

## **2.0 SUSTAINABLE AIRPORT PLANNING**

### **INTRODUCTION**

- **More than EMS**
- **Understanding Sustainable Principles and Strategies**

### **PROCESS**

Within the Planning Chapter, each sustainable prerequisite has four subsections: Intent, Requirements, Submittals, and Technology/Strategy, as described below:

- **Intent:** The primary motivations for any sustainable practice.
- **Requirements:** Specifies institutional, operational, and mechanical design or construction elements that satisfy the intent. The prerequisites must be achieved; the credits are optional, but contribute to the overall project rating.
- **Submittals:** Required and supporting documentation and/or information required to achieve applicable prerequisites or credits. This documentation may include calculations, short narratives, or references to specification sections or design drawings indicating how the requirements are being met.
- **Technology/Strategy:** Highlights specific ways of meeting the recommendations within the scope of work for each specific project. Case studies where available, are presented to help guide the application of sustainable credits to Planning projects and efforts. To aid with consideration of applicable strategies and technologies, they are organized into the following three categories; “Standard Practice,” “Recommended Practice,” and “Best Available Practice.”
  - **Standard Practice:** These are requirements that may be due to standards, specifications, codes, general best management or construction practices. They are practices already in place, and in many cases SAM prerequisites, which also serve to meet sustainable goals.
  - **Recommended Practice:** These include recommendations that are expected to have insignificant impacts to cost and are therefore, encouraged to be incorporated into the design process.
  - **Best Available Practice:** These are strategies and practices that are expected to enhance the environmental design efforts of the Chicago Department of Aviation (CDA), but are anticipated to potentially have an impact on the cost and/or schedule. Planners are encouraged to explore the cost/environmental benefit ratio for such guidelines in order for incorporation into project design to the greatest extent practicable.
  - **Case Study:** Examples of credit intent “in action” at airports and/or other industry facilities.

## **APPLICABILITY**

Planning projects that would be applicable to this SAM Planning Chapter include, but are not limited to the following:

- Master Plan
- Maintenance Plan
- Asset Plan
- Facilities Plan
- Land Use Plan
- Regulatory/Code Requirements
  - Title V Permit Application or Update
  - NPDES Permit Application or Update
  - Stormwater Pollution Prevention Plan Update
  - USACOE 404 Permit Application
- Other Projects or Strategic Initiatives
  - Demand Driven projects
  - Customer Service projects
  - Revenue Opportunities

## **THRESHOLDS AND GUIDANCE**

For all planning projects involving CDA owned, operated, or leased facilities, it is recommended that measurable targets/goals be assigned to the following items, as appropriate and applicable, through development of the project's Sustainability Schematic.

## **SUSTAINABLE AIRPORT MANUAL (SAM) CHECKLISTS**

## **SAM GREEN AIRPLANE CERTIFIED PLANNING PROJECTS IMPLEMENTATION AND REVIEW PROCESS**

All planning projects conducted by or under management of the CDA will follow these procedures.

## **2.0 SUSTAINABLE AIRPORT PLANNING**

### **2.1 Prerequisite 1 – Determine Key Stakeholders**

Early in the project, identify all key stakeholders involved in planning, design, construction, and daily operation/maintenance, as appropriate and applicable, with the ultimate end product in mind of finalizing the Sustainability Schematic in order for it to become part of the official Project Definition Document (PDD) and/or Capital Improvement Program (CIP) Application.

#### **CASE STUDY**

**Ithaca Tompkins Regional Airport** has started its latest master plan update project with sustainability in mind. The Federal Aviation Administration agreed to fund a "green" master plan which would be a first in the country. In September 2009, a **kickoff meeting was held with stakeholders** and the airport is well on its way to developing sustainable concepts for future airport development. Source: November 18, 2009 : <http://www.flyithaca.com/news/story/airport-sustainable-master-plan-takes-off.html>

### **2.2 Prerequisite 2 – Initial Project Meeting to Discuss Project Sustainability Goals**

Hold an initial meeting with key stakeholders in order to provide a forum for discussion regarding the overall sustainability goals for the project, capture innovative ideas and concepts, resolve any potential conflicts, and to determine the necessary environmental approvals, permitting requirements, and any other additional approvals that would be needed as part of the project.. As a result of the meeting, it is anticipated that the method and required inputs for the cost/benefit analysis will be determined.

#### **CASE STUDY**

### **2.3 Pre-Requisite 3 – Sustainability Baseline Assessment and Cost/Benefit Analysis**

Perform a preliminary sustainability baseline assessment to represent the no-project alternative. Perform a preliminary cost/benefit analysis for all project alternatives, including the no-project alternative, in order to compare life cycle costs with the range of potential environmental and social impacts as a result of the project, in order to be able to select the alternative that is the least burdensome.

#### **CASE STUDY**

### **2.4 Prerequisite 4 – Develop a Draft Sustainability Schematic**

When finalized, the Sustainability Schematic will become part of the official Project Definition Document (PDD) and/or Capital Improvement Program (CIP) Application.

**CASE STUDY**

- The consideration of sustainability has been integrated into the planning process at **Dallas Fort-Worth International Airport** through its Project Development Process (PDP) flowchart.
- The consideration of sustainability has been integrated into the planning process at **Ithaca Tompkins Regional Airport** as evidenced in the following flowchart:

**SUSTAINABLE AIRPORT MASTER PLAN PROCESS**

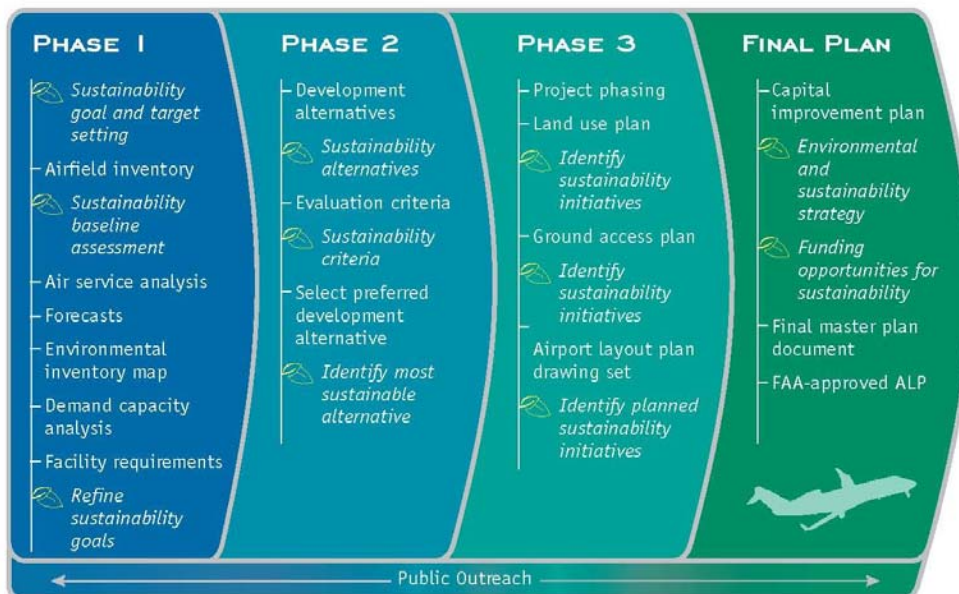


Figure 1-1—Sustainable Airport Master Plan Process

Source: *Sustainable Airport Master Plan Phase 2 Report Draft*, August 2010. Prepared for Ithaca Tompkins Regional Airport. On-line at: <http://www.sustainable-ith.com>

**2.5 Prerequisite 5 – Project Meeting to Finalize Sustainability Schematic**

Upon completion of the Sustainability Schematic, hold a project meeting to finalize the document and prepare it for inclusion in the official Project Definition Document (PDD) and/or Capital Improvement Program (CIP) Application.

**CASE STUDY**

**2.5 Prerequisite 6 – Establish a Plan to Close the Feedback Loop at Project Completion**

Close the feedback loop at project completion in order to determine if key performance indicators, targets, and goals were met as planned, exceeded plan, or were under plan, and the reasons why or why not. This “lessons learned” information can then be compiled and used as valuable background information on future projects. This information can also be used to modify future official Project Definition Documents (PDD) and/or Capital Improvement Program (CIP) Applications, as necessary and applicable.

**CASE STUDY**