SOUTH SUBURBAN AIRPORT

Local Advisory Group Meeting

September 2, 2004

TAMS
AN EARTH TECH COMPANY

Illinois Department of Transportation

INAUGURAL AIRPORT PROGRAM
SOUTH SUBURBAN AIRPORT

Criteria To Be Used In Selection Of The Airport Master Plan

The selection of a preferred concept alternative for the South Suburban Airport is the next action in the Master Plan process. It builds on the *previously established activity forecasts and potential facility requirements* identified to satisfy the forecasted activity of all potential user groups.

The selection of a preferred Master Plan concept alternative is based on *planning criteria* (performance and policy related) *established by IDOT* with the assistance of the consulting team and *input from local officials and the public*. These criteria reflect the goals and objectives of the sponsor as well as the purpose and need of the project.

1998 Phase I Engineering Study

- Was based on selection of the Will County Site
- Selected an E-W Runway Configuration capable of accommodating four simultaneous independent precision approaches during CAT III weather conditions
- Established the airport footprint used in the Tier 1 EIS

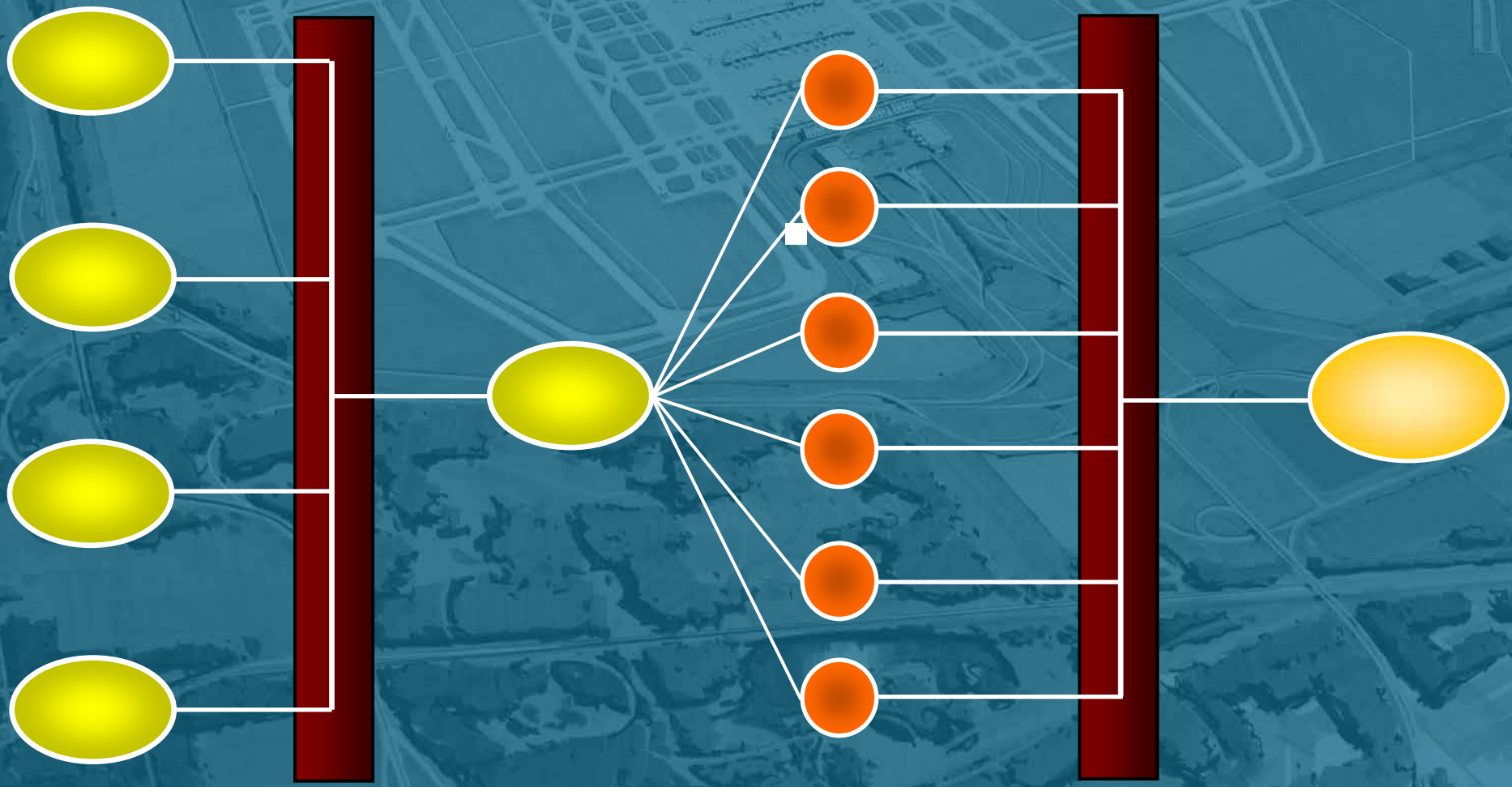
South Suburban Airport

1998 Phase I Engineering Study

1998 Phase 1 Engineering Study - Runway Configuration Alternatives Evaluation Criteria		
No.	**Criteria**	**Definition**
1	Ability to accommodate 2020 aviation demand	• Selected runway configuration would need to accommodate approximately 775,000 annual operations.
2	Ability to accommodate peak demand during CAT III weather conditions using quadruple approaches	• Develop a runway concept that could handle peak hour activity with four independent arrival streams during CAT III conditions.
3	Ability to avoid runway incursions	• Develop an airfield taxiway design able to serve an all-parallel runway concept that circumscribes runway critical areas (i.e., a proposed perimeter taxiway system).
4	Ability to provide for balanced airfield operations	• Develop a runway system configuration that would ultimately be able to serve all types of aircraft operations expeditiously, including: 1. Hub type operation 2. Non-hub type operation 3. International operation 4. Cargo hub type operation, and 5. A point-to point operation. • Develop a runway system that would balance taxiing operations for both east and west air traffic flow configurations.
5	Integration and suitability within the existing regional airspace	• Develop an airfield configuration that would fit within the existing framework of the Chicago airspace without adversely impacting approach and departure procedures for O'Hare and Midway airports and GA in-route flight patterns.
6	Ability to minimize adverse land use impacts	• Develop an on-airport land-use plan that minimizes potential off-airport impacts (in particular noise). • Define the future airport boundary to encompass the optimal land area needed for airport-related uses (aeronautical and operational) but no more land than is absolutely necessary and minimizes impacts to surrounding land uses.
7	Qualitative cost/benefit	• Comparative cost/benefits analysis of airfield configurations.

South Suburban Airport

1998 Phase I Engineering Study Selection Process



South Suburban Airport

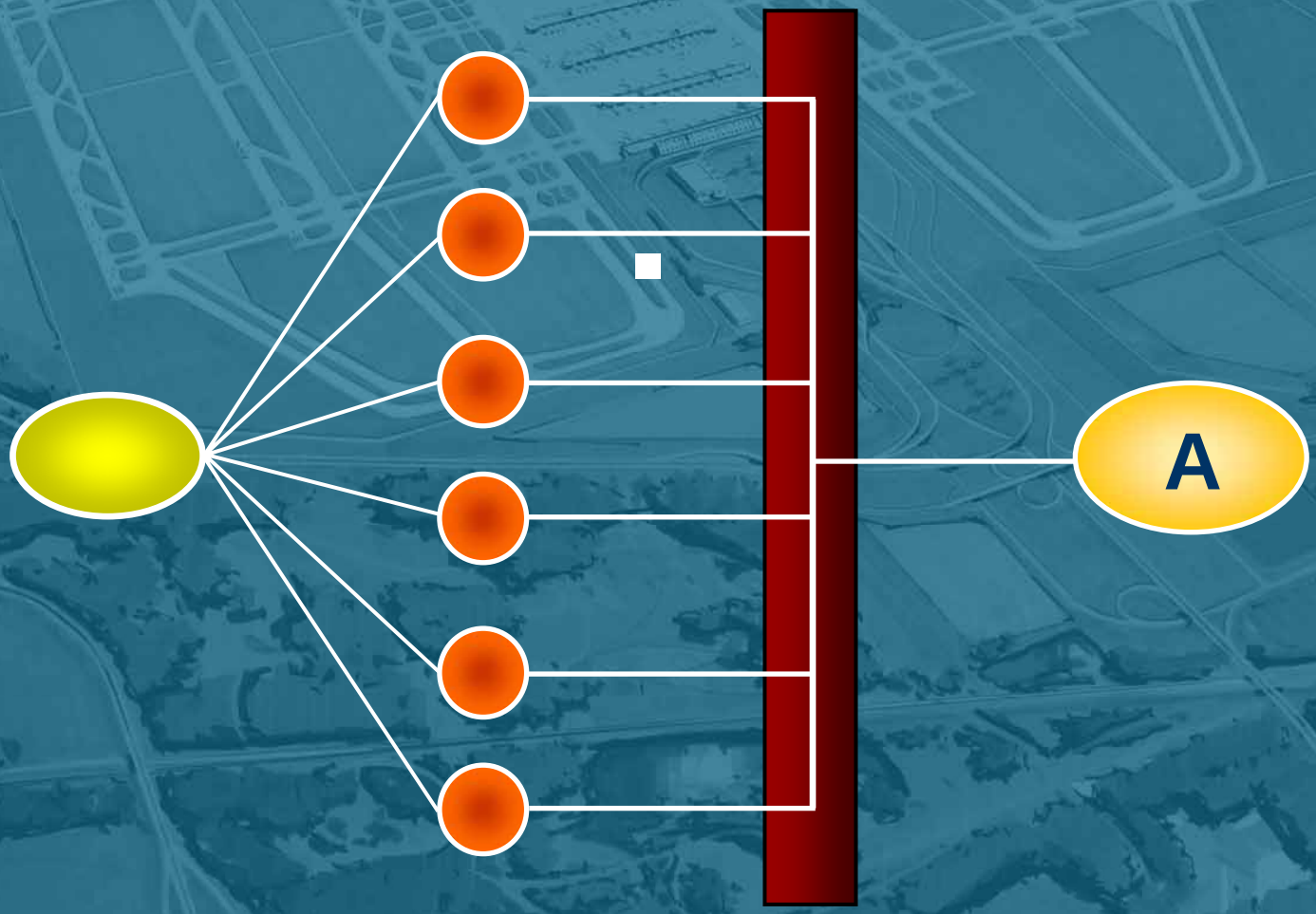
Airfield Refinement Evaluation Process

1998 Preferred IDOT Airfield Configuration

Airfield Configuration Refinements

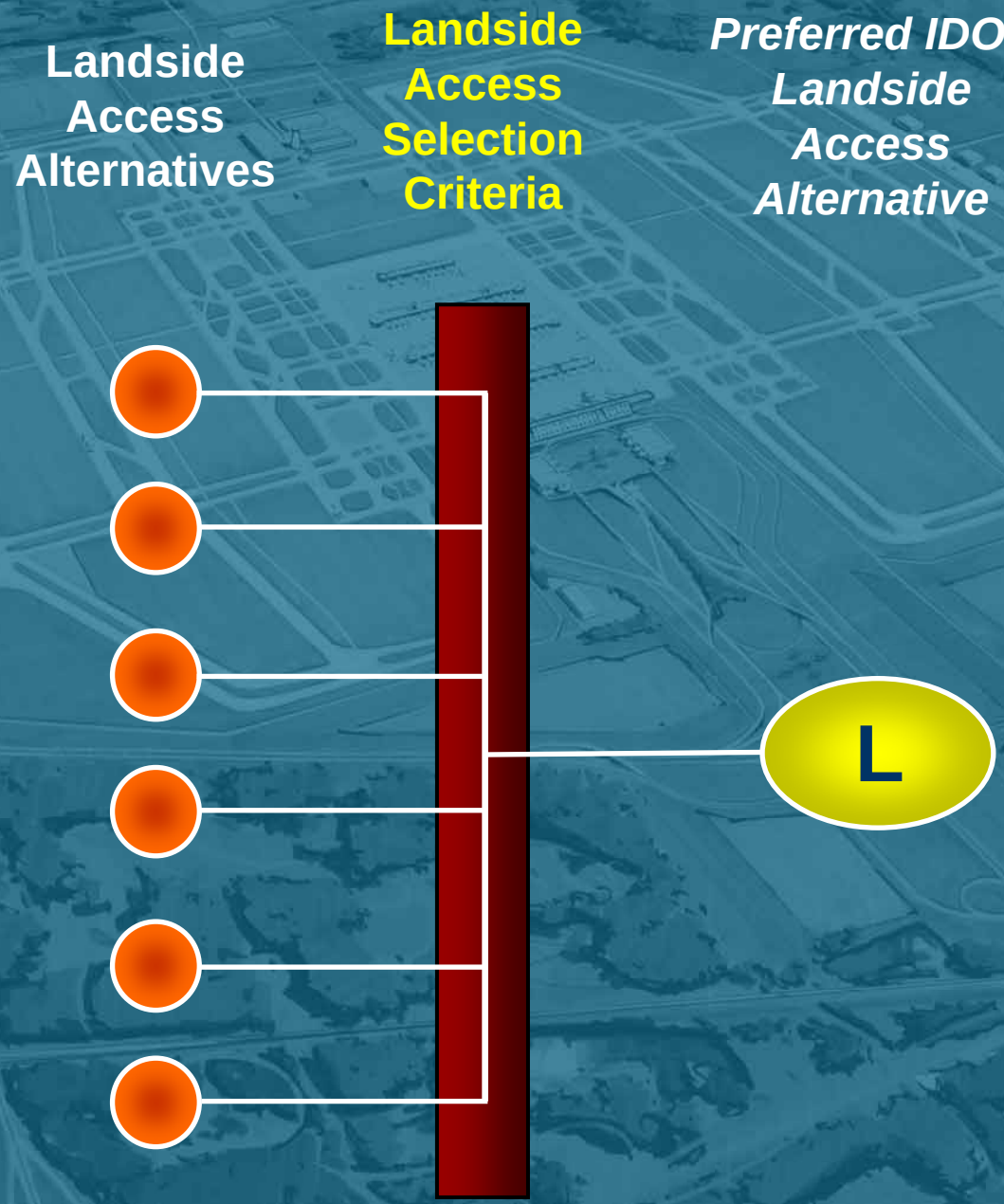
Updated Airfield Configuration Criteria

Preferred IDOT Airfield Alternative



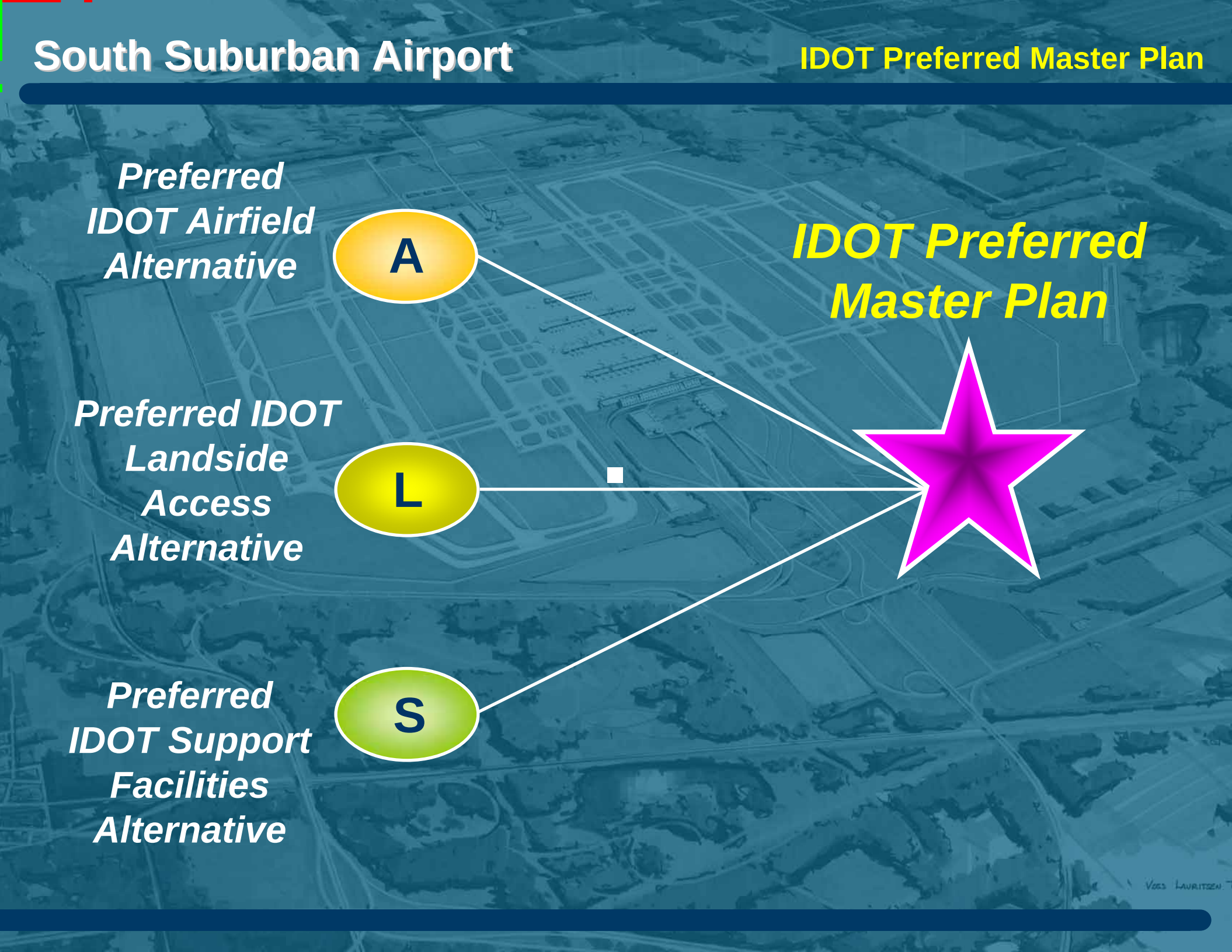
South Suburban Airport

Landside Access Evaluation Process



South Suburban Airport

Support Facilities Evaluation Process


Preferred IDOT Airfield Alternative
A
Preferred IDOT Landside Access Alternative
L
Preferred IDOT Support Facilities Alternative
S
IDOT Preferred Master Plan

Criteria for Airfield Configuration Refinements

Ability to meet aviation forecast demand and projected fleet mix in the short-term.

- The Inaugural Airport runway configuration should provide adequate capacity to handle the forecasted aeronautical activity and projected fleet mix through DBO+5.

- Preserve the airport expansion options to handle the forecasted aeronautical activity and projected fleet mix through DBO+20

Preserve the option to provide an airfield capable of serving long-term regional aviation needs

- Provide maximum flexibility for expansion of the airfield to serve potential long- term aviation needs
- Provide up to four simultaneous independent approaches under CAT III conditions.
- Preserve airport development options

Ability to avoid/minimize runway incursions

- Airfield Safety is a top priority
- Develop a runway configuration that minimizes potential conflicts between aircraft and between ground based vehicles and aircraft

Ability to provide for future landside and terminal expansion in concert with the airfield

- Provide adequate runway separation to allow maximum flexibility in future terminal concepts
- Future landside could evolve in a number of different ways

Ability to provide for flexible and balanced airfield operations

- Develop a runway configuration that would ultimately be able to serve all types of aircraft operations expeditiously

- Develop a runway system that would balance taxiing operations for both east-flow and west-flow air traffic configurations

Ability to minimize adverse land-use impacts and community disruption

- Compatibility with the comprehensive land-use plans of the neighboring communities
- Contain all significant aircraft-generated noise as defined by the FAA on airport property or compatible land-uses
- Optimal land area needed for airport related uses
- Population displacement
- Local traffic disruption

Ability to minimize impacts on Natural Resources

- Wetlands
- Floodplains
- Water Resources
- Parks and Nature Preserves

Airfield Perimeter Security

- Access to Airfield
- Security Buffer Zone

Costs

- Comparative costs of each airfield alternative
- Comparative operating costs

Landside Access Concept Alternatives Evaluation Criteria

Landside Access and Capacity

- Provide easy, direct vehicular access to the Passenger Terminal
- Satisfy projected traffic demand
- Provide convenient access to/from Passenger Terminal and Parking Facilities

Landside Access Security

- Screened or Controlled vehicular access
- Segregation of public traffic from employee and commercial vehicle traffic

Commercial Development Potential

- Provide flexible land-use development
- Maximize land-use opportunities and creation of accessible acreage

Minimize adverse impacts on land use and community disruption

- Compatibility with land use plans of the neighboring communities
- Population displacement
- Local traffic disruption
- Noise impacts

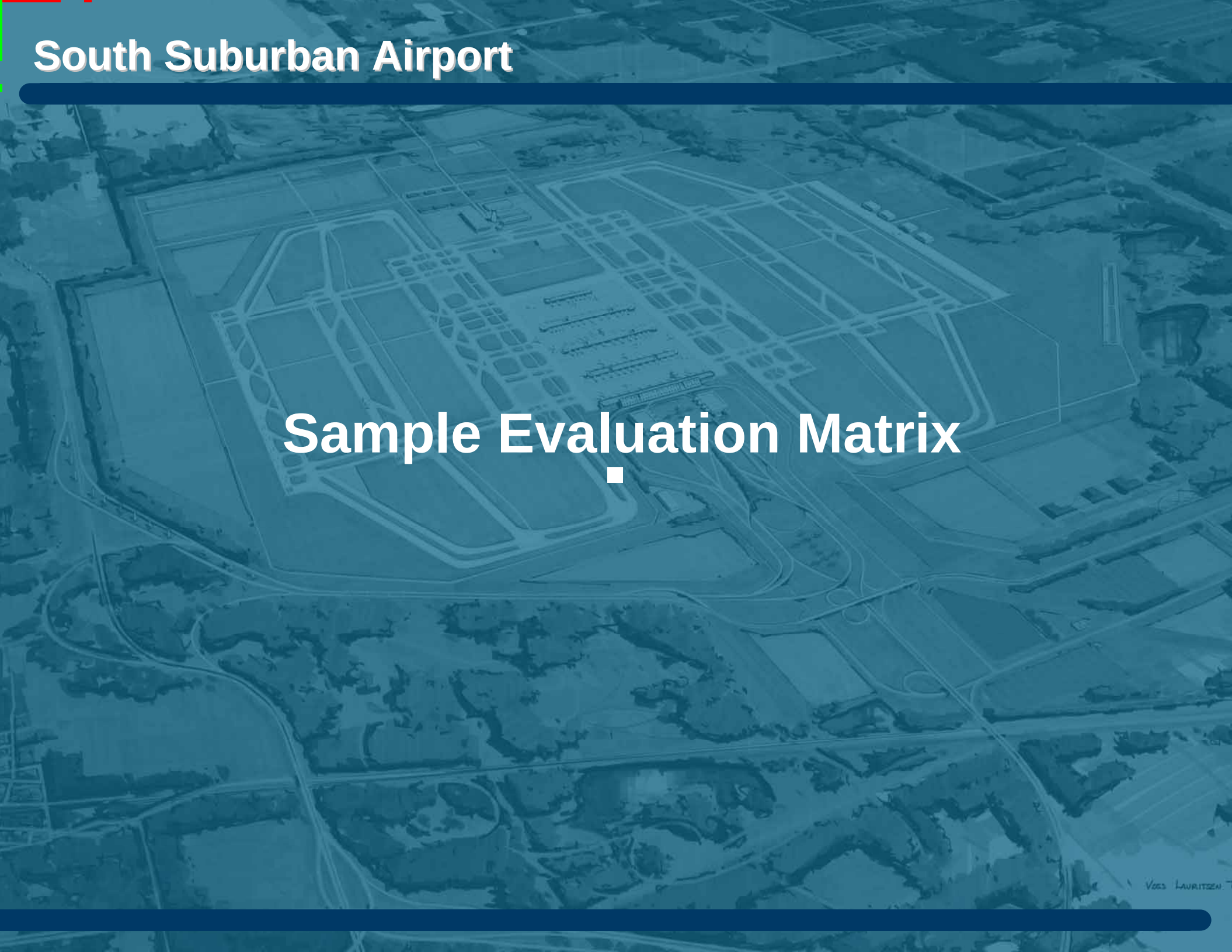
Ability to minimize impacts on Natural Resources

- ❑ Wetlands
- ❑ Floodplains
- ❑ Water Resources
- ❑ Parks and Nature Preserves

Costs

- Comparative costs of each airfield alternative
- Comparative operating costs

Sample Evaluation Matrix



South Suburban Airport

Sample Evaluation Matrix

No.	Criteria	Option 6.0 (Base)	Option 6.1	Option 6.2	Option 6.3	Option 6.4	Option 6.5	Option 6.6	Option 6.7	Option 6.8
1	Ability to accommodate potential long-term future aviation demand (beyond DBO+20)									
2	Preserve the option to provide an airfield capable of accommodating up to four simultaneous independent approaches under all-weather conditions									
3	Ability to avoid runway incursions									
4	Ability to provide for future landside and terminal expansion in balance with the airfield									
5	Ability to provide for flexible and balanced airfield operations									
6	Integration and suitability within the existing regional airspace structure									
7	Ability to meet security criteria									
8	Ability to minimize adverse land-use impacts and community disruption									
a	*Avoid/minimize conflicts with the comprehensive land-use plans of the neighboring communities.*									
b	*Contain all significant aircraft-generated noise, as defined by FAA, on airport property or compatible land uses.*									
c	*The ultimate boundary should encompass the optimal land area needed for airport-related uses (aeronautical and operational), but requires no more land than is necessary and minimizes impacts to surrounding land uses*									
d	*Minimize population displacement*									
	People									
	Population Rating									
e	*Minimize local traffic disruption and permanent closure of existing local roads, emergency vehicle and school bus routes*									
9	Ability to minimize impacts on natural resources									
a	*Wetlands*									
b	*Floodplains*									
c	*Section 303(c) Lands (parks, nature preserves)*									
d	*Water Resources*									
10	Cost comparison									
	Rating Total									

SOUTH SUBURBAN AIRPORT

Local Advisory Group Meeting

September 2, 2004

TAMS
AN EARTH TECH COMPANY

Illinois Department of Transportation

INAUGURAL AIRPORT PROGRAM
SOUTH SUBURBAN AIRPORT