



## Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING

***DRAFT FINAL REPORT***

*Prepared for:*



***United States Government  
Accountability Office***

**CONFIDENTIAL**

April 15, 2005

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## EXECUTIVE SUMMARY

*Evaluation of*  
**CY 2000 AIRLINE COSTS FOR  
PASSENGER AND PROPERTY  
SCREENING**

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## Background

- ④ **The Transportation Security Administration (TSA) took over passenger and property screening at U.S. airports in February 2002.**
- ④ **The agency was authorized to collect two separate fees to help cover the costs of providing these services.**
  - A fee of \$2.50 per enplanement
  - If needed, an annual fee of unspecified dollar amount to be charged directly to U.S. and international airlines operating at U.S. airports (the Aviation Security Infrastructure Fee, or ASIF)
- ④ **The annual ASIF charge was to be set by TSA based on the amount that airlines incurred to provide screening of passengers and property in Calendar Year (CY) 2000.**
- ④ **To determine the costs incurred by airlines to provide passenger and property screening in CY 2000, TSA required each carrier to complete and submit a detailed cost questionnaire known as “Appendix A.”**

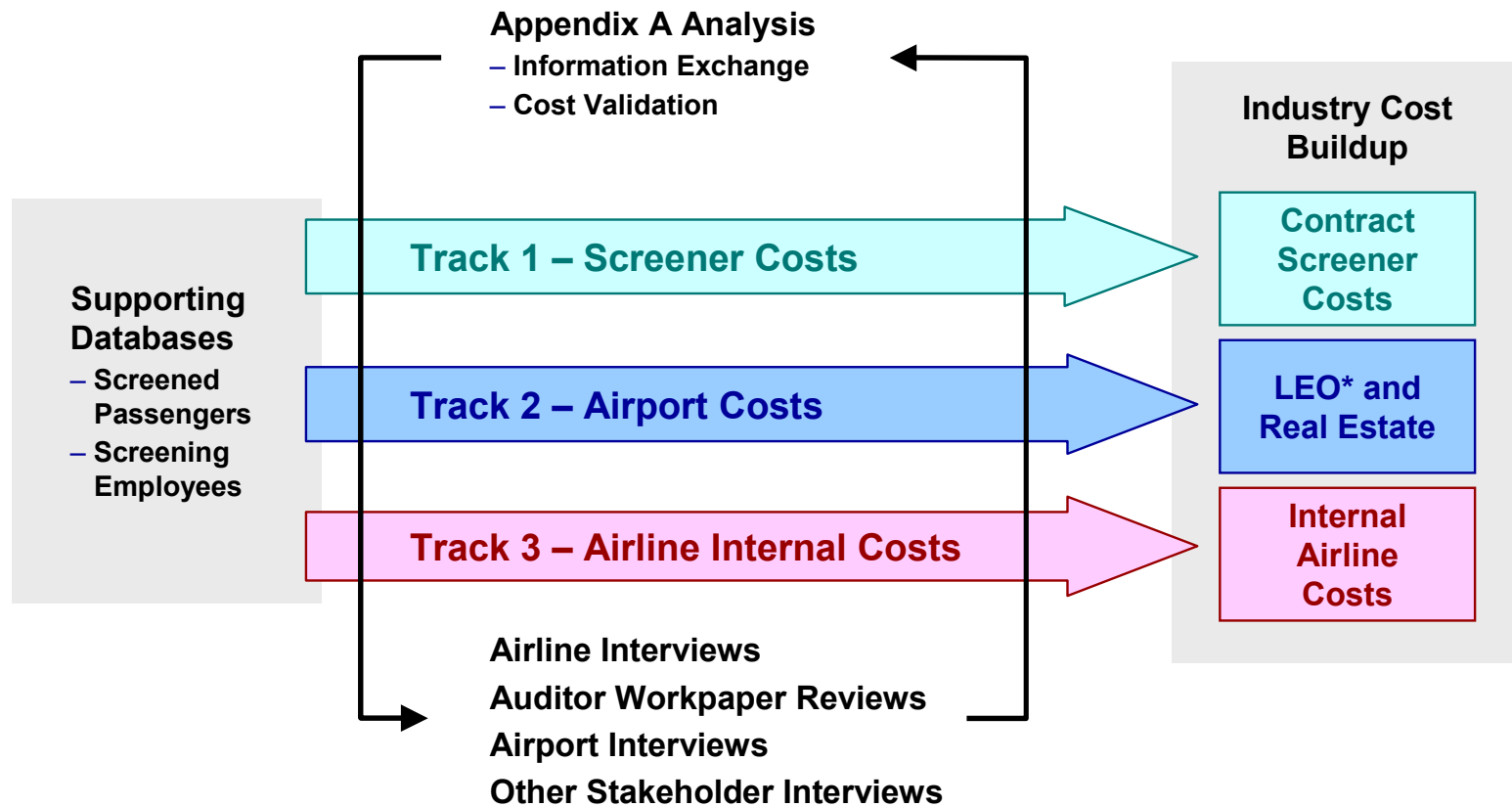
## Background, *cont'd*

- ⊕ While TSA believed that airlines had incurred costs of approximately \$750 million in CY 2000 for passenger and property screening, the cost information submitted by airlines on Appendix A totaled to \$319 million.
- ⊕ Because of this discrepancy, Congress asked the Government Accountability Office (GAO) to develop an independent estimate of the costs incurred by airlines to provide passenger and property screening in CY 2000.
- ⊕ SH&E and its subcontractors were retained by the GAO to assist in preparing this independent estimate.

## Overview of Approach

- ④ **To prepare this cost estimate, we identified where the primary costs of providing passenger and property screening were incurred, and designed a project approach to measure these costs.**
- ④ **We identified three primary cost components that together comprised the overall costs to airlines of providing passenger and property screening at U.S. airports in CY 2000:**
  - Costs associated with the use of private screening contractors (or airline employees where they performed the screening function directly).
  - Airport costs related to passenger and property screening that were passed on to airlines.
  - Internal airline costs including the costs of airline personnel (associated with other non-direct screening functions), the costs of owning and operating screening equipment, and certain other costs.
- ④ **The project workplan included three major work elements designed to quantify the costs incurred by airlines within each of these primary cost areas.**

# The Project Workplan Included Three Major Work Elements Designed to Quantify the Costs Incurred by Airlines Within Each Primary Cost Area



## To Prepare this Independent Estimate, the GAO Project Team Performed Intensive Research and Analysis

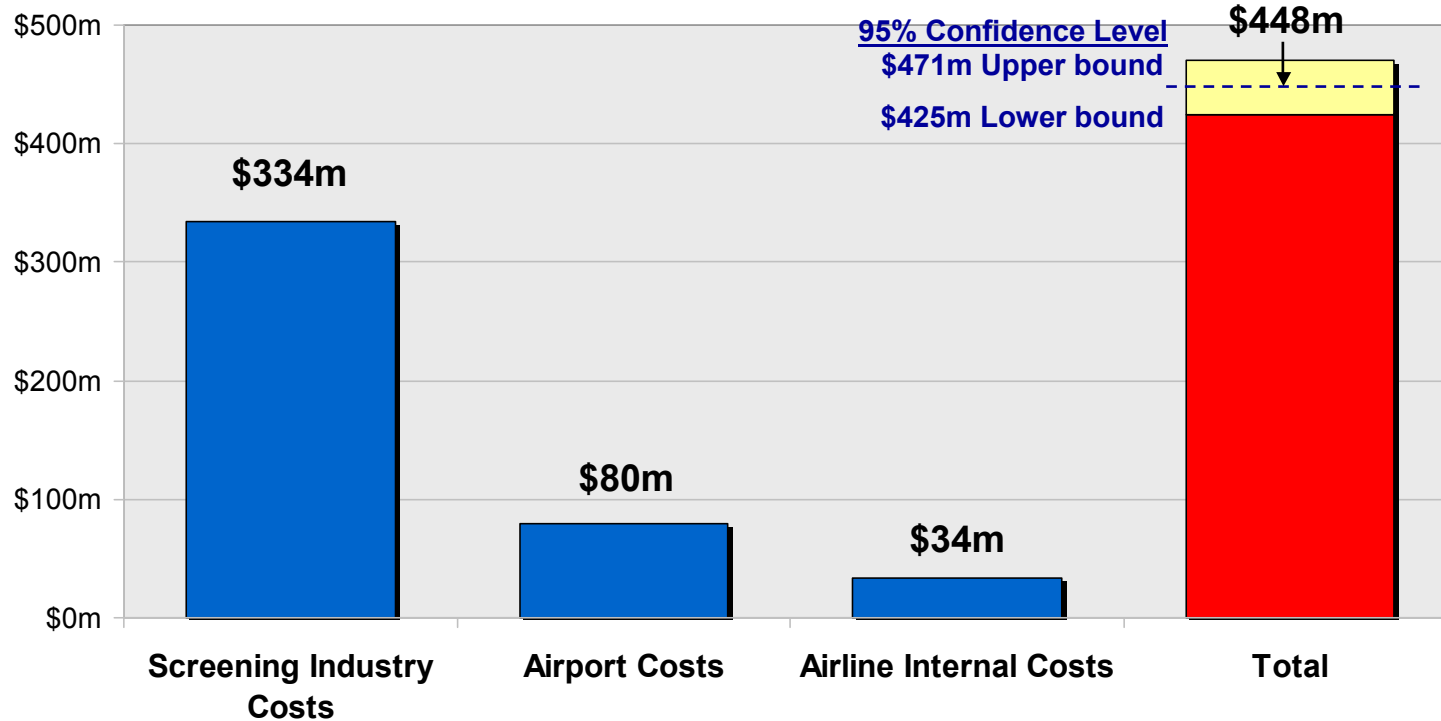
- **Interviewed 12 airlines that together accounted for 63% of total estimated CY 2000 screened passengers at U.S. airports.**
- **Compiled and classified billing records from 9 private screening companies that generated over \$200 million in CY 2000 screening billings and represented approximately 62% of the overall U.S. passenger and property screening market.**
- **Interviewed, collected financial data and analyzed screening-related costs at 59 U.S. airports including 19 of the 20 largest airports and a cross-section of other airports in different size categories. These airports accounted for approximately 70% of total U.S. screened passengers in CY 2000.**



# Our Independent Estimate of Airline Industry Costs to Provide Passenger and Property Screening at U.S. Airports in CY 2000 is \$448 Million

Independent Estimate of Airline Costs in CY 2000

(\$ Millions)



## The Independent Cost Estimate is \$106 Million Greater Than the Amount Reported on Appendix A

Cost Category	Appendix A *	Independent Estimate	Difference
Screening Industry Costs	\$309m	\$334m	\$25m
Airport Costs	\$9m	\$80m	\$71m
Airline Internal Costs	\$24m	\$34m	\$10m
<b>Total</b>	<b>\$342m</b>	<b>\$448m</b>	<b>\$106m</b>

\* Includes amounts reported in Appendix A, plus amounts that were identified in footnotes but not included in Appendix A, and an estimate for missing carriers.

## Expansion of Appendix A to Reflect Footnote Amounts and Missing Carriers

Cost Category	Reported Appendix A	Footnote Amounts	Missing Carrier Estimate	Adjusted Appendix A
Screening Industry Costs	\$293m	\$1m	\$15m	\$309m
Airport Costs	\$5m	\$4m	\$0m	\$9m
Airline Internal Costs	\$21m	\$2m	\$1m	\$24m
<b>Total</b>	<b>\$319m</b>	<b>\$7m</b>	<b>\$16m</b>	<b>\$342m</b>

## Costs Not Measured or Included in the Estimate

- **Our analysis was designed to capture and measure the primary cost elements associated with passenger and property screening at U.S. airports in CY 2000.**
- **For certain security-related functions, it was not practical or feasible within our timeframe to measure or include the associated costs within our estimate. Examples of such costs include:**
  - Security-related real estate costs for airline-owned terminals;
  - Costs associated with the Computer Assisted Passenger Profiling System (CAPPS);
  - Costs related to Positive Passenger Bag Match;
  - Costs for airport officials with specific security related responsibilities; and
  - Costs associated with airline ticket agents asking passengers two security-related questions upon check-in.
- **While inclusion of these costs would have increased the estimate, our estimate has captured the primary cost elements associated with passenger and property screening in CY 2000.**

## Limitations of the Analysis

- ④ **In preparing the cost estimates presented in this report, we have relied upon representations and information provided by air carriers, government agencies, airports and screening companies without independent testing or verification of the data.**
- ④ **Procedural limitations were encountered related to the amount of time that has passed since CY 2000, access and availability of cost or accounting records and/or individuals due to employee turnover, corporate structural changes (i.e., bankruptcy, acquisitions, etc.) and record retention policies.**
- ④ **Certain cost categories required the application of assumptions to identify, categorize or allocate cost due to structure and/or limitations of air carrier, airport or screening company accounting systems.**
- ④ **While nearly all entities contacted were cooperative, the following information or documents requested were not provided consistently from all air carriers and other stakeholders:**
  - Air carrier CY 2000 Section 108 Security Plans;
  - Identification or allocation of time and expense related to ground security coordinators;
  - Full and complete billing records and supporting documentation for all screening companies; and
  - Full and complete records on airport rental payments received from airlines and how airport rates and charges are structured at individual airports.



*Evaluation of  
CY 2000 AIRLINE COSTS FOR  
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SCREENING*

## OVERALL APPROACH TO THE WORK

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## Overall Approach

*At the High Level, Our Approach Was Comprised of  
Four Major Work Areas*

- ④ Develop understanding
- ④ Design analytical framework
- ④ Prepare estimates
- ④ Document the work

## Approach: Develop Understanding

### Key Tasks

- Interviews with GAO, TSA, FAA, DOT OIG, DHS OIG, airlines, airport officials, security companies, industry experts
- Data collection and analysis – Appendix A filings and supporting documents, records of security companies, airport financial records
- Regulatory review – Relevant FAA requirements in effect in CY 2000

### Results

- Understanding of required passenger and property screening functions in CY 2000
- Understanding of Appendix A submissions, commonalities, differences, etc.
- Identification of key information “gaps”
- Understanding of airport security related costs and cost allocation methodologies



## Approach: Develop Estimates

### Key Tasks

- ④ Utilize data collected from contract screening companies, the FAA and other sources to estimate industry-wide costs for direct screening services in CY 2000
- ④ Use information collected from airports to estimate security-related costs that were passed on from airports to airlines
- ④ Identify other airline internal costs and estimate industry costs for each, through a combination of unit cost-based estimates and other means

### Results

- ④ Industry-wide CY 2000 passenger and property screening cost estimates, with associated confidence intervals
- ④ Documentation of limitations caused by data issues and other factors
- ④ Identification of cost elements not included in the estimates

## Approach: Document the Work

### Key Tasks

- Consolidate interview notes
- Document data utilized
- Diagram analytical frameworks utilized
- Prepare report to GAO

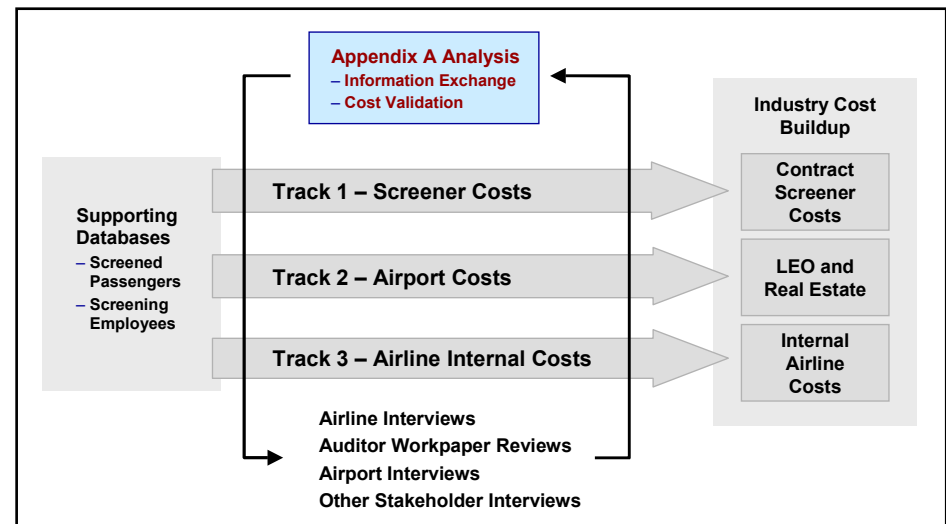
### Results

- Documentation of:
  - Industry-wide cost estimates
  - Methodologies utilized
  - Risk factors and limitations



## Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING

## REVIEW OF APPENDIX A



## Appendix A Background Information

➤ Number of airlines filing Appendix A	160
➤ Number of airlines with screened passengers	268
➤ Estimated screened passengers on airlines filing Appendix A	506 million
➤ Total est. screened passengers in CY 2000	530 million
➤ Estimated screened passengers on the largest carrier not filing Appendix A	17 million
➤ Total costs reported in Appendix A plus footnoted amounts that were identified but not included	\$326 million

## Appendix A Background Information

### *Airline Grouping Used for Appendix A Analysis (Examples)*

<b>Legacy:</b>	<b>Major hub and spoke carriers including American, Delta and United</b>
<b>Low Cost:</b>	<b>Primarily non-hubbing carriers including Southwest and JetBlue</b>
<b>Regional:</b>	<b>Carriers operating regional jet and commuter aircraft including Comair, Mesa and Skywest</b>
<b>Foreign:</b>	<b>Non-U.S. airlines including Air Canada, British Airways and Mexicana</b>
<b>Other:</b>	<b>Niche carriers including Hawaiian, Midwest Express, and US Airways Shuttle</b>

## Appendix A Background Information

### *Reported Cost Per Screened Passenger Varies Among the Five Airline Groups*

Group	Appendix A* Total	Screened Passengers	Average Cost per Passenger
1 Legacy	\$190,227,872	306,680,851	\$0.62
2 Low Cost	\$57,851,832	107,696,186	\$0.54
3 Regional	\$31,918,781	42,485,933	\$0.75
4 Foreign	\$35,184,825	33,981,398	\$1.04
5 Other	\$10,820,150	15,296,436	\$0.71
6 Unknown	\$694,510	0	-
<b>Total</b>	<b>\$326,697,969 *</b>	<b>506,140,805</b>	<b>\$0.65</b>

Note: "Unknown" indicates airlines submitting Appendix A with no record of screened passengers.

\* Includes amounts identified in the footnotes but not included in Appendix A.

## The Airlines Raised Strong Objections to Certain Cost Items that Were Included In Appendix A

- ④ **The principal airline industry objection to Appendix A was that TSA had not assumed all the functions and associated costs for items listed on Appendix A.**
  - Airlines continued to incur the cost of providing these services.
  - Including these elements in the annual ASIF charge would result in airlines paying twice.
  - The ASIF was intended to cover costs incurred by TSA, and should not include functions not being performed or paid for by TSA.
  
- ④ **In addition, carriers objected to the detailed cost elements requested on Appendix A.**
  - Air carriers stated that it was not feasible to identify many of these costs because they were not segregated from other costs in screening contracts and airport lease agreements.
  - Airline accounting systems were not setup to capture this level of cost detail.

# The Majority of Appendix A Filings Were Submitted with Fewer than Three Cost Categories Completed and Limited Supporting Documentation

## ➤ All Air Carriers – 160 Submissions

- 25% of the 35 possible cost categories were filled with an amount or aggregation reference.
- Highest reporting percentage was in the Checkpoint Screening Personnel category with 79% of air carriers reporting a cost or aggregation.

## ➤ Top 30 Air Carriers

- 55% of the 35 possible cost categories were filled with an amount or aggregation reference.
- All 30 air carriers reported an amount or aggregation in the Checkpoint Screening Personnel cost category.

		Cost Categories	Total-160 Carriers % Respond to Cost Category	Total-Top 30 Carriers % Respond to Cost Category
Screening Personnel and Supervisors	1	Checkpoint Screening Personnel	79.4%	100.0%
	2	Exit Lane Monitors	25.0%	63.3%
	3	Cargo Screeners	21.9%	50.0%
	4	Checked Baggage Screeners	35.6%	76.7%
	5	Baggage Runners	23.1%	53.3%
	6	Supervisory Personnel	36.3%	86.7%
	7	Non-Labor Costs	31.3%	80.0%
	8	Background Checks	26.9%	70.0%
	9	Training and Testing	33.8%	70.0%
	10	Training Records	24.4%	70.0%
	11	Evaluations	24.4%	66.7%
	12	Drug and Alcohol Testing and Treatment	30.0%	70.0%
	13	Uniforms	24.4%	66.7%
	14	Canines	14.4%	33.3%
	15	Cost of Obtaining Security Clearances	23.8%	63.3%
Equipment and Procedures	16	Screening Equipment Installation	28.8%	60.0%
	17	Operating, Operational Maintenance and Testing of Installed Screening Equipment	42.5%	86.7%
	18	Maintenance of Sterile Areas	19.4%	50.0%
	19	Checkpoint Signs and Related Equipment	18.1%	43.3%
	20	Exceptional Screening for Persons and Property	18.8%	53.3%
	21	Security Company Contracts	26.3%	36.7%
Property and Plant	22	Real Estate	22.5%	66.7%
	23	Utilities	14.4%	40.0%
Program Management and Contract Oversight	24	Ground Security Coordinators	30.0%	53.3%
	25	Security Program Management	26.3%	56.7%
	26	Security Contract Administration and Oversight	36.3%	56.7%
	27	Screeners/supervisor Background Check Audits	15.6%	43.3%
	28	Legal Support	13.1%	40.0%
	29	Accounting Support	26.3%	46.7%
	30	Other Administrative Support	15.6%	23.3%
	31	Insurance	16.9%	36.7%
	32	Law Enforcement Costs	15.6%	40.0%
	33	Recruitment Expenses	14.4%	43.3%
Security Consortium Costs	34	Management Fees for Oversight of Consortium Contracts	8.8%	13.3%
Other	35	Other	28.1%	36.7%
		Frequency of Complete Appendix A Submission	25.5%	55.6%



# Air Carriers Reported Incurring Costs, But Did Not Include the Costs on Appendix A for Various Reasons

## Reasons for excluding costs:

- The specific cost continues to be incurred and paid by the air carrier
- The air carrier can no longer depreciate a TSA acquired asset
- The specific cost function is not incremental, therefore an incremental portion of the job function cannot be allocated

## The most common categories which air carriers reported less frequently were:

- #16 Screening Equipment Installation, #22 Real Estate, #25 Security Program Management, #32 Law Enforcement Costs

Air Carrier	Identified but not Included	Appendix A Cost Category														
		#2	#3	#5	#6	#16	#19	#22	#23	#24	#25	#26	#28	#29	#30	#32
Carrier 1	\$2,849,000					X		X			X	X	X	X		X
Carrier 2	\$3,427,227		X	X	X	X		X			X	X				
Carrier 3	\$769,462					X	X	X								
Carrier 4	\$119,000	X				X		X			X					X
Carrier 5	\$103,500							X			X	X	X	X		X
Carrier 6	\$143,025					X		X								X
Carrier 7	\$19,579															X
Carrier 8	N/A	X	X	X		X	X	X	X	X						X
Carrier 9	N/A							X			X	X			X	
<b>TOTAL</b>	<b>\$7,430,793</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>6</b>

# Appendix A Cost Components Were Independently Estimated Through Three Separate Approaches

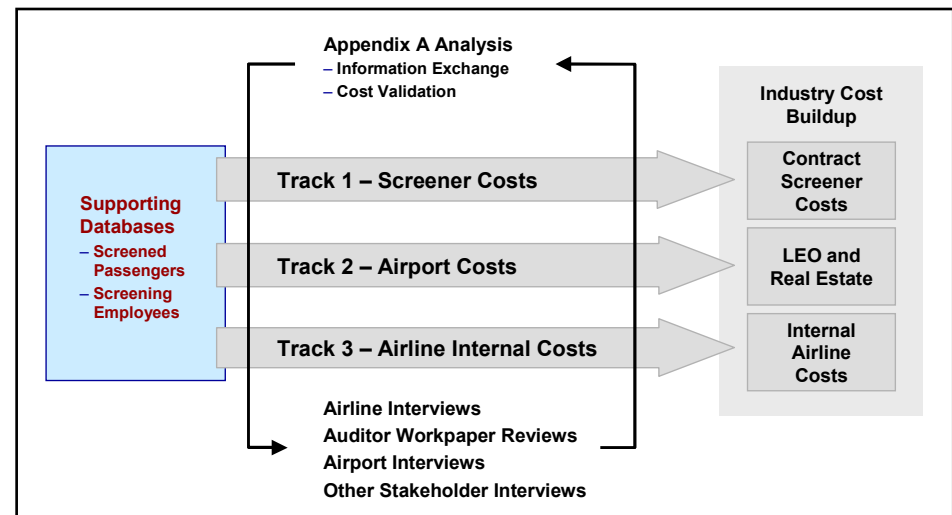
Cost Categories		Basis for Independent Estimates
1	Checkpoint Screening Personnel	Estimate Developed from Contract Screener Cost Analysis
2	Exit Lane Monitors	
3	Cargo Screeners	
4	Checked Baggage Screeners	
5	Baggage Runners	
6	Supervisory Personnel	
7	Non-Labor Costs	
8	Background Checks	
9	Training and Testing	
10	Training Records	
11	Evaluations	
12	Drug and Alcohol Testing and Treatment	
13	Uniforms	
15	Cost of Obtaining Security Clearances	
18	Maintenance of Sterile Areas	
20	Exceptional Screening	
21	Security Company Contracts	
27	Screener/Supervisor Background Checks	
33	Recruitment Expenses *	Estimate Developed from Airline Internal Cost Analysis
22	Real Estate	
23	Utilities	
32	Law Enforcement Costs	
14	Canines	
16	Screening Equipment Installation	
17	Operating, Operational Maintenance and Testing of Installed Screening Equipment	
19	Checkpoint Signs and Related Equipment	
24	Ground Security Coordinators	
25	Security Program Management	
26	Security Contract Administration and Oversight	
28	Legal Support	
29	Accounting Support	
30	Other Administrative Support	
31	Insurance	
34	Management Fees for Oversight of Consortium Contracts	
35	Other	

\* Recruitment expenses exclude direct expenses associated with the recruitment of airline personnel for the screening function.



## *Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING*

## DEVELOPMENT OF SCREENED PASSENGER DATABASE



## Analysis of Screened Passengers at U.S. Airports

- ④ **A database of screened passengers by airport and airline in CY 2000 was prepared in order to provide the basis for developing unit cost rates for use in the expansion of sampled results to an overall system total.**
- ④ **This origin & destination (O&D) based measure was determined to be the most appropriate metric for use in the analysis, since other traffic measures such as enplanements include a substantial number of connecting passengers at hub airports who do not pass through screening.**
  - However, we did include inbound international passengers that connect to domestic flights and are screened at the U.S. gateway airport.
  - The screened passenger estimates also include certain domestic to international connecting passengers that require a second screening because they change terminals when connecting to their international flight.
- ④ **The screened passenger database was used within each of the three primary work areas as a basis for expansion of sample data.**

## 530 Million Passengers Were Screened at 430 U.S. Airports in CY 2000

- **SH&E compiled a database of screened passengers for CY 2000.**
  - Based on available sources of passenger trip data at U.S. Airports:
    - *DOT Passenger Origin & Destination Survey*
    - *DOT T-100 Flight Segment Data*
    - *DOT Part 298C Passenger Data*
    - *Source data as adjusted by Database Products*
  - Reflects passenger travel itineraries and airport screening practices
  - Incorporates 2<sup>nd</sup> screening as determined for specific itineraries based on connecting carriers and airport layouts
  
- **The database identifies screened passengers by airport, carrier and traffic categories.**
  
- **The database was validated to the extent possible by analysis and reconciliation with other data sources.**
  - FAA Enplaned Data by Airport
  - U.S. DOT Total International Passengers from T-100
  - Local and Connecting Traffic Distributions at Major Connecting Hubs

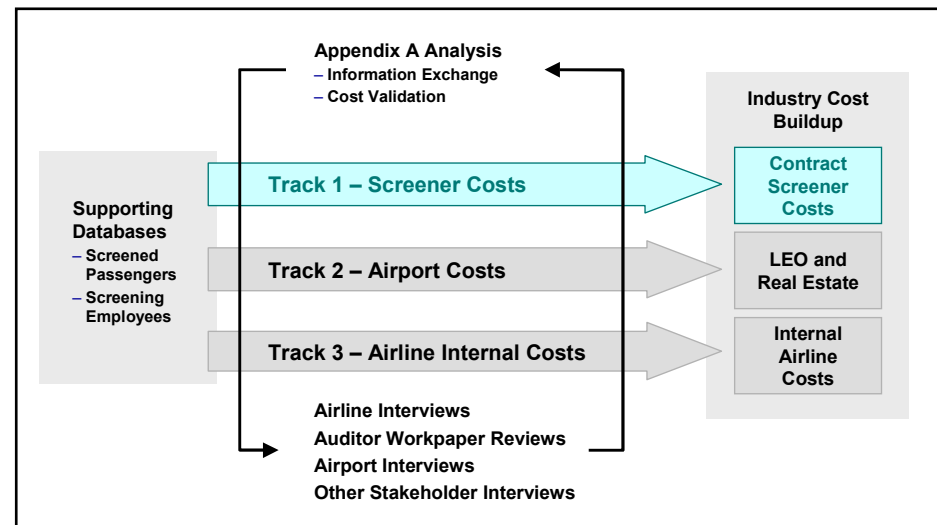
## Pure Domestic Passengers Account for Over 80% of the Screened Passengers at the 430 U.S. Airports in CY 2000

- ④ **Pure domestic trips account for 81.6% of the total screened passengers and are readily identifiable.**
  - Domestic passengers are screened one time – at their originating airport.
  - With few exceptions, domestic connecting passengers are not re-screened at the connecting airport.
  - Therefore, domestic screened passengers are virtually equal to domestic originating passengers.
  
- ④ **International outbound passengers account for 13.9% of the total screened passengers.**
  - Most outbound international passengers are screened one time – at their originating airport, but there are exceptions at some major gateway airports.
  - Five gateway airports account for the vast majority of outbound international passengers that require a 2<sup>nd</sup> screening – these trips were identified by connecting carriers and gateway airports.
  
- ④ **International inbound passengers account for 4.5% of the total screened passengers.**
  - All inbound international passengers connecting to domestic flights are screened at the gateway airport and accounted for in the database.



## *Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING*

## ANALYSIS OF CONTRACT SCREENING INDUSTRY COSTS



## Objectives of the Contract Screening Industry Cost Analysis

- ④ **Our objective was to identify and independently estimate air carrier costs for passenger and property screening (“screening”) incurred through contract screening companies (“screening companies”) and/or air carrier direct labor in CY 2000.**
- ④ **We identified the companies that provided screening in CY 2000, contacted the companies, collected their billing information, and analyzed and validated the data.**
- ④ **The data collected through this process were used to estimate, for CY 2000, the amount of screening costs billed to air carriers in the U.S. by screening companies and incurred through air carrier direct labor costs.**



## Obstacles Were Encountered in the Data Collection Process

### ➤ **5-year time lag (2005 to 2000):**

- Bankruptcy issues – Example: ITS
- Mergers/Acquisitions – Example: Argenbright
- Companies exiting the industry – Example: MaxAero
- Data difficult to obtain (lawsuits, missing documents, record-retention guidelines, etc.) – Example: Globe

### ➤ **Cooperation:**

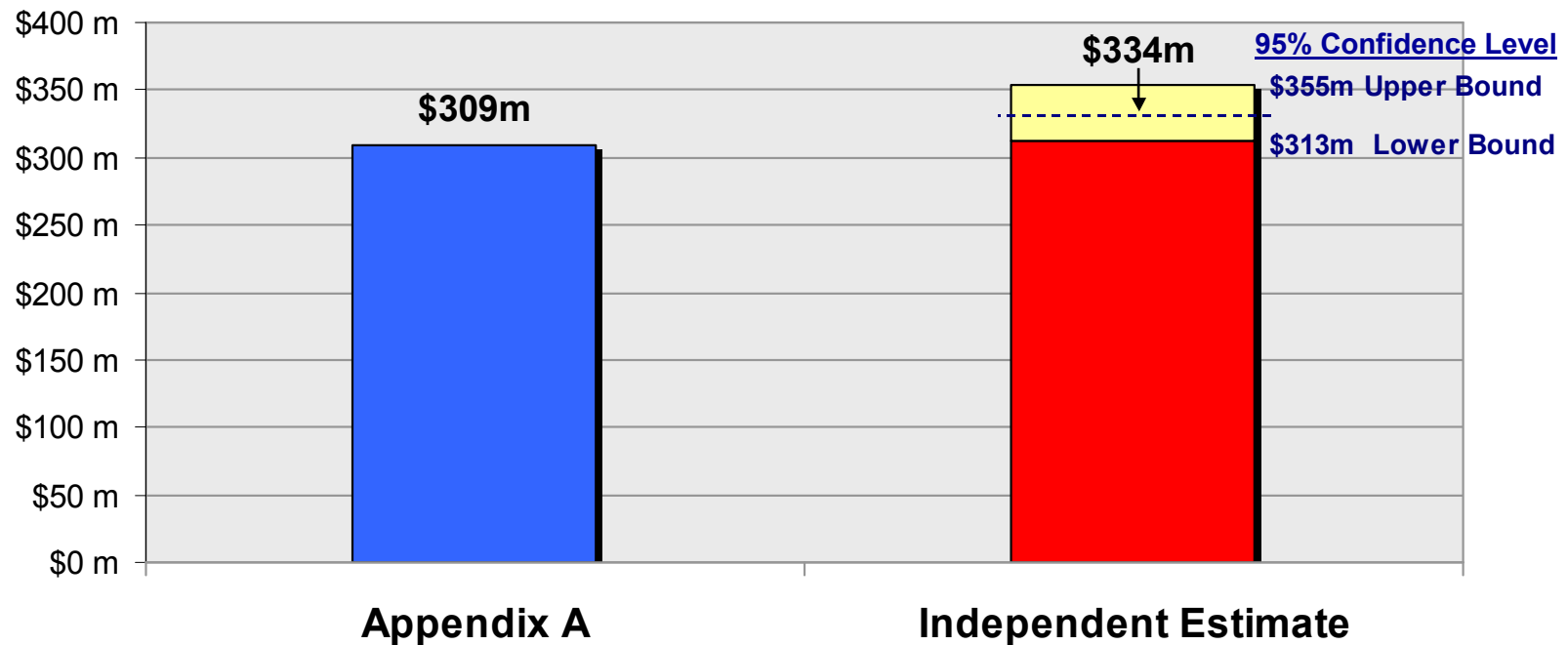
- Contract screening companies have little incentive to assist.
- The GAO team was the 2<sup>nd</sup> entity to have contacted five of the largest screening companies, after the DHS OIG.

## Data Provided by Screening Companies Resulted in Limitations to the Analysis

- ④ Without independent verification, assumed that companies provided full billing records for CY 2000.
- ④ Verification of data could not be performed on some companies due to the inability to provide supporting documentation.
- ④ Data which were not General Ledger downloads and/or were manually entered may contain inaccuracies.
- ④ Data provided invoiced amounts to air carriers, not actual receipts from air carriers.

# Estimated Screening Industry Costs Are \$334 Million with 95% Confidence Interval Bounds between \$313–\$355 Million as Compared to \$309 Million Estimated from Appendix A

Estimated Screening Industry Costs  
(\$ Millions)



Note: \$309m estimate in screening industry billings for Appendix A is comprised of \$293m for costs reported on Appendix A, \$1m for costs incurred by air carriers for screening but which were not reported on their Appendix A submissions, and \$15m for costs estimated for air carriers that did not file an Appendix A submission.

## The Industry Providing Screening Services to Air Carriers in CY 2000 Was Highly Fragmented

- **Over 70 companies with national, regional, and/or local focus.**
- **Top 10 companies account for approximately 84%–93% of the market.**
- **Top 2 companies account for approximately 44%–48% of the market.**
- **Over 517m passengers out of an estimated industry total of 530m passengers, or 98%, were screened by screening companies.**
- **Air carrier employees sometimes provided screening – typically at smaller airports.**

## Screening Company and Air Carrier Contractual Agreements Generally Followed a Similar Format

- **Hourly rates were fully burdened to include:**
  - Background checks, training & testing, training records/employment records, drug & alcohol testing & treatment, uniforms, cost of security clearances
- **Two main types of contractual relationships:**
  - Two-party agreement (between air carrier and screening company)
  - Multi-party agreement (between “council” of air carriers and screening company)
- **Custodial air carriers typically negotiate the contract on behalf of the terminal/airport users, or “council.”**
- **Billings were typically directed at each air carrier, but could also be directed at the custodial air carrier, who in turn would bill-back terminal/airport users.**

# Screening Companies Provided Various Types of Screening and Non-Screening Services

## *Typical Screening Services*

---

- Pre-departure Screening
- Pre-board Screening
- Checkpoint Security Supervisor
- X-Ray Services
- Checkpoint Supervisors
- Baggage Screener
- CTX Bag Runner
- CTX Operator
- Checked Baggage Screening
- Exit Lane Monitors

## *Typical Non-Screening Services*

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- Sky Cap
- Counter Assistant
- Wheel Chair Assistant
- Exclusive Ticket Service
- Ticket Counter Service
- Special Service Agent
- Passenger Escorts
- Elevator Closure
- Ramp Escorts
- Baggage Area Guard

***This Analysis was Structured to Include Only Screening-Related Services in the Industry-Wide Cost Estimate***

Note: Hundreds of varying service types were gathered from the selected screening companies. The services listed above represent some of the major, recurring service types.

## A Multi-Step Approach Was Used to Identify the Selected Screening Companies for Analysis

- Reviewed list of companies compiled by GAO.
- Reviewed list of companies contacted by DHS OIG.
- Analyzed Appendix A submissions and supporting documentation.
- Reviewed data compiled in July and August of CY 2001 by the FAA for 14 CFR Part 111.
- Reviewed CY 2002 TSA contracts with air carriers and screening companies.
- Conducted research through public domain information, trade associations, screening companies, and the TSA.

## The 10 Companies Selected for Analysis Accounted for Approximately 84%–93% of the Industry Market Share

July/August 2001

Screening Company	Market Share	
	Based on No. of Screeners	Based on Est. No. of Screened Passengers
Argenbright	22.6%	26.2%
ITS	21.6%	22.4%
Huntleigh	14.6%	16.3%
Globe	12.5%	14.2%
Aviation Safeguards	3.2%	3.3%
Wackenhut	2.9%	3.7%
Worldwide Security Associates	2.6%	3.1%
Olympic	2.5%	2.3%
Worldwide Flight Services	1.4%	1.3%
Summit	0.9%	0.7%
<b>Total</b>	<b>84.7%</b>	<b>93.5%</b>



## Market Share Based on Number of Screeners

- ⊕ **Using the FAA data from July/August of CY 2001, a market share was calculated for each screening company by dividing the number of screeners for that company by the total number of screeners in the industry. For Example:**
  - ITS Number of Screeners = 4,201
  - Total Contract Screening Industry Number of Employees = 19,453
  - 4,201 divided by 19,453 = 21.6%
  
- ⊕ **This step was repeated for each screening company, with each selected company's percentage summed to obtain the total market share for the selected companies.**
  - 84.7% market share for 10 selected companies

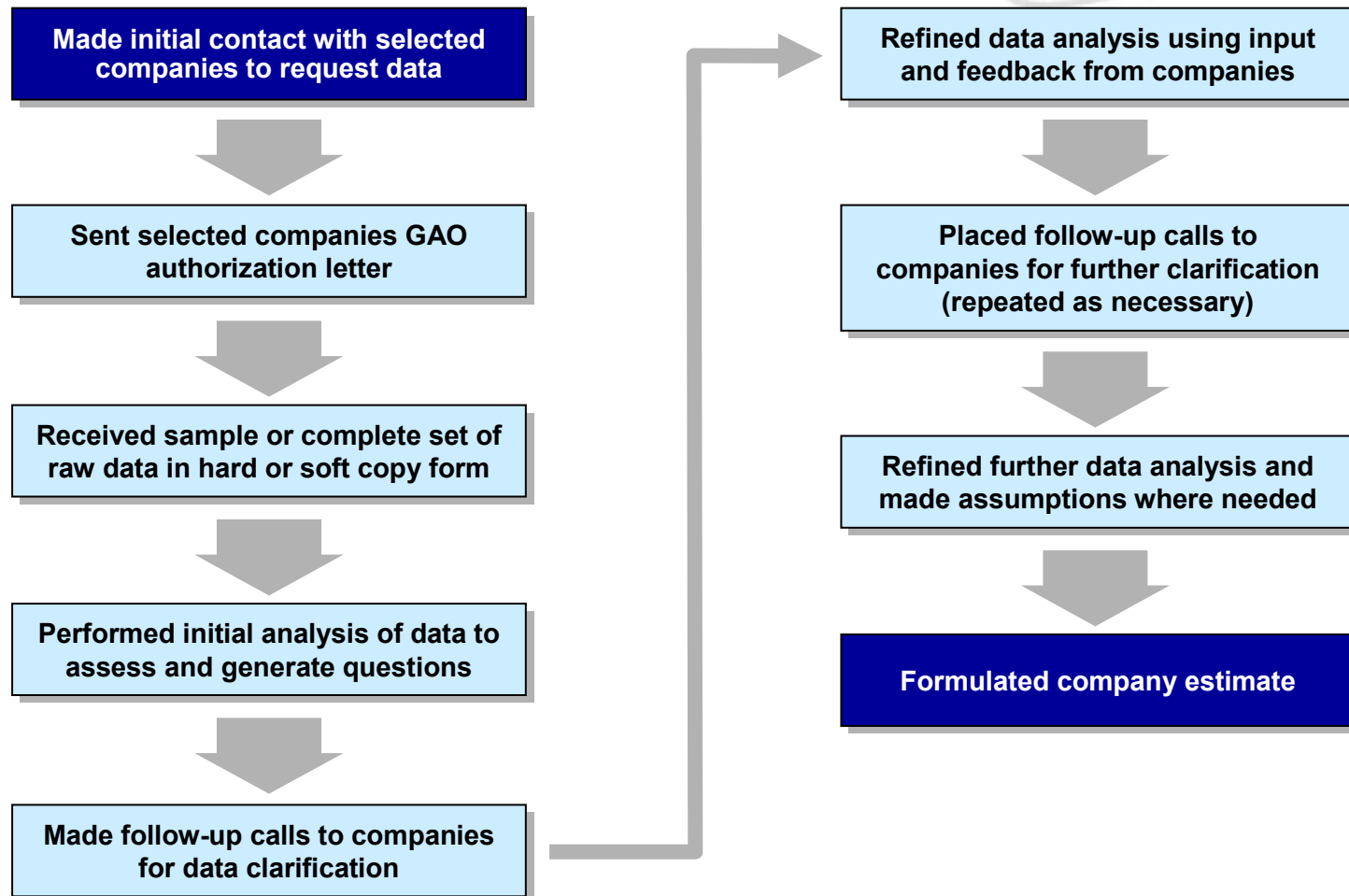
## Market Share Based on Estimated Number of Screened Passengers

- ④ **Using the FAA data from July/August of CY 2001, a market share was calculated for each screening company by airport by dividing the number of screeners for that company by the total number of screeners at that airport. For Example, at LaGuardia airport (LGA) in New York:**
  - ITS' Number of Screeners at LGA = 101
  - Total Contract Screening Employees (all companies) at LGA = 308
  - 101 divided by 308 = 32.8%
  
- ④ **This step was repeated for each of the entities providing screening services at each airport. The resulting percentages were multiplied by the estimated screened passengers for that airport. For Example:**
  - 32.8% market share at LGA for ITS \* 12m estimated screened passengers at LGA = 3m passengers screened by ITS at LGA
  
- ④ **The first two steps were repeated for each company for all airports.**

## Market Share Based on Estimated Number of Screened Passengers *cont'd*

- ④ **Each company's estimated number of screened passengers for all airports were totaled.**
  - 523m passengers for all entities providing screening services
  
- ④ **A market share was calculated for each screening company using the estimated number of screened passengers for all airports divided by the total for all companies. For Example:**
  - ITS' Estimated Number of Screened Passengers = 117m
  - Total Estimated Number of Screened Passengers = 523m
  - 117.3 divided by 523 = 22.4%
  
- ④ **This step was repeated for each of the selected companies and the percentages were summed to obtain the market share for the selected companies.**
  - 93.5% market share for 10 selected companies

# The Billing Data Collection and Analysis Process Involved an In-Depth, Iterative Approach



## Key Assumptions Were Used to Standardize and Compare Data Across Screening Companies

- ⊕ Where data were missing or unavailable for the entire CY 2000 period, data were annualized based upon available information.
- ⊕ When tax data were unavailable, taxes were estimated and applied.
- ⊕ Where bill-backs for items such as equipment charges were unavailable, bill-backs were estimated and applied.
- ⊕ When types of services could potentially be related to both screening and non-screening, an allocation was made based upon averages observed in the collected data.

## Data Validation Techniques Were Employed to Assess the Completeness of Screening Company Billings

- Analyzed month-to-month trends in billed amounts.
- Assessed the consistency of screening vs. non-screening split from month-to-month.
- When available, reconciled actual invoices to summary-level detail or electronic data provided by screening companies.
- From the available data, captured costs associated with taxes, billing adjustments, and various costs passed through to the air carriers.
- Obtained input from selected screening company representatives on billed amounts.

## While Argenbright Data Were Collected and Analyzed, this Data Set Was Not Used in the Analysis for a Number of Reasons

- ④ **Data set compiled from nearly 7,000 Argenbright invoices appear to be incomplete and inconsistent.**
  - Monthly breakdown by customer/air carrier revealed missing data.
  - Comparison to FAA data shows that data set is completely missing information for at least 5 airports.
  - Comparison to Appendix A supporting documentation regarding Argenbright billings at MIA airport reveals missing data.
  - Argenbright did not confirm that all invoices from CY 2000 were made available to the team. In fact, they stated that some invoices were being tied up in litigation.
  
- ④ **Argenbright did not make available a complete listing of air carrier customers by airport to use as a basis for estimating screening costs with the compiled data set.**

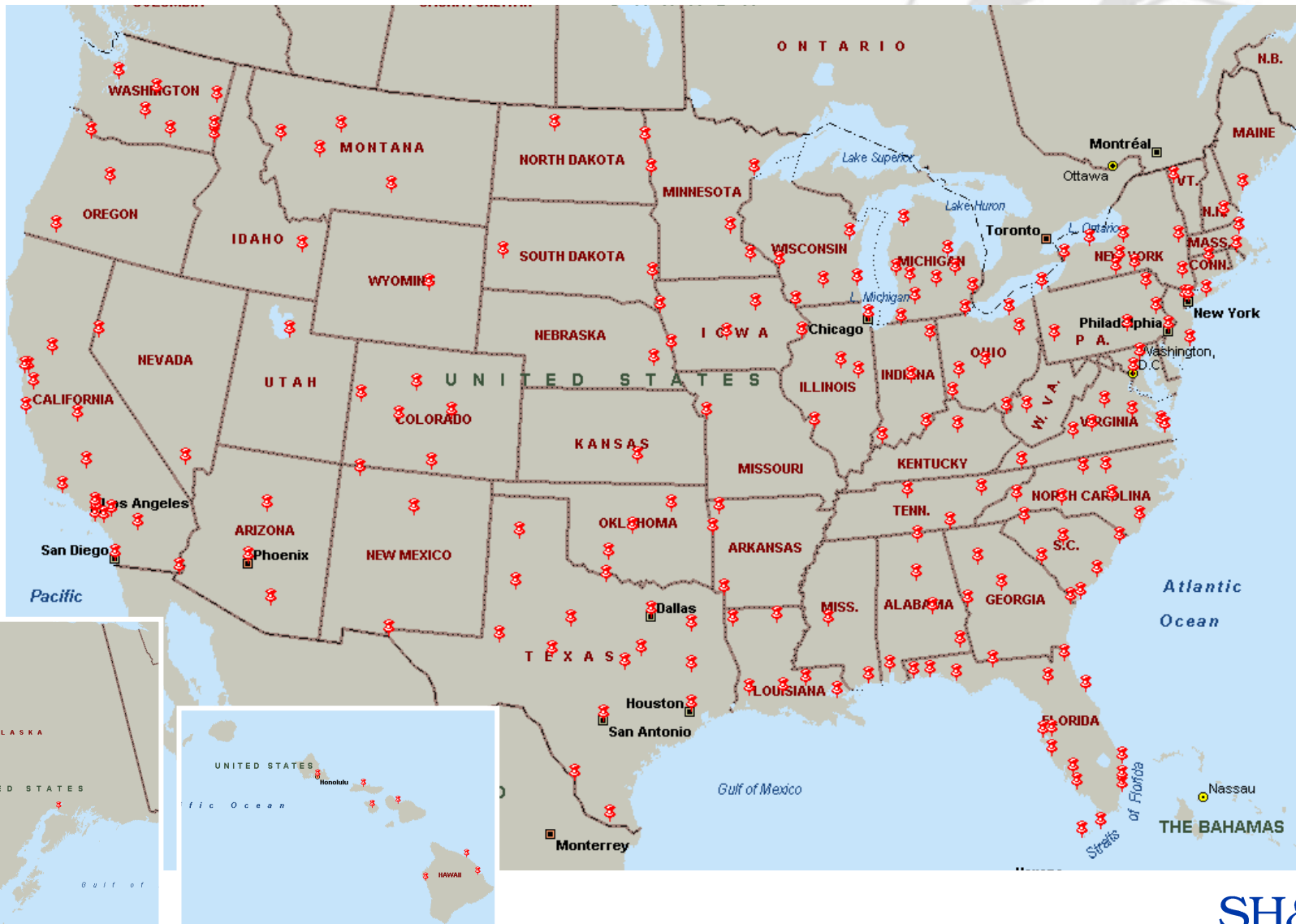
**Although the Argenbright Data Set Was Not Included in the Analysis, the 9 Companies Analyzed Accounted for Approximately 62%–67% of the Industry Market Share**

*July/August 2001*

Screening Company	Market Share	
	Based on No. of Screeners	Based on Est. No. of Screened Passengers
<b>Argenbright</b>	<b>Excluded</b>	<b>Excluded</b>
<b>ITS</b>	<b>21.6%</b>	<b>22.4%</b>
<b>Huntleigh</b>	<b>14.6%</b>	<b>16.3%</b>
<b>Globe</b>	<b>12.5%</b>	<b>14.2%</b>
<b>Aviation Safeguards</b>	<b>3.2%</b>	<b>3.3%</b>
<b>Wackenhut</b>	<b>2.9%</b>	<b>3.7%</b>
<b>Worldwide Security Associates</b>	<b>2.6%</b>	<b>3.1%</b>
<b>Olympic</b>	<b>2.5%</b>	<b>2.3%</b>
<b>Worldwide Flight Services</b>	<b>1.4%</b>	<b>1.3%</b>
<b>Summit</b>	<b>0.9%</b>	<b>0.7%</b>
<b>Total</b>	<b>62.1%</b>	<b>67.3%</b>

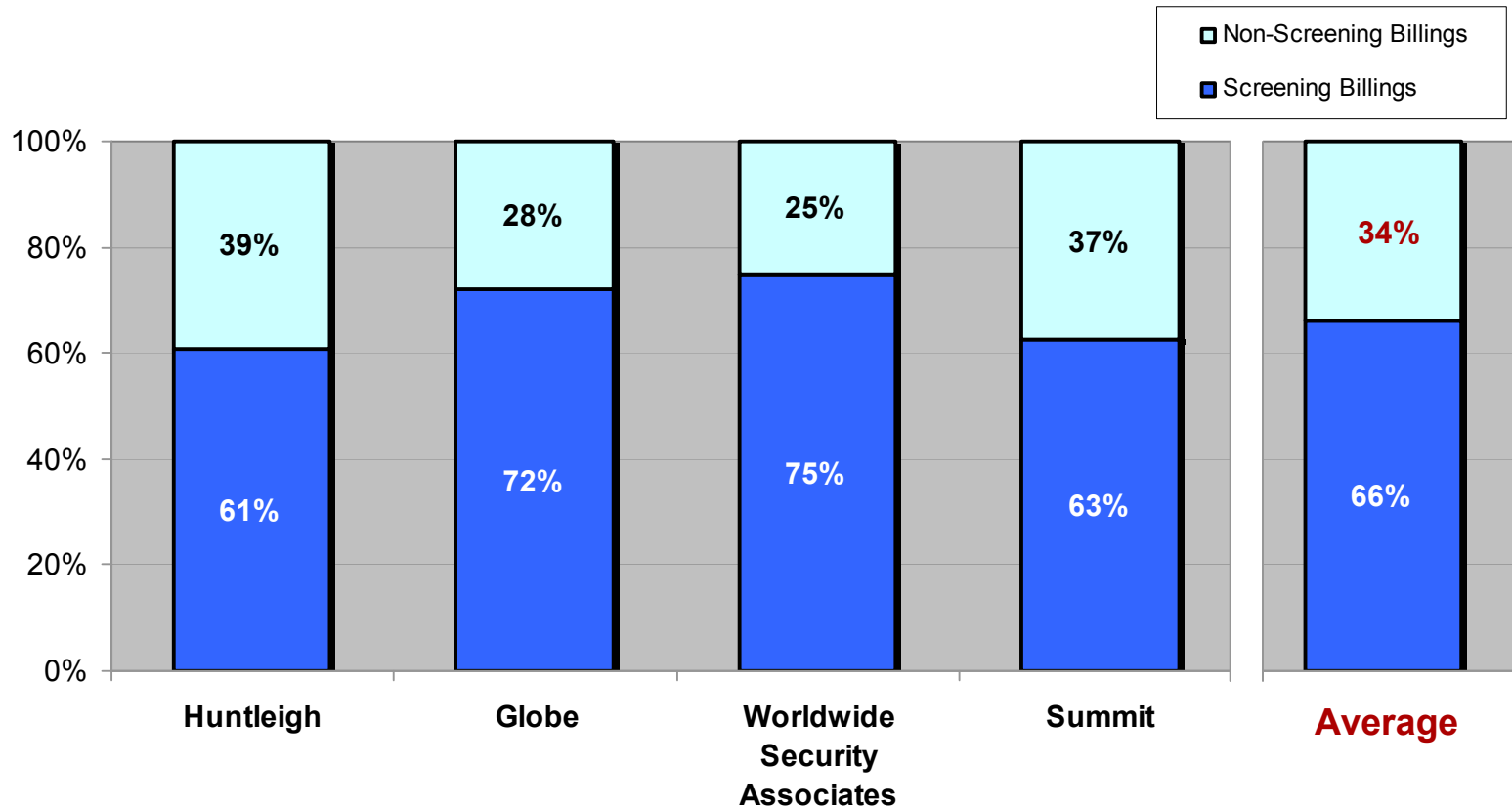


# Selected Screening Companies Provide Broad Geographic Coverage Across 49 States in CY 2000



# Over 30% of Screening Companies' Billings Were for Services Other Than Screening

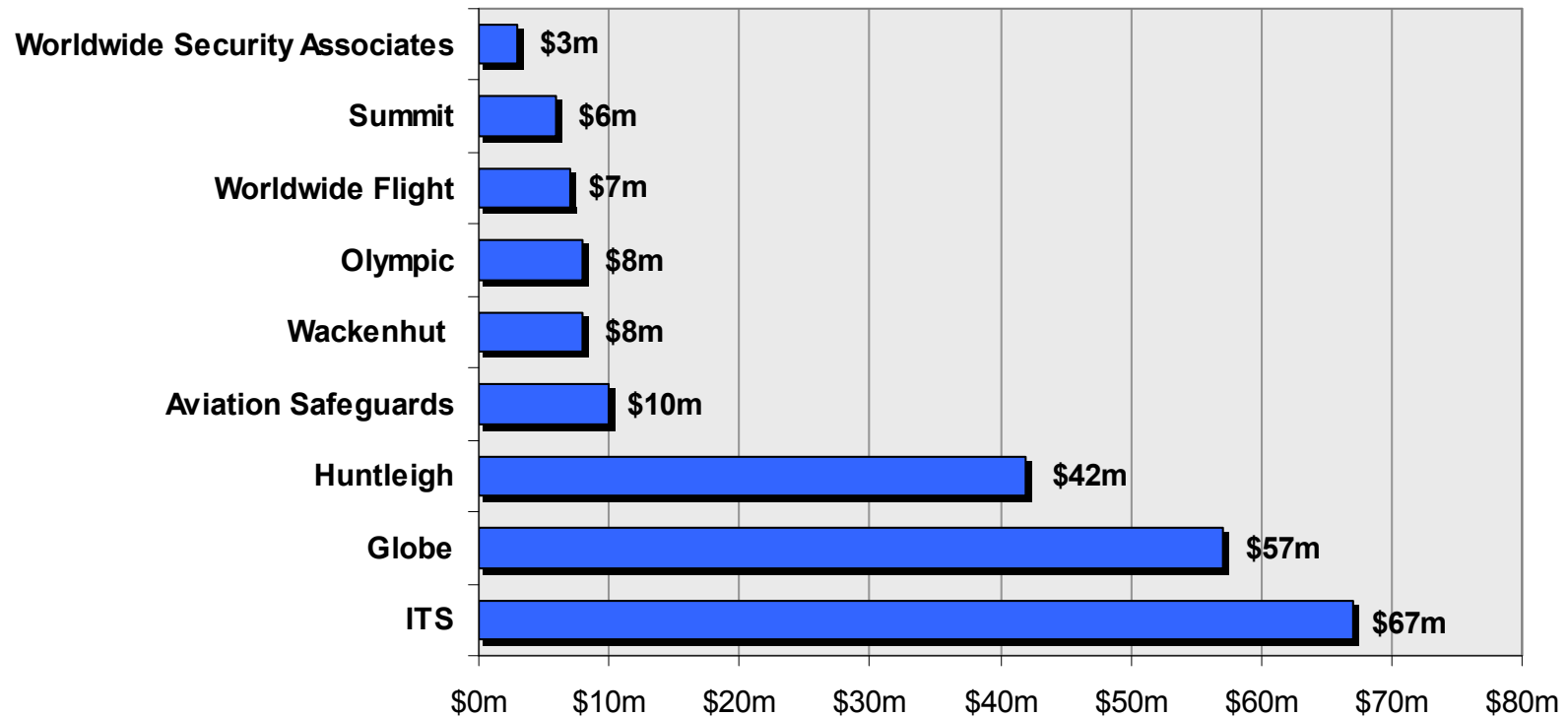
Distribution of Screening Company Billings



Note: Information available to calculate a service breakdown for only 4 out of the 9 analyzed screening companies.

# Contract Screening Companies Analyzed Billed Approximately \$208 Million to Air Carriers in CY 2000 for Screening

Screening Companies Billings  
(\$ Millions)

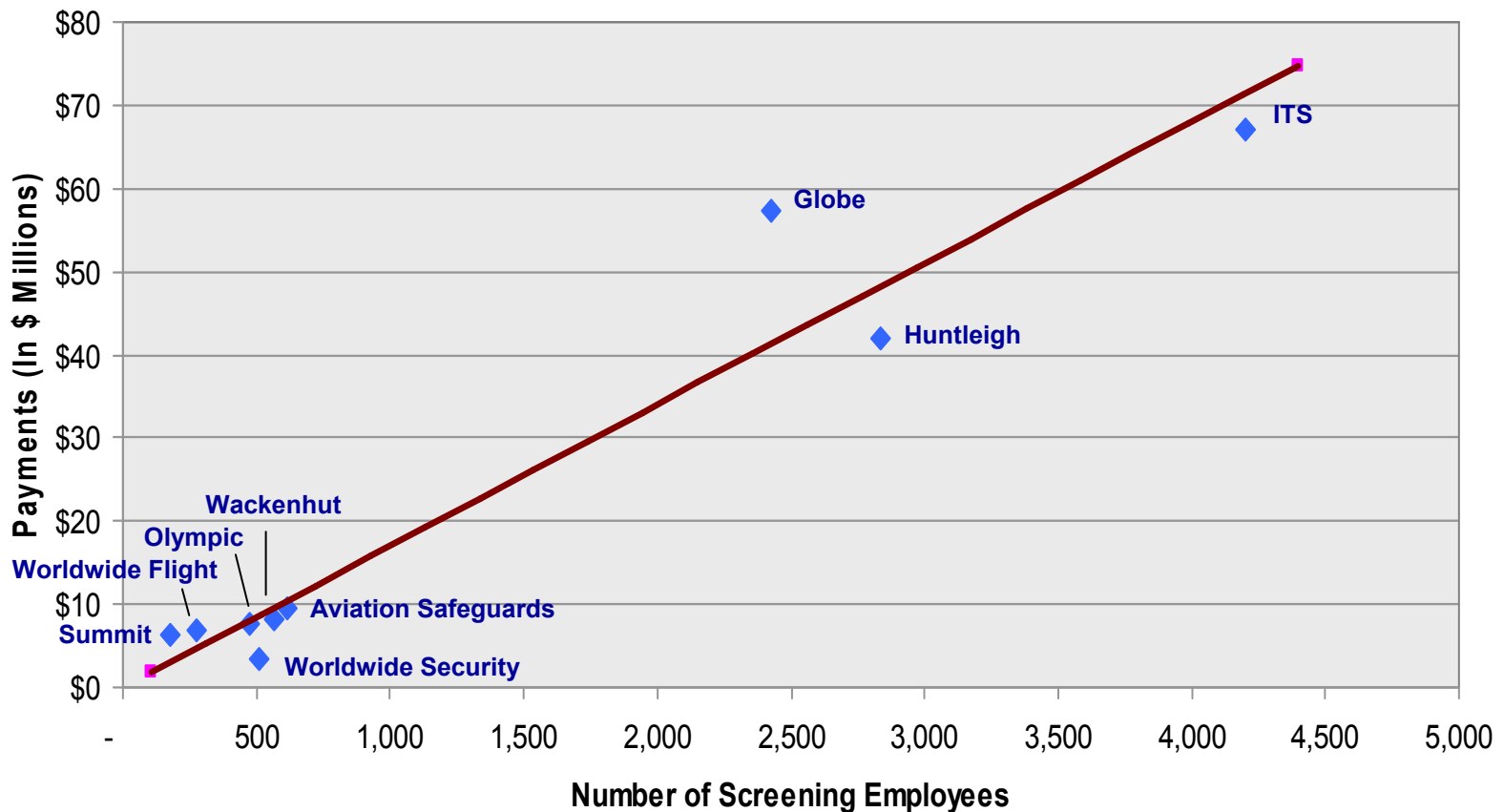


## Regression Analysis Was Used to Estimate Industry Screening Costs of Approximately \$334 Million

- ⊕ Using the data collected for the 9 analyzed companies, a regression model was calculated to estimate total screening costs.
- ⊕ This approach calculated predicted values for those screening companies for which no invoice data were collected.
- ⊕ The sum of the predicted values and the actual invoiced values provide an estimate of total industry-wide screening costs of \$334m.
- ⊕ A 95% confidence interval around this estimate ranges from \$313m–\$355m.

# Using Data Collected for the 9 Analyzed Companies, Total Industry Screening Costs Were Estimated through a Simple Linear Regression

Screening Company Payments (In \$ Millions) vs. Number of Screening Employees



## Regression Analysis Was Used to Estimate Industry Screening Costs and Provided a Predicted Value of \$334 Million

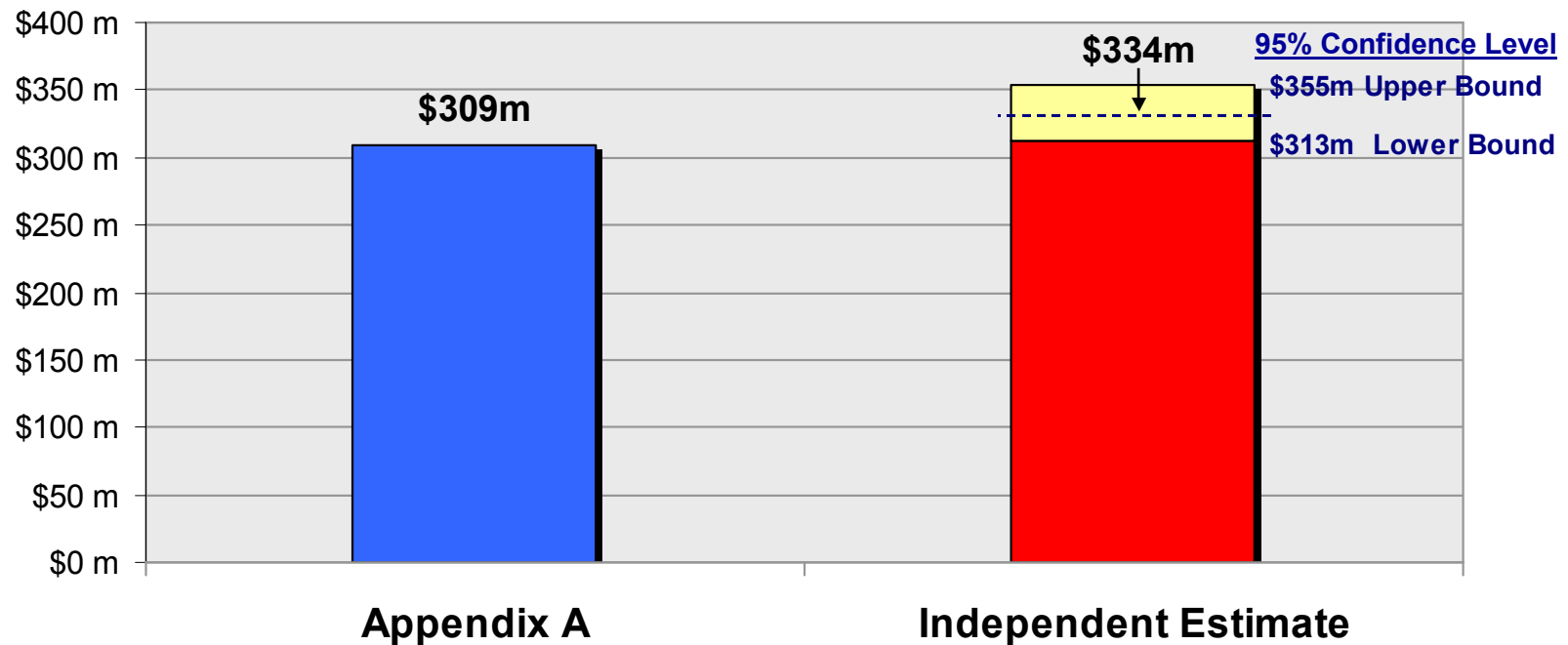
Screening Company	Screening Employees	Billings	Predicted Billings	Actual or Predicted Billings
ITS	4,201	\$67,151,628		\$67,151,628
Globe	2,426	\$57,312,687		\$57,312,687
Huntleigh	2,833	\$41,975,478		\$41,975,478
Aviation Safeguards	615	\$9,606,700		\$9,606,700
Wackenhut	565	\$8,196,675		\$8,196,675
Olympic	477	\$7,528,050		\$7,528,050
Worldwide Flight	275	\$6,961,848		\$6,961,848
Summit	174	\$6,318,085		\$6,318,085
Worldwide Security	509	\$3,334,114		\$3,334,114
Argenbright	4,400		\$74,861,600	\$74,861,600
MAXaero	422		\$7,179,908	\$7,179,908
GAT	350		\$5,954,900	\$5,954,900
Skywest	255		\$4,338,570	\$4,338,570
Haynes	214		\$3,640,996	\$3,640,996
Alaska	198		\$3,368,772	\$3,368,772
Great Lakes Aviation	166		\$2,824,324	\$2,824,324
Air Midwest	126		\$2,143,764	\$2,143,764
Horizon Air	113		\$1,922,582	\$1,922,582
Trans World Airlines	107		\$1,820,498	\$1,820,498
Other	1,027		\$17,473,378	\$17,473,378
<b>Total</b>	<b>19,453</b>	<b>\$208,385,263</b>	<b>\$125,529,292</b>	<b>\$333,914,555</b>

## Additional Approaches Were Used to Estimate Total Screening Industry Costs for Comparative Purposes

- ④ **Market share analysis using screening employees and estimated screened passengers for the 9 analyzed companies was used to extrapolate total industry screening costs. The estimates provided by these calculations were within the range provided by the regression analysis.**
- ④ **Additionally, a per passenger unit cost for screening was calculated at a limited number of airport locations where data were available and expanded for total estimated screened passengers at all U.S. airports. This analysis also yielded results within the range provided by the regression analysis.**

# Estimated Screening Industry Costs Are \$334 Million with 95% Confidence Interval Bounds between \$313–\$355 Million as Compared to \$309 Million Estimated from Appendix A

Estimated Screening Industry Costs  
(\$ Millions)



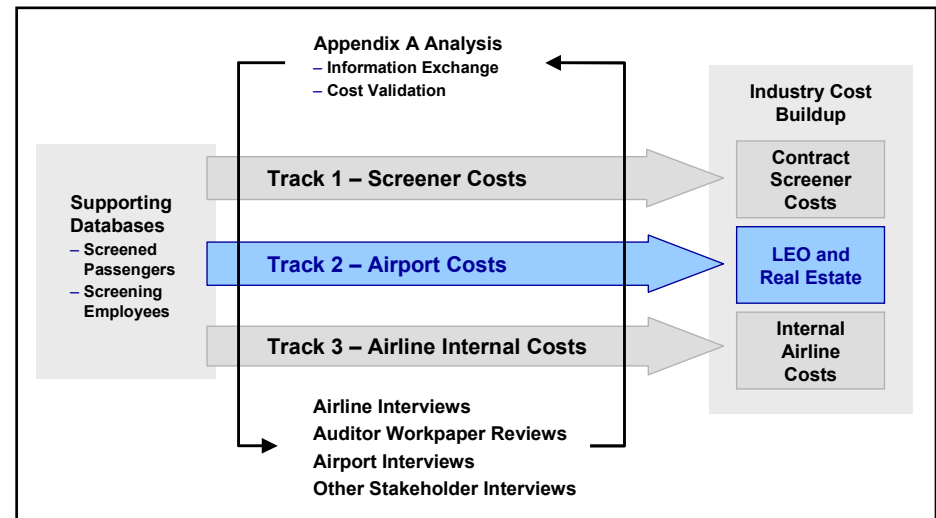
Note: \$309m estimate in screening industry billings for Appendix A is comprised of \$293m for costs reported on Appendix A, \$1m for costs incurred by air carriers for screening but which were not reported on their Appendix A submissions, and \$15m for costs estimated for air carriers that did not file an Appendix A submission.





## Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING

## ANALYSIS OF AIRPORT COSTS



## Objective of the Airport Cost Analysis

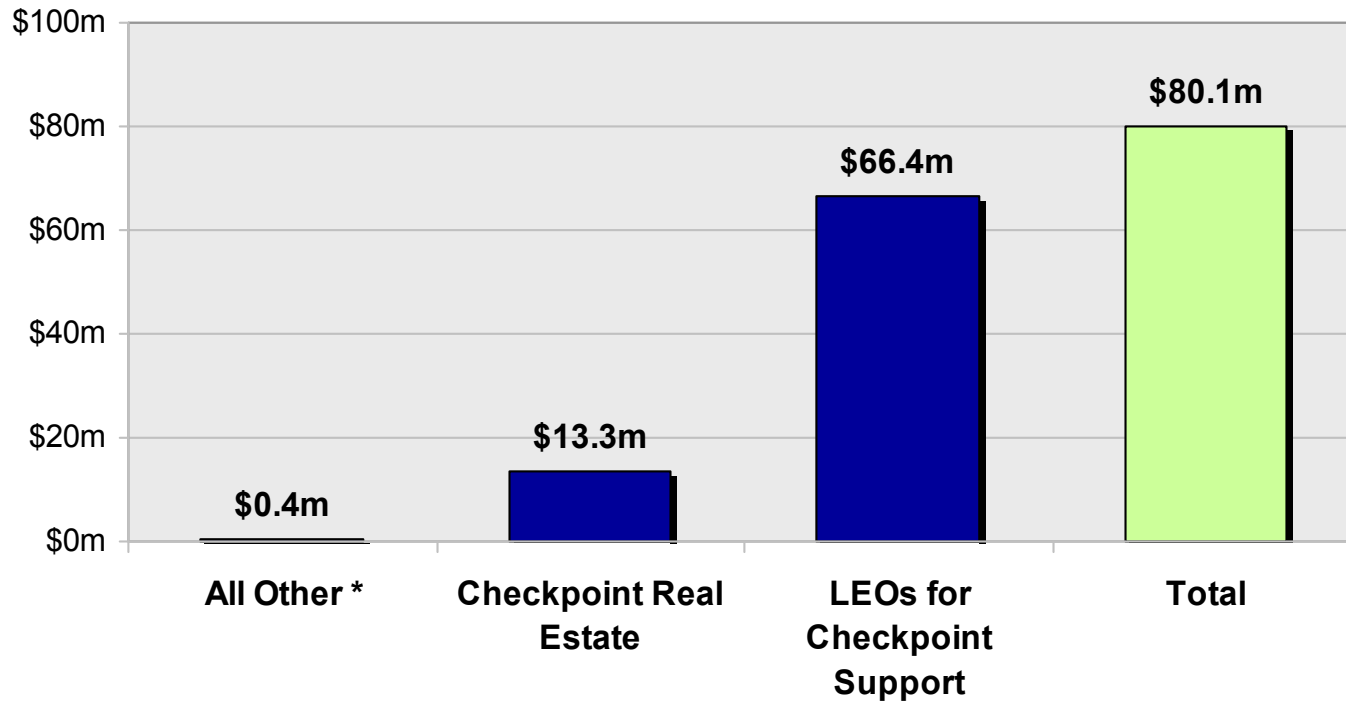
- ④ **Our objective was to identify and independently quantify airport costs for passenger and property screening that were passed on to the airlines in CY 2000.**
- ④ **We conducted interviews with a representative sample of U.S. airports to collect information on airline use agreements, airport rate making methodologies, and specific screening related costs that were incurred by airlines.**
- ④ **The data collected through the airport interviews were used to quantify airline screening costs at the sample airports. These data were then extrapolated to the total U.S. airport system.**

## Project Limitations Affecting Airport Cost Estimates

- **Estimates are based on the representations and information provided by airports without independent verification of the data.**
- **Procedural limitations were encountered related to access and availability of cost or accounting records and/or individuals due to the 5 years that have passed since CY 2000, airport employee turnover, changes in airport ownership, and record retention policies.**
- **Certain cost categories required the application of assumptions to identify, categorize or allocate cost due to structure and/or limitations of airport accounting systems.**
- **While nearly all airports interviewed were cooperative, the following information or documents requested were not provided consistently from all sampled airports:**
  - Size of checkpoints in CY 2000;
  - Full and complete accounting records and supporting documentation for airline rates and charges and revenue collections; and
  - Specific time records related to LEO functions in the terminal buildings.

# Airlines Incurred \$80 Million in Passenger and Property Screening Costs at U.S. Airports in CY 2000

Estimated Passenger and Property Screening Costs Incurred by Airlines at U.S. Airports, CY 2000  
(\$ Millions)



\* All Other includes ancillary screening company space, screened checked baggage space, and screening equipment.

## Airport Responsibilities Related to Passenger and Property Screening

- ④ **FAR Part 107 defined airport responsibilities related to passenger and property screening.**
- ④ **There were two primary airport requirements:**
  - Restrict access to the pre-boarding sterile area. This entailed the provision of space to physically accommodate the passenger and property screening function. (FAR 107.20)
  - Provide Law Enforcement Officers to respond to potential incidents at the screening checkpoints. (FAR 107.15)
- ④ **In meeting these requirements, airports incurred costs that were passed on to airlines, to varying degrees, through airport rates and charges.**

## Summary of Airport Cost Analysis Approach

- ④ **Designed a stratified sample of U.S. airports**
- ④ **Developed interview protocol**
- ④ **Scheduled interviews with airport officials**
- ④ **Conducted interviews**
- ④ **Obtained back-up documentation and clarification**
- ④ **Quantified costs by airport**
- ④ **Calculated unit cost rates**
- ④ **Extrapolated sample results to U.S. airport system total**

# Airport Sample Design

- **A stratified sample of airports was drawn from the 400\* largest U.S. airports based on outbound O&D passengers, which represent 99.9% of estimated screened passengers at U.S. airports in CY 2000.**
- **Stratum 1 included the top 20 airports based on estimated screened passengers. Interviews were attempted with all airports in Stratum 1.**
- **There were 50 sample airports in Stratum 2 to 5.**
  - Airports were divided into 10 groups, each with 5 airports, for scheduling purposes.
  - Each group contained airports from the various stratum to insure that the sample remained unbiased.
  - Interviews were attempted with all sample airports in Stratum 2 to 5.
- **The goal of the survey was to collect cost information for at least 50 of the sample airports in order to extrapolate the results to the total population of U.S. Airports.**

Stratum	Estimated Screened Passengers	Percent of Total	Number of Airports	Sample Airports
1	270,557,510	51.0%	20	20
2	136,932,121	25.8%	27	20
3	69,321,908	13.1%	34	10
4	33,284,409	6.3%	60	10
5	20,305,673	3.8%	289	10
Total	530,401,620	100.0%	430*	70

\* After the sample design was completed, a complete list of airports that had passenger and property screening in CY 2000 was provided by former FAA officials, now with the TSA. That list identified 430 airports.

## Interview Process

- **Sample airports were initially contacted by telephone or e-mail, and telephone interviews were scheduled with appropriate airport personnel.**
- **An airport interview questionnaire with targeted questions and a summary of the study purpose, and a cover letter from the GAO, were sent to all airports prior to the scheduled interview.**
  - Officials at some airports chose to complete and return the questionnaires. In these instances, the study team followed up with phone interviews to clarify and expand on written responses.
- **Interviews were conducted by teams of 2 to 3 individuals.**
- **Following each interview, interview notes with a list of follow-up items and required documentation were sent to the airport representatives.**
- **All airports were given an opportunity to review the written interview notes and make any necessary corrections or clarifications.**



## Airport Interview Success Rates

- Over 80% of the 70 sample airports were interviewed.
- Airports that were not interviewed were generally unable to participate because of schedule issues.
- For two airports (IAD and OAK), the study team relied on DHS OIG workpapers, in lieu of an interview.

Category	No. of Airports	No. Interviewed	Interview Rate
Top 20	20	19	95%
All Other	50	40	80%
<b>Total</b>	<b>70</b>	<b>59</b>	<b>84%</b>

## Data Collection for Top 20 Airports

- ④ **Interviews were conducted with 19 of the top 20 airports.**
  - A full interview was not conducted with Chicago O'Hare because of the airport official's time constraints.
- ④ **Nearly all of the contacted airports were able to provide information on LEO costs and the method of recovering these costs from the airlines.**
- ④ **13 of the top 20 airports were able to provide sufficient information to calculate checkpoint real estate costs borne by airlines.**
  - It was necessary to estimate checkpoint costs for 6 of the top 20 airports: Atlanta, Denver, Newark, Orlando, Miami and Chicago O'Hare.
- ④ **Some airports had one or more terminals owned and operated by airlines. Checkpoint real estate costs for privately owned terminals are not included in the airport cost estimates because airport operators generally could not provide information on operating and maintenance (O&M) costs or checkpoint areas for privately owned terminals.**
- ④ **4 of the top 20 airports identified other types of screening costs passed on to airlines.**
  - These include real estate costs for checked baggage screening, screening equipment costs, and real estate costs for ancillary space used by screening companies but paid for by airlines.

# Summary of Data Collection for Top 20 Airports

	Airport	Code	Interview Completed	Documentation Received		
				LEO	Checkpoint Space	Other
Stratum 1	Atlanta	ATL	Yes	Yes	No	-
	Baltimore	BWI	Yes	Yes	Yes	-
	Boston	BOS	Yes	Yes	Yes	-
	Chicago O'Hare	ORD	Partial	Yes**	No	-
	Dallas/Fort Worth	DFW	Yes	Yes	Yes	-
	Denver	DEN	Yes	Yes	No	Yes
	Detroit *	DTW	Yes	No	No	-
	Honolulu	HNL	Yes	Yes	Yes	-
	Las Vegas	LAS	Yes	Yes	Yes	Yes
	Los Angeles	LAX	Yes	Yes	Yes	-
	Miami	MIA	Yes	Yes	No	Yes
	Minneapolis	MSP	Yes	Yes	Yes	-
	New York J F Kennedy	JFK	Yes	Yes	Yes	-
	New York La Guardia	LGA	Yes	Yes	Yes	-
	New York Newark	EWR	Yes	Yes	No	-
	Orlando	MCO	Yes	Yes	No	-
	Philadelphia	PHL	Yes	Yes	Yes	-
	Phoenix	PHX	Yes	Yes	Yes	-
	San Francisco	SFO	Yes	Yes	Yes	-
	Seattle/Tacoma	SEA	Yes	Yes	Yes	Yes

\* In 2002, the ownership of the Detroit Airport was transferred from Wayne County to the Wayne County Airport Authority. The Airport Authority was unable to provide the necessary information to document screening-related airline costs for CY 2000.

\*\* Necessary to estimate portion recovered from airlines.

## Data Collection for Airports in Stratums 2 to 5

- Interviews were conducted with 40 of the 50 airports in Stratums 2 to 5.
- 35 of the airports in Stratums 2 to 5 were able to provide some level of information on LEO costs.
- 37 of the airports in Stratums 2 to 5 provided sufficient information to calculate checkpoint costs incurred by airlines.
- 6 of the Stratum 2 to 5 airports identified other types of screening costs passed on to airlines.
  - Real estate costs for checked baggage screening
  - Screening equipment costs
  - Real estate costs for ancillary space used by screening companies and paid for by airlines

# Summary of Data Collection for Stratum 2 Airports

	Airport	Code	Interview Completed	Documentation Received		
				Checkpoint		
				LEO	Space	Other
<b>Stratum 2</b>	Austin	AUS	Yes	Yes	Yes	Yes
	Chicago Midway	MDW	Partial	Yes*	No	-
	Cleveland	CLE	Yes	Yes	No	-
	Columbus	CMH	Yes	Yes	Yes	-
	Fort Lauderdale/Hollywood	FLL	Yes	Yes	Yes	-
	Hartford	BDL	No	-	-	-
	Houston	IAH	Yes	Yes	Yes	-
	Indianapolis	IND	Yes	Yes	Yes	Yes
	Nashville	BNA	Yes	Yes	Yes	-
	New Orleans	MSY	Yes	Yes	Yes	-
	Oakland	OAK	DHS OIG	Yes*	Yes	Yes
	Orange County	SNA	Yes	Yes	Yes	-
	Portland	PDX	Yes	Yes	Yes	-
	Raleigh/Durham	RDU	Yes	Yes	Yes	-
	Salt Lake City	SLC	Yes	Yes	Yes	-
	San Diego	SAN	Yes	Yes	Yes	-
	San Juan	SJU	No	-	-	-
St. Louis	STL	Yes	Yes*	Yes	-	
Tampa	TPA	Yes	Yes	Yes	Yes	
Washington Dulles	IAD	DHS OIG	Yes	Yes	-	

\* Necessary to estimate portion recovered from airlines.

# Summary of Data Collection for Stratum 3 and 4 Airports

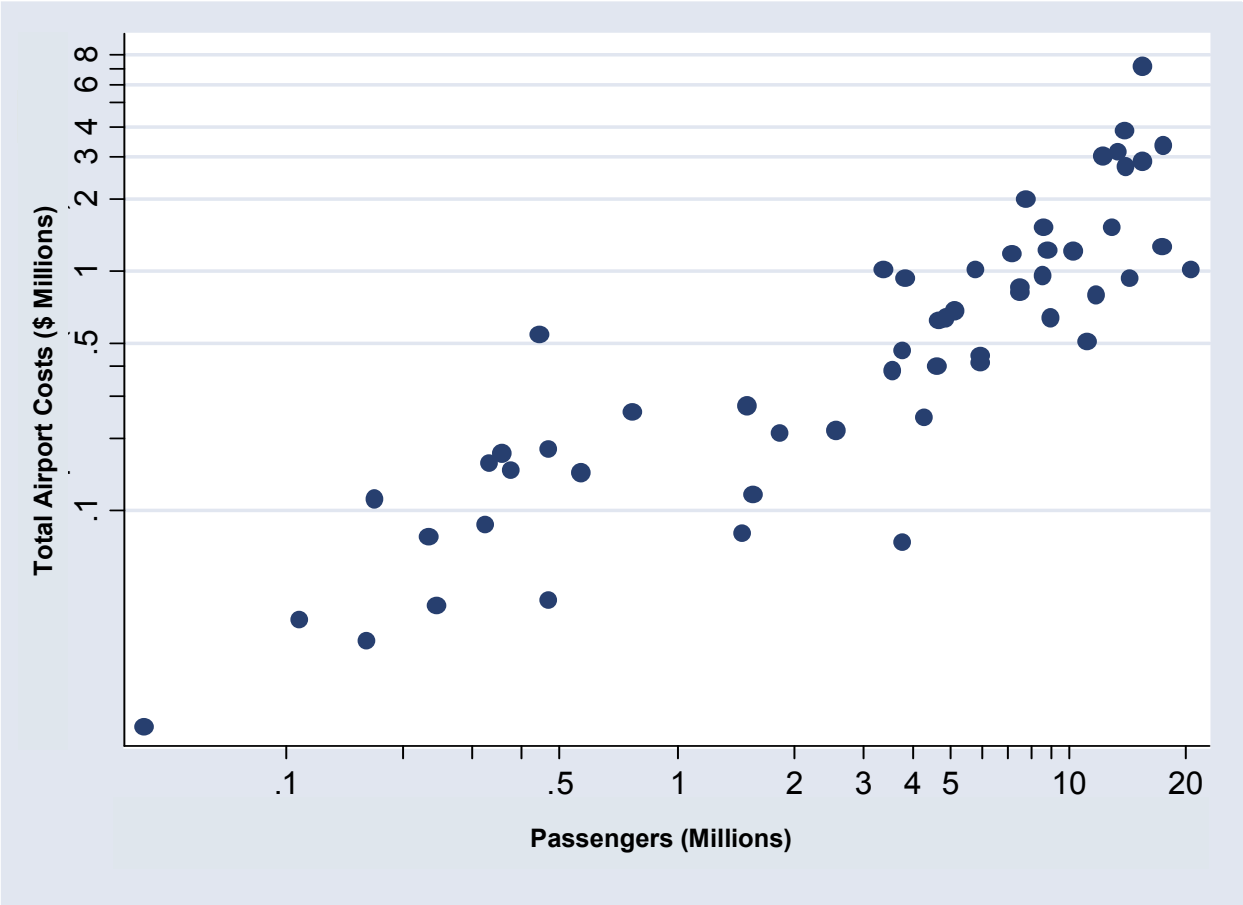
	Airport	Code	Interview Completed	Documentation Received		
				Checkpoint		
				LEO	Space	Other
Stratum 3	Birmingham	BHM	Yes	Yes	Yes	-
	Dallas Love Field	DAL	No	-	-	-
	Jacksonville	JAX	No	-	-	-
	Kahului	OGG	Yes	Yes	Yes	-
	Kona	KOA	Yes	Yes	Yes	-
	Louisville	SDF	Yes	Yes	Yes	-
	Providence	PVD	No	-	-	-
	Reno	RNO	Yes	Yes	Yes	-
	Spokane	GEG	Yes	Yes	Yes	-
	Tulsa	TUL	Yes	Yes	Yes	-
Stratum 4	Amarillo	AMA	Yes	Yes	Yes	-
	Greenville/Spartanburg	GSP	Yes	Yes	Yes	-
	Harlingen	HRL	Yes	Yes	Yes	-
	Lansing	LAN	Yes	Yes	Yes	-
	Lubbock	LBB	Yes	Yes	Yes	-
	Midland Odessa	MAF	Yes	Yes	Yes	-
	Santa Barbara	SBA	Yes	Yes	Yes	-
	Shreveport	SHV	Yes	Yes	No	-
	Springfield	SGF	Yes	Yes	Yes	-
	Syracuse	SYR	No	-	-	-

# Summary of Data Collection for Stratum 5 Airports

	Airport	Code	Interview Completed	Documentation Received		
				Checkpoint		
				LEO	Space	Other
Stratum 5	Bozeman	BZN	Yes	Yes	Yes	-
	Charlottesville	CHO	Yes	Yes	Yes	-
	Evansville	EVV	Yes	Yes	Yes	Yes
	Martha's Vineyard	MVY	No	-	-	-
	Muskegon	MKG	Yes	Yes	Yes	Yes
	Panama City	PFN	Yes	Yes	Yes	-
	Pendleton	PDT	Yes	na	na	na
	Provincetown	PVC	Yes	na	na	na
	Wenatchee	EAT	Yes	Yes	Yes	-
	Yampa Valley Regional	HDN	Yes	Yes	Yes	-

“na” = Not applicable; airports indicated that there was no screening in CY 2000, therefore costs are zero.

# Airport Screening Costs Borne by Airlines Were Correlated with Airport Size





## Despite This Correlation, Some Airports of Comparable Size Exhibit Substantial Variation in Screening-Related Costs to Airlines

- **While screening-related airport costs absorbed by airlines were correlated with the size of airport and volume of screened passengers, individual airports of comparable size showed considerable variation.**
- **There are two principal reasons for this variation:**
  - The actual costs incurred by airports for these functions varied, and
  - The percentage of airport costs that were passed on to the airlines varied based on the rates and charges structure at the airport.
- **The costs incurred by airports for flexible response by LEOs differed, even for airports of comparable size.**
  - Wage rates for law enforcement officers vary in different geographic locations.
  - Required LEO staffing differed based on the terminal layouts at different airports.

## Despite This Correlation, Some Airports of Comparable Size Exhibit Substantial Variation in Screening-Related Costs to Airlines , *cont'd*

- **The percentage of screening-related costs incurred by the airport and passed on to airlines ranged from zero to 100%.**
  - At LAX, the largest U.S. airport in terms of screened passengers, none of the costs associated with providing LEO flexible response or checkpoint real estate were passed on to the airlines. These costs were assigned to “City Space” and were covered by non-airline revenues.
  - In contrast, at DFW and many other airports, 100% of LEO costs associated with flexible response was directly billed to the airlines.
  - Other sampled airports bundled LEO costs in the terminal cost center, with the share of such costs passed on to airlines varying widely.

## Airport Ratemaking Methodologies Differ Widely, with Significant Impacts on the Share of Costs Borne by the Airlines

- ④ **The airport costs included in our estimate do not represent the full security and screening-related costs that were incurred by the airports.**
- ④ **Rather, the cost values that we have quantified and reported represent only the share of those airport costs that was passed on to the airlines.**
- ④ **Differences in the rates and charges methodologies across airports resulted in widely varying shares of overall airport costs being passed through to airline tenants.**

## Methodology for Measuring LEO Costs

- ④ **The extent to which airlines incurred LEO costs at particular airports depended on how airports treated LEO expenses.**
  - Some airports directly billed the airlines for LEO expenses.
  - Some airports bundled the costs of providing LEOs in the the terminal rental rates.
  - Some airports completely absorbed the LEO costs with no cost recovery from the airlines.
- ④ **If an airport explicitly identified a LEO charge to airlines for “Flexible Response” (or “Screening”, “FAR 107”, “Anti-Air Piracy”, “Security Reimbursement”, etc.), 100% of this charge was assigned to passenger and property screening.**
- ④ **If an airport allocated a portion of its airport-wide LEO budget to the terminal cost center, only a portion was assigned to passenger and property screening.**
  - FAR 107 required LEOs to respond to checkpoint incidents within a specified timeframe depending upon the size and type of airport.
  - Some airport officials stated that 100% of the LEO costs assigned to the terminal were related to passenger and property screening because of this flexible response requirement.
  - Several airports stated that it would be incorrect to assign 100% of terminal building LEOs to the screening function, since LEOs perform multiple duties.
  - A 50% allocation factor was judgmentally applied to LEO costs allocated to the terminal cost center in recognition of both the FAR 107 flexible response requirement and the fact that LEOs performed additional duties.
- ④ **Finally, the LEO costs assigned to airlines reflected only the share of overall terminal costs that was recovered from the airlines based on the rates and charges methodologies of the airports.**

# Examples of LEO Cost Calculations at Airports with Different Rate Structures

## Example 1

### Dallas-Ft. Worth (DFW)

<b>Anti-Air Piracy Charges</b> <i>(Billed Directly to Airlines)</i>	<b>\$3,172,260</b>
<b>Assumed Share Related to Screening</b>	<b>100%</b>
<b>Costs Recovered from Airlines</b>	<b>\$3,172,260</b>

## Example 2

### Houston (IAH)

<b>LEO Concourse Security Cost</b>	<b>\$3,837,379</b>
<b>Assumed Share Related to Screening</b>	<b>50%</b>
<b>Amount Identified as Screening</b>	<b>\$1,918,690</b>
<b>Percent Allocated to Airline Areas</b>	<b>47.6%</b>
<b>Costs Recovered from Airlines</b>	<b>\$913,850</b>

## Methodology for Measuring Checkpoint Real Estate Costs

- ④ **The calculation of checkpoint real estate costs borne by the airlines depended on the rate structure at individual airports.**
- ④ **If the checkpoint was located in “common” or “joint use” space paid for by the airlines, the real estate cost was calculated based on checkpoint area square footage and the applicable rental rate.**
- ④ **If the checkpoint was located in “public” space, for which the airlines were not directly charged, the measurement of airline cost depended on features of the airport terminal rate structure.**
  - No airline costs were assigned if the public space was allocated a share of total terminal costs within the airport rate structure and absorbed by the airport.
  - Checkpoint costs were not assigned to airlines if the costs of the public space were not factored into the cost pool used to determine airline rental rates (e.g.,  $\text{Airline Rental Rates} = \frac{\text{Total Terminal Costs (including Public Space)}}{\text{Total Terminal Area (including Public Space)}}$ ). In this case, the costs of the public space are not borne by the airlines.
  - Checkpoint costs were assigned to airlines if the costs associated with public space were rolled into the cost pool that determined rental rates for airline rentable space (e.g.,  $\text{Airline Rental Rate} = \frac{\text{Total Terminal Costs (including Public Space)}}{\text{Airline Rentable Space}}$ ). In this case, the airlines paid for the public space indirectly.
- ④ **Checkpoint real estate costs are net of any portion of LEO screening related costs that may have been factored into terminal rental rates.**

# Examples of Different Checkpoint Real Estate Cost Calculations

## **Example 1: Checkpoints Located in Public Use Space and Costs Not Recovered from Airlines Los Angeles International (LAX)**

Checkpoints located in “City” (or Public) Space	
Certain Terminal Costs Were Allocated to City Space	
Airport Recovered Costs with Concession Revenues	
No Charge to Airlines for Checkpoint Space	\$0

## **Example 2: Checkpoints Located in Public Space and Costs Indirectly Recovered from Airlines New Orleans International Airport (MSY)**

Checkpoint Area (sq. ft.)	6,582
Total Terminal Area (sq. ft.)	990,561
<i>Checkpoint Area Share of Terminal</i>	<i>0.7%</i>
Airline Terminal Rent Net of LEO Cost	\$12,755,440
Airline Checkpoint Costs	\$84,750

## **Example 3: Checkpoints Located in Joint Use Space Tulsa (TUL)**

Checkpoint Area (sq. ft.)	1,162
Rental Rate for Airline Joint Use Space	\$35.59
Checkpoint Costs	\$41,356

## Simplifying Assumptions for Airport Cost Analysis

- ⊕ Charges allocated to airlines based on rentable square footage were taken to represent costs incurred by airlines at airports where actual CY 2000 airline revenue was not provided.
- ⊕ Budgeted or projected airline revenue was assumed to be representative of the actual costs incurred by airlines at airports that were unable to provide actual CY 2000 airline revenue.
- ⊕ Fiscal year data were accepted as representative of CY 2000 costs for airports that were unable to provide documentation of costs for the two fiscal year periods that comprised CY 2000.



# Cost Analysis at Sampled Airports

Airport	Stratum	Estimated Screened Passengers	Screening Costs Incurred by Airlines			Total
			LEO	Checkpoint Space	All Other	
Los Angeles	1	27,289,000	\$0	\$0	\$0	\$0
Chicago O'Hare	1	20,276,000	\$175,823 *	\$364,558 *	\$0	\$540,381
San Francisco	1	17,332,000	\$2,151,465	\$1,284,185	\$0	\$3,435,650
Atlanta	1	17,282,000	\$975,940	\$310,726 *	\$0	\$1,286,666
New York Newark Liberty	1	15,334,000	\$2,747,927	\$125,018 *	\$0	\$2,872,945
New York J F Kennedy	1	15,304,000	\$7,132,384	\$0	\$0	\$7,132,384
Las Vegas	1	14,214,000	\$818,495	\$68,514	\$69,514	\$956,523
Orlando	1	13,893,000	\$2,500,000	\$249,800 *	\$0	\$2,749,800
Miami	1	13,769,000	\$3,580,817	\$247,559 *	\$53,991	\$3,882,367
Dallas/Fort Worth	1	13,257,000	\$3,172,260	\$0	\$0	\$3,172,260
Boston	1	12,821,000	\$1,034,705	\$489,440	\$0	\$1,524,145
New York La Guardia	1	12,125,000	\$2,566,894	\$450,585	\$0	\$3,017,479
Phoenix	1	11,621,000	\$433,094	\$361,094	\$0	\$794,188
Seattle/Tacoma	1	11,028,000	\$400,040	\$83,017	\$25,467	\$508,524
Denver	1	10,205,000	\$1,000,000	\$183,480 *	\$39,186	\$1,222,666
Minneapolis	1	8,935,000	\$447,049	\$192,145	\$0	\$639,194
Honolulu	1	8,821,000	\$0	\$0	\$0	\$0
Philadelphia	1	8,575,000	\$1,488,912	\$31,542	\$0	\$1,520,454
Baltimore	1	8,530,000	\$911,386	\$50,780	\$0	\$962,166
Houston Intercontinental	2	8,782,000	\$913,850	\$316,286	\$0	\$1,230,136
Fort Lauderdale/Hollywood	2	7,714,000	\$1,126,008	\$441,259	\$0	\$1,567,267
Tampa	2	7,448,000	\$704,100	\$99,982	\$51,310	\$855,392
San Diego	2	7,445,000	\$815,143	\$0	\$0	\$815,143
Washington Dulles	2	7,113,000	\$814,134	\$371,245	\$0	\$1,185,379
Portland	2	5,923,000	\$293,252	\$153,399	\$0	\$446,651
Chicago Midway	2	5,905,000	\$42,023 *	\$206,196 *	\$0	\$248,219
St. Louis	2	5,742,000	\$330,284 *	\$325,132	\$0	\$655,416
Oakland	2	5,064,000	\$285,554 *	\$64,548	\$12,762	\$362,864
Salt Lake City	2	4,804,000	\$573,306	\$66,907	\$0	\$640,213
New Orleans	2	4,626,000	\$544,560	\$84,750	\$0	\$629,310
Cleveland	2	4,554,000	\$220,368	\$159,033 *	\$0	\$379,401

"All Other" includes real estate costs for ancillary space used by screening companies and leased by the airlines, space for checked baggage screening, and screening equipment. Zero indicates no airport costs or no airport costs passed on to airlines.

\* Indicates an estimated value based on the average of sampled airports in the same stratum. Estimated values are for airports that supplied incomplete information.

## Cost Analysis at Sampled Airports, *cont'd*

Airport	Stratum	Estimated Screened Passengers	Screening Costs Incurred by Airlines			
			LEO	Checkpoint Space	All Other	Total
Raleigh/Durham	2	4,259,000	\$103,606	\$144,303	\$0	\$247,909
Orange County	2	3,813,000	\$458,527	\$483,794	\$0	\$942,321
Nashville	2	3,724,000	\$34,900	\$39,623	\$0	\$74,523
Indianapolis	2	3,723,000	\$384,173	\$58,856	\$22,000	\$465,029
Austin	2	3,536,000	\$66,230	\$293,942	\$27,592	\$387,764
Columbus	2	3,344,000	\$920,000	\$96,048	\$0	\$1,016,048
Kahului	3	2,686,000	\$0	\$0	\$0	\$0
Reno	3	2,522,000	\$138,600	\$78,637	\$0	\$217,237
Louisville	3	1,819,000	\$75,000	\$0	\$0	\$75,000
Tulsa	3	1,550,000	\$76,225	\$41,356	\$0	\$117,581
Spokane	3	1,498,000	\$287,419	\$8,982	\$0	\$296,401
Birmingham	3	1,461,000	\$81,346	\$0	\$0	\$81,346
Kona	3	1,294,000	\$0	\$0	\$0	\$0
Greenville/Spartanburg	4	765,000	\$145,015	\$113,941	\$0	\$258,956
Lubbock	4	565,000	\$144,744	\$0	\$0	\$144,744
Midland Odessa	4	467,000	\$25,799	\$17,017	\$0	\$42,816
Harlingen	4	467,000	\$174,132	\$7,835	\$0	\$181,967
Amarillo	4	443,000	\$547,287	\$0	\$0	\$547,287
Santa Barbara	4	374,000	\$53,694	\$94,500	\$0	\$148,194
Shreveport	4	356,000	\$174,558	\$25,911 *	\$0	\$200,469
Springfield	4	329,000	\$144,211	\$14,633	\$0	\$158,844
Lansing	4	323,000	\$63,900	\$24,109	\$0	\$88,009
Evansville	5	242,000	\$24,000	\$15,744	\$492	\$40,236
Bozeman	5	231,000	\$72,300	\$6,004	\$0	\$78,304
Panama City	5	167,000	\$112,758	\$0	\$0	\$112,758
Charlottesville	5	160,000	\$25,250	\$3,660	\$0	\$28,910
Yampa Valley Regional	5	108,000	\$24,774	\$10,789	\$0	\$35,563
Wenatchee	5	49,000	\$0	\$0	\$0	\$0
Muskegon	5	43,000	\$10,800	\$1,175	\$620	\$12,595
<b>Total</b>		<b>376,049,000</b>	<b>\$42,569,021</b>	<b>\$8,362,038</b>	<b>\$302,934</b>	<b>\$51,233,993</b>

"All Other" includes real estate costs for ancillary space used by screening companies and leased by the airlines, space for checked baggage screening, and screening equipment. Zero indicates no airport costs or no airport costs passed on to airlines.

\* Indicates an estimated value based on the average of sampled airports in the same stratum. Estimated values are for airports that supplied incomplete information.

## Airport Passenger and Property Screening Costs Incurred by Airlines in CY 2000 are Estimated at \$80.1 Million

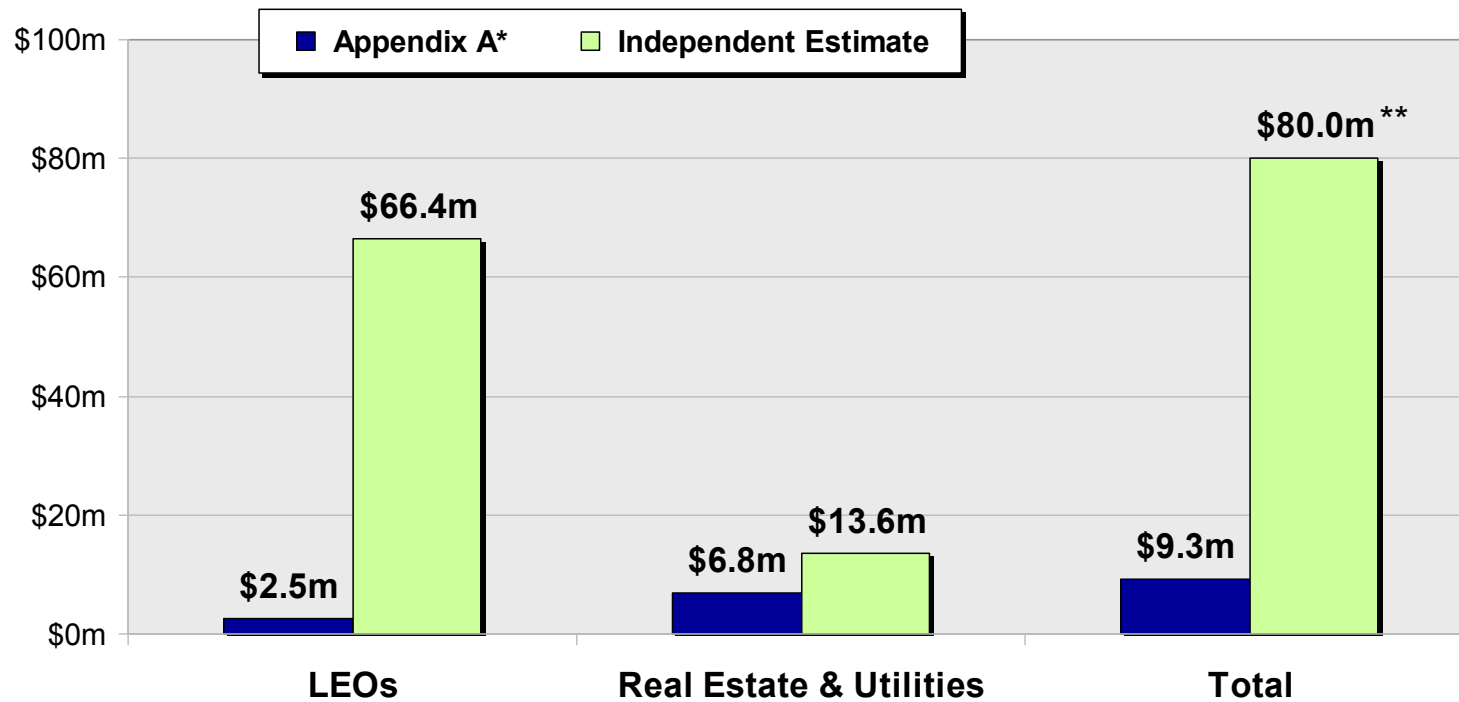
Airport Costs	Estimate
Law Enforcement Officers	\$66,382,000
Checkpoint Space	\$13,348,000
Ancillary Screening Company Space *	\$118,000
Screened Baggage Space	\$140,000
Screening Equipment	<u>\$138,000</u>
<b>Total</b>	<b>\$80,126,000</b>
<b>Standard Error</b>	<b>\$4.8 million</b>
<b>95% Confidence Interval</b>	<b>\$70.7 to \$89.5 million</b>

- ⊕ **LEO costs represented 83% of total airport screening-related costs borne by airlines.**
- ⊕ **Checkpoint real estate costs represented 17% of the total.**
- ⊕ **Other costs (i.e., screening equipment, ancillary space used by screening companies, and checked baggage screening) were negligible.**

\* Only includes charges for ancillary space that the airlines paid for.

# The Independent Airport Cost Analysis Identified \$71 Million in Airline Screening Costs that Were Not Included in Appendix A

**Airport Passenger and Property Screening Costs Incurred by Airlines in CY 2000**  
 (\$ Millions)



\* Includes amounts reported in Appendix A footnotes and estimated amounts for missing carriers.

\*\* Excludes \$0.1m in screening equipment costs passed on to carriers by airports. These costs cannot be separately identified on Appendix A or in the Appendix A footnotes.

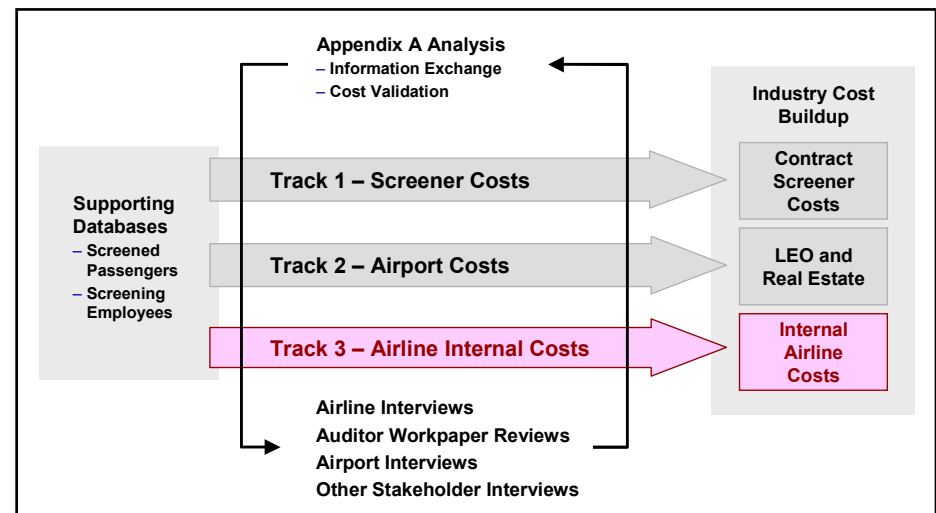
## Sensitivity Analysis Concerning the Assignment of Terminal LEOs to Passenger and Property Screening

- ④ In our cost estimate, 50% of unassigned terminal LEO costs were allocated to the screening function.
- ④ A sensitivity analysis was performed to measure the impact of this assumption on the estimate of LEO costs related to passenger and property screening that were incurred by the airlines.
  - The 50% baseline results were compared to alternative assumptions of both 25% and 75%.
  - The sensitivity analysis only affects those airports where terminal LEO costs were not specifically assigned to the flexible response requirement.
  - It is important to understand that airports that directly billed airlines for flexible response account for the majority of overall LEO costs at sampled airports, and that the sensitivity analysis only impacts a small subset of sampled airports.
- ④ Modifying the 50% assumption to 75% increased the resultant LEO cost estimate by \$4.0 million across sampled airports, or by \$6.3 million when the sampled results are extrapolated to the U.S. system total.
- ④ Conversely, lowering the LEO allocation factor to 25% would reduce the cost estimate by \$4.0 million across sampled airports, or by \$6.3 million when the sampled results are extrapolated to the U.S. system total.



## Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING

## ANALYSIS OF AIRLINE INTERNAL COSTS



## Airline Internal Cost Analysis Overview

- ④ **Our objective was to prepare an independent estimate of internal airline costs related to passenger and property screening that were not captured through the separate analyses of contract screener industry costs and airport costs.**
- ④ **Our approach was to first develop an understanding of airline responsibilities related to passenger and property screening.**
  - Reviewed FAR Part 108 and the Air Carrier Standard Security Plan (ACSSP) for CY 2000.
  - Reviewed Appendix A submissions and accompanying notes.
  - Prepared interview questionnaires and conducted interviews with airline officials.
  - Reviewed workpapers prepared by independent auditors and the DHS OIG.
- ④ **We then designed appropriate cost estimating methodologies and applied those methodologies to develop industry cost estimates for the identified internal cost functions.**

## Project Limitations Affecting Airline Internal Cost Estimates

- ④ **Estimates for certain line items are based on the representations and information provided by airlines without independent testing or verification of the data.**
- ④ **Procedural limitations were encountered related to access and availability of cost or accounting records and/or individuals due to the time that has passed since CY 2000, employee turnover, corporate structural changes (i.e., bankruptcy, acquisitions, etc.) and record retention policies.**
- ④ **Certain cost categories required the application of assumptions to identify, categorize or allocate costs due to structure and/or limitations of airline accounting systems.**



# The Airline Internal Cost Analysis Focuses on 11 Cost Categories

## *Appendix A Cost Categories*

<b>Line 16</b>	<b>Screening Equipment Installation</b>
<b>Line 17</b>	<b>Operating, Maintenance and Testing of Screening Equipment</b>
<b>Line 24</b>	<b>Ground Security Coordinators</b>
<b>Line 25</b>	<b>Security Program Management</b>
<b>Line 26</b>	<b>Security Contract Administration and Oversight</b>
<b>Line 28</b>	<b>Legal Support</b>
<b>Line 29</b>	<b>Accounting Support</b>
<b>Line 30</b>	<b>Other Administrative Support</b>
<b>Line 31</b>	<b>Insurance</b>
<b>Line 34</b>	<b>Fees for Oversight of Consortium Contracts</b>
<b>Line 35</b>	<b>Other (includes fines)</b>

## The Analysis is Based Largely on Five Sources of Information

- **Appendix A submissions including accompanying notes**
- **Airline interviews**
- **Interviews with former airline officials with security-related responsibilities**
- **Analysis of airline auditor work papers**
- **Information compiled during audits conducted by DHS OIG**

## To Perform the Analysis, Airlines Were Classified into Five Groups

### ➤ Airline groups based on types of operations:

- Legacy: Major hub and spoke carriers including American, Delta and United
- Low Cost: Primarily non-hubbing carriers including Southwest and JetBlue
- Regional: Carriers operating regional jet and commuter aircraft including Comair, Mesa and Skywest
- Foreign: Non-U.S. airlines including Air Canada, British Airways and Mexicana
- Other: Niche carriers including Hawaiian, Midwest Express, and US Airways Shuttle

## Interviews with Airlines and Analysis of Auditor Work Papers Supplement Information Reported in Appendix A

- Legacy, Low Cost, Regional and Foreign Airlines were interviewed, and airline auditor and DHS workpapers were analyzed.

Airline	Interview	Auditor Workpapers
American	✓	
Continental	✓	✓
Northwest	✓	✓
United	✓	DHS OIG
US Airways	✓	✓
Southwest	✓	✓
Frontier	✓	
JetBlue	✓	
Skywest	✓	
Aeromexico	✓	
Air France	✓	✓
Mexicana	✓	

## The Independent Estimates for Six Cost Categories are Based Largely on Appendix A Information

<b>Line 16</b>	<b>Screening Equipment Installation</b>
<b>Line 17</b>	<b>Operating, Maintenance and Testing of Screening Equipment</b>
<b>Line 25</b>	<b>Security Program Management</b>
<b>Line 26</b>	<b>Security Contract Administration and Oversight</b>
<b>Line 28</b>	<b>Legal Support</b>
<b>Line 29</b>	<b>Accounting Support</b>

- ⊕ **Lines 16 and 17 include depreciation of screening equipment owned by airlines. Most airlines tracked this expense in general ledger accounts. For those carriers that reported this cost on Appendix A, these costs were taken to be reliable.**
- ⊕ **Lines 25 to 29 represent overhead functions with costs based on the time spent by airline employees performing applicable duties.**
  - Based on statements made during airline interviews, these duties represented only a small portion of the overall responsibilities of the relevant airline employees.
  - Airlines stated that there were no time records kept to use as a basis for allocating employee time to these functions.
  - Therefore, the only basis for performing these time allocations is information provided by airlines and their employees.
- ⊕ **Airline interviews and auditor workpaper reviews indicated that the carriers that submitted costs for these line items generally followed reasonable and logical methodologies to develop their estimates.**
- ⊕ **This finding supports the use of Appendix A data filed by responding carriers as the basis for estimating costs for carriers that did not report costs for these categories.**
- ⊕ **This includes estimating applicable costs for carriers that filed Appendix A but reported zero costs for certain items, as well as estimating applicable costs for carriers that did not file Appendix A.**

## Examples of Carrier Appendix Cost Methodologies that Appear Reasonable and Logical

### **Line 25 Security Program Management**

*“Obtained the job code for employees responsible for oversight of airport security and applied 100% of the salary costs to this line item as this was the sole job responsibility of this workgroup. Benefits were added to the salary number consistent with the ratio paid by the company in total in 2000.”*

### **Line 26 Security Contract Administration and Oversight**

*“...The amount was calculated by taking the percentage of total contracts that security screening and x-ray equipment sharing agreements represent. This percentage was then multiplied by the total annual salary of all employees for 2000 with the “contract – Sales, Service and Buy Group”. This sub total was then multiplied by a fringe benefit cost factor to arrive at the total amount of costs incurred in 2000...”*

### **Line 28 Legal Support**

*“Obtained the estimated number of hours spent reviewing contracts and collecting indemnity payments and applied a blended rate (per job code) to arrive at the applicable salary. Benefits were added to the salary number consistent with the ratio paid by the company in total in 2000.”*

## The Approach for Estimating Industry Costs for these Categories Included Six Steps

### *For Each Cost Item:*

1. Used Appendix A data and estimated screened passengers by airline to calculate the unit cost for each reporting carrier.
2. Calculated the weighted average unit cost for each airline group based on data filed by reporting carriers.
3. Assessed whether all non-reporting carriers were likely to have incurred costs.
4. For cost items where all carriers were likely to have incurred costs, we multiplied the group average unit cost times estimated airline screened passengers to estimate the cost for non-reporting carriers.
5. For items where some carriers may not have incurred costs, we estimated costs only for non-reporting carriers likely to have incurred costs.
6. Added estimated costs for non-reporting carriers to costs reported in Appendix A.

# Example of Cost Estimating Approach for Line Item 16 – Security Equipment Installation

## Appendix A Line 16 – Equipment

Airline Group	Passengers	Appendix A + Footnotes	Unit Cost	Estimated Cost
A. Legacy	35,973,892	\$668,655	\$0.019	
A. Legacy	58,460,964	\$920,701	\$0.016	
A. Legacy	69,380,150	\$752,000	\$0.011	
A. Legacy	32,992,318	\$258,088	\$0.008	
A. Legacy	43,009,662	\$179,000	\$0.004	
A. Legacy	66,863,863		\$0.000	\$774,664
A. Legacy	17,042,218	not filed	\$0.000	\$197,446
Weighted Average of Reporting Carriers			\$0.012	\$972,109
B. Low Cost	1,828,230	\$13,637	\$0.007	
B. Low Cost	61,521,854	\$370,341	\$0.006	
B. Low Cost	14,292,335	\$65,200	\$0.005	
B. Low Cost	2,396,780	aggregated	\$0.000	
B. Low Cost	5,535,170		\$0.000	none *
B. Low Cost	999,199		\$0.000	none *
B. Low Cost	5,815,831		\$0.000	none *
B. Low Cost	2,920,675		\$0.000	none *
B. Low Cost	2,182,377		\$0.000	none *
B. Low Cost	1,314,400		\$0.000	none *
Weighted Average of Reporting Carriers			\$0.006	
<i>Approach repeated for Regional, Foreign and Other Carrier Groups</i>				

Item	Amount
<b>Total Appendix A Reported Costs</b> (including footnotes & non-filing carriers)	<b>\$4,124,992</b>
<b>Estimated cost for non-reporting legacy carriers equals passengers times weighted average unit cost</b>	<b>\$774,664</b>
<b>Estimated cost for other non-reporting carriers</b> (may not have incurred costs)	<b>\$0</b>
<b>New Estimate - Appendix A plus est. cost</b>	<b>\$4,899,655</b>

\* Airline statements indicate that low cost carriers may not have incurred costs for this item. For this reason estimated costs are not allocated to low cost carriers.



## The Independent Estimates for These Six Cost Items Are 16% Higher than the Amounts Reported in Appendix A

*In \$ Millions*

<b>Cost Category</b>	<b>Appendix A*</b>	<b>Independent Estimate</b>
<b>Line 16 - Screening Equipment Installation</b>	<b>\$4.1</b>	<b>\$4.9</b>
<b>Line 17 - Operating, Operational Maintenance and Testing of Screening Equipment</b>	<b>\$10.5</b>	<b>\$10.8</b>
<b>Line 25 - Security Program Management</b>	<b>\$2.5</b>	<b>\$3.3</b>
<b>Line 26 - Security Contract Administration and Oversight</b>	<b>\$1.0</b>	<b>\$1.8</b>
<b>Line 28 - Legal Support</b>	<b>\$0.1</b>	<b>\$0.1</b>
<b>Line 29 - Accounting Support</b>	<b>\$0.2</b>	<b>\$0.4</b>
<b>Total</b>	<b>\$18.4</b>	<b>\$21.3</b>

\* Expanded to reflect costs identified in footnotes but not included in Appendix A and estimated amounts for missing carriers.

# Estimating GSC Costs Involved Conducting Airline Interviews, Discussing Assumptions with Former Airline Security Officials, and Reviewing the ACSSP, Airline Auditor Workpapers, and DHS OIG Workpapers

- ④ **Compiled information on GSC requirements**
  - Training
  - Recurrent tasks
  - Daily Tasks
- ④ **Estimated total number of qualified GSCs**
- ④ **Estimated cost of initial and recurrent training**
- ④ **Estimated cost of monthly checkpoint audits**
- ④ **Estimated cost associated with daily tasks**

## In CY 2000, GSC Screening-Related Duties Included:

- ④ Testing screeners at security checkpoints using FAA-approved test objects;
- ④ Responding to alarms at security checkpoints;
- ④ Communicating all information that could affect the security of a flight to the In-flight Security Coordinator (ISC) before the flight departs;
- ④ Ensuring that security requirements of all flights are monitored prior to departure;
- ④ Documenting and reporting all security disturbances;
- ④ Conducting monthly checkpoint audits; and
- ④ Completing recurrent GSC training annually.

# The Approach for Estimating GSC Costs Focused on Three Functions

Function	Key Drivers
1. GSC Training Costs	<ul style="list-style-type: none"><li>- Total number of qualified GSCs in CY 2000</li><li>- Number of GSCs receiving initial and recurrent training in CY 2000</li></ul>
2. Checkpoint Audits	<ul style="list-style-type: none"><li>- Number of checkpoints in CY 2000</li><li>- Average time to conduct a monthly checkpoint audit</li></ul>
3. Daily Tasks	<ul style="list-style-type: none"><li>- Average number of GSCs active on any given day</li><li>- Average time per shift that each active GSC spends on GSC tasks</li><li>- Average GSC wage rate with benefits</li></ul>

## Airline Estimates of the Time Spent Performing GSC Duties Varied Considerably

- Several airlines stated that time spent by active GSCs on daily tasks was close to zero.
- One carrier estimated that active GSCs in CY 2000 spent 10 percent of their time on GSC tasks, but this carrier included responsibilities that were not required by FAA FAR Part 108 in CY 2000.
- One carrier stated that monthly checkpoint audits took “minutes.”
- Others estimated that monthly audits took 90 minutes to 2 hours.
- Estimates of 10 minutes per shift and 90 minutes per monthly audit were used to develop GSC costs, balancing the high and low time estimates made by different carriers.

## GSC Training

***Based on Information From the Airline Interviews, Auditor Workpaper Reviews, and Discussions With Former Airline Security Officials, We Developed the Following Key Parameters:***

- 1. In CY 2000, U.S. airlines had an estimated 21,200 qualified GSCs.**
- 2. That year 24% received initial training and 76% received recurrent training.**
- 3. Initial training involved two days of classroom training and recurrent training one-half day.**
- 4. Based on 145,700 total GSC training hours at a rate of \$15 per hour with benefits, airlines incurred GSC training costs of \$2.2 million in CY 2000.**

## Monthly Checkpoint Audits

1. In CY 2000, the 430 airports with passenger screening had an estimated 774 security checkpoints.
2. Monthly checkpoint audits were required, with each audit taking an average of 90 minutes.
3. With an average GSC wage rate of \$15 per hour fully burdened, the annual cost for checkpoint audits is estimated at \$209,000 in CY 2000.

## GSC Daily Tasks

1. In CY 2000, an estimated 4,600 GSCs were active on any given day.
2. All GSCs have other responsibilities, and airlines did not keep records of time spent performing GSC tasks.
3. Most airlines that were interviewed indicated that GSC daily tasks took very little time in CY 2000 .
4. Based on GSC responsibilities defined in FAR Part 108, discussions with former airline employees and airline interviews, it was estimated that GSC daily tasks took an average of 10 minutes per shift (10 minutes represents 2% of an 8 hour shift).
5. Using that assumption, airlines incurred an estimated cost of \$4.2 million for GSC daily tasks in CY 2000.



# The Independent Estimate of GSC Costs is \$4.7 Million Greater than the Appendix A Total

*In \$ Millions*

Cost Category	Appendix A*	Independent Estimate
<b>Line 24 - Ground Security Coordinators</b>		
Training		\$2.2
Checkpoint Audits		\$0.2
Daily Tasks		\$4.2
<b>Total</b>	<b>\$1.9</b>	<b>\$6.6</b>

\* Expanded to reflect costs identified in footnotes but not included in Appendix A and estimated amounts for missing carriers.

## The Approach for Line 35 – Other including Fines – Involved Analyzing FAA Quarterly Enforcement Reports

- **Reviewed FAA Quarterly Enforcement Reports to determine total airline security fines settled in CY 2000.**
  - Not all airline security fines related to passenger and property screening.
- **Reviewed Appendix A submissions, airline interviews, airline auditor workpapers and DHS OIG audits for information on fines paid and indemnification by contract screening companies.**
  - Several carriers stated that they incurred costs but objected to including them in Appendix A.
  - One carrier that reported being fully indemnified in Appendix A was found to be only partially indemnified and incurred costs for fines.
  - Carriers who reported all their Appendix A costs in Line 35 were excluded from the analysis of fines paid.
- **Used midpoint of Appendix A costs (understated) and FAA security fines (overstated) to estimate industry costs in this category.**
- **Estimated total industry fines of \$4.1 million, compared to \$2.0 in Appendix A.**

## Independent Estimates Were Not Prepared for Three Cost Categories

<b>Line 30</b>	<b>Other Administrative Support</b>
<b>Line 31</b>	<b>Insurance</b>
<b>Line 34</b>	<b>Management Fees for Oversight of Consortium Contracts</b>

- **Most carriers submitted no costs for these items.**
- **Carriers that did report costs generally reported very small amounts.**
- **Airline interviews and work paper reviews suggested that non-reporting carriers did not necessarily incur costs for these items.**
- **Therefore, the amounts reported in Appendix A were used as an estimate of overall industry costs.**

# Summary of Findings

*In \$ Millions*

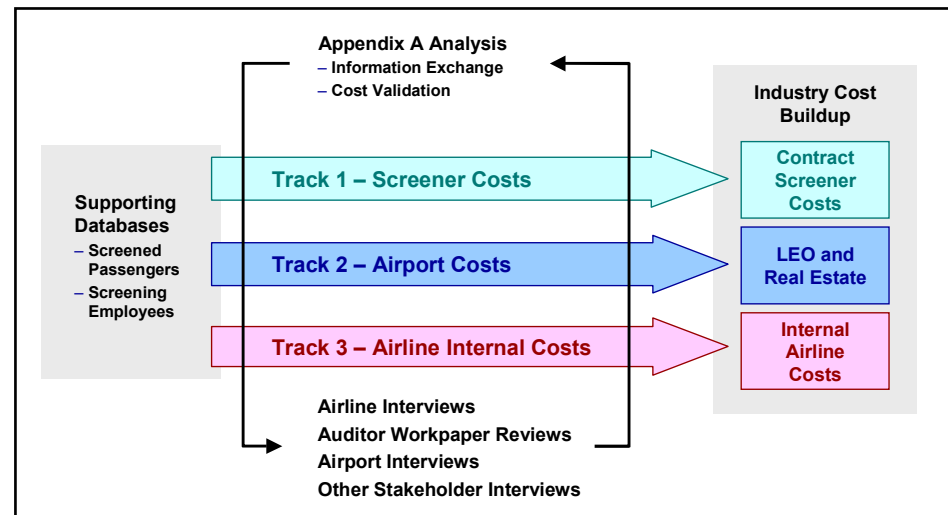
Cost Category	Appendix A *	Independent Estimate
Line 16 - Screening Equipment Installation	\$4.1	\$4.9
Line 17 - Operating, Operational Maintenance and Testing of Screening Equipment	\$10.5	\$10.8
Line 24 - Ground Security Coordinators	\$1.9	\$6.6
Line 25 - Security Program Management	\$2.5	\$3.3
Line 26 - Security Contract Administration and Oversight	\$1.0	\$1.8
Line 28 - Legal Support	\$0.1	\$0.1
Line 29 - Accounting Support	\$0.2	\$0.4
Line 30 - Other Administrative Support	\$0.2	\$0.2
Line 31 - Insurance	\$0.2	\$0.2
Line 34 - Management Fees for Oversight of Consortium Contracts	\$1.2	\$1.2
Line 35 - Other (fines)	\$2.0	\$4.1
<b>Total</b>	<b>\$24.1</b>	<b>\$33.6</b>

\* Expanded to reflect costs identified in footnotes but not included in Appendix A and estimated amounts for missing carriers.



## Evaluation of CY 2000 AIRLINE COSTS FOR PASSENGER AND PROPERTY SCREENING

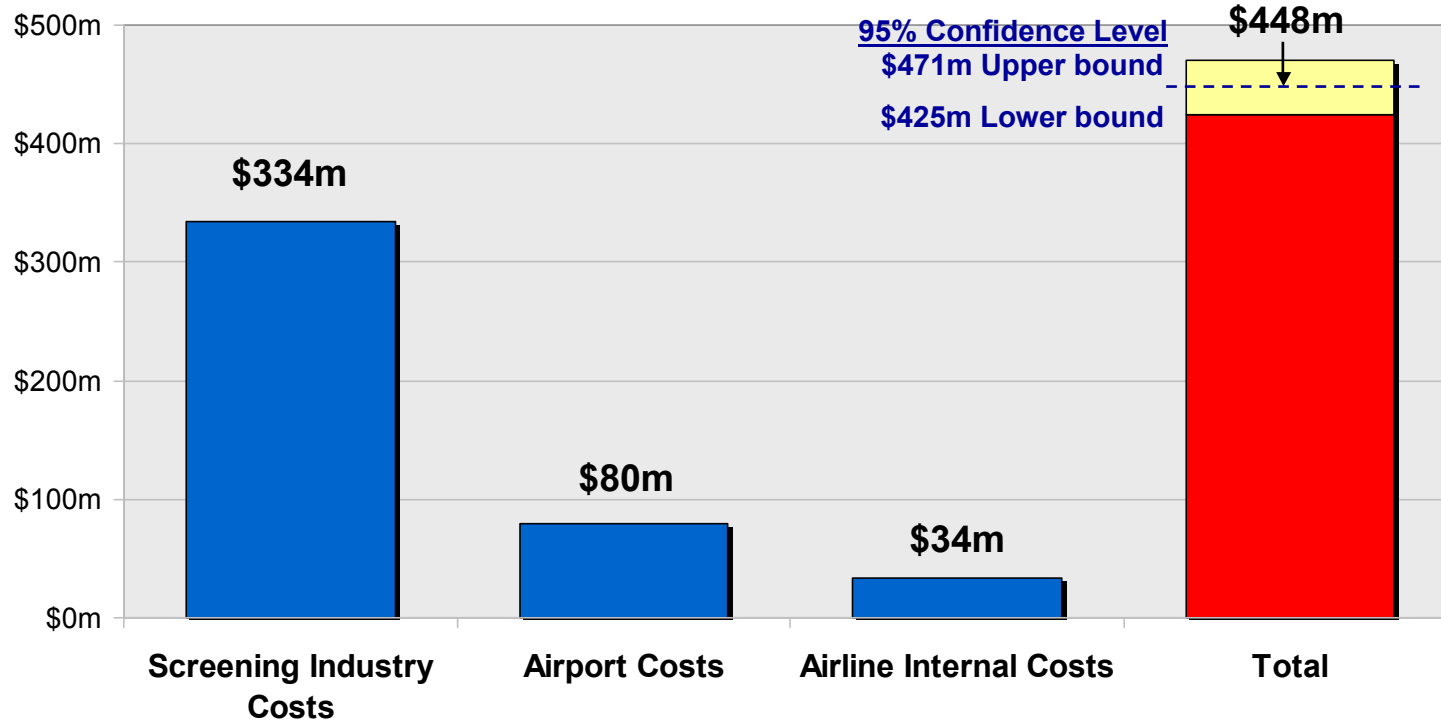
## CONCLUSION



# Our Independent Estimate of Airline Industry Costs to Provide Passenger and Property Screening at U.S. Airports in CY 2000 is \$448 Million

Independent Estimate of Airline Costs in CY 2000

(\$ Millions)



## The Independent Cost Estimate is \$106 Million Greater Than the Amount Reported on Appendix A

Cost Category	Appendix A *	Independent Estimate	Difference
Screening Industry Costs	\$309m	\$334m	\$25m
Airport Costs	\$9m	\$80m	\$71m
Airline Internal Costs	\$24m	\$34m	\$10m
<b>Total</b>	<b>\$342m</b>	<b>\$448m</b>	<b>\$106m</b>

\* Includes amounts reported in Appendix A, plus amounts that were identified in footnotes but not included in Appendix A, and an estimate for missing carriers.