementation Financing

The possibilities for implementation financing for this airport are very similar to the previous airports included in this mission. The demand for goods and services for this project could range from planning, engineering, construction, surveying, to airport ground equipment. It is estimated that approximately 60% or more of these goods can be imported from the U.S. and other foreign sources. Financing for this project should be a combination of internal (local) and international financing. Such internal sources may come from airport shareholders, i.e. ASA, the State, or the private investor(s). Additional airport user fees or taxes (passenger facility charges) can be imposed for construction financing. In addition, the airport may be able to issue bonds to the public. Furthermore, the Mexican development

banks Banco Nacional de Obras y Servicios Públicos (Banobras) and Nacional Financiera (NAFIN) may be able to provide loan and equity support.

Internationally, projects can be financed through sources such as the Export-Import Bank of the United States (Ex-Im Bank), the Inter-American Development Bank (IADB), the World Bank, or the Overseas Private Investment Company (OPIC).

- The Ex-Im Bank: Ex-Im Bank has had a long-standing relationship with Mexico for more than 60 years. In fiscal year 2004, Ex-Im Bank approved $2.2 billion in support of U.S. exports to Mexico. Ex-Im Bank finances purchases for a wide range of sectors, including energy, agriculture, transportation, telecommunications, and manufacturing. Ex-Im will provide export credit insurance, working capital guarantees and loan guarantees. Direct loans may also be provided in certain circumstances where private lenders are reluctant to enter a regional market. Ex-Im Bank's foreign currency agreement will enable NAFIN to offer peso-denominated loans, guaranteed by Ex-Im Bank, to Mexican small- and medium-sized enterprises buying U.S. goods and services. NAFIN became the first bank in the world to sign a foreign currency supplement to Ex-Im Bank's master guarantee agreement.

  Through meetings and discussions held with Ex-Im representatives, Ex-Im Bank expressed interest in any aviation development project. Although Ex-Im will still consider financing for U.S. goods and services on government funded development projects, it was expressed that Ex-Im favors financing opportunities in which there is a large private investment. Ideally, 85% of Ex-Im supported financing should directly benefit the export of U.S. services and goods in which 15% of the financed amount may be used to for local materials, goods and services.

- The IADB: The Inter-American Development Bank has been involved with Mexican infrastructure development during the 1990's and earlier years of 2000. Recently, it is has launched its 2007 call for proposals to support regional solutions for common or cross-border challenges in Latin America and the Caribbean. The program supports collective action among the countries in Latin America and the Caribbean to respond to challenges and opportunities that can be dealt with more effectively in a regional context. Examples of regional public goods include cooperation in opening markets, controlling cross-border contagion of financial crises and of diseases, and the preservation of shared ecosystems.

- World Bank: Over five decades, the World Bank has provided crucial expertise and financial support to Mexico. Presently, the Bank is financing 27 projects in the country, with an average annual commitment of up to 1 billion USD. The projects are divided in lending operations and grants. In addition, the Bank's Country Partnership Strategy (CPS) program with Mexico has established a programmatic series of economic and sector work in key thematic areas, such as poverty, competitiveness and governance, combined with intensive dialogue and informal technical assistance. About 40% of the Bank's program budget in Mexico between 2005 and 2007 was invested in these areas. Currently, Querétaro is not involved with the World Bank,

but could very well be involved based on its desire to remain competitive in economic interests within Mexico. The airport is a crucial component of this competitive strategy.

- OPIC: OPIC Financing provides medium- to long-term funding through direct loans and loan guaranties to eligible investment projects in developing countries and emerging markets. By complementing the private sector, OPIC can provide financing in countries where conventional financial institutions often are reluctant or unable to lend on such a basis. In response to the critical shortfall of private equity capital in developing countries, OPIC provides support for the creation of privately-owned and managed investment funds. These funds make direct equity and equity-related investments in new, expanding or privatizing emerging market companies. OPIC-supported funds assist emerging market economies to secure long-term growth capital, access management skills, and secure the financial expertise, all of which are key factors in expanding economic development. OPIC-supported funds are among the largest providers of private equity capital to emerging markets. Since 1991, OPIC has committed (as of FY 2006) nearly $3 billion in funding to over 35 private equity funds. These funds in turn have invested $2.9 billion in more than 400 privately-owned and managed companies, the vast majority of which are small and medium-sized entities located across 53 developing countries in emerging market regions eligible for OPIC support. The beneficial impact of OPIC's credit support of funds that invest in companies is significantly greater than the amount of capital that OPIC contributes directly to the funds: private equity direct investment creates a multiplier effect as new capital attracts additional investment and financing in companies. OPIC also provides political insurance coverage for business interest in foreign work. In order for development projects to be considered for direct OPIC financing, a credible debt-to-equity ratio of at least 60/40 should be foreseen.

Furthermore, there is also the Latin American Infrastructure Fund (LAIF). The AIG-GE Capital Latin American Infrastructure Fund (LAIF) is a $1.01 billion fund established in 1996 to make equity investments in South America, Mexico, Central America and the Caribbean. At its establishment, it was the largest private equity fund operating exclusively in the Latin American and the Caribbean Region. EMP Latin American Management LLC is the principle advisor to LAIF. The sponsors of LAIF are American International Group ("AIG") and GE Capital Corporation ("GE"), whose combined investments comprise 30% of LAIF's capital. Between 1997 and 2002, LAIF made 23 investments totaling $803 million. The Fund targeted minority stakes in infrastructure related businesses, often in sectors which had recently been deregulated or privatized. Investments spanned the entire region, with a focus on Argentina, Mexico and Brazil. LAIF invested in companies operating in fixed and wireless telephony, cable TV, transportation, petrochemicals, and power generation and distribution. As the Mexican airport system is largely privatized, this fund should be of high interest to potential funding for airport projects.

7.4 U.S. Export Potential

As outlined in **Figure 24: Estimated Capital Expenditures – QRO**, 65% of the overall development costs, estimated at US$ 23.2 million, is intended to be provided through U.S.

firms and is comprised of U.S. labor, equipment, materials and professional services. The primary U.S. exports envisioned for the proposed airport expansion includes airport planning services (master planning updates), airport equipment (general service equipment and passenger boarding bridges), navigational aid equipment (ILS, runway lighting), ground equipment (tugs for pushback operations, fuel and fire-fighting vehicles), construction services (cargo aircraft parking area), FBO services, and industrial parts to Querétaro-based manufacturers. It is important to note that QRO and the City of Querétaro are situated on a direct line with major trucking and railway routes. In fact, there is a main railway, owned and operated by Kansas City Railway, which is located just outside and to the northeast of the airport property. Current State plans include the construction of a multimodal rail center in the airport's vicinity which may foster a free trade zone area for the airport. Such multimodal facilities may provide a direct link to U.S. cities.

7.5 Foreign Competition

As Mexico has continuously been developing in virtually all export and import markets related to industry, transport and manufacturing, the involvement of foreign competition is inherent. Foreign competition for this project may include airport planning, construction and development, airline competition, suppliers of technology, and cargo specific operations.

In terms of airport planning, construction, and management, there are a large number of international companies that provide such services. Already present in Mexico at other airports are Aeroports de Paris (ADP), Copenhagen International Airport, and Aeropuertos Españoles y Navegación Aereas (AENA). These are primarily contracted with the large airport groups established by private concessions (ASUR, OMA, and GAP) and act as investors and technical advisors. As Querétaro is not part of such a private concession, interest to provide such services by these types of foreign companies can prove to be high. However, from the information gathered during the site visit, it is evident that a few U.S. companies have already expressed interest in planning and development activities at QRO. In return, QRO has already expressed interest in working with smaller U.S. firms to continue development; however, a thorough and updated plan must be implemented first.

Airline competition for QRO is primarily envisioned in the domestic market with the continued rise of the low cost carriers. International routes should also see increased competition as a result of more international firms investing in Querétaro. During the visits to the City's surrounding industrial parks it was evident that foreign investment continues to grow at an astronomical rate. Since large European and Asian automotive companies are also well established in Querétaro, it is foreseen that cargo airlines such as Lufthansa, Martin Air, Cargo Lux, Korean Airlines, and others will operate out of QRO once the facilities are in place. In terms of U.S. companies, the QRO staff indicated and presented letters of interest from Delta Airlines expressing possibilities for QRO – U.S. operations.

7.6 Developmental Impact

The USTDA has a dual mission of promoting U.S. exports and advancing economic development in the host country and measures developmental impact in four categories of These four categories, as defined by the USTDA, include:

- Infrastructure
- Market Oriented Reform
- Human Capacity Building
- Technology Transfer and Productivity Improvement

7.6.1 Primary Developmental Benefits

The primary impacts associated with development in Querétaro are the enhancement of its transportation and industrial sectors, including technology transfer and productivity improvement. In terms of infrastructure, any improvements to the airport's facilities will create greater efficiency of operations and attract more aircraft and passenger traffic, thus directly fostering opportunities for the industrial zones surrounding the airport to utilize these facilities for the shipping of goods. In addition, by providing enhanced levels of passenger services to attract more domestic and international airlines, air travel to and from the region will become more affordable and the region itself more easily accessible.

As the industrial infrastructure development surrounding the airport is currently experiencing a significant boom in technology oriented business, including the addition of the new Bombardier aircraft manufacturing facility, it can be expected that such industry will enhance the skills and abilities of local labor forces. Additionally, as there are a large number of technical schools in the area that can aid in developing technical labor skills for the local workforce, it is expected that the technology oriented business and the local workforce will benefit equally.

The direct impact of the transfer of technology is envisioned to have a very positive effect on human capacity building in the Querétaro region. As Mexico is also entering the digital age, any technology transfer related to computer-manufactured products, i.e. the automobile industry, will enhance the local workforce's ability to use digital technology. With the vested interest of U.S. and multiple foreign companies in the region that manufacture technological products, it was evident during the on-site visits that human capacity building and technology transfer in Querétaro has already led to the establishment of a very modern city with a technology-minded population.

7.7 Impact on the Environment

Based upon meetings with the airport and planning staff, any proposed expansion or development will be assessed for environmental compliance under Mexican laws prescribed by the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT). SEMARNAT is responsible for developing a state policy of environmental protection that reverses ecological deterioration and promotes sustainable use. SEMARNAT issues the Environmental Regulations for the Environmental laws. Through research aviatDesign determined that PROFEPA is the Prosecutor for the Protection of the Environment. Environmental Standards (NOM-SEMARNAT previously marked NOM-ECOL) are issued

with the coordination of SEMARNAT and the DGN (Secretary of Economy department). These agencies and authorities should be involved in any airport planning and design project.

7.8 Impact on U.S. Labor

As outlined in **Figure 24: Estimated Capital Expenditures – QRO**, 65% of the overall development costs are estimated to be furnished by U.S. companies for goods and services. Hence, it is reasonable to apply that the increase of products and services will have a positive impact on direct U.S. labor. The same types of rates that are evident from NAFTA's economic success for the U.S. can be applied to the potential impact on U.S. labor markets. According to NAFTA statistics, U.S. employment rose from 112 million in 1993 to 134.8 million in 2006, an increase of 20.1%. Unemployment also decreased from 7.1% in to 5.1% during this period. Such successes are marked by the investment of U.S. companies in foreign markets such as Mexico.

7.9 Project Justification

The main sources of the justification for the development of Querétaro International Airport are: the effort to decongest Mexico City Benito Juárez International Airport (AICM); to contribute to the Metropolitan Statistical Area (SMA), QRO's existing and very new facilities, the extraordinary industrial growth currently experienced within the region, and the fact that the U.S. is the largest investor in the region as illustrated in **Figure 23: QRO Direct Foreign Investment.**

As a result of AICM's inability to expand facilities, the air carriers and cargo companies are actively seeking new ventures outside of the main airport. It is evident from the onsite visits that such investment in QRO is already occurring, i.e. the planned cargo facility. To foster this growth correctly for QRO, a solid transportation system must be in place. The airport's current terminal is operating at levels higher than expected and plans for terminal expansion should be implemented as soon as practical. The airport administrators stated that the most important part of the airport's development is to have updated plans and a realistic implementation and cost schedule, along with the hiring of specialized firms to carry out the development.

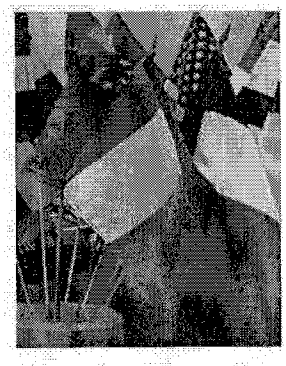
Discussions with the SCT, DGAC, and ASA indicated that the Federal Government's intentions are to relocate cargo carriers to satellite airports within the SMA and support the major business and financial centers surrounding Mexico City. In addition, there were discussions and implications that AICM may become a large airplane airport only in the mid-term planning horizon. As such, more international flights will occur at the satellite airports, including QRO. This is already evident at QRO from interest shown by U.S, airlines such as Delta.

In addition to the need for expansion at the airport, the State of Querétaro has also invested in multi-modal facilities to foster further economic growth. This multi-modal link is attractive for all foreign investors as it links Querétaro directly to Mexico City, other cities within the region, and the U.S.

Figure 23: QRO Direct Foreign Investment

Direct Foreign Investment

AEROPUERTO INTERNACIONAL QUERÉTARO



Exporting Firms 406

Country	Firms	% Participation
United States	254	48.8
Spain	52	10.0
Germany	36	6.9
Korea	21	4.0
Canada	20	3.8
Italy	18	3.5
Netherlands	17	3.3
Japan	13	2.5
France	14	2.7
Other	75	14.5
Total	520	100.0

Source: Ministry of Economy, June 2005

Source: QRO Administration

During the site visits and meetings with airport and government officials, it has become clear that the Mexican local, State and Federal governments are aggressively pursuing infrastructure changes to accommodate the new economic demands on all levels. The change can also be seen in Mexico City itself. Efforts to decongest the main highway transport routes that lead to cities such as Querétaro and Puebla are occurring in the form of major bypass systems. Such commitment from the current government can be seen as a positive incentive for foreign investment. All future plans for Mexico and the State of Querétaro confirm that this expansion is slated to continue for the next 20 years or more.

Development at QRO since the opening of the airport in 2005 has been occurring in the private/general aviation sector with multiple new hangars and FBO development, and in the cargo sector of the airport. As the large increases in current passenger and cargo operations have shown, QRO needs to accommodate this growth even further in order to avoid its own saturation which in turn could affect the local economy, the airport's safety, and could provide a barrier to future foreign and domestic investment. As such, any financial aid in the development of this airport will benefit U.S. companies that are not only involved in the airport development industry, but also in the Querétaro and the Mexican industry as a whole. A market and development plan to more accurately assess investment interest to coincide with airport expansion should be implemented so that proper

implementation of plans can commence. Such a plan would also depict further potential for U.S. interests. **It is therefore recommended that the USTDA provide funding for this request and to move forward as quickly as possible to avoid any missed opportunities for immediate U.S. interest.**

7.10 Recommendations for Additional Airport Development

As Querétaro already has the existing airfield structures, i.e. runways, taxiways, and aprons, to handle all future operations within the 20 year planning horizon, it is essential that the airport focuses on cargo building development, terminal building development, and general aviation development. It is recommended that the priority for QRO is to implement a market and development plan as requested for USTDA funding in this DM. Such a plan should essentially become a master plan update that will ensure that the appropriate growth rates are applied to physical facility development. The master plan update should also include an on-airport land-use plan to allow for expansion efficiency and lock in areas required for specific development. Currently, the airport has land areas set aside for significant cargo expansion and general aviation expansion. Furthermore, the Bombardier facilities have also already been planned. However; the airport needs these expansion plans to be included/consolidated in an updated plan that also provides information for financing options. It is important to note that during the DM process, a U.S. firm has already approached QRO to provide a land use plan.

Since cargo and general aviation plans have already been approved, it is recommended that the immediate priority be placed on terminal expansion. The current terminal is the original general aviation terminal and is already showing signs of complete saturation during peak hours. The terminal expansion needs to be reflected in a new master plan update to ensure the peak hour utilization reflects accurate near and long term air traffic and passenger forecasts.

It is further recommended that the only airfield expansion consist of navigational aid improvements from non-precision to precision instrument approach capabilities, i.e. an Instrument Landing System (ILS) and the associated airport lighting systems. This will enable the airport to provide for safe operations and increased capacity during adverse weather conditions. Such equipment can be installed and provided by U.S. companies.

The following outlines the recommendations for QRO expansion (in order of priority):

- Master Market and Development Plan (Master Plan Update)
- Commercial Terminal Expansion
- Airfield Navigational Aid Improvements
- Cargo Facility Infrastructure Development
- FBO Facility Implementation

7.11 Estimated Capital Expenditures – Querétaro International Airport

Figure 24: Estimated Capital Expenditures – QRO illustrates the proposed development costs associated with the envisioned development at Querétaro International Airport including the estimated contribution of U.S. supplied goods and services.

Figure 24: Estimated Capital Expenditures – QRO

Item	Description	Unit Cost	Area	Unit	Total
1.0 - Runway Expansion					
1.1	Runway Resurfacing	$30	189,000	m²	$5,670,000
1.2	Navigational Aids - ILS	$2,000,000	1	Unit	$2,000,000
1.3	Navigational Aids - ASR Radar	$7,000,000	1	Unit	$7,000,000
				Total	**$14,670,000**
2.0 - Terminal Expansion					
2.1	Terminal Expansion	$2,000	8,000	m²	$16,000,000
				Total	**$16,000,000**
3.0 - Landside Expansion					
3.1	Roadways	$500	1,000	lm	$500,000
				Total	**$500,000**
4.0 - General Aviation Expansion					
4.1	GA Terminal	$2,500	1,000	m²	$2,500,000
4.2	GA Hangars	$750	2,500	m²	$1,875,000
				Total	**$1,875,000**
				Total Development	**$33,045,000**
5.0 - Design, Engineering, Construction and Supervision Services				8%	$2,643,600
				Grand Total	**$35,688,600**
6.0 - Estimated U.S. Exports of Goods and Services				**65%**	**$23,197,590**

8 PROJECTS TERMS OF REFERENCE

8.1 SAN LUIS POTOSÍ FEASIBILITY STUDY TERMS OF REFERENCE

8.1.1 Project Objective

The primary objective is to develop a Feasibility Study for the airport with emphasis on the expansion of the existing Runway 14-32 at San Luis Potosí International Airport, hereinafter referred to as "SLP". The expansion of the runway is intended to accommodate new larger aircraft that can facilitate the current and projected passenger and cargo traffic volumes. This runway extension is anticipated to foster the interests of a number of larger airlines and cargo companies that will enhance the regional industrial growth. Moreover, the runway extension is expected to enhance the following items:

- the opening of airport-affiliated industrial parks to complement the integrated logistics center,
- supplement the growth of Estafeta's capabilities as Mexico's largest express package service provider,
- a significant growth in employment related to passenger traffic growth,
- U.S. companies interests in the region,
- An increase in competition among regional operators to obtain affordable domestic travel for the traveling public.

San Luis Potosí is located approximately 263 miles (424) kilometers northwest of Mexico City and has a population of approximately 2.5 million. The State of San Luis Potosí is one of the most important industrial centers of Mexico, primarily because of its central location in Mexico and its proximity to other industrial cities such as Mexico City, Monterrey, and Guadalajara, with the primary products being automotive and construction materials, and technical services. Additionally, San Luis Potosí boasts 19 technical schools and institutes to enhance Mexican employment in the industrial sectors. The "Ponciana Arriaga" San Luis Potosí International Airport (SLP) is located 4.5 miles (15 kilometers) northeast of the City of San Luis Potosí and has an elevation of 6,070 feet (1,850 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 81°F and 86°F (27°C and 30°C). The airport can be accessed from the Matehuala Highway at kilometer marker 9.5, which connects to the city's main circular beltway, the Anillo Periferico, which in turn connects to the main arterial highways that connect to Mexico City, Zacatecas, and Guadalajara.

It is important to note that SLP is not part of the SCT designated Metropolitan Airport System (SMA) aimed to relieve congestion at Mexico City Benito Juárez International Airport (AICM). However, the airport is considered close enough for air transport to provide relief to AICM in terms of both passengers and cargo.

The proposed Feasibility Study shall be carried out through a series of individual tasks which will guide the study to a successful completion. Each task which is carried out is subsequently included as part of the Final Report to be delivered at the end of the project.

The primary tasks associated with the preparation of the Feasibility Study include the following:

TASK 1: Data Collection

TASK 2: Airport Assessment and Analysis

TASK 3: Passenger and Cargo Demand Forecast

TASK 4: Facility Requirements

TASK 5: Economic and Financial Analysis

TASK 6: Airport Development Plan

TASK 7: Environmental Analysis

TASK 8: U.S. Source List

TASK 9: Prepare and Submit Final Report

Each of the aforementioned tasks, including all relevant deliverables, is described hereafter.

8.1.2 TASK 1: Data Collection

The Consultant shall collect all relevant data required to undertake and successfully complete all tasks. Data to be collected shall include:

- Information on the existing airside and landside facilities, including all relevant design documents, airport layout plans, aerial surveys, topographic surveys as well as all previous reports and studies prepared for SLP.
- Socio-economic, infrastructure, tourism, business, GDP and population data which is to be used in preparing projected aviation traffic forecasts.
- Information and data which may impact aviation activity including the emergence of new economic markets, proposed aircraft/airline operations, and development of major industries.
- Airport fees information as well as information pertaining to airport operational costs.

- Information obtained through meetings and interviews with airlines, local / federal government agencies and FBO's operating or intending to operate at the airport.
- All relevant historic data detailing the level of aviation related activity at SLP for use in the development of activity forecasts later in this study. Information to be collected shall include the following:
  - Historic Enplaned Domestic, International and Connecting Passengers by Airline – 10-years of data
  - Landing Fee Reports by Month and by Airline for the past 5-years which includes:
    - Aircraft Type (Fleet Mix)
    - Landing Weight
    - Carrier
    - Number of Seats (used to determine Boarding Load Factor)
    - Passengers and/or Cargo Volume Carried
  - Based General Aviation Aircraft – 5-years of data
  - Air Traffic Control Tower Operation Counts by Type (Commercial Passenger/Military, General Aviation) which includes:
    - Hourly Count
    - Daily Count
    - Monthly and Annual
  - Consolidated Flight Schedules from the Airport or from individual carriers.
  - Military fleet mix and operational levels
  - Historic cargo operations and tonnage of throughput -5-years of data.

In addition to the information obtained from SLP, it is anticipated that the Consultant will contact several other organizations or agencies in order to obtain additional traffic information. Other potential sources for information may include the following:

- Airport Council International
- Customs and Immigration Service
- United States Federal Aviation Administration Statistical Databases
- IATA, ICAO and Aircraft Manufactures (i.e. Boeing, Airbus Industries)

8.1.3 TASK 2: Airport Assessment and Analysis

The Consultant shall conduct an on-site analysis of all airport facilities and associated operations including cargo facilities, passenger terminal, airport access roadways, parking facilities (cargo, passenger terminal and FBO's), airport technical infrastructure, airside aircraft apron, taxiways, runways, airfield lighting and navigational aids, Fixed Base Operators (FBO's), Aircraft Rescue and Fire Fighting (ARFF) facility and air traffic control tower.

Based on the on-site analysis the Consultant shall prepare an Airport Assessment Report which shall include an inspection report for each of the aforementioned facilities. The inspection report shall provide the following information:

- Brief description of each major facility including primary usage.
- General data for all major airside, landside and terminal facilities including length and width of runways, building area, number of floor levels, type and category of navigational aids, category of ARFF facility, category of airport operations,
- Documentation of all major equipment and systems.
- Address whether the facility has any major deficiencies including building defects, environmental issues, obstacle limitations, ATC line-of-sight limitations, security breaches as well as any other major non-compliance issues relating to ICAO and FAA regulations.
- Outline if the facility is sufficient to handle existing passenger/cargo traffic, as well as overall capacity which can be handled at each existing facility.

Deliverable: Airport Assessment and Analysis Report

The Airport Assessment and Analysis Report shall be submitted to SLP as an Adobe® PDF, or approved equal, data file. A hardcopy shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.4 TASK 3: Passenger and Cargo Demand Forecast

Based on the data collected as part of TASK 1, the Consultant shall develop traffic projections for cargo and passenger demand for the next 15 years. Projections shall be prepared for domestic and international traffic and include projections for:

- Total aircraft operations (split between cargo and passenger traffic)
- Total peak hour operations (split between cargo and passenger traffic)
- Total peak hour passengers (arrival, departure and transfer passenger traffic)
- Total peak hour passengers (combined arrival and departure traffic)

All traffic projections shall be prepared using three types of scenarios which include most likely growth scenario, high growth scenario and low growth scenario.

Deliverable: Passenger and Cargo Demand Forecast

The Passenger and Cargo Demand Forecast shall be submitted to SLP as an Adobe® PDF, or approved equal, data file which will be provided for review and approval. The approved forecast shall be used as base data for the preparation of all further tasks.

The Passenger and Cargo Demand Forecast shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.5 TASK 4: Facility Requirements

As a basis for the Development Plan to be prepared as part of Task 6, the Consultant shall prepare a demand capacity analysis which will include:

- Overview of airfield characteristics.
- Determination of design aircraft and fleet mix.
- Determination of airfield design standards.
- Determination of airport cargo, passenger terminal and airfield facility requirements.
  - Runway length analysis
  - Airfield facility requirements
  - Navigational aid analysis
  - Aircraft parking analysis
  - Terminal space programming
  - Cargo facility space determination
  - Industrial park development

The physical facility requirements shall include possible alternatives for location, development phasing, development costs and feasibility.

In this task the Consultant shall focus on the airport's requested runway extension and prepare an analysis in conjunction with this section's subtasks.

Deliverable: Facility Requirements and associated Layout Plans.

The Facility Requirements and all associated Layout Plans shall be submitted to SLP as an Adobe® PDF, or approved equal, data file which will be provided for review.

All documents related to the Facility Requirements shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.6 TASK 5: Economic and Financial Analysis

The Consultant shall conduct an economic and financial analysis which will include a determination of the existing airport operating and maintenance expenditures as well as estimates of revenue which may be generated through the airport expansion program as indicated as part of the Task 4 deliverable. Revenues to be analyzed include those from landing fees, passenger facilitation charges (PFC's), over flight fees, aircraft parking fees, aircraft gate utilization fees, vehicular parking fees, concession generated revenue, fuelling fees, Free Trade Zones and any other airport related

charges or operational fees that the Consultant finds to be relevant for the expansion of SLP.

Based on the projected revenue, the Consultant shall develop a schedule of revenues for a 15-year period and include a calculation of the expected internal rate of return and financial internal rate of return for a number of different scenarios or development implementation phases.

For the benefit of those interested in the Project, the Contractor shall assess the development benefits associated with the Project and the methodology for measuring those benefits. The assessment shall include examples of the development benefits that would be expected in the Host Country if the Project is implemented as outlined in the Final Report. The Contractor shall specifically focus on examples from the categories listed below and shall develop a methodology for assessing these impacts over time. The Contractor shall select examples that USTDA can obtain information on in the future and shall identify where to obtain this information (e.g. the Grantee, trade statistics, or U.S. Embassy in the Host Country). The Contractor shall only list benefits in the categories that are applicable to the Project.

The categories to be considered are as follows:

Infrastructure: Estimate the expected scale of infrastructure construction and comment on the capabilities of any recommended infrastructure improvements.

Human capacity building: Estimate the number and type of jobs that would be created during the construction or installation phase if the Contractor's recommendations are implemented. Distinguish between temporary construction jobs and the number of jobs that would be created or sustained once construction is complete. Comment on any prospective training recommended in the Final Report, including an estimate of the number of persons to be trained, type of training needed, and the desired outcome of the training.

Technology transfer and productivity improvements: Discuss potential commercial contracts for licensing new technologies that are recommended, as well as the expected productivity benefits of any such technologies. More generally, discuss the expected efficiency gains related to the recommendations, such as improved systems or processes that enhance productivity or result in the more efficient use of resources.

Market-oriented reform: Discuss any market-oriented reforms that would facilitate implementation of the Project or that would result from Project implementation, such as any policy changes that result in the liberalization of prices, privatization of previously state-owned assets, or increased competition in a given sector.

Other: Discuss prospective indirect development impacts of the key recommendations, such as enhanced safety and economic benefits (including increases in tourism, investment, and indirect job creation) that are not captured in the four categories listed above.

Deliverable: Economic and Financial Analysis Report

The Economic and Financial Analysis Report shall be submitted to SLP as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Economic and Financial Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.7 TASK 6: Airport Development Plan

The results and data obtained from previous tasks are to be used to develop an Airport Development Plan which shall document and illustrate a recommended development plan for a period of up to 15 years.

The Airport Development Plan shall depict graphically the following:

- All existing physical airport facilities including:
  - Runways
  - Taxiways
  - Aircraft Parking Areas
  - Access Roadways
  - Commercial Passenger Facilities
  - General Aviation Facilities
  - Cargo Facilities
  - Navigational Aid and Lighting Facilities (Air Traffic Control)
  - Rescue and Firefighting Facilities
  - Fuel Facilities
  - Commercial Facilities (Bombardier)
  - Major Landmarks or Geographical structures in the airport vicinity
  - Airfield safety areas (ICAO standards)
- Basic Airport Data Including:
  - ICAO reference codes
  - Lengths and width of runways and taxiways
  - Geographical coordinates for major airport points
  - Critical aircraft data
  - Weather Data pertaining to runway orientation
- All proposed airport future expansion including all conceptual facilities.
- Phasing of future airport expansion (short-term, mid-term, long-term).
- Future On-Airport Land Use designations.

Deliverable: An Airport Layout Plan will be prepared and illustrate the proposed airport development including interim phases of development. A narrative report with accompany the Airport Layout Plan and describe the primary issues which contribute to

the recommended development. All deliverables shall be submitted to SLP as an Adobe® PDF, or approved equal, data file as well as three (3) hardcopies.

Presentation: A presentation shall be conducted in San Luis Potosí, Mexico for SLP and include an overview and associated results deriving from all tasks completed to date. The focus of the presentation shall be on the approved traffic forecast, economic & financial analysis and proposed Airport Development Plan.

All documents prepared on behalf of Task 6: Airport Layout Plan shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.8 TASK 7: Environmental Analysis

The Consultant shall provide a general analysis of the current environmental conditions for the airport and immediate surroundings. The analysis shall include general information pertaining to the various types of federal and local regulations and ordinances that must be adhered to when undertaking any future aviation development including the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT), Prosecutor for the Protection of the Environment (PROFEPA) and the Secretary of Economy (DGN). These agencies and authorities shall be contacted and relevant information should be compiled prior to carrying-out the proposed analysis.

The Consultant shall also conduct a general analysis of the environmental conditions and prepare a report which includes:

- General Location and Site Description
- Natural Geographic Conditions including general information pertaining to topography, climate, hydrology, geology, seismic activity, archeological findings and agricultural development.
- General information and description of the source of water supply, sewage treatment, storm water drainage, handling of hazardous substances, air quality, noise monitoring, fuelling and waste management.
- Reporting of any previous environmental infractions including aviation related incidents, accidents and contamination on or surrounding the airport property.

Deliverable: Environmental Analysis Report as part of the Final Report

The Environmental Analysis Report shall be submitted to SLP as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Environmental Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.1.9 TASK 8: U.S. Source List

As part of Task 8, the Consultant shall prepare a U.S. Source List which shall outline potential U.S. suppliers which may be able to provide goods and services for carrying out the services required to implement the proposed Airport Development Plan. The information shall include U.S. companies who currently maintain branch offices in the SLP region and in Mexico as well as any other major U.S. based manufactures and suppliers of goods and services that are considered a key supplier. The U.S. Source List shall include company name, contact information, contact person and a general description of the products and/or services which are provided.

Deliverable: U.S. Source List as part of the Final Report

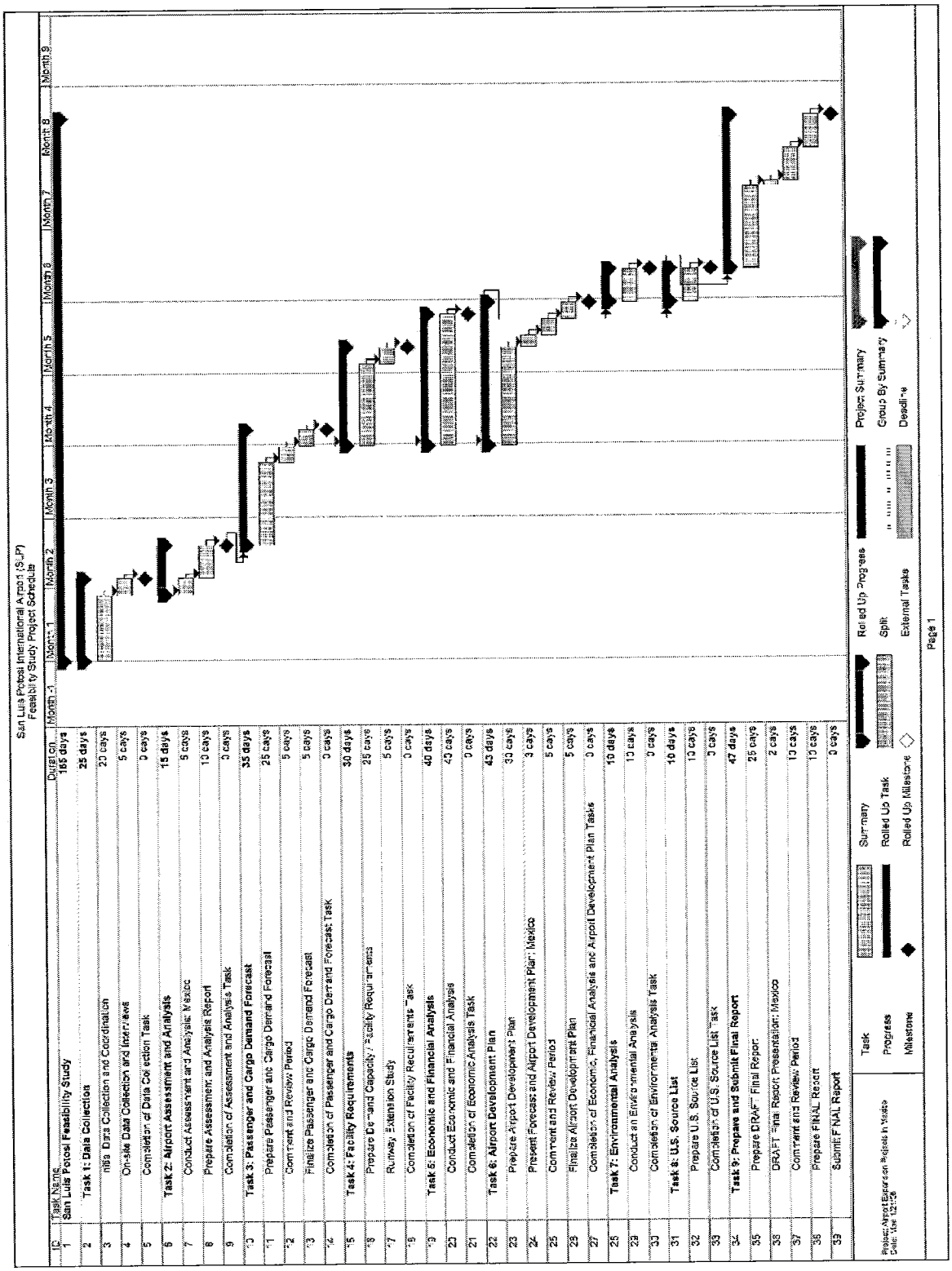
8.1.10 TASK 9: Prepare and Submit Final Report

For the concluding Task 9, the Consultant shall prepare a Final Report which encompasses all findings outlined in Task 1 through 8. The Final Report shall include an Executive Summary which summarizes all key issues and findings determined through the preparation of the study. A DRAFT Final Report shall be submitted to SLP and the USTDA as an Adobe PDF, or approved equal, data file for review and comments. All comments obtained from the USTDA and SLP shall be reviewed and incorporated. Once all comments have been incorporated, the Final Report Deliverable shall be submitted to the USTDA and SLP as stipulated in the Consultant's contractual agreement.

8.1.11 Implementation Plan

The proposed implementation plan for carrying out the Feasibility Study has been included on the following page as **Figure 25: SLP Feasibility Study Implementation Plan**.

Figure 25: SLP Feasibility Study Implementation Plan



8.1.12 Study Budget

A breakdown of all anticipated labor costs and expenses in order to successfully carry-out the Feasibility Study has been outlined in **Figure 26: SLP Feasibility Study Budget.**

Figure 26: SLP Feasibility Study Budget

Feasibility Study Budget: San Luis Potosi International Airport (SLP)

Labor Classification	Task Breakdown (Hours)									Labor Total		
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Hours	Hourly Rate	Cost
Airport Planning Services												
Principal	8	4	4	4	4	4	4	4	8	44	$180.00	$7,920.00
Project Manager / Sr. Airport Planner	40	40	24	112	24	80	16	8	80	424	$150.00	$63,600.00
Airport Engineer/CADD Operator	8	16	0	96	0	120	0	32	120	392	$90.00	$35,280.00
Administrative	16	8	8	8	8	8	8	8	16	88	$40.00	$3,520.00
											Total	$110,320.00
Economic & Financial Services												
Principal	4	0	4	0	4	0	0	0	4	16	$220.00	$3,520.00
Project Manager / Sr. Economic / Financial Analyst	40	16	80	0	104	0	0	0	16	256	$175.00	$44,800.00
Economic / Financial Analyst	8	32	120	0	160	0	0	0	24	344	$130.00	$44,720.00
Administrative	8	0	8	0	8	0	0	0	8	32	$40.00	$1,280.00
											Total	$94,320.00
Locally Provided Services												
Economic / Financial Analyst	40	32	32	0	80	0	0	0	16	200	$75.00	$15,000.00
Environmental Engineer	0	32	0	0	0	0	40	0	16	88	$50.00	$4,400.00
Administrative / Local Coordination Services	32	24	24	16	32	16	24	16	24	208	$20.00	$4,160.00
											Total	$23,560.00
											Total Labor	$228,200.00

Expenses	Breakdown of Expenses Per Task									Quantity/Unit	Price	Cost
Air Transportation to/from Mexico (Unit)	2					3			3	8	$750.00	$6,000.00
Local Ground Transportation (Lump-sum)	1					1			1	3	$200.00	$600.00
Travel Allowance Per Diem* (Per Diem in Days)	10					6			4	20	$300.00	$6,000.00
Reprographics (Lump-sum)										1	$2,500.00	$2,500.00
Expenses Total												**$15,100.00**
Labor and Expense Total												**$243,300.00**

*Based on U.S. Department of State Office of Allowances (11/1/07 Rates) includes Accommodations, Meals and Incidentals

8.2 PUEBLA FEASIBILITY STUDY TERMS OF REFERENCE

8.2.1 Project Objective

The project objective is to develop a Feasibility Study for the Puebla International Airport, hereinafter referred to as "PBC", for the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics. These expansion projects are anticipated to foster the continued interests of domestic and U.S. airlines, and cargo companies that will enhance the regional industrial growth. Moreover, these proposed developments are expected to enhance the following items:

- the significant potential growth in employment related to passenger traffic growth,
- U.S. companies interests in the region,
- Incentives for all-cargo airline companies to use PBC as a cargo destination/hub.

Puebla is the capital of the State of Puebla and was founded in 1531. The City of Puebla is located approximately 70 miles (113) kilometers southeast of Mexico City and has a population of 2.5 million. The State of Puebla is one of the most important agricultural, industrial, and cultural centers of Mexico, with the primary products being automotive and textile products. Additionally, Puebla is also Mexico's second largest centers for education, harboring over 20 universities.

The "Hermanos Serdán" Puebla International Airport (PBC) is located 12.5 miles (20 kilometers) northeast of the City of Puebla and has an elevation of 7,353 feet (2,241 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 60°F and 70°F (18°C and 20°C). PBC is located in the municipalities of Huejotzingo and Juan C. Bonilla and is adjacent to the Municipality of Tlaltenango. The airport can be accessed through the Airport Boulevard, which connects to the Mex-150 highway to the north (the Mexico – Puebla Turnpike) and the Mex-190 (Puebla Federal Highway) highway to south. The latter provides access to the town of Huejotzingo. Furthermore, due to its location and road access, PBC has a geographical transport influence that spans the western-central part of Veracruz, the northern portion of Oaxaca, Morelos, and the western and southern areas of the Metropolitan Area of Mexico City. PBC is officially part of the SCT designated Metropolitan Airport System (SMA) aimed to relieve congestion at Mexico City Benito Juárez International Airport.

The proposed Feasibility Study shall be carried out through a series of individual tasks which will guide the study to a successful completion. Each task which is carried out is subsequently included as part of the Final Report to be delivered at the end of the project.

The primary tasks associated with the preparation of the Feasibility Study include the following:

TASK 1: Data Collection

TASK 2: Airport Assessment and Analysis

TASK 3: Passenger and Cargo Demand Forecast

TASK 4: Facility Requirements

TASK 5: Economic and Financial Analysis

TASK 6: Airport Development Plan

TASK 7: Environmental Analysis

TASK 8: U.S. Source List

TASK 9: Prepare and Submit Final Report

Each of the aforementioned tasks, including all relevant deliverables, is described hereafter.

8.2.2 TASK 1: Data Collection

The Consultant shall collect all relevant data required to undertake and successfully complete all tasks. Data to be collected shall include:

- Information on the existing airside and landside facilities including all relevant design documents, airport layout plans, aerial surveys, topographic surveys as well as all previous reports and studies prepared for PBC.
- Previously prepared USTDA funded Definitional Mission Report for Air Cargo Terminal Projects in Mexico completed by Airlines Capital Associates, Inc. on March 25, 2002 and referenced as Order#: TDA_CO200250007A.
- Socio-economic, infrastructure, tourism, business, GDP and population data which is to be used in preparing projected aviation traffic forecasts.
- Information and data which may impact aviation activity including the emergence of new economic markets, proposed aircraft/airline operations, development of major industries.
- Airport fees information as well as information pertaining to airport operational costs.
- Information obtained through meetings and interviews with airlines, local / federal government agencies and FBO's operating or intending to operate at the airport.

- All relevant historic data detailing the level of aviation related activity at SLP for use in the development of activity forecasts later in this study. Information to be collected shall include the following:
  - Historic Enplaned Domestic, International and Connecting Passengers by Airline – 10-years of data
  - Landing Fee Reports by Month and by Airline for the past 5-years which includes:
    - Aircraft Type (Fleet Mix)
    - Landing Weight
    - Carrier
    - Number of Seats (used to determine Boarding Load Factor)
    - Passengers and/or Cargo Volume Carried
  - Based General Aviation Aircraft – 5-years of data
  - Air Traffic Control Tower Operation Counts by Type (Commercial Passenger/Military, General Aviation) which includes:
    - Hourly Count
    - Daily Count
    - Monthly and Annual
  - Consolidated Flight Schedules from the Airport or from individual carriers.
  - Military fleet mix and operational levels (if any).
  - Historic cargo operations and tonnage of throughput -5-years of data.

In addition to the information obtained from PBC, it is anticipated that the Consultant will contact several other organizations or agencies in order to obtain additional traffic information. Other potential sources for information may include the following:

- Airport Council International
- SCT/ASA
- Customs and Immigration Service
- United States Federal Aviation Administration Statistical Databases
- IATA, ICAO and Aircraft Manufactures (i.e. Boeing, Airbus Industries)

8.2.3 TASK 2: Airport Assessment and Analysis

The Consultant shall conduct an on-site analysis of all airport facilities and associated operations including cargo facilities, passenger terminal, airport access roadways, parking facilities (cargo, passenger terminal and FBO's), airport technical infrastructure, airside aircraft apron, taxiways, runways, airfield lighting and navigational aids, Fixed Base Operators (FBO's), Aircraft Rescue and Fire Fighting (ARFF) facility and air traffic control tower.

Based on the on-site analysis the Consultant shall prepare an Airport Assessment Report which shall include an inspection report for each of the aforementioned facilities. The inspection report shall provide the following information:

- Brief description of each major facility including primary usage.
- General data for all major airside, landside and terminal facilities including length and width of runway, building area, number of floor levels, type and category of navigational aids, category of ARFF facility, category of airport operations.
- Documentation of all major equipment and systems.
- Address whether the facility has any major deficiencies including building defects, environmental issues, obstacle limitations, ATC line-of-sight limitations, security breaches as well as any other major non-compliance issues relating to ICAO and FAA regulations.
- Outline if the facility is sufficient to handle existing passenger/cargo traffic, as well as overall capacity which can be handled at each existing facility.

Deliverable: Airport Assessment and Analysis Report

The Airport Assessment and Analysis Report shall be submitted to PBC as an Adobe® PDF, or approved equal, data file. A hardcopy shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.4 TASK 3: Passenger and Cargo Demand Forecast

Based on the data collected as part of TASK 1, the Consultant shall develop traffic projections for cargo and passenger demand for the next 15 years. Projections shall be prepared for domestic and international traffic and include projections for:

- Total aircraft operations (split between cargo and passenger traffic)
- Total peak hour operations (split between cargo and passenger traffic)
- Total peak hour passengers (arrival, departure and transfer passenger traffic)
- Total peak hour passengers (combined arrival and departure traffic)

All traffic projections shall be prepared using three types of scenarios which include most likely growth scenario, high growth scenario and low growth scenario.

This portion of the study shall be coordinated with the airport authority and the WTC facility representatives. It is important to note that the Consultant must include, as part of the study, an analysis of the expected all-cargo operations vs. belly-haul cargo operations. Currently, the airport does not have an all-cargo aircraft parking apron. The study shall include a demand study for this type of all-cargo operation.

Deliverable: Passenger and Cargo Demand Forecast

The Passenger and Cargo Demand Forecast shall be submitted to PBC as an Adobe® PDF, or approved equal, data file which will be provided for review and approval. The approved forecast shall be used as base data for the preparation of all further tasks.

The Passenger and Cargo Demand Forecast shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.5 TASK 4: Facility Requirements

As a basis for the Development Plan to be prepared as part of Task 6, the Consultant shall prepare a demand capacity analysis which will include:

- Overview of airfield characteristics.
- Determination of design aircraft and fleet Mix.
- Determination of airfield design standards.
- Determination of airport cargo, passenger terminal and airfield facility requirements.
  - Runway length analysis
  - Airfield facility requirements
  - Navigational aid analysis
  - Aircraft parking analysis
  - Terminal space programming
  - Cargo facility space determination
  - Industrial park development

The physical facility requirements shall include possible alternatives for location, cost, and feasibility.

Deliverable: Facility Requirements and associated Layout Plans.

The Facility Requirements and all associated Layout Plans shall be submitted to PBC as an Adobe® PDF, or approved equal, data file which will be provided for review.

All documents related to the Facility Requirements shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.6 TASK 5: Economic and Financial Analysis

The Consultant shall conduct an economic and financial analysis which will include a determination of the existing airport operating and maintenance expenditures as well as estimates of revenue which may be generated through the airport expansion program as indicated as part of the Task 4 deliverable. Revenues to be analyzed include those from landing fees, passenger facilitation charges (PFC's), over-flight fees, aircraft parking fees, aircraft gate utilization fees, vehicular parking fees, concession

generated revenue, fuelling fees, Free Trade Zones and any other airport related charges or operational fees that the Consultant finds to be relevant for the expansion of PBC.

Based on the projected revenue, the Consultant shall develop a schedule of revenues for a 15-year period and include a calculation of the expected internal rate of return and financial internal rate of return for a number of different scenarios or development implementation phases.

For the benefit of those interested in the Project, the Contractor shall assess the development benefits associated with the Project and the methodology for measuring those benefits. The assessment shall include examples of the development benefits that would be expected in the Host Country if the Project is implemented as outlined in the Final Report. The Contractor shall specifically focus on examples from the categories listed below and shall develop a methodology for assessing these impacts over time. The Contractor shall select examples that USTDA can obtain information on in the future and shall identify where to obtain this information (e.g. the Grantee, trade statistics, or U.S. Embassy in the Host Country). The Contractor shall only list benefits in the categories that are applicable to the Project.

The categories to be considered are as follows:

Infrastructure: Estimate the expected scale of infrastructure construction and comment on the capabilities of any recommended infrastructure improvements.

Human capacity building: Estimate the number and type of jobs that would be created during the construction or installation phase if the Contractor's recommendations are implemented. Distinguish between temporary construction jobs and the number of jobs that would be created or sustained once construction is complete. Comment on any prospective training recommended in the Final Report, including an estimate of the number of persons to be trained, type of training needed, and the desired outcome of the training.

Technology transfer and productivity improvements: Discuss potential commercial contracts for licensing new technologies that are recommended, as well as the expected productivity benefits of any such technologies. More generally, discuss the expected efficiency gains related to the recommendations, such as improved systems or processes that enhance productivity or result in the more efficient use of resources.

Market-oriented reform: Discuss any market-oriented reforms that would facilitate implementation of the Project or that would result from Project implementation, such as any policy changes that result in the liberalization of prices, privatization of previously state-owned assets, or increased competition in a given sector.

Other: Discuss prospective indirect development impacts of the key recommendations, such as enhanced safety and economic benefits (including increases in tourism, investment, and indirect job creation) that are not captured in the four categories listed above.

Deliverable: Economic and Financial Analysis Report

The Economic and Financial Analysis Report shall be submitted to PBC as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Economic and Financial Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.7 TASK 6: Airport Development Plan

The results and data obtained from previous tasks are to be used to develop Facility Requirements which shall document and illustrate a recommended development plan for a period of up to 15 years.

The Airport Development Plan shall depict graphically the following:

- All existing physical airport facilities including:
  - Runways
  - Taxiways
  - Aircraft Parking Areas
  - Access Roadways
  - Commercial Passenger Facilities
  - General Aviation Facilities
  - Cargo Facilities
  - Navigational Aid and Lighting Facilities (Air Traffic Control)
  - Rescue and Firefighting Facilities
  - Fuel Facilities
  - Commercial Facilities (Bombardier)
  - Major Landmarks or Geographical structures in the airport vicinity
  - Airfield safety areas (ICAO standards)
- Basic Airport Data Including:
  - ICAO reference codes
  - Lengths and width of runways and taxiways
  - Geographical coordinates for major airport points
  - Critical aircraft data
  - Weather Data pertaining to runway orientation
- All proposed airport future expansion including all conceptual facilities.
- Phasing of future airport expansion (short-term, mid-term, long-term).
- Future On-Airport Land Use designations.

Deliverable: An Airport Layout Plan will be prepared and illustrate the proposed airport development including interim phases of development. A narrative report with accompany the Airport Layout Plan and describe the primary issues which contribute to the recommended development. All deliverables shall be submitted to PBC as an Adobe® PDF, or approved equal, data file as well as three (3) hardcopies.

Presentation: A presentation shall be conducted in Puebla, Mexico for PBC and include an overview and associated results deriving from all tasks completed to date. The focus of the presentation shall be on the approved traffic forecast, economic & financial analysis and proposed Airport Development Plan.

All documents prepared on behalf of Task 6: Airport Layout Plan shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.8 TASK 7: Environmental Analysis

The Consultant shall provide a general analysis of the current environmental conditions for the airport and immediate surroundings. The analysis shall include general information pertaining to the various types of federal and local regulations and ordinances that must be adhered to when undertaking any future aviation development including the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT), Prosecutor for the Protection of the Environment (PROFEPA) and the Secretary of Economy (DGN). These agencies and authorities shall be contacted and relevant information should be compiled prior to carrying-out the proposed analysis.

The Consultant shall also conduct a general analysis of the environmental conditions and prepare a report which includes:

- General Location and Site Description
- Natural Geographic Conditions including general information pertaining to topography, climate, hydrology, geology, seismic activity, archeological findings and agricultural development.
- General information and description of the source of water supply, sewage treatment, storm water drainage, handling of hazardous substances, air quality, noise monitoring, fuelling and waste management.
- Reporting of any previous environmental infractions including aviation related incidents, accidents and contamination on or surrounding the airport property.

Deliverable: Environmental Analysis Report as part of the Final Report

The Environmental Analysis Report shall be submitted to PBC as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Environmental Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.2.9 TASK 8: U.S. Source List

As part of the Task 8, the Consultant shall prepare a U.S. Source List which shall outline potential U.S. suppliers which may be able to provide goods and services for carrying out the services required to implement the proposed Airport Development Plan. The information shall include U.S. companies who currently maintain branch offices in the PBC region and in Mexico as well as any other major U.S. based manufactures and suppliers of goods and services that are considered a key supplier. The U.S. Source List shall include company name, contact information, contact person and a general description of the products and/or services which are provided.

Deliverable: U.S. Source List as part of the Final Report

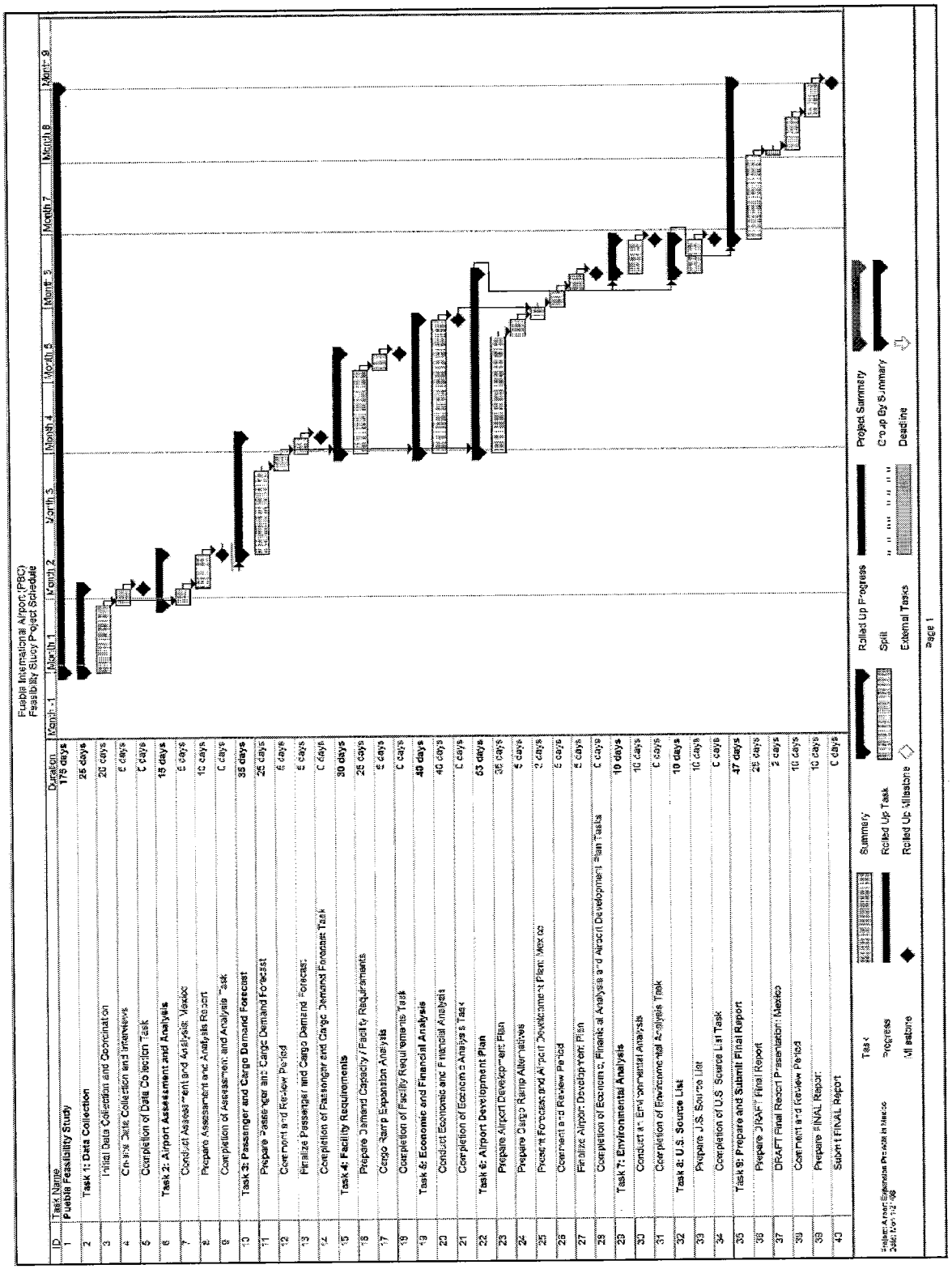
8.2.10 TASK 9: Prepare and Submit Final Report

For the concluding Task 9, the Consultant shall prepare a Final Report which encompasses all findings outlined in Task 1 through 8. The Final Report shall include an Executive Summary which summarizes all key issues and findings determined through the preparation of the study. A DRAFT Final Report shall be submitted to PBC and the USTDA as an Adobe PDF, or approved equal, data file for review and comments. All comments obtained from the USTDA and PBC shall be reviewed and incorporated. Once all comments have been incorporated the Final Report Deliverable shall be submitted to the USTDA and PBC as stipulated in the Consultant's contractual agreement.

8.2.11 Implementation Plan

The proposed implementation plan for carrying out the Feasibility Study has been included on the following page as **Figure 27: PBC Feasibility Study Implementation Plan**.

Figure 27: PBC Feasibility Study Implementation Plan



8.2.12 Study Budget

A breakdown of all anticipated labor costs and expenses in order to successfully carry-out the Feasibility Study has been outlined in **Figure 28: PBC Feasibility Study Budget**.

Figure 28: PBC Feasibility Study Budget

Feasibility Study Budget: Puebla International Airport (PBC)

Labor Classification	Task Breakdown (Hours)									Labor Total		
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Hours	Hourly Rate	Cost
Airport Planning Services												
Principal	8	4	4	4	4	4	4	4	8	44	$180.00	$7,920.00
Project Manager / Sr. Airport Planner	40	40	24	120	24	80	16	8	80	432	$150.00	$64,800.00
Airport Engineer/CADD Operator	8	16	0	76	0	152	0	32	120	404	$90.00	$36,360.00
Administrative	16	8	8	8	8	8	8	8	16	88	$40.00	$3,520.00
											Total	$112,600.00
Economic & Financial Services												
Principal	4	0	4	0	4	0	0	0	4	16	$220.00	$3,520.00
Project Manager / Sr. Economic / Financial Analyst	40	16	80	0	104	0	0	0	16	256	$175.00	$44,800.00
Economic / Financial Analyst	8	32	120	0	160	0	0	0	24	344	$130.00	$44,720.00
Administrative	8	0	8	0	8	0	0	0	8	32	$40.00	$1,280.00
											Total	$94,320.00
Locally Provided Services												
Economic / Financial Analyst	40	32	32	0	60	0	0	0	16	200	$75.00	$15,000.00
Environmental Engineer	0	32	0	0	0	0	40	0	16	88	$50.00	$4,400.00
Administrative / Local Coordination Services	32	24	24	16	32	16	24	16	24	208	$20.00	$4,160.00
											Total	$23,560.00
											Total Labor	$230,480.00

Expenses	Breakdown of Expenses Per Task									Quantity/Unit	Price	Cost
Air Transportation to/from Mexico (Unit)	2					3			3	8	$750.00	$6,000.00
Local Ground Transportation (Lump-sum)	1					1			1	3	$200.00	$600.00
Travel Allowance Per Diem* (Per Diem in Days)	10					6			4	20	$300.00	$6,000.00
Reprographics (Lump-sum)										1	$2,500.00	$2,500.00
Expenses Total												$15,100.00
Labor and Expense Total												$245,580.00

*Based on U.S. Department of State Office of Allowances (11/1/07 Rates) includes Accommodations, Meals and Incidentals

8.3 QUERÉTARO FEASIBILITY STUDY TERMS OF REFERENCE

8.3.1 Project Objective

The project objective is to develop a Feasibility Study for the Querétaro International Airport, hereinafter referred to as "QRO", for the development of the airport's commercial terminal facilities, cargo facilities, and a master market and development plan. These expansion projects are anticipated to foster the continued interests of domestic and U.S. airlines, and cargo companies that will enhance the regional industrial growth. Moreover, these proposed developments are expected to foster the following items:

- The significant potential growth in employment related to passenger traffic growth,
- U.S. companies interests in the region,
- Incentives for all-cargo airline companies to use QRO as a cargo destination/hub,
- The opening of airport-affiliated industrial parks to complement the airport's link to multi-modal transportation modes.

Querétaro City is the capital of the State of Querétaro and was founded in 1531, the same time as the City of Puebla. The City of Querétaro is located in the municipalities of Colón and El Marqués, approximately 120 miles (193) kilometers northwest of Mexico City with a population of approximately 920,000. Querétaro's location along the main NAFTA corridor has produced increased industry diversification and strong economic growth. Its industrial and economical activity, which originally developed in the agricultural and livestock sectors in the mid 70's, is now surpassed by the manufacturing and trade activities. The leading manufacturing activities are focused on the food processing (dairy products, canned fruit and vegetables), chemical (fertilizers), steel, and auto parts, and electrical and electronics industries. Additionally, the region has seen investment in the aerospace and aeronautics industry with major production plants being operated by Bombardier, GE, and ITR. Most of the export manufacturing companies in Querétaro have vested foreign capital and benefit from the related high investments in technology. It is important to note that the related steel industry and auto parts industries account for 66% of all industrial activity in the city. Querétaro's proximity to Mexico City, coupled with an excellent road network, facilitates the relocation of export manufacturing companies from the congested Mexico City metropolitan area.

The Querétaro International Airport (QRO) is located 15 miles (24 kilometers) east of the City of Querétaro and has an elevation of 6,250 feet (1,905 meters) above mean sea level. The Airport experiences average annual temperatures ranging between 45°F and 86°F (7°C and 30°C) and averaging 70°F (20°C). The airport can be accessed through the main Airport Boulevard, which connects to the Federal Highway MEX-57D. MEX-

57D connects to Mexico City and is also the main highway that connects to San Luis Potosí.

The proposed Feasibility Study shall be carried out through a series of individual tasks which will guide the study to a successful completion. Each task which is carried out is subsequently included as part of the Final Report to be delivered at the end of the project.

The primary tasks associated with the preparation of the Feasibility Study include the following:

TASK 1: Data Collection

TASK 2: Airport Assessment and Analysis

TASK 3: Passenger and Cargo Demand Forecast

TASK 4: Facility Requirements

TASK 5: Economic and Financial Analysis

TASK 6: Airport Development and Marketing Plan

TASK 7: Environmental Analysis

TASK 8: U.S. Source List

TASK 9: Prepare and Submit Final Report

Each of the aforementioned tasks, including all relevant deliverables, is described hereafter.

8.3.2 TASK 1: Data Collection

- The Consultant shall collect all relevant data required to undertake and successfully complete all tasks. Data to be collected shall include:
- Information on the existing airside and landside facilities including all relevant design documents, airport layout plans, aerial surveys, topographic surveys as well as all previous reports and studies prepared for QRO since its opening in 2005.
- Socio-economic, infrastructure, tourism, business, GDP and population data which is to be used in preparing projected aviation traffic forecasts and conduct a thorough market analysis intended for the master market and development plan.
- The Consultant shall meet with the appropriate Querétaro local authorities to ensure an airport market and development plan will coincide with local planning and State planning.

- Information and data which may impact aviation activity including the emergence of new economic markets, proposed aircraft/airline operations, development of major industries, and in the case of QRO, the effects of the Bombardier operations.
- Airport fees collected as well as information pertaining to airport operational costs.
- Information obtained through meetings and interviews with airlines, local / federal government agencies and FBO's operating or intending to operate at the airport.
- All relevant historic data detailing the level of aviation related activity at QRO for use in the development of activity forecasts later in this study. Information to be collected shall include the following:
  - Historic Enplaned Domestic, International and Connecting Passengers by Airline. Since QRO has only been operating since 2005, the Consultant shall also look at past trends experienced by the region and that which was experienced at the previous airport (Fernando Espinosa Gutiérrez).
  - Landing Fee Reports by Month and by Airline since the airport's inception which includes:
    - Aircraft Type (Fleet Mix)
    - Landing Weight
    - Carrier
    - Number of Seats (used to determine Boarding Load Factor)
    - Passengers and/or Cargo Volume Carried
  - Based General Aviation Aircraft – data since the airport's inception.
  - Air Traffic Control Tower Operation Counts by Type (Commercial Passenger/Military, General Aviation) which includes:
    - Hourly Count
    - Daily Count
    - Monthly and Annual
  - Consolidated Flight Schedules from the Airport or from individual carriers.
  - Historic cargo operations and tonnage of throughput - 5-years of data (including, if possible, information gathered from the previous airport's operations).
  - The Consultant shall have discussions with the future cargo operators at QRO to determine how the airport will impact the industrial areas of the immediate region and what the expected growth rates will mean for airport operational traffic.

In addition to the information obtained from QRO, it is anticipated that the Consultant will contact several other organizations or agencies in order to obtain additional traffic information. Other potential sources for information may include the following:

- Airport Council International

- SCT/ASA
- Customs and Immigration Service
- United States Federal Aviation Administration Statistical Databases
- IATA, ICAO and Aircraft Manufactures (i.e. Boeing, Airbus Industries)

8.3.3 TASK 2: Airport Assessment and Analysis

The Consultant shall conduct an on-site analysis of all airport facilities and associated operations including cargo facilities, passenger terminal, airport access roadways, parking facilities (cargo, passenger terminal and FBO's), airport technical infrastructure, airside aircraft apron, taxiways, runways, airfield lighting and navigational aids, Fixed Base Operators (FBO's), Aircraft Rescue and Fire Fighting (ARFF) facility and air traffic control tower.

Based on the on-site analysis the Consultant shall prepare an Airport Assessment Report which shall include an inspection report for each of the aforementioned facilities. The inspection report shall provide the following information:

- Brief description of each major facility including primary usage.
- General data for all major airside, landside and terminal facilities including length and width of runway, building area, number of floor levels, type and category of navigational aids, category of ARFF facility, category of airport operations,
- Documentation of all major equipment and systems.
- Address whether the facility has any major deficiencies including building defects, environmental issues, obstacle limitations, ATC line-of-sight limitations, security breaches as well as any other major non-compliance issues relating to ICAO and FAA regulations.
- Outline if the facility is sufficient to handle existing passenger/cargo traffic, as well as overall capacity which can be handled at each existing facility.
- Determine the airport's overall impact on the region, and the potential impacts of the airport based on the addition of new airlines flights, flight testing facilities Bombardier), and cargo operations.
- The Consultant shall meet with Bombardier representatives to assess their current and anticipated involvement in Mexico and QRO operations. The intent of the meeting is also to determine the overall need for future airport facility enhancement.
- The Consultant will determine if the flight test operations by Bombardier, along with increased airline operations will warrant the addition of a precision approach system, i.e. an instrument landing system (ILS) which the airport currently does not have.

Deliverable: Airport Assessment and Analysis Report

The Airport Assessment and Analysis Report shall be submitted to QRO as an Adobe® PDF, or approved equal, data file. A hardcopy shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.4 TASK 3: Passenger and Cargo Demand Forecast

Based on the data collected as part of TASK 1, the Consultant shall develop traffic projections for cargo and passenger demand for the next 15 years. Projections shall be prepared for domestic and international traffic and include projections for:

- Total aircraft operations (split between cargo and passenger traffic)
- Total peak hour operations (split between cargo and passenger traffic)
- Total peak hour passengers (arrival, departure and transfer passenger traffic)
- Total peak hour passengers (combined arrival and departure traffic)

All traffic projections shall be prepared using three types of scenarios which include most likely growth scenario, high growth scenario and low growth scenario.

Deliverable: Passenger and Cargo Demand Forecast

The Passenger and Cargo Demand Forecast shall be submitted to QRO as an Adobe® PDF, or approved equal, data file which will be provided for review and approval. The approved forecast shall be used as base data for the preparation of all further tasks.

The Passenger and Cargo Demand Forecast shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.5 TASK 4: Facility Requirements

As a basis for the Development Plan to be prepared as part of Task 6, the Consultant shall prepare a demand capacity analysis which will include:

- Overview of airfield characteristics.
- Determination of design aircraft and fleet Mix.
- Determination of airfield design standards.
- Determination of airport cargo, passenger terminal and airfield facility requirements.
  - Airfield facility requirements
  - Navigational aid analysis
  - Aircraft parking analysis

- Terminal space programming
- Feasibility of terminal expansion
- Cargo facility space determination
- Industrial park development

The physical facility requirements shall include possible alternatives for location, cost, and feasibility.

Deliverable: Facility Requirements and associated Layout Plans.

The Facility Requirements and all associated Layout Plans shall be submitted to QRO as an Adobe® PDF, or approved equal, data file which will be provided for review.

All documents related to the Facility Requirements shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.6 TASK 5: Economic and Financial Analysis

The Consultant shall conduct an economic and financial analysis which will include a determination of the existing airport operating and maintenance expenditures as well as estimates of revenue which may be generated through the airport expansion program as indicated as part of the Task 4 deliverable. This task shall be considered as a top priority as the airport requires a master market development plan to enhance its operations. Revenues to be analyzed include those from landing fees, passenger facilitation charges (PFC's), over-flight fees, aircraft parking fees, aircraft gate utilization fees, vehicular parking fees, concession generated revenue, fuelling fees, Free Trade Zones and any other airport related charges or operational fees that the Consultant finds to be relevant for the expansion of QRO.

Based on the projected revenue, the Consultant shall develop a schedule of revenues for a 15-year period and include a calculation of the expected internal rate of return and financial internal rate of return for a number of different scenarios or development implementation phases.

For the benefit of those interested in the Project, the Contractor shall assess the development benefits associated with the Project and the methodology for measuring those benefits. The assessment shall include examples of the development benefits that would be expected in the Host Country if the Project is implemented as outlined in the Final Report. The Contractor shall specifically focus on examples from the categories listed below and shall develop a methodology for assessing these impacts over time. The Contractor shall select examples that USTDA can obtain information on in the future and shall identify where to obtain this information (e.g. the Grantee, trade statistics, or U.S. Embassy in the Host Country). The Contractor shall only list benefits in the categories that are applicable to the Project.

The categories to be considered are as follows:

Infrastructure: Estimate the expected scale of infrastructure construction and comment on the capabilities of any recommended infrastructure improvements.

Human capacity building: Estimate the number and type of jobs that would be created during the construction or installation phase if the Contractor's recommendations are implemented. Distinguish between temporary construction jobs and the number of jobs that would be created or sustained once construction is complete. Comment on any prospective training recommended in the Final Report, including an estimate of the number of persons to be trained, type of training needed, and the desired outcome of the training.

Technology transfer and productivity improvements: Discuss potential commercial contracts for licensing new technologies that are recommended, as well as the expected productivity benefits of any such technologies. More generally, discuss the expected efficiency gains related to the recommendations, such as improved systems or processes that enhance productivity or result in the more efficient use of resources.

Market-oriented reform: Discuss any market-oriented reforms that would facilitate implementation of the Project or that would result from Project implementation, such as any policy changes that result in the liberalization of prices, privatization of previously state-owned assets, or increased competition in a given sector.

Other: Discuss prospective indirect development impacts of the key recommendations, such as enhanced safety and economic benefits (including increases in tourism, investment, and indirect job creation) that are not captured in the four categories listed above.

Deliverable: Economic and Financial Analysis Report

The Economic and Financial Analysis Report shall be submitted to QRO as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Economic and Financial Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.7 TASK 6: Airport Development and Marketing Plan

The results and data obtained from previous tasks are to be used to develop Facility Requirements which shall document and illustrate a recommended development plan for a period of up to 15 years.

The Airport Development Plan shall depict graphically the following:

- All existing physical airport facilities including:
  - Runways
  - Taxiways
  - Aircraft Parking Areas

- Access Roadways
- Commercial Passenger Facilities
- General Aviation Facilities
- Cargo Facilities
- Navigational Aid and Lighting Facilities (Air Traffic Control)
- Rescue and Firefighting Facilities
- Fuel Facilities
- Commercial Facilities (Bombardier)
- Major Landmarks or Geographical structures in the airport vicinity
- Airfield safety areas (ICAO standards)

✈ Basic Airport Data Including:

- ICAO reference codes
- Lengths and width of runways and taxiways
- Geographical coordinates for major airport points
- Critical aircraft data
- Weather Data pertaining to runway orientation

✈ All proposed airport future expansion including all conceptual facilities.

✈ All proposed Bombardier facilities and related airfield improvements.

✈ Phasing of future airport expansion (short-term, mid-term, long-term).

✈ Future On-Airport Land Use designations.

A Marketing Plan will be prepared and based on the analysis conducted as part of Task 4. The Marketing Plan shall address the following topics:

✈ Economic Overview of Querétaro Region

✈ Overview of Airline Market, Tourism Market, Regional Aviation Infrastructure, Cargo Operations, and QRO's ability to accommodate market demands.

✈ Competition markets (including Bus system competition)

✈ Marketing Methodologies and Strategies

✈ Marketing Phasing Plan

✈ Marketing Financial Plan

✈ Implementation Plan

Deliverable: An Airport Layout Plan will be prepared and illustrate the proposed airport development including interim phases of development. The aforementioned Marketing Plan and a narrative report will accompany the Airport Layout Plan and describe the primary issues which contribute to the recommended development. All deliverables

shall be submitted to QRO as an Adobe® PDF, or approved equal, data file as well as three (3) hardcopies.

Presentation: A presentation shall be conducted in Querétaro, Mexico for QRO and include an overview and associated results deriving from all tasks completed to date. The focus of the presentation shall be on the approved traffic forecast, economic & financial analysis and the proposed Airport Development and Marketing Plan.

All documents prepared on behalf of Task 6 shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.8 TASK 7: Environmental Analysis

The Consultant shall provide a general analysis of the current environmental conditions for the airport and immediate surroundings. The analysis shall include general information pertaining to the various types of federal and local regulations and ordinances that must be adhered to when undertaking any future aviation development including the Mexican Secretariat for the Environment and Natural Resources (SEMARNAT), Prosecutor for the Protection of the Environment (PROFEPA) and the Secretary of Economy (DGN). These agencies and authorities shall be contacted and relevant information should be compiled prior to carrying-out the proposed analysis.

The Consultant shall also conduct a general analysis of the environmental conditions and prepare a report which includes:

- General Location and Site Description
- Natural Geographic Conditions including general information pertaining to topography, climate, hydrology, geology, seismic activity, archeological findings and agricultural development.
- General information and description of the source of water supply, sewage treatment, storm water drainage, handling of hazardous substances, air quality, noise monitoring, fuelling and waste management.
- Reporting of any previous environmental infractions including aviation related incidents, accidents and contamination on or surrounding the airport property.

Deliverable: Environmental Analysis Report as part of the Final Report

The Environmental Analysis Report shall be submitted to QRO as an Adobe® PDF, or approved equal, data file which will be provided for review.

All contents of the Environmental Analysis Report shall be submitted as part of the Final Report outlined as part of Task 9.

8.3.9 TASK 8: U.S. Source List

As part of the Task 8, the Consultant shall prepare a U.S. Source List which shall outline potential U.S. suppliers which may be able to provide goods and services for carrying out the services required to implement the proposed Airport Development Plan. The information shall include U.S. companies who currently maintain branch offices in

the QRO region and in Mexico as well as any other major U.S. based manufactures and suppliers of goods and services that are considered a key supplier. The U.S. Source List shall include company name, contact information, contact person and a general description of the products and/or services which are provided.

Deliverable: U.S. Source List as part of the Final Report

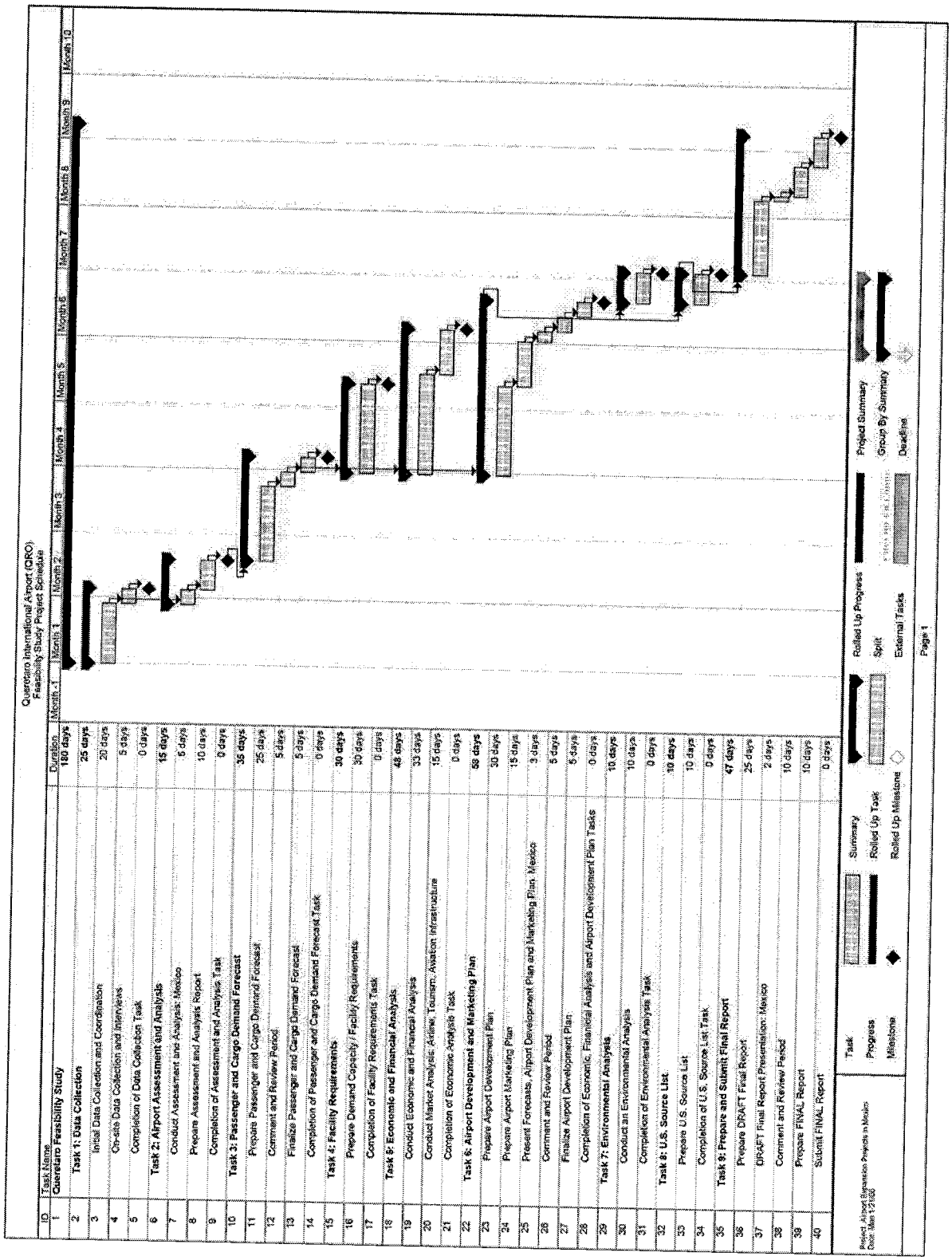
8.3.10 TASK 9: Prepare and Submit Final Report

For the concluding Task 9, the Consultant shall prepare a Final Report which encompasses all findings outlined in Task 1 through 8. The Final Report shall include an Executive Summary which summarizes all key issues and findings determined through the preparation of the study. A DRAFT Final Report shall be submitted to QRO and the USTDA as an Adobe PDF, or approved equal, data file for review and comments. All comments obtained from the USTDA and QRO shall be reviewed and incorporated. Once all comments have been incorporated the Final Report Deliverable shall be submitted to the USTDA and QRO as stipulated in the Consultants contractual agreement.

8.3.11 Implementation Plan

The proposed implementation plan for carrying out the Feasibility Study has been included on the following page as **Figure 29: QRO Feasibility Study Implementation Plan.**

Figure 29: QRO Feasibility Study Implementation Plan



8.3.12 Study Budget

A breakdown of all anticipated labor costs and expenses in order to successfully carry-out the Feasibility Study has been outlined

Figure 30: QRO Feasibility Study Budget.

Figure 30: QRO Feasibility Study Budget

Feasibility Study Budget: Queretaro International Airport (QRO)

Labor Classification	Task Breakdown (Hours)									Labor Total		
	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Hours	Hourly Rate	Cost
Airport Planning Services												
Principal	8	4	4	4	4	4	4	4	8	44	$180.00	$7,920.00
Project Manager / Sr. Airport Planner	40	40	24	104	24	80	16	8	80	416	$150.00	$62,400.00
Airport Engineer/CADD Operator	8	16	0	56	0	120	0	32	120	352	$90.00	$31,680.00
Administrative	16	8	8	8	8	8	8	8	16	88	$40.00	$3,520.00
											Total	$105,520.00
Economic & Financial Services												
Principal	4	0	4	0	4	0	0	0	4	16	$220.00	$3,520.00
Project Manager / Sr. Economic / Financial Analyst	40	16	80	0	136	24	0	0	16	312	$175.00	$54,600.00
Economic / Financial Analyst	8	32	120	0	200	80	0	0	24	464	$130.00	$60,320.00
Administrative	8	0	8	0	8	0	0	0	8	32	$40.00	$1,280.00
											Total	$119,720.00
Locally Provided Services												
Economic / Financial Analyst	40	32	32	0	80	0	0	0	16	200	$75.00	$15,000.00
Environmental Engineer	0	32	0	0	0	0	40	0	16	88	$50.00	$4,400.00
Administrative / Local Coordination Services	32	24	24	16	32	16	24	16	24	208	$20.00	$4,160.00
											Total	$23,560.00
											Total Labor	$248,800.00

Expenses	Breakdown of Expenses Per Task									Quantity/Unit	Price	Cost
Air Transportation to/from Mexico (Unit)	2					3			3	8	$750.00	$6,000.00
Local Ground Transportation (Lump-sum)	1					1			1	3	$200.00	$600.00
Travel Allowance Per Diem* (Per Diem in Days)	10					6			4	20	$300.00	$6,000.00
Reprographics (Lump-sum)										1	$2,500.00	$2,500.00
Expenses Total												
												$15,100.00
Labor and Expense Total												
												$263,900.00

*Based on U.S. Department of State Office of Allowances (11/1/07 Rates) includes Accommodations, Meals and Incidentals

9 U.S. SOURCE LIST

9.1 General

The following pages identify contact information for U.S. companies which provide key products and services which are considered the primary export potential for the airport development programs outlined in this Definitional Mission.

9.2 Airport Gate Systems & Equipment

The Chamberlain Group
Mr. William Gioia
845 Larch Avenue
Elmhurst, IL 60126
United States
Tel. (800) 282-6225
Fax. (630) 516-6888
www.chamberlain.com

InterSystems U.S.A., Inc.
Mr. Nimrod Halfon
12650 E. Briarwood Ave., Suite 2G
Englewood, CO 80112-6792
United States
Tel. (303) 858-1000
Fax. (303) 858-1100
www.intersystemsww.com

INET Airport Systems
Mr. Tom E. Tatham
4111 North Palm Street
Fullerton, CA 92835
United States
Tel. (714) 888-2700
Fax. (714) 888-2727
www.inetas.com

Safegate Airport Systems, Inc.
Mr. Thomas B. Duffy
7101 Northland Circle, Suite 203
Brooklyn Park, MN 55428
United States
Tel. (763) 535-9299
Fax. (763) 535-2307
www.safegate.com

9.3 Aircraft Boarding Bridge Systems & Equipment

CONTECH Bridge Solutions, Inc.
Mr. Timothy J. Beach
3100 Research Boulevard
P.O. Box 20266
Dayton, OH 45420
United States
Tel. (800) 526-3999
Fax. (937) 254-8365
www.contechbridge.com

FMC Technologies - Jetway
Mr. Todd Tanner
1805 W. 2550 South
Ogden, UT 84401
United States
Tel. (801) 629-3106
Fax. (801) 629-3474
www.jetwaysystems.com

9.4 Aircraft Docking Systems & Equipment

Safegate Airport Systems, Inc
Mr. Thomas B. Duffy
7101 Northland Circle, Suite 203
Brooklyn Park, MN 55428
United States
Tel. (763) 535-9299
Fax. (763) 535-2307
www.safegate.com

9.5 Airfield Lighting Systems & Equipment

Liberty Airport Systems, Inc.
Mr. Don Gordon
C5-3375 N. Service Road
Burlington, ON L7N 3G2 Canada
Tel. (905) 631-1597
Fax. (905) 631-5387
www.libertyairportsystems.com

Safegate Airport Systems, Inc.
Mr. Thomas B. Duffy
7101 Northland Circle, Suite 203
Brooklyn Park, MN 55428
United States
Tel. (763) 535-9299
Fax. (763) 535-2307
www.safegate.com

9.6 Airfield Systems & Equipment

Engineered Arresting Systems Corp.
Mr. Kevin Quan
2239 High Hill Road
Logan Township, NJ 08085
United States
Tel. (856) 241-8620 Ext. 452
Fax. (856) 241-8621
www.esco.zodiac.com

XYBASE Inc.
Ms. Selina Teo
AVP - 8 Faneuil Hall
3rd Floor, Suite 404
Boston, MA 02109
United States
Tel. (617) 973-5170
Fax. (617) 973-6406
www.xybase.com

9.7 Air Traffic Control and Radar

Multi Electric Mfg., Inc.
Mr. Giuseppe Giussani
4223 W Lake Street
Chicago, IL 60624-1787
United States
Tel. (773) 722-1900
Fax. (773) 722-5694
www.multielectric.com

9.8 Aviation Planning Consultants

aviatDesign, Inc.
Mr. Tim Schneiter
7647 Clementine Way
Orlando, FL 32819
United States
Tel. (407) 248-9036
Fax. (321) 251-5533
www.aviatDesign.com

CH2M-Hill
Mr. Terry A. Ruhl, P.E.
9191 S. Jamaica Street
Englewood, CO 80112
United States
Tel. (720) 286-5212
Fax. (720) 286-9967
www.ch2mhill.com

AVCON, Inc.
Mr. James A. Kriss, P.E.
5555 E. Michigan St., Suite 200
Orlando, FL 32822-2779
United States
Tel. (407) 599-1122
Fax. (407) 599-1133
www.avconinc.com

Clough, Harbour & Associates, LLP
Mr. Paul VanGelder
2001 Route 46, Suite 107
Parsippany, NJ 07054
United States
Tel. (973) 299-7530
Fax. (518) 453-2895
www.cloughharbour.com

9.9 Baggage Systems

Glidepath, LLC
Mr. Robert Johnston
365 S. County Road 550 E.
Avon, IN 46123
United States
Tel. (317) 718-1430
Fax. (317) 718-1435
www.quad-j.com

Jervis B. Web Company
Mr. Kenneth M. Hamel
World Headquarters
34375 W. Twelve Mile Road
Farmington Hills, MI 48331
United States
Tel. (248) 553-1257
Fax. (248) 553-1238
www.jervisbwebb.com

InterSystems USA, Inc.
Mr. Nimrod Halfon
12650 E. Briarwood Ave., Suite 2G
Englewood, CO 80112-6792
United States
Tel. (303) 858-1000
Fax. (303) 858-1100
www.intersystemsww.com

9.10 Business Process Re-engineering

The Solution Design Group, Inc.
Mr. Tom Strange
7147 Norwich Ct.
Warrenton, VA 20187
United States
Tel. (540) 341-0044
Fax. (540) 349-3339
www.thesolutiondesigngroup.com

Yankee & Associates LLC
Mr. Tod R. Yankee
102 Wolfes Neck Road
Freeport, ME 04032
United States
Tel. (781) 639-7728
Fax. (781) 631-2732
www.Yankee-Associates.com

9.11 Cargo Facilities Development & Management

AIRIS International Holdings, LLC
Mr. Justin Factor
One Riverway
Suite 1630
Houston, Texas 77056
United States
Tel. (713) 739-1700
Fax. (713) 739-1788
www.airis.com

9.12 Construction Management

Bechtel Corporation
Mr. Steve Riano
50 Beale Street
San Francisco, CA 94105-1895
United States
Tel. (415) 768-0743
Fax. (415) 768-8822
www.bechtel.com/aviation

Burns & McDonnell
Mr. Randy D. Pope, P.E.
9400 Ward Parkway
Kansas City, MO 64114
United States
Tel. (816) 822-3231
Fax. (816) 822-3517
www.burnsmcd.aero

DMJM Aviation / AECOM
Mr. Philip H. Agee, P.E.
3101 Wilson Blvd., Suite 400
Arlington, VA 22201
United States
Tel. (703) 682-5042
Fax. (703) 682-5001
www.dmjmaviation.com

Parsons
Ms. Daun Dickinson
1133 15th Street NW
Washington, DC 20005
United States
Tel. (202) 775-6072
Fax. (202) 775-6005
www.parsons.com

The Louis Berger Group
Mr. Steven T. Baldwin
20 Corporate Woods Blvd.
Albany, NY 12211
United States
Tel. (518) 432-9545
Fax. (518) 432-9571
www.louisberger.com

URS Corporation
Mr. Laddie E. Irion
7650 West Courtney Campbell Cswy.
Tampa, FL 33607
United States
Tel. (813) 636-2425
Fax. (813) 636-2400
www.urscorp.com

9.13 Electronic Systems & Equipment

ARINC
Ms. Susan Rork
2551 Riva Road
Annapolis, MD 21401
United States
Tel. (443) 223-7833
Fax. (410) 573-3533
www.arinc.com

L-3 Communications
Ms. Molly Deol
1215 S. Clark Street, Suite 1104
Arlington, VA 22202
United States
Tel. (703) 412-6073
Fax. (703) 236-7446
www.L-3com.com

THALES E-Security, Inc.
Mr. Stephen Howard
2114 Galloping Way
Vienna, VA 22181-2932
United States
Tel. (703) 319-3171
Fax. (703) 319-3172
www.thalesesec.com

The Solution Design Group, Inc.
Mr. Tom Strange
7147 Norwich Ct.
Warrenton, VA 20187
United States
Tel. (540) 341-0044
Fax. (540) 349-3339
www.thesolutiondesigngroup.com

9.14 Environmental Consultants

ESA Airports
Mr. Michael R. Arnold
1715 N. Westshore Blvd., Suite 780
Tampa, FL 33607
United States
Tel. (407) 281-1709
Fax. (813) 207-7201
www.esassoc.com

Hoyle, Tanner & Associates, Inc.
Mr. J. Richard Ludders, C.M.
150 Dow Street
Manchester, NH 03101
United States
Tel. (603) 669-5555 Ext. 159
Fax. (603) 669-4168
www.hoyletanner.com

9.15 Financial and Management Consultants

Aviation Capital Management

Mr. Kenneth Koziol, P.E.
9365 Counselors Row, Suite 120
Indianapolis, IN 46241
United States
Tel. (317) 487-8552
Fax. (317) 487-5412
www.aviationcapitalmanagement.com

Infrastructure Management Group, Inc.
Mr. Jorge A. Gonzalez
4733 Bethesda Ave., Suite 600
Bethesda, MD 20814
United States
Tel. (301) 907-2900
Fax. (301) 907-2906
www.imggroup.com

9.16 Ground Support Systems & Equipment

FMC Technologies - Jetway
Mr. Todd Tanner
1805 W. 2550 South
Ogden, UT 84401
United States
Tel. (801) 629-3106
Fax. (801) 629-3474
www.jetwaysystems.com

INET Airport Systems

Mr. Tom E. Tatham
4111 North Palm Street
Fullerton, CA 92835
United States
Tel. (714) 888-2700
Fax. (714) 888-2727
www.inetas.com

East Jordan Ironworks, Inc.
Mr. Pete DeHaan
P.O. Box 439
East Jordan, MI 49727
United States
Tel. (231) 536-4421
Fax. (231) 536-4458
www.EJIW.com

Hobart Ground Power / Trilectron Industries
Mr. Alberto Rocha
129 Ridgecrest Drive
Suffolk, VA 23434
United States
Tel. (757) 373-1700
Fax. (425) 675-9672
www.hobartgroundpower.com

9.17 Information Display Systems & Equipment

ARINC
Ms. Susan Rork
2551 Riva Road
Annapolis, MD 21401
United States
Tel. (443) 223-7833
Fax. (410) 573-3533
www.arinc.com

Daktronics, Inc.
Mr. DeWayne Anderson
331 32nd Avenue
P.O. Box 5128
Brookings, SD 57006
United States
Tel. (605) 697-4067
Fax. (605) 697-4700
www.daktronics.com

InterSystems USA, Inc.
Mr. Nimrod Halfon
12650 E. Briarwood Ave., Suite 2G
Englewood, CO 80112-6792
United States
Tel. (303) 858-1000
Fax. (303) 858-1100
www.intersystemsww.com

Productivity Apex, Inc.
Mr. Maurice M. Callinan
12689 Challenger Parkway, Suite 130A
Orlando, FL 32826
United States
Tel. (407) 384-0800
Fax. (407) 384-0882
www.productivityapex.com

9.18 Navigational Aids Systems &Equipment

Quad-J, Inc.
Mr. Robert Johnston
365 S. County Road 550 E.
Avon, IN 46123
United States
Tel. (317) 718-1430
Fax. (317) 718-1435
www.quad-j.com

THALES E-Security, Inc.
Mr. Stephen Howard
2114 Galloping Way
Vienna, VA 22181-2932
United States
Tel. (703) 319-3171
Fax. (703) 319-3172
www.thalesesec.com

9.19 Security Systems & Equipment

Glidepath, LLC
Mr. David Mead
878 Greenview Drive
Grand Prairie, TX 75050
United States
Tel. (972) 641-4200
Fax. (972) 352-2731
www.glidepathgroup.com

L-3 Communications
Ms. Molly Deol
1215 S. Clark Street, Suite 1104
Arlington, VA 22202
United States
Tel. (703) 412-6073
Fax. (703) 236-7446
www.L-3com.com

InterSystems USA, Inc.
Mr. Nimrod Halfon
12650 E. Briarwood Ave., Suite 2G
Englewood, CO 80112-6792
United States
Tel. (303) 858-1000
Fax. (303) 858-1100
www.intersystemsww.com

Reveal Imaging Technologies, Inc.
Mr. Stephen M. Pelham
201 Burlington Road
Bedford, MA 01730
United States
Tel. (706) 302-2128
Fax. (781) 276-8410
www.revealimaging.com

Smiths Detection
Ms. RuthAnne K. Stoll
1601 N. Kent Street, Suite 200
Arlington, VA 22209
United States
Tel. (703) 682-5689
Fax. (703) 682-5699
www.smithsdetection.com

Thales E-Security
Mr. Stephen Howard
2114 Galloping Way
Vienna, VA 22181-2932
United States
Tel. (703) 319-3171
Fax. (703) 319-3172
www.thalesesec.com

9.20 Ticket Counters / Casework

Fish Construction, Inc.
Mr. Scott Fish
9820 Cash Road
Stafford, TX 77477
United States
Tel. (281) 261-3375
Fax. (281) 261-6644
www.fishconstruction.com

Infra-Structures, Inc.
Mr. James Larson
171 Rodeo Drive
Brentwood, NY 11717
United States
Tel. (800) 367-4361 Ext. 224
Fax. (631) 243-0700
www.infra-structures.com

9.21 Weather Observing Systems & Equipment

Belfort Instrument Company
Mr. Ralph Petragnani
727 S. Wolfe Street
Baltimore, MD 21231
United States
Tel. (410) 342-2626
Fax. (410) 342-7028
www.belfortinstrument.com

Potomac Aviation
Mr. Gary S. Loff
Potomac Airfield
10300 Glen Way
Fort Washington, MD 20744
United States
Tel. (301) 248-5720
Fax. (301) 248-3997
www.superawos.com

ANNEX 3

USTDA NATIONALITY REQUIREMENTS

U.S. TRADE AND DEVELOPMENT AGENCY
Arlington, VA 22209-2131

NATIONALITY, SOURCE, AND ORIGIN REQUIREMENTS

The purpose of USTDA's nationality, source, and origin requirements is to assure the maximum practicable participation of American contractors, technology, equipment and materials in the prefeasibility, feasibility, and implementation stages of a project.

USTDA STANDARD RULE (GRANT AGREEMENT STANDARD LANGUAGE):

Except as USTDA may otherwise agree, each of the following provisions shall apply to the delivery of goods and services funded by USTDA under this Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from host country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for implementation of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in host country are not subject to the above restrictions. USTDA will make available further details concerning these standards of eligibility upon request.

NATIONALITY:

1) Rule

Except as USTDA may otherwise agree, the Contractor for USTDA funded activities must be either a U.S. firm or a U.S. individual. Prime contractors may utilize U.S. subcontractors without limitation, but the use of host country subcontractors is limited to 20% of the USTDA grant amount.

2) Application

Accordingly, only a U.S. firm or U.S. individual may submit proposals on USTDA funded activities. Although those proposals may include subcontracting arrangements with host country firms or individuals for up to 20% of the USTDA grant amount, they may not include subcontracts with third country entities. U.S. firms submitting proposals must ensure that the professional services funded by the USTDA grant, to the extent not subcontracted to host country entities, are supplied by employees of the firm or employees of U.S. subcontractor firms who are U.S. individuals.

Interested U.S. firms and consultants who submit proposals must meet USTDA nationality requirements as of the due date for the submission of proposals and, if selected, must continue to meet such requirements throughout the duration of the USTDA-financed activity. These nationality provisions apply to whatever portion of the Terms of Reference is funded with the USTDA grant.

3) Definitions

A "U.S. individual" is (a) a U.S. citizen, or (b) a non-U.S. citizen lawfully admitted for permanent residence in the U.S. (a green card holder).

A "U.S. firm" is a privately owned firm which is incorporated in the U.S., with its principal place of business in the U.S., and which is either (a) more than 50% owned by U.S. individuals, or (b) has been incorporated in the U.S. for more than three (3) years prior to the issuance date of the request for proposals; has performed similar services in the U.S. for that three (3) year period; employs U.S. citizens in more than half of its permanent full-time positions in the U.S.; and has the existing capability in the U.S. to perform the work in question.

A partnership, organized in the U.S. with its principal place of business in the U.S., may also qualify as a "U.S. firm" as would a joint venture organized or incorporated in the United States consisting entirely of U.S. firms and/or U.S. individuals.

A nonprofit organization, such as an educational institution, foundation, or association may also qualify as a "U.S. firm" if it is incorporated in the United States and managed by a governing body, a majority of whose members are U.S. individuals.

SOURCE AND ORIGIN:

1) Rule

In addition to the nationality requirement stated above, any goods (e.g., equipment and materials) and services related to their shipment (e.g., international transportation and insurance) funded under the USTDA Grant Agreement must have their source and origin in the United States, unless USTDA otherwise agrees. However, necessary purchases of goods and project support services which are unavailable from a U.S. source (e.g., local food, housing and transportation) are eligible without specific USTDA approval.

2) Application

Accordingly, the prime contractor must be able to demonstrate that all goods and services purchased in the host country to carry out the Terms of Reference for a USTDA Grant Agreement that were not of U.S. source and origin were unavailable in the United States.

3) Definitions

"Source" means the country from which shipment is made.

"Origin" means the place of production, through manufacturing, assembly or otherwise.

Questions regarding these nationality, source and origin requirements may be addressed to the USTDA Office of General Counsel.

ANNEX 4

USTDA GRANT AGREEMENT, INCLUDING MANDATORY CONTRACT CLAUSES

USTDA #07-51024B

MAR - 3 2008

GRANT AGREEMENT

This Grant Agreement is entered into between the Government of the United States of America, acting through the U.S. Trade and Development Agency ("USTDA"), and Operadora Estatal de Aeropuertos, S.A. de C.V. ("Grantee"). USTDA agrees to provide the Grantee under the terms of this Agreement US$245,580 ("USTDA Grant") to fund the cost of goods and services required for a feasibility study ("Study") on the proposed Puebla International Airport Expansion project ("Project") in Mexico ("Host Country").

1. USTDA Funding

The funding to be provided under this Grant Agreement shall be used to fund the costs of a contract between the Grantee and the U.S. firm selected by the Grantee ("Contractor") under which the Contractor will perform the Study ("Contract"). Payment to the Contractor will be made directly by USTDA on behalf of the Grantee with the USTDA Grant funds provided under this Grant Agreement.

2. Terms of Reference

The Terms of Reference for the Study ("Terms of Reference") are attached as Annex I and are hereby made a part of this Grant Agreement. The Study will examine the technical, financial, environmental, and other critical aspects of the proposed Project. The Terms of Reference for the Study shall also be included in the Contract.

3. Standards of Conduct

USTDA and the Grantee recognize the existence of standards of conduct for public officials, and commercial entities, in their respective countries. The parties to this Grant Agreement and the Contractor shall observe these standards, which include not accepting payment of money or anything of value, directly or indirectly, from any person for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Study.

4. Grantee Responsibilities

The Grantee shall undertake its best efforts to provide reasonable support for the Contractor, such as local transportation, office space, and secretarial support.

5. USTDA as Financier

(A) USTDA Approval of Competitive Selection Procedures

Selection of the U.S. Contractor shall be carried out by the Grantee according to its established procedures for the competitive selection of contractors with advance notice of the procurement published online through *Federal Business Opportunities (www.fedbizopps.gov)*. Upon request, the Grantee will submit these contracting procedures and related documents to USTDA for information and/or approval.

(B) USTDA Approval of Contractor Selection

The Grantee shall notify USTDA at the address of record set forth in Article 17 below upon selection of the Contractor to perform the Study. Upon approval of this selection by USTDA, the Grantee and the Contractor shall then enter into a contract for performance of the Study. The Grantee shall notify in writing the U.S. firms that submitted unsuccessful proposals to perform the Study that they were not selected.

(C) USTDA Approval of Contract Between Grantee and Contractor

The Grantee and the Contractor shall enter into a contract for performance of the Study. This contract, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing. To expedite this approval, the Grantee (or the Contractor on the Grantee's behalf) shall transmit to USTDA, at the address set forth in Article 17 below, a photocopy of an English language version of the signed contract or a final negotiated draft version of the contract.

(D) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of the contract and any amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of funding the Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not bar the Grantee or USTDA from asserting any right they might have against the

Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Grantee or USTDA.

(E) Grant Agreement Controlling

Regardless of USTDA approval, the rights and obligations of any party to the contract or subcontract thereunder must be consistent with this Grant Agreement. In the event of any inconsistency between the Grant Agreement and any contract or subcontract funded by the Grant Agreement, the Grant Agreement shall be controlling.

6. Disbursement Procedures

(A) USTDA Approval of Contract Required

USTDA will make disbursements of Grant funds directly to the Contractor only after USTDA approves the Grantee's contract with the Contractor.

(B) Contractor Invoice Requirements

The Grantee should request disbursement of funds by USTDA to the Contractor for performance of the Study by submitting invoices in accordance with the procedures set forth in the USTDA Mandatory Clauses in Annex II.

7. Effective Date

The effective date of this Grant Agreement ("Effective Date") shall be the date of signature by both parties or, if the parties sign on different dates, the date of the last signature.

8. Study Schedule

(A) Study Completion Date

The completion date for the Study, which is December 31, 2009, is the date by which the parties estimate that the Study will have been completed.

(B) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this Grant Agreement for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

9. USTDA Mandatory Clauses

All contracts funded under this Grant Agreement shall include the USTDA mandatory clauses set forth in Annex II to this Grant Agreement. All subcontracts funded or partially funded with USTDA Grant funds shall include the USTDA mandatory clauses, except for clauses B(1), G, H, I, and J.

10. Use of U.S. Carriers

(A) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(B) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

11. Nationality, Source, and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source, and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

12. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees, or other levies imposed under laws in effect in Host Country. Neither the Grantee nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees, or other levies.

13. Cooperation Between Parties and Follow-Up

The parties will cooperate to assure that the purposes of the Grant Agreement are accomplished. For five (5) years following receipt by USTDA of the Final Report (as defined in Clause I of Annex II), the Grantee agrees to respond to any reasonable inquiries from USTDA about the status of the Project.

14. Implementation Letters

To assist the Grantee in the implementation of the Study, USTDA may, from time to time, issue implementation letters that will provide additional information about matters covered by the Grant Agreement. The parties may also use jointly agreed upon implementation letters to confirm and record their mutual understanding of matters covered by the Grant Agreement.

15. Recordkeeping and Audit

The Grantee agrees to maintain books, records, and other documents relating to the Study and the Grant Agreement adequate to demonstrate implementation of its responsibilities under the Grant Agreement, including the selection of contractors, receipt and approval of contract deliverables, and approval or disapproval of contractor invoices for payment by USTDA. Such books, records, and other documents shall be separately maintained for three (3) years after the date of the final disbursement by USTDA. The Grantee shall afford USTDA or its authorized representatives the opportunity at reasonable times to review books, records, and other documents relating to the Study and the Grant Agreement.

16. Representation of Parties

For all purposes relevant to the Grant Agreement, the Government of the United States of America will be represented by the U.S. Ambassador to Host Country or USTDA and Grantee will be represented by the General Director. The parties hereto may, by written notice, designate additional representatives for all purposes under the Grant Agreement.

17. Addresses of Record for Parties

Any notice, request, document, or other communication submitted by either party to the other under the Grant Agreement shall be in writing or through a wire or electronic medium which produces a tangible record of the transmission, such as a telegram, cable, or facsimile, and will be deemed duly given or sent when delivered to such party at the following:

To: Operadora Estatal de Aeropuertos, S.A. de C.V.
Km. 91.5 Carretera Federal México - Puebla
Huejotzingo, Puebla, C.P. 74160
MEXICO

Phone: (52-222) 774-2804
Fax: (52-222) 774-2805

To: U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

All such communications shall be in English, unless the parties otherwise agree in writing. In addition, the Grantee shall provide the Commercial Section of the U.S. Embassy in Host Country with a copy of each communication sent to USTDA.

Any communication relating to this Grant Agreement shall include the following fiscal data:

Appropriation No.:	118/91001
Activity No.:	2007-51024B
Reservation No.:	2008510012
Grant No.:	GH2008510004

18. Termination Clause

Either party may terminate the Grant Agreement by giving the other party thirty (30) days advance written notice. The termination of the Grant Agreement will end any obligations of the parties to provide financial or other resources for the Study, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the written notice of termination.

19. Non-Waiver of Rights and Remedies

No delay in exercising any right or remedy accruing to either party in connection with the Grant Agreement shall be construed as a waiver of such right or remedy.

20. U.S. Technology and Equipment

By funding this Study, USTDA seeks to promote the project objectives of the Host Country through the use of U.S. technology, goods, and services. In recognition of this purpose, the Grantee agrees that it will allow U.S. suppliers to compete in the procurement of technology, goods, and services needed for Project implementation.

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IN WITNESS WHEREOF, the Government of the United States of America and Operadora Estatal de Aeropuertos, S.A. de C.V., each acting through its duly authorized representative, have caused this Agreement to be signed in the English language in their names and delivered as of the day and year written below. In the event that this Grant Agreement is signed in more than one language, the English language version shall govern.

For the Government of the United States of America

By: _____

Leocadia I. Zak
Acting Director

Date: February 27, 2008

For Operadora Estatal de Aeropuertos, S.A. de C.V.

By: _____

C.P. Fernando Ramírez Elizalde
Director General

Date: February 27, 2008

Annex I -- Terms of Reference

Annex II -- USTDA Mandatory Clauses

Annex I

Terms of Reference

Objective

The objective of the Puebla International Airport Expansion Feasibility Study ("Study") is to develop Puebla International Airport's ("PBC") commercial terminal facilities and cargo facilities, and to provide an updated airport development plan ("Project"). The Study will assess the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics.

Activities

Task 1: Data Collection

The Contractor shall collect all relevant data required to undertake and successfully complete all tasks. Data to be collected shall include the following:

- Information on the existing airside and landside facilities, including all relevant design documents, airport layout plans, aerial surveys, topographic surveys, as well as all previous reports and studies prepared for the Grantee, including the USTDA-funded Puebla International Airport Modernization Feasibility Study (USTDA Activity No. 2002-50007B);
- Socio-economic, infrastructure, tourism, business, gross domestic product, and population data that will be used in preparing projected aviation traffic forecasts;
- Information and data which may impact aviation activity, including the emergence of new economic markets, proposed aircraft/airline operations, and development of major industries;
- Airport fees collected, as well as information pertaining to airport operational costs;
- Information obtained through meetings and interviews with airlines, local and federal government agencies, and fixed base operators ("FBOs") operating or intending to operate at the airport;
- All relevant historical data detailing the level of aviation-related activity at PBC for use in the development of the forecasts in Task 3. Information to be collected in this area shall include the following:
    - Historic enplaned domestic, international and connecting passengers by airline (10 years of data);
    - Landing fee reports by month and by airline for the past 5 years, which includes:

    - Aircraft type (fleet mix)
    - Landing weight
    - Carrier
    - Number of seats (used to determine boarding load factor)
    - Passengers and/or cargo volume carried;
- Based general aviation aircraft (5 years of data);
- Air traffic control ("ATC") tower operation counts by type (commercial passenger/military, general aviation), which includes:
    - Hourly count
    - Daily count
    - Monthly and annual counts;
- Consolidated flight schedules from the airport or from individual carriers;
- Military fleet mix and operational levels (if any);
- Historic cargo operations and tonnage of throughput (5 years of data).

In addition to the information obtained from the Grantee, the Contractor shall contact other organizations or agencies in order to obtain additional traffic information. Other potential sources for information may include the following:

- Airport Council International;
- Secretariat of Communications and Transportation ("SCT") / Aeropuertos y Servicios Auxiliares ("ASA");
- Customs and Immigration Service;
- U.S. Federal Aviation Administration ("FAA") statistical databases;
- International Air Transport Association ("IATA"), International Civil Aviation Organization ("ICAO"), and aircraft manufactures (such as Boeing).

Task 2: Airport Assessment and Analysis

The Contractor shall conduct an on-site analysis of all airport facilities and associated operations including cargo facilities, passenger terminal, airport access roadways, parking facilities (for cargo, passenger terminal, and FBOs), airport technical infrastructure, airside aircraft apron, taxiways, runways, airfield lighting and navigational aids, FBOs, aircraft rescue and fire fighting ("ARFF") facility, and air traffic control tower.

Based on the on-site analysis, the Contractor shall prepare an airport assessment report that shall include an inspection report for each of the aforementioned facilities. The inspection report shall provide the following information:

- Brief description of each major facility, including primary usage;
- General data for all major airside, landside, and terminal facilities, including length and width of runway, building area, number of floor levels, type and category of navigational aids, category of ARFF facility, and category of airport operations;

- Documentation of all major equipment and systems;
- Address whether the facility has any major deficiencies, including building defects, environmental issues, obstacle limitations, ATC line-of-sight limitations, security breaches, as well as any other major non-compliance issues relating to ICAO and FAA regulations;
- Outline if the facility is sufficient to handle existing passenger/cargo traffic, as well as overall capacity that can be handled at each existing facility.

Deliverable: Airport assessment and analysis report

The airport assessment and analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 3: Passenger and Cargo Demand Forecast

Based on the data collected as part of Task 1, the Contractor shall develop traffic projections for cargo and passenger demand for the next 15 years. Projections shall be prepared for domestic and international traffic, and include projections for:

- Total aircraft operations (split between cargo and passenger traffic);
- Total peak hour operations (split between cargo and passenger traffic);
- Total peak hour passengers (arrival, departure, and transfer passenger traffic);
- Total peak hour passengers (combined arrival and departure traffic).

All traffic projections shall be prepared using 3 types of scenarios: most likely growth scenario, high growth scenario, and low growth scenario.

The Contractor shall coordinate with the airport authority and the World Trade Center ("WTC") facility representatives. The Contractor shall include an analysis of the expected all-cargo operations compared with belly-haul cargo operations. Since the airport does not currently have an all-cargo aircraft parking apron, the Contractor shall prepare a demand study for this type of all-cargo operation.

Deliverable: Passenger and cargo demand forecast

The passenger and cargo demand forecast shall be submitted to the Grantee as an electronic file for review and approval. The approved forecast shall be used as base data for the preparation of all following tasks.

Task 4: Facility Requirements

As a basis for the airport development plan to be prepared in Task 6, the Contractor shall prepare a demand capacity analysis, which shall include:

- Overview of airfield characteristics;
- Determination of design aircraft and fleet mix;

- Determination of airfield design standards;
- Determination of airport cargo, passenger terminal, and airfield facility requirements;
    - Runway length analysis,
    - Airfield facility requirements,
    - Navigational aid analysis,
    - Aircraft parking analysis,
    - Terminal space programming,
    - Cargo facility space determination,
    - Industrial park development.

The physical facility requirements shall include possible alternatives for location, cost, and feasibility.

Deliverable: Facility requirements and associated layout plans

The Facility requirements and all associated layout plans shall be submitted to the Grantee as an electronic file for review and approval.

Task 5: Economic and Financial Analysis

The Contractor shall conduct an economic and financial analysis that will include a determination of the existing airport operating and maintenance expenditures, as well as estimates of revenue that may be generated through the facility requirements development in Task 4. Revenues to be analyzed include those from landing fees, passenger facilitation charges ("PFCs"), over-flight fees, aircraft parking fees, aircraft gate utilization fees, vehicular parking fees, concession generated revenue, fuelling fees, and any other airport-related charges or operational fees that the Contractor finds to be relevant for the expansion of PBC.

Based on the projected revenue, the Contractor shall develop a schedule of revenues for a 15-year period and include a calculation of the expected internal rate of return and financial internal rate of return for a number of different scenarios or development implementation phases.

For the benefit of those interested in the Project, the Contractor shall assess the development benefits associated with the Project and the methodology for measuring those benefits. The assessment shall include examples of the development benefits that would be expected in the Host Country if the Project is implemented as outlined in the Final Report. The Contractor shall specifically focus on examples from the categories listed below, shall develop a methodology for assessing these impacts over time, and shall identify where to obtain this information in the future (e.g. the Grantee, trade statistics, or U.S. Embassy in the Host Country). The Contractor shall only list benefits in the categories that are applicable to the Project.

The categories to be considered are as follows:

Infrastructure: Estimate the expected scale of infrastructure construction and comment on the capabilities of any recommended infrastructure improvements.

Human capacity building: Estimate the number and type of jobs that would be created during the construction or installation phase if the Contractor's recommendations are implemented. Distinguish between temporary construction jobs and the number of jobs that would be created or sustained once construction is complete. Comment on any prospective training recommended in the Final Report, including an estimate of the number of persons to be trained, type of training needed, and the desired outcome of the training.

Technology transfer and productivity improvements: Discuss potential commercial contracts for licensing new technologies that are recommended, as well as the expected productivity benefits of any such technologies. More generally, discuss the expected efficiency gains related to the recommendations, such as improved systems or processes that enhance productivity or result in the more efficient use of resources.

Market-oriented reform: Discuss any market-oriented reforms that would facilitate implementation of the Project or that would result from Project implementation, such as any policy changes that result in the liberalization of prices, privatization of previously state-owned assets, or increased competition in a given sector.

Other: Discuss prospective indirect development impacts of the key recommendations, such as enhanced safety and economic benefits (including increases in tourism, investment, and indirect job creation) that are not captured in the four categories listed above.

Deliverable: Economic and financial analysis report

The economic and financial analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 6: Airport Development Plan

Based on the results and data obtained from the previous tasks, particularly Task 4, the Contractor shall document and illustrate a recommended airport development plan for a period of up to 15 years. The airport development plan shall graphically depict the following:

- All existing physical airport facilities including:
    - Runways,
    - Taxiways,

- Aircraft parking areas,
- Access roadways,
- Commercial passenger facilities,
- General aviation facilities,
- Cargo facilities,
- Navigational aid and lighting facilities (air traffic control),
- Rescue and firefighting facilities,
- Fuel facilities,
- Commercial facilities,
- Major landmarks or geographical structures in the airport vicinity,
- Airfield safety areas (ICAO standards);

- Basic airport data including:
  - ICAO reference codes,
  - Lengths and width of runways and taxiways,
  - Geographical coordinates for major airport points,
  - Critical aircraft data,
  - Weather data pertaining to runway orientation;
- All proposed airport future expansion, including all conceptual facilities;
- Phasing of future airport expansion (short-term, mid-term, and long-term);
- Future on-airport land use designations.

Deliverable: Airport Development Plan
The Contractor shall prepare and illustrate an airport development plan that includes interim phases of development and a narrative report describing the principal reasoning behind the recommended airport development plan. The Contractor shall submit an electronic file and 3 hard copies of the airport development plan to the Grantee for review and approval.

Presentation: The Contractor shall conduct a presentation in Puebla for the Grantee that includes an overview of the results of all tasks completed to date. The focus of the presentation shall be on the approved traffic forecast, economic and financial analysis, and the recommended airport development plan.

Task 7: Environmental Analysis

The Contractor shall provide a general analysis of the current environmental conditions for the airport and immediate surroundings. The analysis shall include general information pertaining to the various types of federal and local regulations and ordinances that must be adhered to when undertaking any future airport development, including those from Mexico's Secretariat of the Environment and Natural Resources ("SEMARNAT"), Federal Prosecutor of the Environment (Procuraduría Federal del Medio Ambiente, "PROFEPA"), and the Dirección General de Normas ("DGN") of the Secretariat of the Economy. The

Contractor shall contact these agencies and shall compile the relevant information prior to carrying out the analysis.

The Contractor shall prepare a report that includes:

- General location and site description;
- Natural geographic conditions, including general information pertaining to topography, climate, hydrology, geology, seismic activity, archaeological remains, and agricultural development;
- Past and existing historical airport operations conducted at the airport;
- General information and description of the source of water supply, sewage treatment, storm water drainage, handling of hazardous substances, air quality, noise monitoring, fuelling, and waste management;
- Reporting of any previous environmental infractions, including aviation related incidents, accidents, and contamination on or near the airport property.

Deliverable: Environmental Analysis Report

The environmental analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 8: U.S. Sources of Supply

The Contractor shall prepare a list of prospective U.S. sources of supply that outlines potential U.S. suppliers that may be able to provide goods and services for carrying out the services required to implement the Project. The list shall include U.S. companies who currently maintain branch offices in the PBC region and in Mexico, as well as U.S.-based manufactures and suppliers of goods and services. The list of prospective U.S. sources of supply shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

Task 9: Final Report

The Contractor shall prepare a draft Final Report that includes all analyses and findings performed under Tasks 1-8 and shall provide the draft Final Report as an electronic file to the Grantee for review and discussion. The draft Final Report shall include an executive summary that covers all key issues and findings of the Study.

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive Final Report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

Notes:

(1) The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

(2) The Contractor and the Grantee shall be careful to ensure that the public version of the Final Report contains no security or confidential information.

(3) The Grantee and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the Final Report and all work product that is developed under these Terms of Reference.

Annex II

USTDA Mandatory Contract Clauses

A. USTDA Mandatory Clauses Controlling

The parties to this contract acknowledge that this contract is funded in whole or in part by the U.S. Trade and Development Agency ("USTDA") under the Grant Agreement between the Government of the United States of America acting through USTDA and Operadora Estatal de Aeropuertos, S.A. de C.V. ("Client"), dated _____ ("Grant Agreement"). The Client has selected _____ ("Contractor") to perform the feasibility study ("Study") for the Puebla International Airport Expansion project ("Project") in Mexico ("Host Country"). Notwithstanding any other provisions of this contract, the following USTDA mandatory contract clauses shall govern. All subcontracts entered into by Contractor funded or partially funded with USTDA Grant funds shall include these USTDA mandatory contract clauses, except for clauses B(1), G, H, I, and J. In addition, in the event of any inconsistency between the Grant Agreement and any contract or subcontract thereunder, the Grant Agreement shall be controlling.

B. USTDA as Financier

(1) USTDA Approval of Contract

All contracts funded under the Grant Agreement, and any amendments thereto, including assignments and changes in the Terms of Reference, must be approved by USTDA in writing in order to be effective with respect to the expenditure of USTDA Grant funds. USTDA will not authorize the disbursement of USTDA Grant funds until the contract has been formally approved by USTDA or until the contract conforms to modifications required by USTDA during the contract review process.

(2) USTDA Not a Party to the Contract

It is understood by the parties that USTDA has reserved certain rights such as, but not limited to, the right to approve the terms of this contract and amendments thereto, including assignments, the selection of all contractors, the Terms of Reference, the Final Report, and any and all documents related to any contract funded under the Grant Agreement. The parties hereto further understand and agree that USTDA, in reserving any or all of the foregoing approval rights, has acted solely as a financing entity to assure the proper use of United States Government funds, and that any decision by USTDA to exercise or refrain from exercising these approval rights shall be made as a financier in the course of financing the Study and shall not be construed as making USTDA a party to the contract. The parties hereto understand and agree that USTDA may, from time to time, exercise the foregoing approval rights, or discuss matters related to these rights and the Project with the parties to the contract or any subcontract, jointly or separately, without thereby incurring any responsibility or liability to such parties. Any approval or failure to approve by USTDA shall not

bar the Client or USTDA from asserting any right they might have against the Contractor, or relieve the Contractor of any liability which the Contractor might otherwise have to the Client or USTDA.

C. Nationality, Source, and Origin

Except as USTDA may otherwise agree, the following provisions shall govern the delivery of goods and services funded by USTDA under the Grant Agreement: (a) for professional services, the Contractor must be either a U.S. firm or U.S. individual; (b) the Contractor may use U.S. subcontractors without limitation, but the use of subcontractors from Host Country may not exceed twenty percent (20%) of the USTDA Grant amount and may only be used for specific services from the Terms of Reference identified in the subcontract; (c) employees of U.S. Contractor or U.S. subcontractor firms responsible for professional services shall be U.S. citizens or non-U.S. citizens lawfully admitted for permanent residence in the U.S.; (d) goods purchased for performance of the Study and associated delivery services (e.g., international transportation and insurance) must have their nationality, source, and origin in the United States; and (e) goods and services incidental to Study support (e.g., local lodging, food, and transportation) in Host Country are not subject to the above restrictions. USTDA will make available further details concerning these provisions upon request.

D. Recordkeeping and Audit

The Contractor and subcontractors funded under the Grant Agreement shall maintain, in accordance with generally accepted accounting procedures, books, records, and other documents, sufficient to reflect properly all transactions under or in connection with the contract. These books, records, and other documents shall clearly identify and track the use and expenditure of USTDA funds, separately from other funding sources. Such books, records, and documents shall be maintained during the contract term and for a period of three (3) years after final disbursement by USTDA. The Contractor and subcontractors shall afford USTDA, or its authorized representatives, the opportunity at reasonable times for inspection and audit of such books, records, and other documentation.

E. U.S. Carriers

(1) Air

Transportation by air of persons or property funded under the Grant Agreement shall be on U.S. flag carriers in accordance with the Fly America Act, 49 U.S.C. 40118, to the extent service by such carriers is available, as provided under applicable U.S. Government regulations.

(2) Marine

Transportation by sea of property funded under the Grant Agreement shall be on U.S. carriers in accordance with U.S. cargo preference law.

F. Workman's Compensation Insurance

The Contractor shall provide adequate Workman's Compensation Insurance coverage for work performed under this Contract.

G. Reporting Requirements

The Contractor shall advise USTDA by letter as to the status of the Project on March 1st annually for a period of two (2) years after completion of the Study. In addition, if at any time the Contractor receives follow-on work from the Client, the Contractor shall so notify USTDA and designate the Contractor's contact point including name, telephone, and fax number. Since this information may be made publicly available by USTDA, any information which is confidential shall be designated as such by the Contractor and provided separately to USTDA. USTDA will maintain the confidentiality of such information in accordance with applicable law.

H. Disbursement Procedures

(1) USTDA Approval of Contract

Disbursement of Grant funds will be made only after USTDA approval of this contract. To make this review in a timely fashion, USTDA must receive from either the Client or the Contractor a photocopy of an English language version of a signed contract or a final negotiated draft version to the attention of the General Counsel's office at USTDA's address listed in Clause M below.

(2) Payment Schedule Requirements

A payment schedule for disbursement of Grant funds to the Contractor shall be included in this Contract. Such payment schedule must conform to the following USTDA requirements: (1) up to twenty percent (20%) of the total USTDA Grant amount may be used as an advance payment; (2) all other payments, with the exception of the final payment, shall be based upon contract performance milestones; and (3) the final payment may be no less than fifteen percent (15%) of the total USTDA Grant amount, payable upon receipt by USTDA of an approved Final Report in accordance with the specifications and quantities set forth in Clause I below. Invoicing procedures for all payments are described below.

(3) Contractor Invoice Requirements

USTDA will make all disbursements of USTDA Grant funds directly to the Contractor. The Contractor must provide USTDA with an ACH Vendor Enrollment Form (available from USTDA) with the first invoice. The Client shall request disbursement of funds by USTDA to the Contractor for performance of the contract by submitting the following to USTDA:

(a) Contractor's Invoice

The Contractor's invoice shall include reference to an item listed in the Contract payment schedule, the requested payment amount, and an appropriate certification by the Contractor, as follows:

(i) For an advance payment (if any):

"As a condition for this advance payment, which is an advance against future Study costs, the Contractor certifies that it will perform all work in accordance with the terms of its Contract with the Client. To the extent that the Contractor does not comply with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(ii) For contract performance milestone payments:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(iii) For final payment:

"The Contractor has performed the work described in this invoice in accordance with the terms of its contract with the Client and is entitled to payment thereunder. Specifically, the Contractor has submitted the Final Report to the Client, as required by the Contract, and received the Client's approval of the Final Report. To the extent the Contractor has not complied with the terms and conditions of the Contract, including the USTDA mandatory provisions contained therein, it will, upon USTDA's request, make an appropriate refund to USTDA."

(b) Client's Approval of the Contractor's Invoice

(i) The invoice for an advance payment must be approved in writing by the Client.

(ii) For contract performance milestone payments, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and the terms and conditions of the USTDA Grant Agreement."

(iii) For final payment, the following certification by the Client must be provided on the invoice or separately:

"The services for which disbursement is requested by the Contractor have been performed satisfactorily, in accordance with applicable Contract provisions and terms and conditions of the USTDA Grant Agreement. The Final Report submitted by the Contractor has been reviewed and approved by the Client."

(c) USTDA Address for Disbursement Requests

Requests for disbursement shall be submitted by courier or mail to the attention of the Finance Department at USTDA's address listed in Clause M below.

(4) Termination

In the event that the Contract is terminated prior to completion, the Contractor will be eligible, subject to USTDA approval, for reasonable and documented costs which have been incurred in performing the Terms of Reference prior to termination, as well as reasonable wind down expenses. Reimbursement for such costs shall not exceed the total amount of undisbursed Grant funds. Likewise, in the event of such termination, USTDA is entitled to receive from the Contractor all USTDA Grant funds previously disbursed to the Contractor (including but not limited to advance payments) which exceed the reasonable and documented costs incurred in performing the Terms of Reference prior to termination.

I. USTDA Final Report

(1) Definition

"Final Report" shall mean the Final Report described in the attached Annex I Terms of Reference or, if no such "Final Report" is described therein, "Final Report" shall mean a substantive and comprehensive report of work performed in accordance with the attached Annex I Terms of Reference, including any documents delivered to the Client.

(2) Final Report Submission Requirements

The Contractor shall provide the following to USTDA:

(a) One (1) complete version of the Final Report for USTDA's records. This version shall have been approved by the Client in writing and must be in the English language. It is the responsibility of the Contractor to ensure that confidential information, if any, contained in this version be clearly marked. USTDA will maintain the confidentiality of such information in accordance with applicable law.

and

(b) One (1) copy of the Final Report suitable for public distribution ("Public Version"). The Public Version shall have been approved by the Client in writing and must be in the English language. As this version will be available for public distribution, it must not contain any confidential information. If the report in (a) above contains no confidential information, it may be used as the Public Version. In any event, the Public Version must be informative and contain sufficient Project detail to be useful to prospective equipment and service providers.

and

(c) Two (2) CD-ROMs, each containing a complete copy of the Public Version of the Final Report. The electronic files on the CD-ROMs shall be submitted in a commonly accessible read-only format. As these CD-ROMs will be available for public distribution, they must not contain any confidential information. It is the responsibility of the Contractor to ensure that no confidential information is contained on the CD-ROMs.

The Contractor shall also provide one (1) copy of the Public Version of the Final Report to the Foreign Commercial Service Officer or the Economic Section of the U.S. Embassy in Host Country for informational purposes.

(3) Final Report Presentation

All Final Reports submitted to USTDA must be paginated and include the following:

(a) The front cover of every Final Report shall contain the name of the Client, the name of the Contractor who prepared the report, a report title, USTDA's logo, USTDA's mailing and delivery addresses. If the complete version of the Final Report contains confidential information, the Contractor shall be responsible for labeling the front cover of that version of the Final Report with the term "Confidential Version." The Contractor shall be responsible for labeling the front cover of the Public Version of the Final Report with the term "Public Version." The front cover of every Final Report shall also contain the following disclaimer:

> "This report was funded by the U.S. Trade and Development Agency (USTDA), an agency of the U.S. Government. The opinions, findings, conclusions or recommendations expressed in this document are those of the

author(s) and do not necessarily represent the official position or policies of USTDA. USTDA makes no representation about, nor does it accept responsibility for, the accuracy or completeness of the information contained in this report."

(b) The inside front cover of every Final Report shall contain USTDA's logo, USTDA's mailing and delivery addresses, and USTDA's mission statement. Camera-ready copy of USTDA Final Report specifications will be available from USTDA upon request.

(c) The Contractor shall affix to the front of the CD-ROM a label identifying the Host Country, USTDA Activity Number, the name of the Client, the name of the Contractor who prepared the report, a report title, and the following language:

"The Contractor certifies that this CD-ROM contains the Public Version of the Final Report and that all contents are suitable for public distribution."

(d) The Contractor and any subcontractors that perform work pursuant to the Grant Agreement must be clearly identified in the Final Report. Business name, point of contact, address, telephone, and fax numbers shall be included for Contractor and each subcontractor.

(e) The Final Report, while aiming at optimum specifications and characteristics for the Project, shall identify the availability of prospective U.S. sources of supply. Business name, point of contact, address, telephone, and fax numbers shall be included for each commercial source.

(f) The Final Report shall be accompanied by a letter or other notation by the Client which states that the Client approves the Final Report. A certification by the Client to this effect provided on or with the invoice for final payment will meet this requirement.

J. Modifications

All changes, modifications, assignments or amendments to this contract, including the appendices, shall be made only by written agreement by the parties hereto, subject to written USTDA approval.

K. Study Schedule

(1) Study Completion Date

The completion date for the Study, which is December 31, 2009, is the date by which the parties estimate that the Study will have been completed.

(2) Time Limitation on Disbursement of USTDA Grant Funds

Except as USTDA may otherwise agree, (a) no USTDA funds may be disbursed under this contract for goods and services which are provided prior to the Effective Date of the Grant Agreement; and (b) all funds made available under the Grant Agreement must be disbursed within four (4) years from the Effective Date of the Grant Agreement.

L. Business Practices

The Contractor agrees not to pay, promise to pay, or authorize the payment of any money or anything of value, directly or indirectly, to any person (whether a governmental official or private individual) for the purpose of illegally or improperly inducing anyone to take any action favorable to any party in connection with the Study. The Client agrees not to receive any such payment. The Contractor and the Client agree that each will require that any agent or representative hired to represent them in connection with the Study will comply with this paragraph and all laws which apply to activities and obligations of each party under this Contract, including but not limited to those laws and obligations dealing with improper payments as described above.

M. USTDA Address and Fiscal Data

Any communication with USTDA regarding this Contract shall be sent to the following address and include the fiscal data listed below:

U.S. Trade and Development Agency
1000 Wilson Boulevard, Suite 1600
Arlington, Virginia 22209-3901
USA

Phone: (703) 875-4357
Fax: (703) 875-4009

Fiscal Data:

Appropriation No.:	118/91001
Activity No.:	2007-51024B
Reservation No.:	2008510012
Grant No.:	GH2008510004

N. Definitions

All capitalized terms not otherwise defined herein shall have the meaning set forth in the Grant Agreement.

O. Taxes

USTDA funds provided under the Grant Agreement shall not be used to pay any taxes, tariffs, duties, fees, or other levies imposed under laws in effect in Host Country. Neither the Client nor the Contractor will seek reimbursement from USTDA for such taxes, tariffs, duties, fees, or other levies.

ANNEX 5

TERMS OF REFERENCE
(FROM USTDA GRANT AGREEMENT)

Annex I

Terms of Reference

Objective

The objective of the Puebla International Airport Expansion Feasibility Study ("Study") is to develop Puebla International Airport's ("PBC") commercial terminal facilities and cargo facilities, and to provide an updated airport development plan ("Project"). The Study will assess the expansion of the existing commercial passenger terminal, the addition of an air cargo aircraft parking apron, and the addition of a parallel taxiway, based on updated current and projected growth statistics.

Activities

Task 1: Data Collection

The Contractor shall collect all relevant data required to undertake and successfully complete all tasks. Data to be collected shall include the following:

- Information on the existing airside and landside facilities, including all relevant design documents, airport layout plans, aerial surveys, topographic surveys, as well as all previous reports and studies prepared for the Grantee, including the USTDA-funded Puebla International Airport Modernization Feasibility Study (USTDA Activity No. 2002-50007B);
- Socio-economic, infrastructure, tourism, business, gross domestic product, and population data that will be used in preparing projected aviation traffic forecasts;
- Information and data which may impact aviation activity, including the emergence of new economic markets, proposed aircraft/airline operations, and development of major industries;
- Airport fees collected, as well as information pertaining to airport operational costs;
- Information obtained through meetings and interviews with airlines, local and federal government agencies, and fixed base operators ("FBOs") operating or intending to operate at the airport;
- All relevant historical data detailing the level of aviation-related activity at PBC for use in the development of the forecasts in Task 3. Information to be collected in this area shall include the following:
    - Historic enplaned domestic, international and connecting passengers by airline (10 years of data);
    - Landing fee reports by month and by airline for the past 5 years, which includes:

    - Aircraft type (fleet mix)
    - Landing weight
    - Carrier
    - Number of seats (used to determine boarding load factor)
    - Passengers and/or cargo volume carried;
- Based general aviation aircraft (5 years of data);
- Air traffic control ("ATC") tower operation counts by type (commercial passenger/military, general aviation), which includes:
    - Hourly count
    - Daily count
    - Monthly and annual counts;
- Consolidated flight schedules from the airport or from individual carriers;
- Military fleet mix and operational levels (if any);
- Historic cargo operations and tonnage of throughput (5 years of data).

In addition to the information obtained from the Grantee, the Contractor shall contact other organizations or agencies in order to obtain additional traffic information. Other potential sources for information may include the following:

- Airport Council International;
- Secretariat of Communications and Transportation ("SCT") / Aeropuertos y Servicios Auxiliares ("ASA");
- Customs and Immigration Service;
- U.S. Federal Aviation Administration ("FAA") statistical databases;
- International Air Transport Association ("IATA"), International Civil Aviation Organization ("ICAO"), and aircraft manufactures (such as Boeing).

Task 2: Airport Assessment and Analysis

The Contractor shall conduct an on-site analysis of all airport facilities and associated operations including cargo facilities, passenger terminal, airport access roadways, parking facilities (for cargo, passenger terminal, and FBOs), airport technical infrastructure, airside aircraft apron, taxiways, runways, airfield lighting and navigational aids, FBOs, aircraft rescue and fire fighting ("ARFF") facility, and air traffic control tower.

Based on the on-site analysis, the Contractor shall prepare an airport assessment report that shall include an inspection report for each of the aforementioned facilities. The inspection report shall provide the following information:

- Brief description of each major facility, including primary usage;
- General data for all major airside, landside, and terminal facilities, including length and width of runway, building area, number of floor levels, type and category of navigational aids, category of ARFF facility, and category of airport operations;

- Documentation of all major equipment and systems;
- Address whether the facility has any major deficiencies, including building defects, environmental issues, obstacle limitations, ATC line-of-sight limitations, security breaches, as well as any other major non-compliance issues relating to ICAO and FAA regulations;
- Outline if the facility is sufficient to handle existing passenger/cargo traffic, as well as overall capacity that can be handled at each existing facility.

Deliverable: Airport assessment and analysis report

The airport assessment and analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 3: Passenger and Cargo Demand Forecast

Based on the data collected as part of Task 1, the Contractor shall develop traffic projections for cargo and passenger demand for the next 15 years. Projections shall be prepared for domestic and international traffic, and include projections for:

- Total aircraft operations (split between cargo and passenger traffic);
- Total peak hour operations (split between cargo and passenger traffic);
- Total peak hour passengers (arrival, departure, and transfer passenger traffic);
- Total peak hour passengers (combined arrival and departure traffic).

All traffic projections shall be prepared using 3 types of scenarios: most likely growth scenario, high growth scenario, and low growth scenario.

The Contractor shall coordinate with the airport authority and the World Trade Center ("WTC") facility representatives. The Contractor shall include an analysis of the expected all-cargo operations compared with belly-haul cargo operations. Since the airport does not currently have an all-cargo aircraft parking apron, the Contractor shall prepare a demand study for this type of all-cargo operation.

Deliverable: Passenger and cargo demand forecast

The passenger and cargo demand forecast shall be submitted to the Grantee as an electronic file for review and approval. The approved forecast shall be used as base data for the preparation of all following tasks.

Task 4: Facility Requirements

As a basis for the airport development plan to be prepared in Task 6, the Contractor shall prepare a demand capacity analysis, which shall include:

- Overview of airfield characteristics;
- Determination of design aircraft and fleet mix;

- Determination of airfield design standards;
- Determination of airport cargo, passenger terminal, and airfield facility requirements;
    - Runway length analysis,
    - Airfield facility requirements,
    - Navigational aid analysis,
    - Aircraft parking analysis,
    - Terminal space programming,
    - Cargo facility space determination,
    - Industrial park development.

The physical facility requirements shall include possible alternatives for location, cost, and feasibility.

Deliverable: Facility requirements and associated layout plans

The Facility requirements and all associated layout plans shall be submitted to the Grantee as an electronic file for review and approval.

Task 5: Economic and Financial Analysis

The Contractor shall conduct an economic and financial analysis that will include a determination of the existing airport operating and maintenance expenditures, as well as estimates of revenue that may be generated through the facility requirements development in Task 4. Revenues to be analyzed include those from landing fees, passenger facilitation charges ("PFCs"), over-flight fees, aircraft parking fees, aircraft gate utilization fees, vehicular parking fees, concession generated revenue, fuelling fees, and any other airport-related charges or operational fees that the Contractor finds to be relevant for the expansion of PBC.

Based on the projected revenue, the Contractor shall develop a schedule of revenues for a 15-year period and include a calculation of the expected internal rate of return and financial internal rate of return for a number of different scenarios or development implementation phases.

For the benefit of those interested in the Project, the Contractor shall assess the development benefits associated with the Project and the methodology for measuring those benefits. The assessment shall include examples of the development benefits that would be expected in the Host Country if the Project is implemented as outlined in the Final Report. The Contractor shall specifically focus on examples from the categories listed below, shall develop a methodology for assessing these impacts over time, and shall identify where to obtain this information in the future (e.g. the Grantee, trade statistics, or U.S. Embassy in the Host Country). The Contractor shall only list benefits in the categories that are applicable to the Project.

The categories to be considered are as follows:

Infrastructure: Estimate the expected scale of infrastructure construction and comment on the capabilities of any recommended infrastructure improvements.

Human capacity building: Estimate the number and type of jobs that would be created during the construction or installation phase if the Contractor's recommendations are implemented. Distinguish between temporary construction jobs and the number of jobs that would be created or sustained once construction is complete. Comment on any prospective training recommended in the Final Report, including an estimate of the number of persons to be trained, type of training needed, and the desired outcome of the training.

Technology transfer and productivity improvements: Discuss potential commercial contracts for licensing new technologies that are recommended, as well as the expected productivity benefits of any such technologies. More generally, discuss the expected efficiency gains related to the recommendations, such as improved systems or processes that enhance productivity or result in the more efficient use of resources.

Market-oriented reform: Discuss any market-oriented reforms that would facilitate implementation of the Project or that would result from Project implementation, such as any policy changes that result in the liberalization of prices, privatization of previously state-owned assets, or increased competition in a given sector.

Other: Discuss prospective indirect development impacts of the key recommendations, such as enhanced safety and economic benefits (including increases in tourism, investment, and indirect job creation) that are not captured in the four categories listed above.

Deliverable: Economic and financial analysis report

The economic and financial analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 6: Airport Development Plan

Based on the results and data obtained from the previous tasks, particularly Task 4, the Contractor shall document and illustrate a recommended airport development plan for a period of up to 15 years. The airport development plan shall graphically depict the following:

- All existing physical airport facilities including:
    - Runways,
    - Taxiways,

- Aircraft parking areas,
- Access roadways,
- Commercial passenger facilities,
- General aviation facilities,
- Cargo facilities,
- Navigational aid and lighting facilities (air traffic control),
- Rescue and firefighting facilities,
- Fuel facilities,
- Commercial facilities,
- Major landmarks or geographical structures in the airport vicinity,
- Airfield safety areas (ICAO standards);

- Basic airport data including:
  - ICAO reference codes,
  - Lengths and width of runways and taxiways,
  - Geographical coordinates for major airport points,
  - Critical aircraft data,
  - Weather data pertaining to runway orientation;
- All proposed airport future expansion, including all conceptual facilities;
- Phasing of future airport expansion (short-term, mid-term, and long-term);
- Future on-airport land use designations.

Deliverable: Airport Development Plan
The Contractor shall prepare and illustrate an airport development plan that includes interim phases of development and a narrative report describing the principal reasoning behind the recommended airport development plan. The Contractor shall submit an electronic file and 3 hard copies of the airport development plan to the Grantee for review and approval.

Presentation: The Contractor shall conduct a presentation in Puebla for the Grantee that includes an overview of the results of all tasks completed to date. The focus of the presentation shall be on the approved traffic forecast, economic and financial analysis, and the recommended airport development plan.

Task 7: Environmental Analysis

The Contractor shall provide a general analysis of the current environmental conditions for the airport and immediate surroundings. The analysis shall include general information pertaining to the various types of federal and local regulations and ordinances that must be adhered to when undertaking any future airport development, including those from Mexico's Secretariat of the Environment and Natural Resources ("SEMARNAT"), Federal Prosecutor of the Environment (Procuraduría Federal del Medio Ambiente, "PROFEPA"), and the Dirección General de Normas ("DGN") of the Secretariat of the Economy. The

Contractor shall contact these agencies and shall compile the relevant information prior to carrying out the analysis.

The Contractor shall prepare a report that includes:

- General location and site description;
- Natural geographic conditions, including general information pertaining to topography, climate, hydrology, geology, seismic activity, archaeological remains, and agricultural development;
- Past and existing historical airport operations conducted at the airport;
- General information and description of the source of water supply, sewage treatment, storm water drainage, handling of hazardous substances, air quality, noise monitoring, fuelling, and waste management;
- Reporting of any previous environmental infractions, including aviation related incidents, accidents, and contamination on or near the airport property.

Deliverable: Environmental Analysis Report

The environmental analysis report shall be submitted to the Grantee as an electronic file for review and approval.

Task 8: U.S. Sources of Supply

The Contractor shall prepare a list of prospective U.S. sources of supply that outlines potential U.S. suppliers that may be able to provide goods and services for carrying out the services required to implement the Project. The list shall include U.S. companies who currently maintain branch offices in the PBC region and in Mexico, as well as U.S.-based manufactures and suppliers of goods and services. The list of prospective U.S. sources of supply shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

Task 9: Final Report

The Contractor shall prepare a draft Final Report that includes all analyses and findings performed under Tasks 1-8 and shall provide the draft Final Report as an electronic file to the Grantee for review and discussion. The draft Final Report shall include an executive summary that covers all key issues and findings of the Study.

The Contractor shall prepare and deliver to the Grantee and USTDA a substantive and comprehensive Final Report of all work performed under these Terms of Reference ("Final Report"). The Final Report shall be organized according to the above tasks, and shall include all deliverables and documents that have been provided to the Grantee. The Final Report shall be prepared in accordance with Clause I of Annex II of the Grant Agreement.

Notes:

(1) The Contractor is responsible for compliance with U.S. export licensing requirements, if applicable, in the performance of the Terms of Reference.

(2) The Contractor and the Grantee shall be careful to ensure that the public version of the Final Report contains no security or confidential information.

(3) The Grantee and USTDA shall have an irrevocable, worldwide, royalty-free, non-exclusive right to use and distribute the Final Report and all work product that is developed under these Terms of Reference.