

Sea-Tac Airport Capital Program

- ❖ Overview / Plan of Finance
- ❖ International Arrivals Facility
- ❖ NorthSTAR

Purpose and Desired Outcomes

- ❖ Primarily, a background briefing in anticipation of future requests for authorization
 - International Arrivals Facility (IAF)
 - NorthSTAR
 - Other
- ❖ Concurrence re addition of gates at North Satellite (NorthSTAR)



CAPITAL PROGRAM OVERVIEW AND PLAN OF FINANCE

Drivers and Other Planning Factors of Major Capital Projects

- ❖ Principal driver: Adequate capacity
- ❖ Must also balance:
 - Rate/confidence in demand grow
 - Peak facility use
 - How offset capital needs with operational changes or technology
 - Sustainability project elements
 - “Lumpy” investments vs. long life
 - Risk of over- or under-building
 - Cost impacts on customers
 - Financing capacity
- ❖ IAF and NorthSTAR are classic examples of balancing act



Drivers of Sea-Tac's Capital Program

- ❖ Sea-Tac is in an enviable – and challenging – position of needing to add capacity to meet needs of growing economy and increasing air travel demand
- ❖ Major focus on building “just in time” or, at least, not late
- ❖ Initial capital costs will drive growth in cost per enplanement (CPE), debt/enplanement
 - These metrics will come down as airlines more intensely use facilities

Sea-Tac Growing Faster than Most Airports

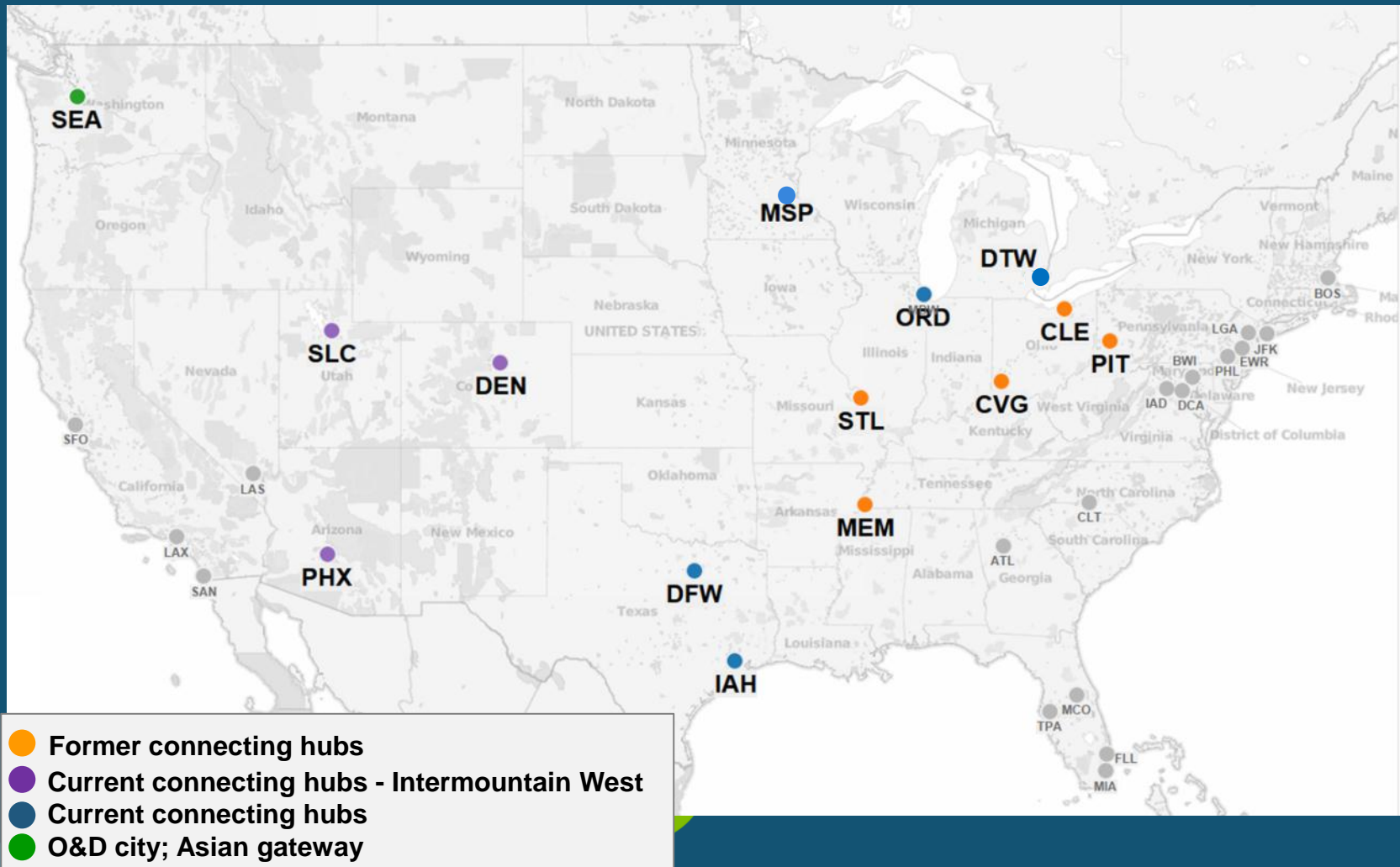
2013 passenger enplanements indexed to 2001 activity
U.S. large hub airports (>= 60% O&D enplanements)

(2001 = 100)

Airport Name	Code	O&D	Enpl Index
John F Kennedy Int'l	JFK	72%	155
Fort Lauderdale/Hollywood Int'l	FLL	90%	137
Ronald Reagan Washington National	DCA	76%	133
San Francisco Int'l	SFO	72%	120
Seattle-Tacoma Int'l	SEA	69%	118
Orlando Int'l	MCO	87%	116
Baltimore/Washington Int'l	BWI	67%	116
Mc Carran Int'l	LAS	77%	114
San Diego Intl	SAN	88%	113
Logan Int'l	BOS	87%	112
La Guardia	LGA	88%	107
Newark Liberty Int'l	EWR	69%	103
Tampa Int'l	TPA	86%	101
Los Angeles Int'l	LAX	69%	101
Honolulu Int'l	HNL	75%	94

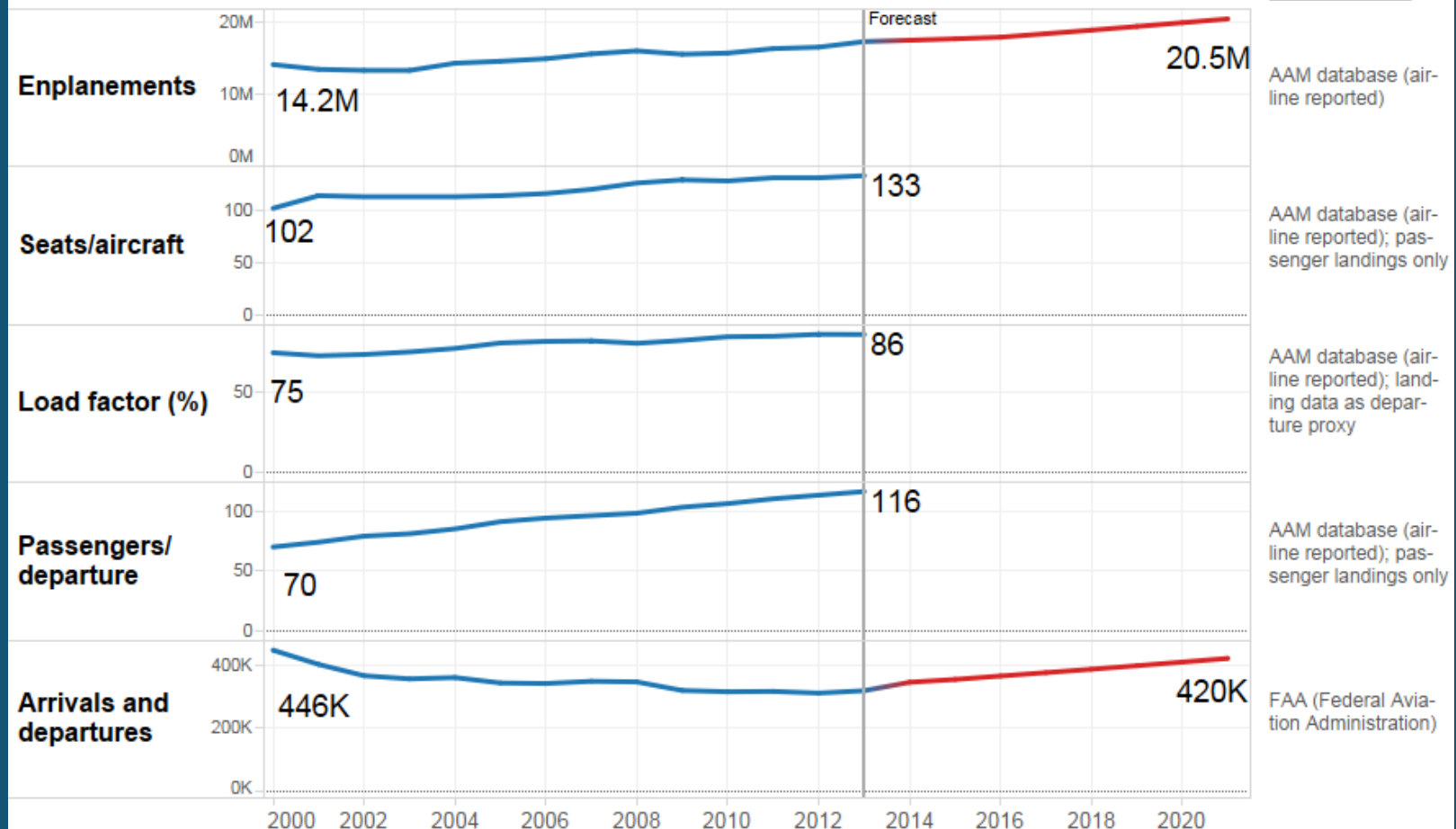
O&D: percentage of domestic passenger enplanements that begin trip at airport.
Sources: FAA; USDOT OD1A database

Role of Sea-Tac in 21st century vs. Midwest airports, post-1978



Drivers of Major Capacity Projects

Sea-Tac actual and forecasted activity (2000 - 2021)



Capital Program

Delivery Track Record: 1998-2008

Overall Performance			
		Without Third Runway Program	Third Runway Program
1999 Baseline Budget		\$1,628,896,700	\$773,362,000
Additions (Reductions)		(45,127,778)	355,248,430
Final Baseline Budget		\$1,583,768,922	\$1,128,610,430
Actuals at Completion		\$1,546,113,165	\$974,337,572
Overall Under-run Phase 1		\$37,655,757	\$154,272,858

- ❖ 1999 – 2008 capital program completed under budget
- ❖ After US ACOE and WA DOE finalized permit requirements, Third Runway was completed on-time and under budget

2014-2023 Capital Program

Figures in \$000s

<u>Projects</u>	<u>2014-18</u>	<u>2019-23</u>	<u>2014-23 Total</u>
NorthSTAR *	367,588	90,677	458,265
International Arrivals Facility	315,903	27,969	343,872
Checked Baggage Optimization	187,000	127,688	314,688
Runway 16C/34C	99,224	0	99,224
Four Major Projects	969,715	246,334	1,216,048
Aero Allowance	98,000	421,316	519,316
Non-Aero Allowance	50,000	112,089	162,089
Other Projects	459,668	70,493	530,161
Total - Current	1,577,383	850,232	2,427,615
Total - Oct 1, 2013	1,531,260	853,126	2,384,386
Change since Plan of Finance	46,123	(2,894)	43,229

* NorthSTAR budget includes possible NSAT gate additions.

2014-2023 Capital Program: Sample of Other Projects

Figures in \$000s	<u>2014-18</u>	<u>2019-23</u>	<u>2014-23 Total</u>
Aircraft RON Parking	38,082		38,082
Noise Program	35,273		35,273
Emergency Backup Power	30,119		30,119
Service Tunnel Renovation	23,404	4,137	27,541
Vertical Conveyance Modernization	21,351		21,351
GSE Electrical Charging Stations	17,352		17,352
Cargo 6 Enhancements	6,006		6,006
Wireless Coverage - Ramps	2,890		2,890
Concourse D Roof Replacement	3,227		3,227
Other Projects (115)	281,964	66,356	348,320
Total	459,668	70,493	530,161

Funding Strategy: Another Balancing Act

- ❖ Maximize use of grants and PFCs to minimize rate base costs to airlines
- ❖ Maintain minimum cash balance of 10 months O&M (approximately \$200 million)
- ❖ Maintain minimum debt service coverage of 1.25x
- ❖ Grow non-aero revenue and net income to reduce amount of required debt
- ❖ Issue debt only as needed; vast majority of debt service paid by airline rates and charges
- ❖ Maintain focus on key metrics vs. peer airports
 - Cost per enplaned passenger (CPE)
 - Debt/enplaned passenger

Plan of Finance

Figures in \$000s

Funding Source	Plan of Finance - October 2013				Current	
	2014-18	2019-23	Total (\$)	Total (%)	Total (\$)	Total (%)
Existing Bonds	24,189	0	24,189	1%	30,224	1%
CFC	4,332	0	4,332	0%	1,976	0%
PFC	86,329	38,669	124,998	5%	197,385	8%
Grants	169,051	13,036	182,087	8%	212,979	9%
Tax levy - HSD Noise	3,549	1,708	5,257	0%	10,998	0%
Future Bonds	1,054,298	557,988	1,612,286	68%	1,592,832	66%
ADF	189,512	241,725	431,237	18%	381,221	16%
Total	1,531,260	853,126	2,384,386	100%	2,427,615	100%

- ADF (cash) derived from net income – principally non-airline sources

Project Costs Recovered by Users of Specific Facilities

- ❖ Project funding sources drive costs to various cost centers/rate bases -- paid by users of that cost center. For example:
 - Runway 16C: Airline landing fee
 - Baggage Optimization: Airline baggage system rates
 - NorthSTAR: Increases costs of terminal
 - Shared 77% airlines / 23% concessions
 - Airline share spread among all airlines – principally in gate cost center
 - IAF: FIS rate base, paid by international carriers

Runway 16C

Figures in \$000s

<u>Funding Source</u>	<u>2014-18</u>	<u>2019-23</u>	<u>Total (\$)</u>	<u>Total (%)</u>	<u>Rate Base (%)</u>
AIP	26,180	0	26,180	26%	0%
Future Bonds	73,044	0	73,044	74%	100%
Total	99,224	0	99,224	100%	

- ❖ Airlines pay all non-grant-funded costs in landing fees.

Baggage Optimization

Figures in \$000s

<u>Funding Source</u>	<u>2014-18</u>	<u>2019-23</u>	<u>Total (\$)</u>	<u>Total (%)</u>	<u>Rate Base (%)</u>
TSA Grant	89,100	4,100	93,200	30%	0%
Future Bonds	97,900	123,588	221,488	70%	100%
Total	187,000	127,688	314,688	100%	

- ❖ TSA has committed \$93 million in grants
- ❖ Airlines pay all non-grant-funded costs via Bag Claim, Bag Makeup and FIS rates.

NorthSTAR

Figures in \$000s

<u>Funding Source</u>	<u>2014-18</u>	<u>2019-23</u>	<u>Total (\$)</u>	<u>Total (%)</u>	<u>Rate Base (%)</u>
ADF	1,788	0	1,788	0%	100%
PFC	0	5,303	5,303	1%	0%
Future Bonds	365,800	85,374	451,174	98%	100%
Total	367,588	90,677	458,265	100%	

- ❖ Costs included in Terminal cost center
 - 23% of terminal costs allocated to concessions
 - 77% paid by all airlines, primarily in gates and bag make-up cost centers
 - AAG will pay only its pro rata share of airline costs

International Arrivals Facility

Figures in \$000s

<u>Funding Source</u>	<u>2014-18</u>	<u>2019-23</u>	<u>Total (\$)</u>	<u>Total (%)</u>	<u>Rate Base (%)</u>
ADF	63,571	5,034	68,605	20%	100%
PFC	126,642	9,330	135,972	40%	0%
Future Bonds	125,690	13,605	139,295	41%	0% *
Total	315,903	27,969	343,872	100%	

* Assumes revenue bond debt service paid by PFCs

- ❖ Acronyms: IAF = International Arrivals Facility; FIS = Federal Inspection Services (facility)
- ❖ All IAF costs roll into FIS cost center – paid by users of facility (international flights)
- ❖ Using Plan of Finance to keep FIS fees competitive with other airports
- ❖ May use portion of AIP entitlement grants when available

Passenger Facility Charge Use

- ❖ SLOA III established FIS/IAF as separate cost center
- ❖ Port clear in negotiations of plans to use financing strategy to ensure FIS airline fee remained competitive
- ❖ Since 1992, Sea-Tac spent \$972 million in PFCs to fund capital program and debt service
 - ❖ 57% spent on airfield; 43% on terminal projects
 - ❖ None spent on international facilities (i.e., FIS)
- ❖ With projected allocation to IAF, 1990-2023 PFC use to support international service will be ~11%

Comparative FIS Rates

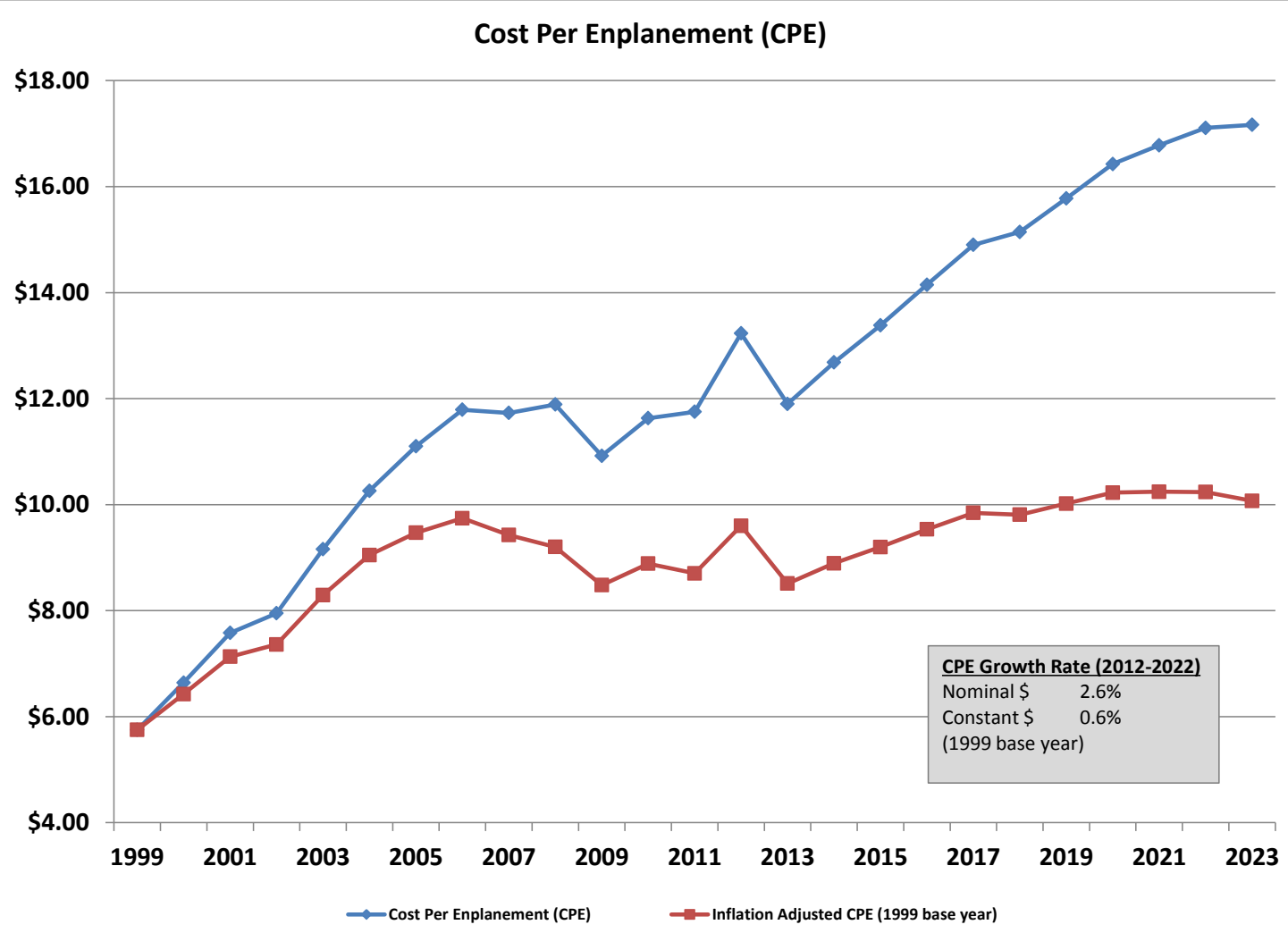
Airport	2013-2014	Comments
Denver	\$6.65	Not cost recovery. Increase 2 -3% per year.
Portland	\$6.00	Rate based on the number of passengers.
San Francisco	\$8.96	Average cost per passenger derived from international facility joint use fee.
Los Angeles	\$9.50	Signatory rate
Vancouver	\$12.42	FIS fee derived from terminal fee as well as a per aircraft turn fee for international flights.
Sea-Tac		
2014	\$5.76	Signatory rate, full cost recovery
2019	\$11.00	With planned use of PFCs
2019	\$25.00	Without use of PFCs

Passenger Facility Charge Use

Figures in \$000s

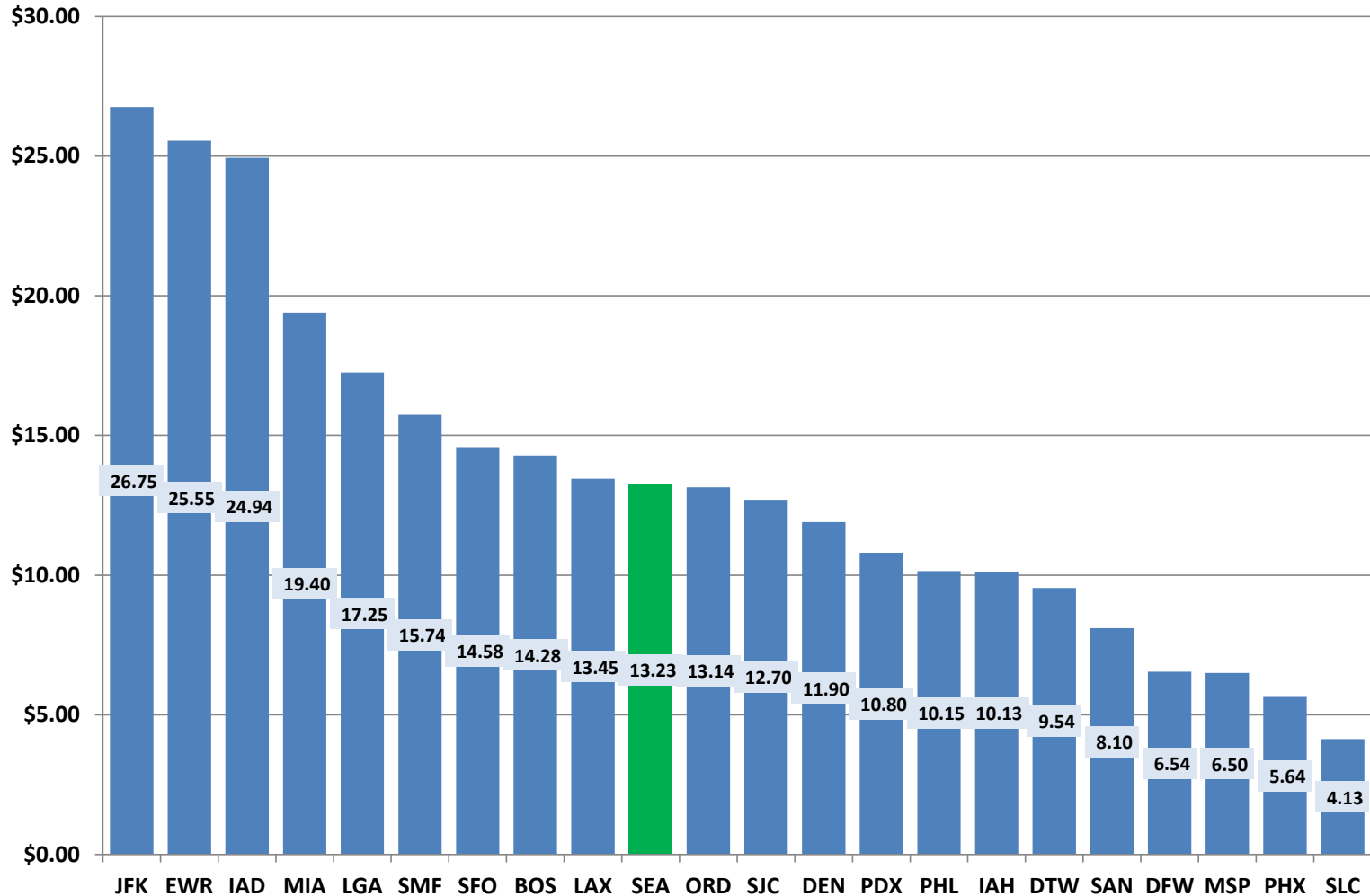
PFC USES	2014	2015	2016	2017	2018	2019
PFC Backed Bonds Debt Service						
Third Runway, Conc A, STS	18,770	18,770	18,767	18,915	20,129	20,128
Revenue Bond Debt Service						
Third Runway	20,794	25,099	25,901	28,240	28,240	28,430
Conc A & STS	9,595	4,781	3,675	1,336	1,337	3,927
Baggage systems (prior projects)	3,095	3,920	4,224	4,224	4,223	4,223
IAF						11,405
NorthSTAR	-					-
Total	33,485	33,800	33,800	33,800	33,800	47,985
TOTAL USED FOR DEBT SERVICE	52,255	52,570	52,567	52,715	53,929	68,114
Pay-Go Funding						
Noise	922	926	2,770	-	1,491	-
Baggage System (prior costs)	5,000	5,000	5,000	5,000	5,000	5,000
IAF		50,850	47,235	14,924	13,633	-
NorthSTAR						2,568
Total pay-go	5,922	56,776	55,005	19,924	20,124	7,568
TOTAL USES	58,176	109,346	107,572	72,639	74,053	75,682

Cost per Enplanement (CPE) Impact

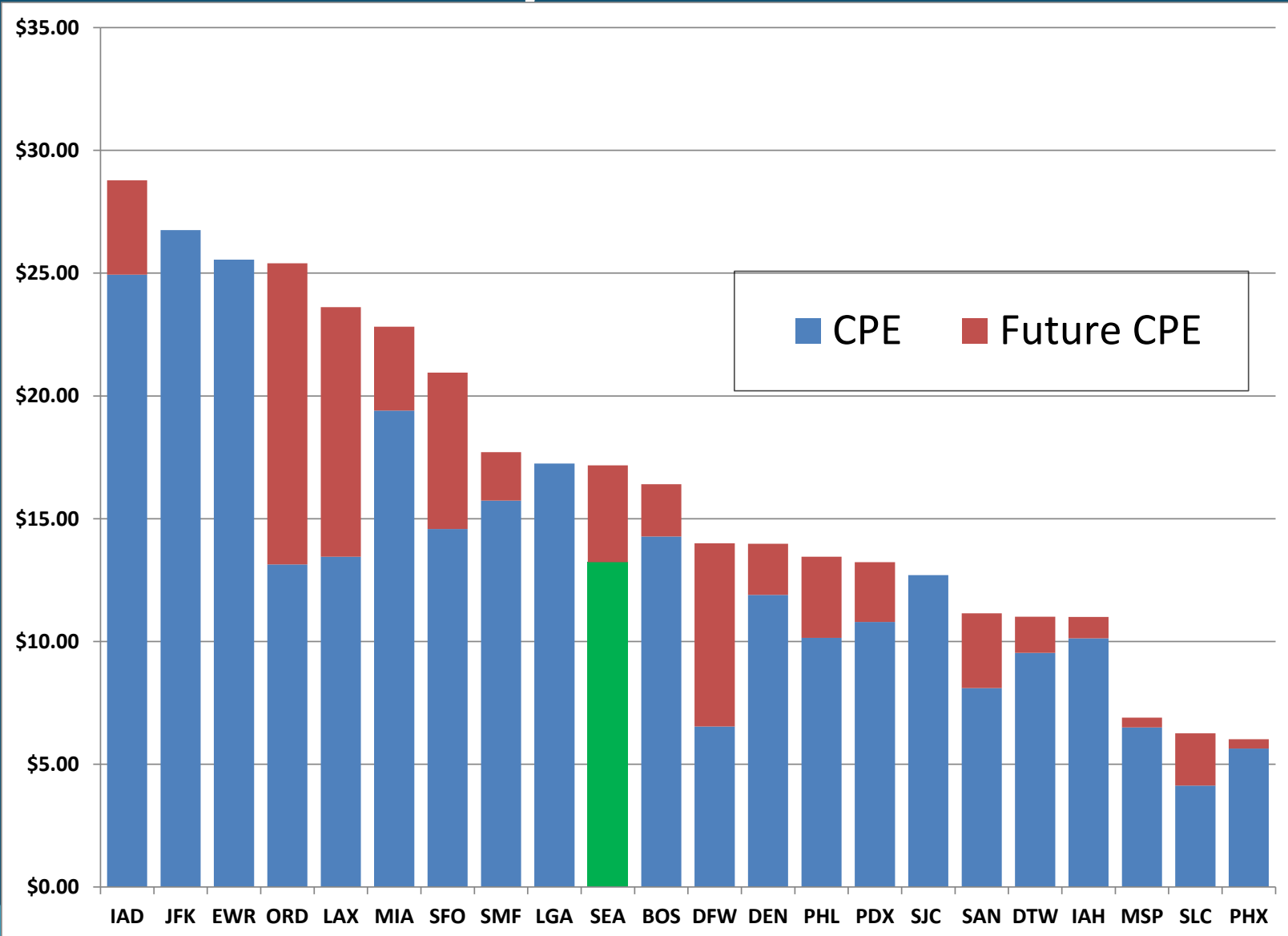


CPE Comparison - Current

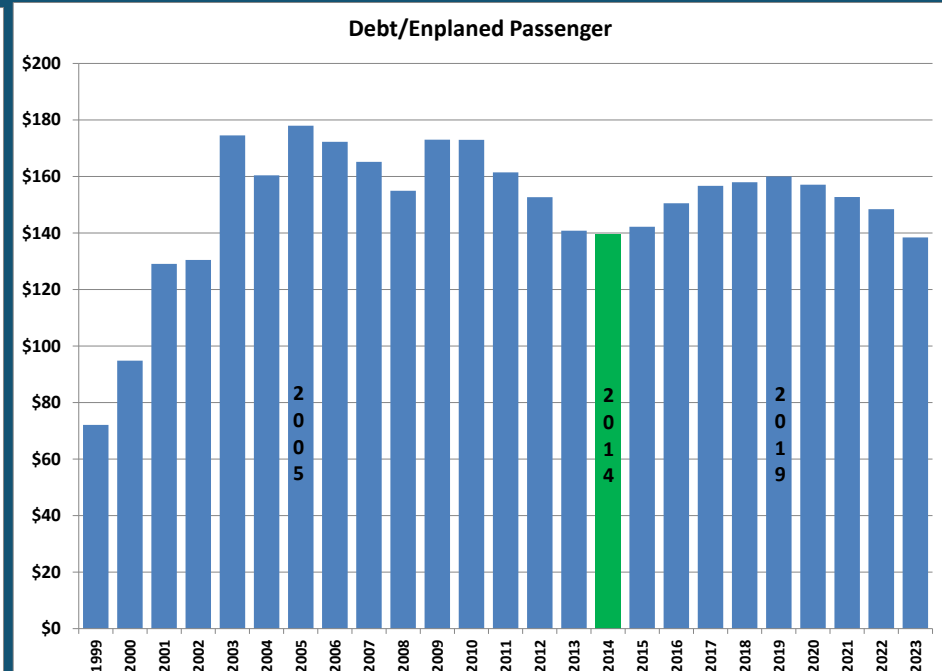
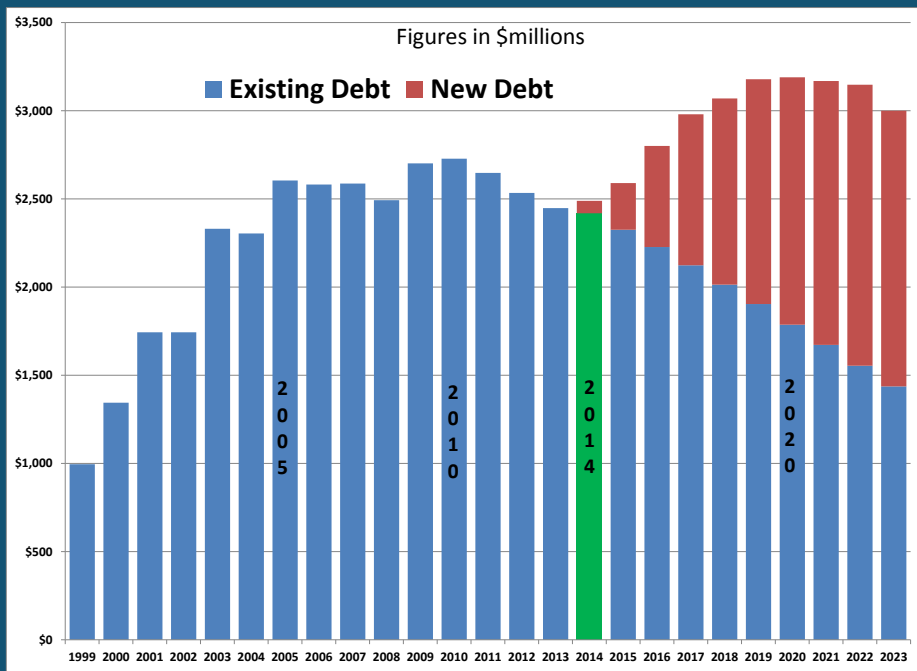
2012 CPE For 22 Peer Airports



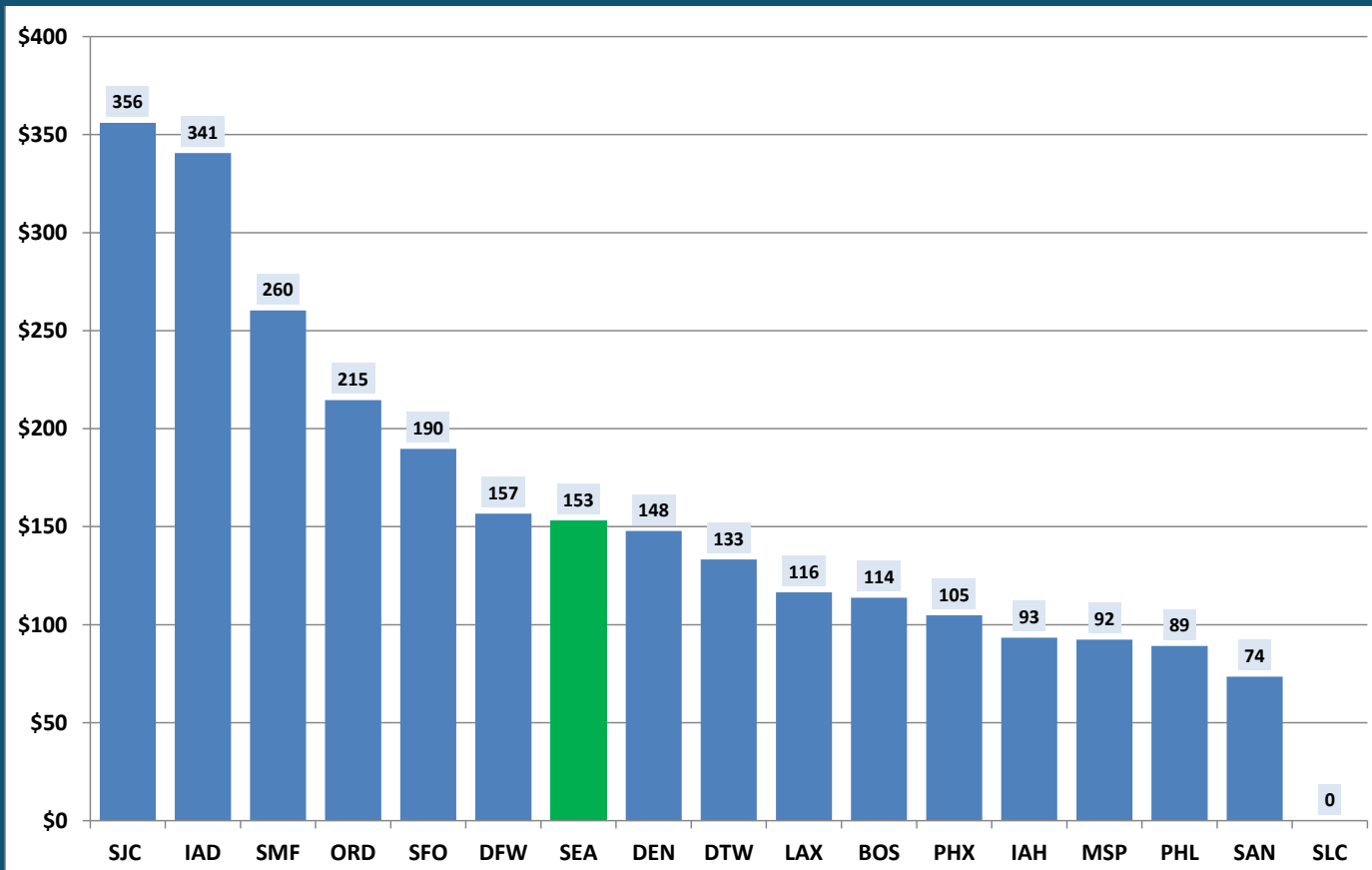
CPE Comparison - Future



Past and Future Debt Levels Sea-Tac Airport



Debt Per Enplaned Passenger 2012 Peer Airports



Airports that serve as major hubs have a higher percentage of connecting traffic and thus lower debt per enplaned passenger

Summary

- ❖ Current capital program needed to meet future demands and safe operations
- ❖ Plan of Finance is appropriate and affordable
 - Future debt and CPE levels within industry norms
- ❖ Strategic use of PFCs is critical to managing rate base balance among cost centers
- ❖ Port has ability to adjust allocation of funding sources as conditions and/or priorities change



INTERNATIONAL ARRIVALS FACILITY

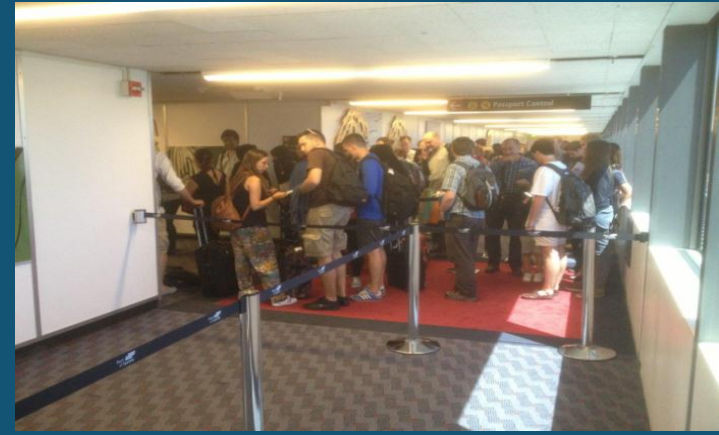
International Arrivals Facility

- ❖ What are the problems?
- ❖ How will we measure success?
- ❖ Elements of the solution
 - How can operational improvements help?
 - What facility improvements are required?
- ❖ How did we define scope?
- ❖ How build “just in time?”
- ❖ How best deliver project?

Problem: Insufficient Capacity; Unacceptable “Front Door”

- ❖ FIS facility design capacity = 1200/hour
 - 2014 peak summer schedule: ~1500/hour
 - 2014 peak demand with Irregular Ops: ~2000/hour
- ❖ Passengers increasingly required to wait on board aircraft due to insufficient capacity
- ❖ Aircraft can wait up to 45 minutes for gate
- ❖ Baggage system lacks capacity due to small claim devices
- ❖ Minimum Connect Time (MCT) too long

Inadequate Capacity



Unacceptable
Customer
Experience

Key Characteristics

	SSAT 1973	SSAT 2014	IAF 2018
Capacity (passengers/peak hour)	600	1200	~1900
Scheduled passengers at peak hour	NA	~1500	??
Number of FIS accessible gates	2	11	18
Passenger flow	Simple	Slow / confusing	Intuitive
Single bag claim process	No	No	Yes
Curbside direct access	No	No	Yes

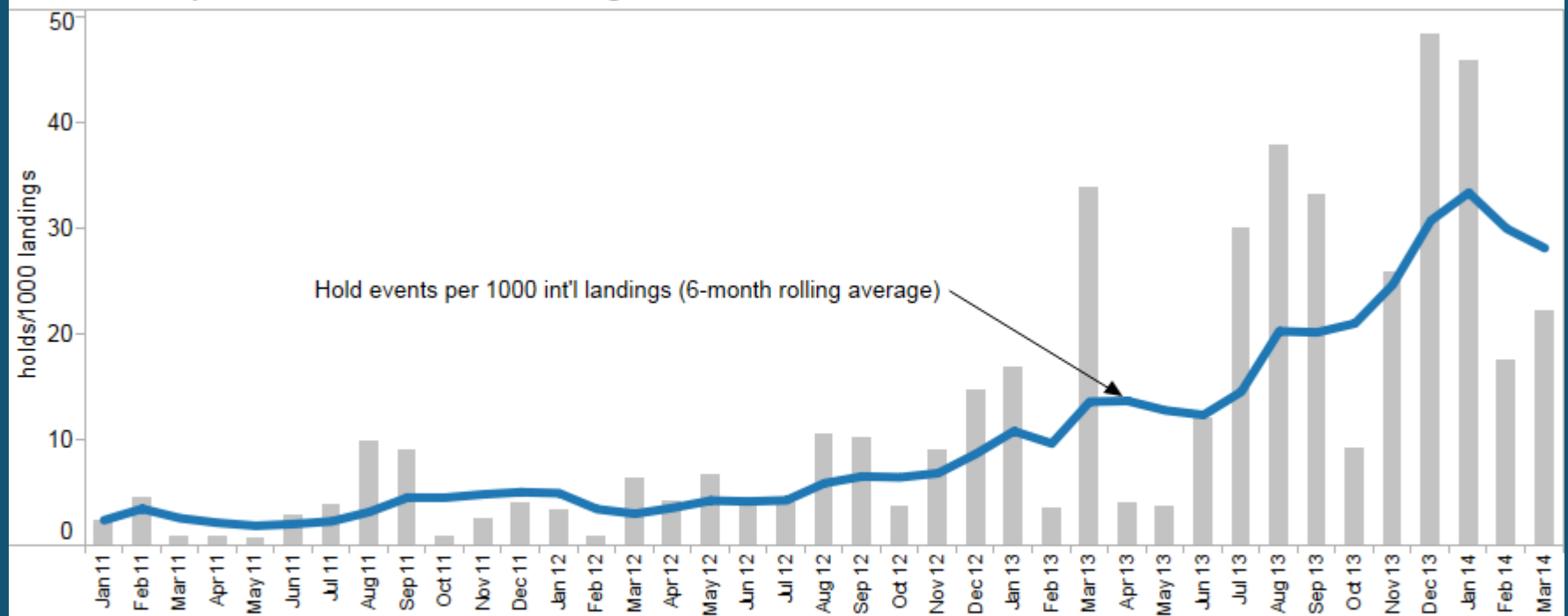
Customer Service Impacts

	Hold on Board	Hold in Corridor	Hold for Gate	Total Events	Minutes/ Customer
2013	23	339	16	378	19
2012	25	78	0	103	18
2011	20	36	0	56	13
2010	19	0	NA	19	9
2009	4	0	NA	4	NA

Source: Airport Operations Dept. logs

Inadequate Capacity: Passengers Cannot Proceed to FIS

Hold events per 1000 international landings



Includes passenger hold on board and hold in international corridor events only.

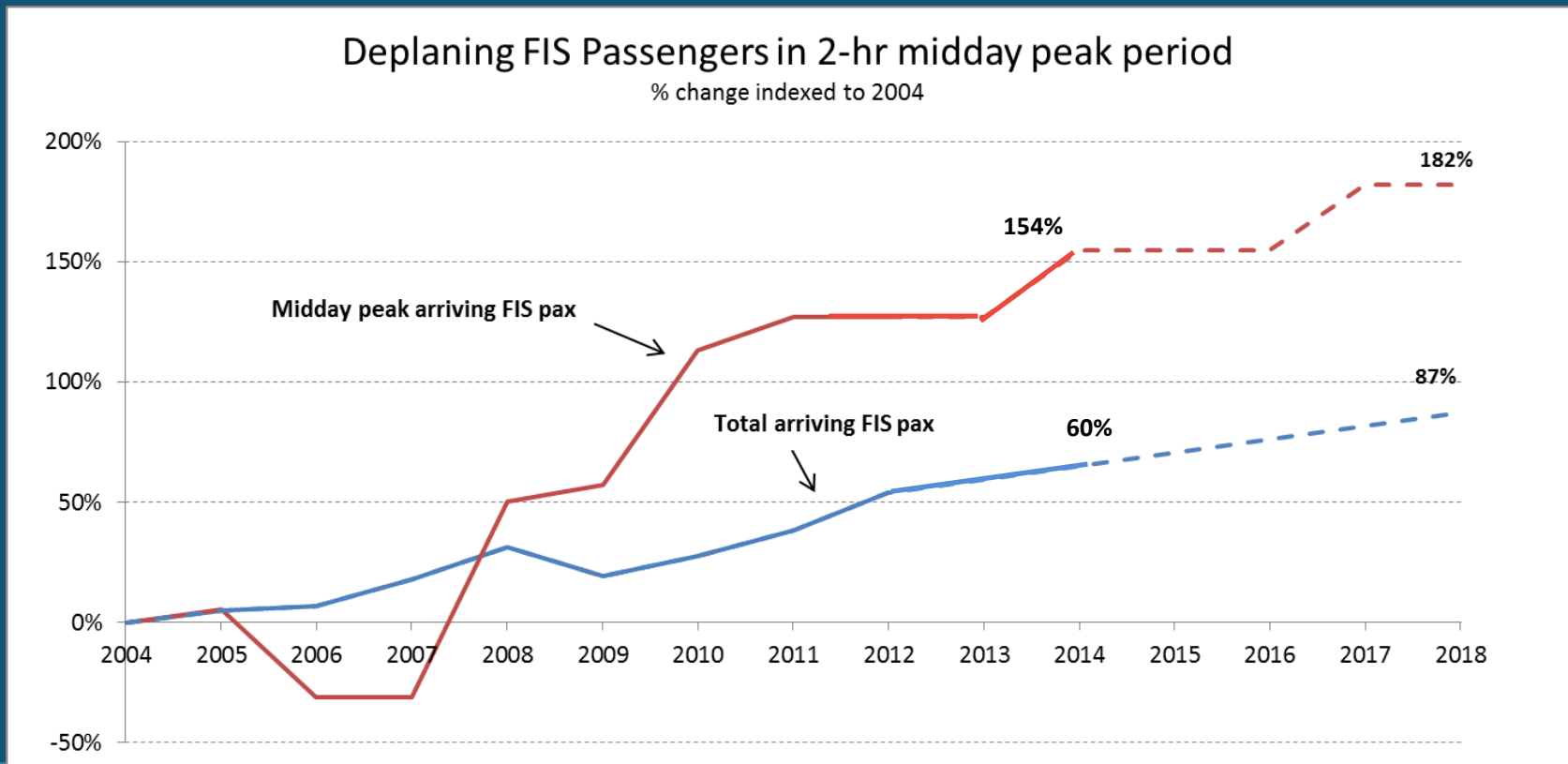
Source: Operations Dept. logs

Customer Service Metrics

Customer Service At Peak	1973	2013	IAF 2018
Hold on Boards:	0	23	0
Hold in Corridors:	0	339	0
Over Ramp Busing – possible times/day:	0	2 (2014)	0
Lines at “Primary” (Passport Check):	0	Long	Modest
Crowding at Baggage			
International Carousels	0	Extreme	Low
Terminal Carousel	0	Medium	Low
Double Bag Handling: FIS & Bag Claim	Yes	Yes	No
STS Train Wait (Minutes):	Low	4 (2 nd train)	N/A
Minimum Connect Time (minutes):	N/A	90	75

Demand/Capacity Mismatch Getting Worse

- ❖ SEA is among fastest growing international gateways; anticipate 600+ passengers per hour beyond capacity over the next 5 years
- ❖ International growth benefits airlines' domestic routes
- ❖ Airlines anticipating improvement; affects interest in Sea-Tac



Elements of the Solution

- ❖ Operational improvements
 - Expand Global Entry – now 3.4% of passengers
 - Automated Passport Control kiosks – now “all” U.S. and Canadian passport holders
 - 12 new CBP officers for Seattle (not all Sea-Tac)
 - Enhanced FIS customer-oriented staffing
- ❖ Short-term capital improvements at SSAT
 - Way finding -- stanchions in corridor
 - Additional “international” gate (2015)
 - Off-gate busing ability (seeking to avoid using)

Elements of the Solution -- CBP Wait Time Measures

2013 data (Jan-Dec)

	SEA	MIA	MCO	DFW	JFK	IAH	SFO
Processed passengers	1,348,703	9,643,416	1,457,359	2,984,363	6,059,294	4,048,937	2,473,425
Average Wait Time (minutes)	18	29	28	25	28	25	25
Passengers with wait time > 30 minutes	19%	37%	36%	30%	30%	30%	29%

Source: <http://awt.cbp.gov/>

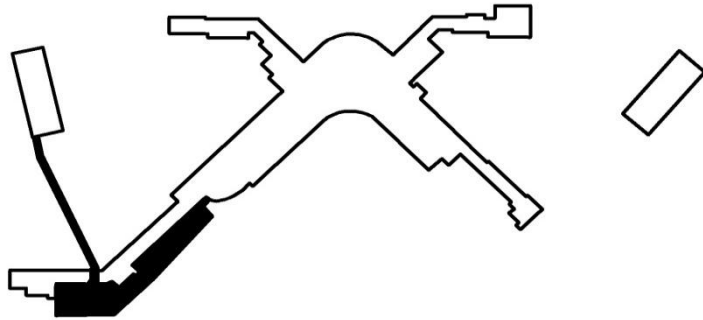
- ❖ TSA/CBP cooperation / effectiveness is high at STIA
- ❖ New CBP resources will flow to airports with worst problems

Elements of the Solution: Scope

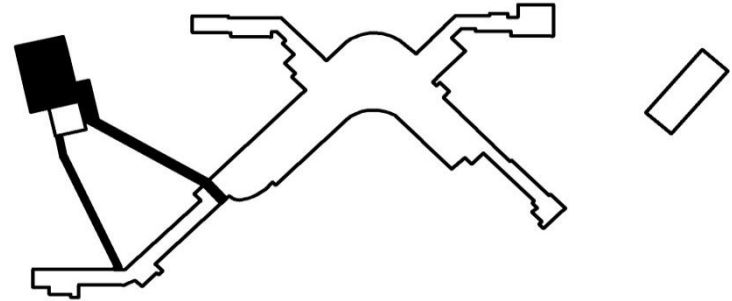
- ❖ New International Arrivals Facility (IAF)
 - 18 gates connected to IAF – no waiting for gate
 - Adequate primary processing – no holds on board or corridor
 - 6, then 8, bag claim carousels (vs. 4 today)
 - Shorter time to domestic connections for passengers and bags
 - Direct passenger access to landside (no double baggage pick-up)

Defined Scope with Airline Involvement

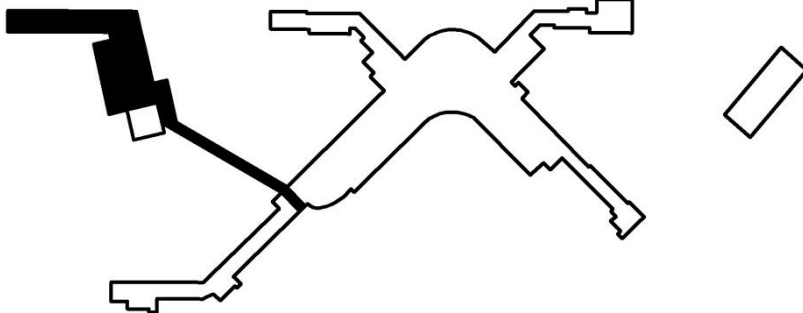
Option 1: New Concourse A IAF



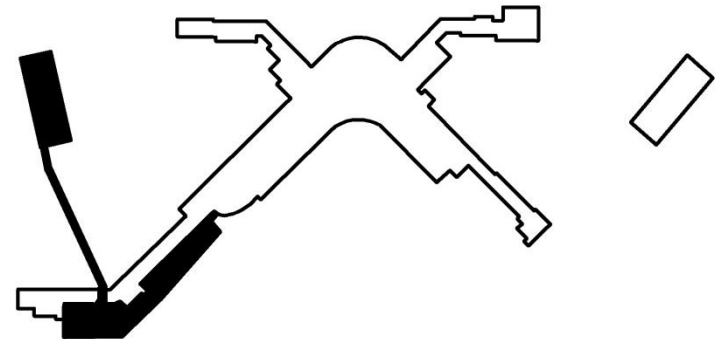
Option 2: Expand South Satellite IAF



**Option 3: Expand South Satellite IAF
with additional gates**



Option 4: Dual Processing IAF



Airline Engagement

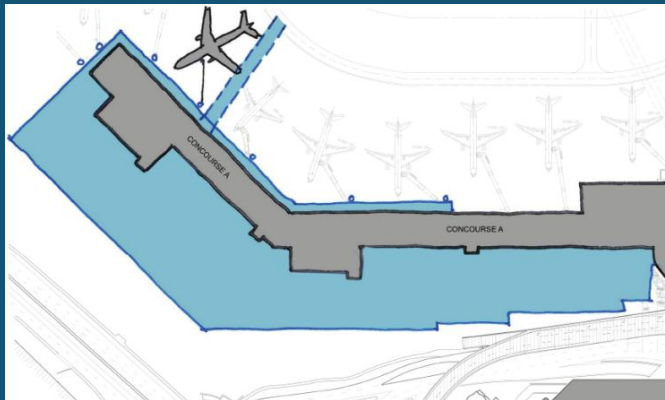
- ❖ Discussed 12 times over 4 years with AAAC
- ❖ Discussions over 24 months during SLOA III negotiations.
- ❖ 29 airlines signed SLOA III that includes separate IAF cost center, with understanding during negotiations of Port intent to use a distinct IAF PFC funding plan
- ❖ Concourse A facility selected

Construction Options

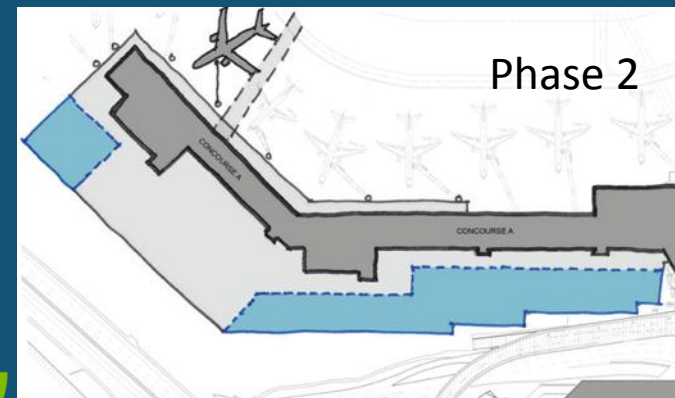
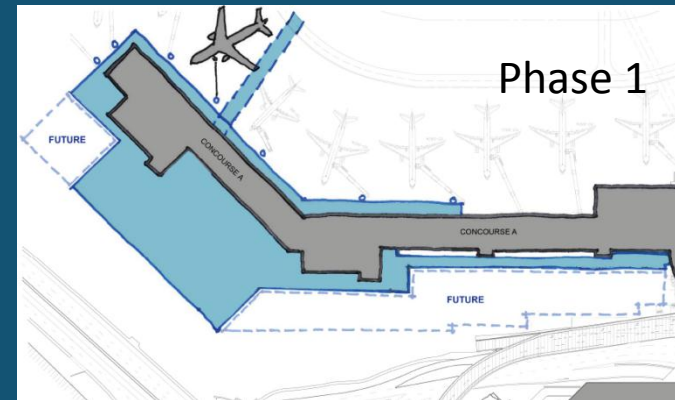
- ❖ Sought best combination of (1) providing necessary long-term scope while (2) controlling costs
- ❖ Examined three options:
 - Construct entire facility in one phase
 - Construct in two phases with both including partial shell and related improvements
 - Construct entire shell and only necessary near-term improvements in first phase; longer-term improvement in second phase

Construction: One Phase versus Two Phase

Build All in One Phase

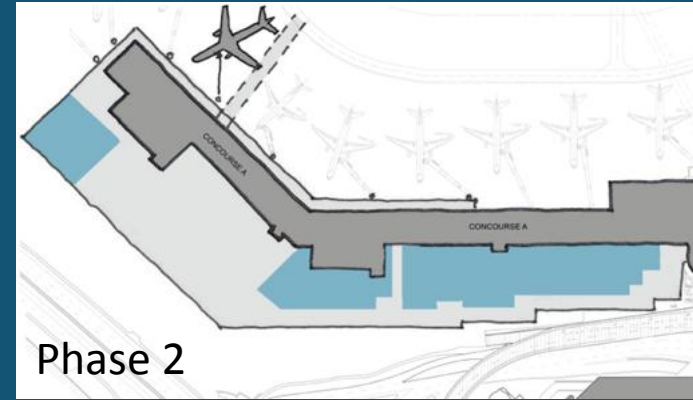
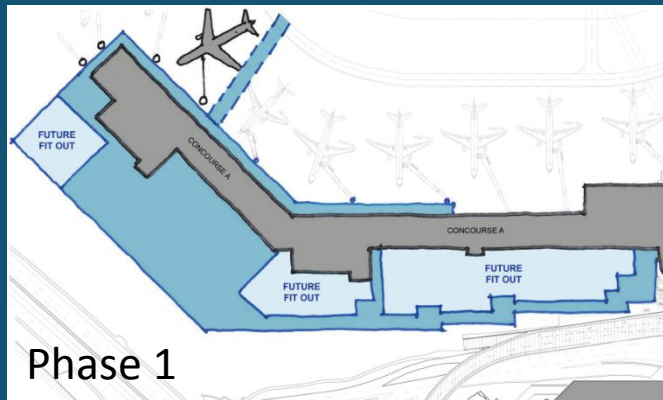


Build in Two Phases



Two Phase Construction

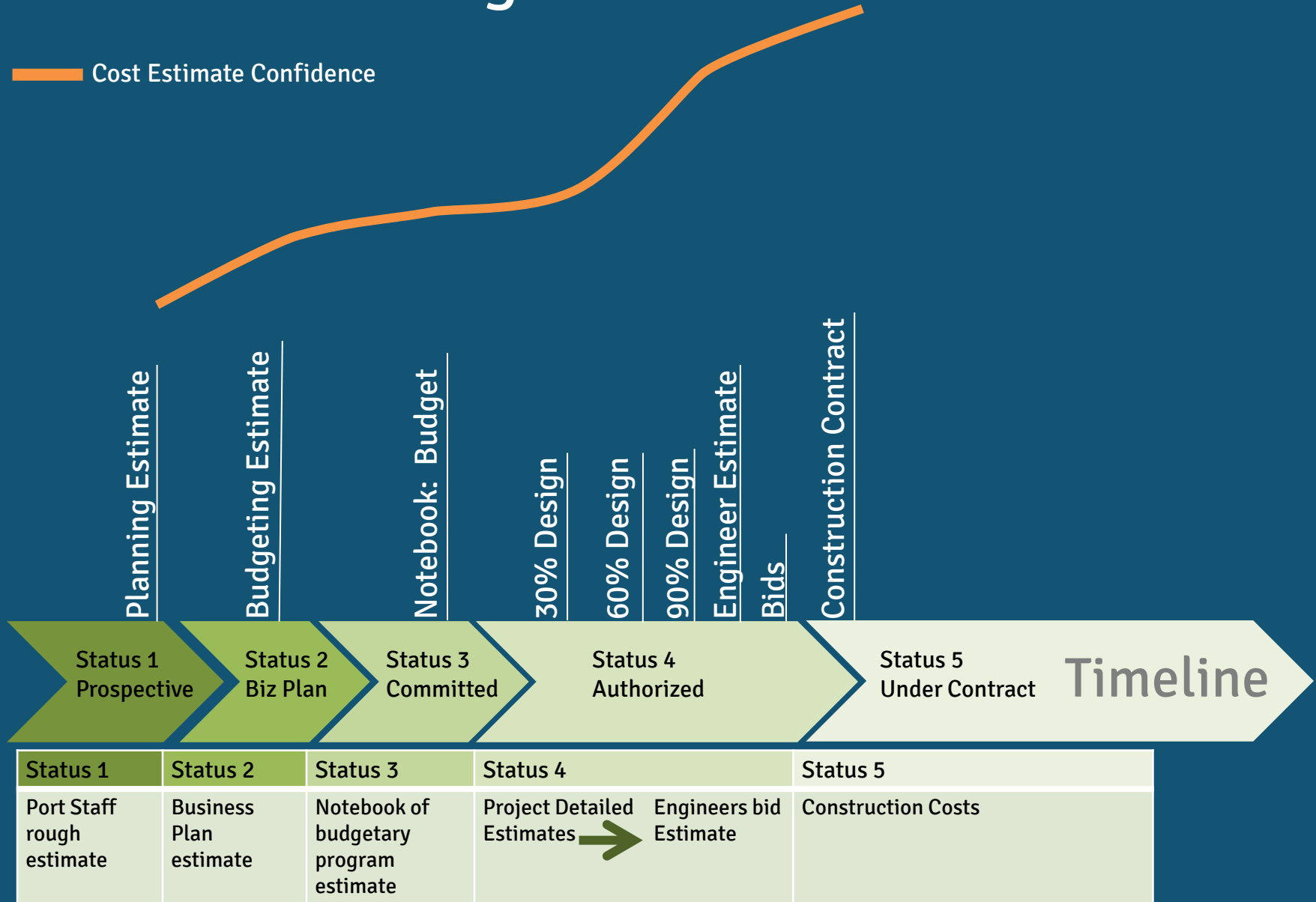
Construct Full Shell; Build Out Interior In Two Phases



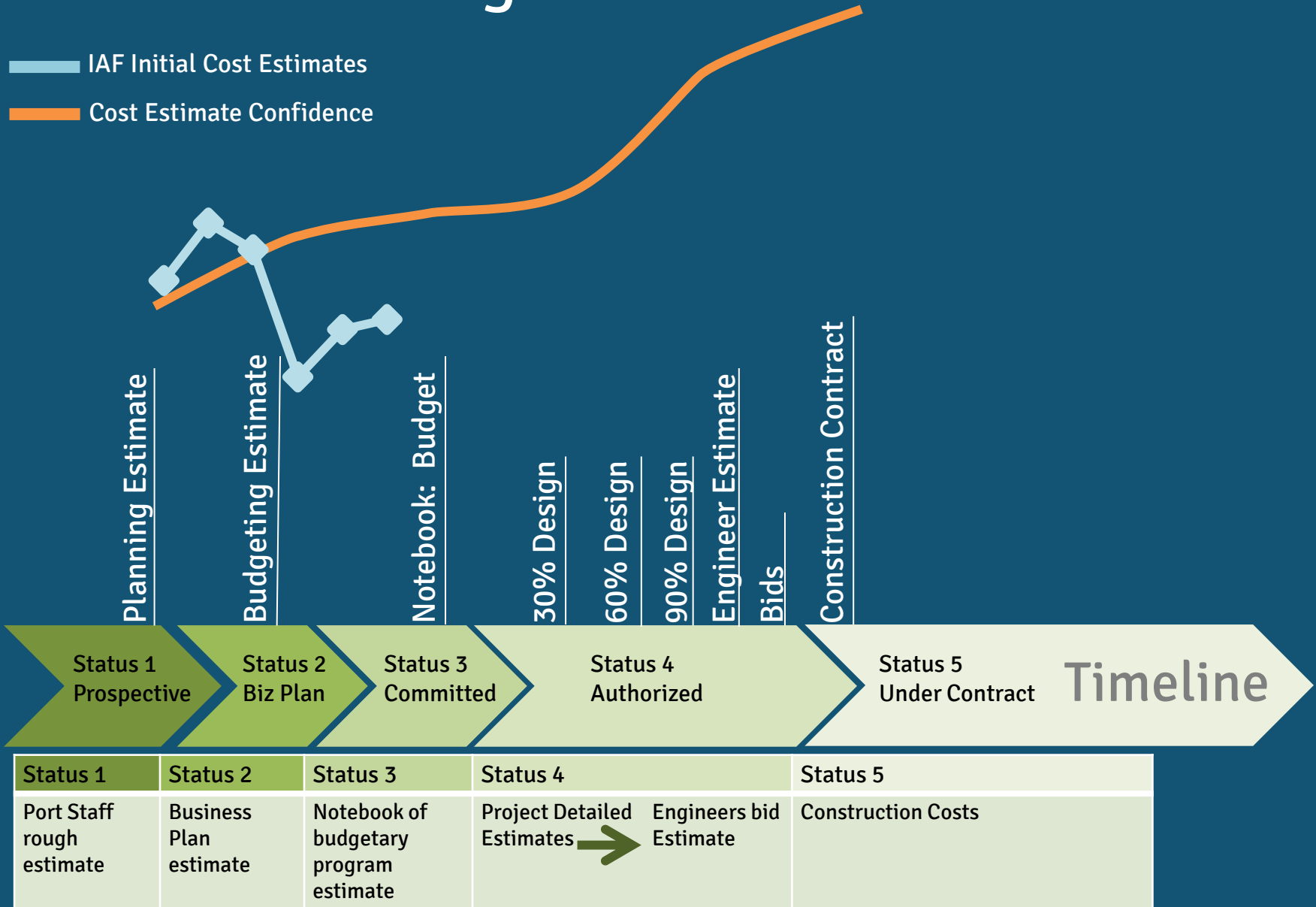
- ❖ Building full shell and only those improvements required for first 5 years is most cost-effective approach
 - Subsequent contract to construct second phase of shell would require new procurement, new Port staffing, contractor mobilization, etc.
 - More disruption of bus operation
 - No laydown area, etc.

Traditional Design to Construction Process

— Cost Estimate Confidence



Traditional Design to Construction Process



Project Delivery

- ❖ Have examined multiple delivery options, including:
 - Design/Bid/Build
 - Lump Sum Design/Build
 - Progressive Design/Build
 - General Contractor/Construction Manager
- ❖ Extended briefing scheduled for May 6 to discuss options and provide more information on Progressive Design/Build



BAGGAGE OPTIMIZATION

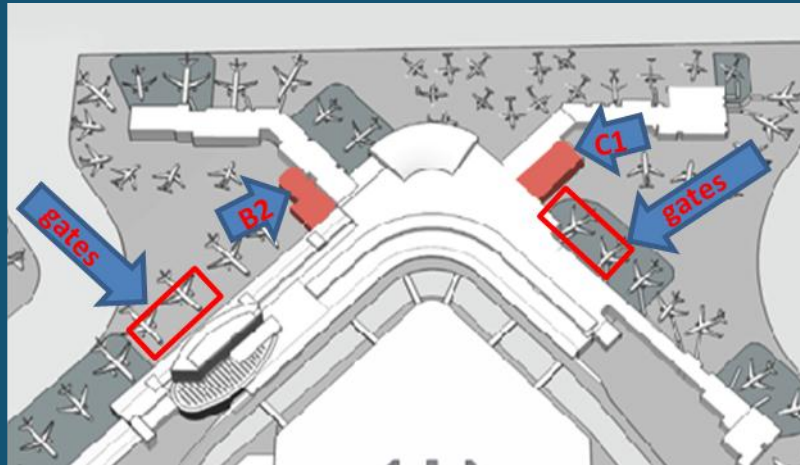
Baggage Optimization Will Address Major Long-term Challenge

- ❖ Now accommodate 35 Million Annual Passengers (MAP)
- ❖ Will need to handle ~60 MAP
- ❖ Four of the existing six systems are nearing end of life
- ❖ Current configuration won't support operations past 45 MAP
- ❖ Expanding current configuration would remove aircraft gates

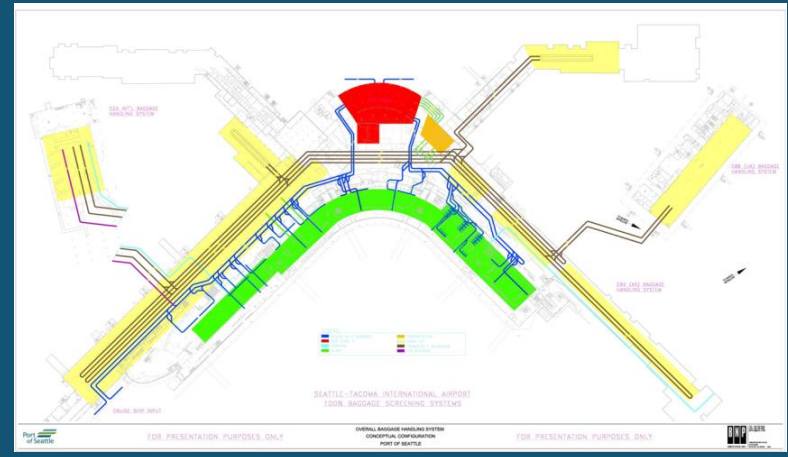
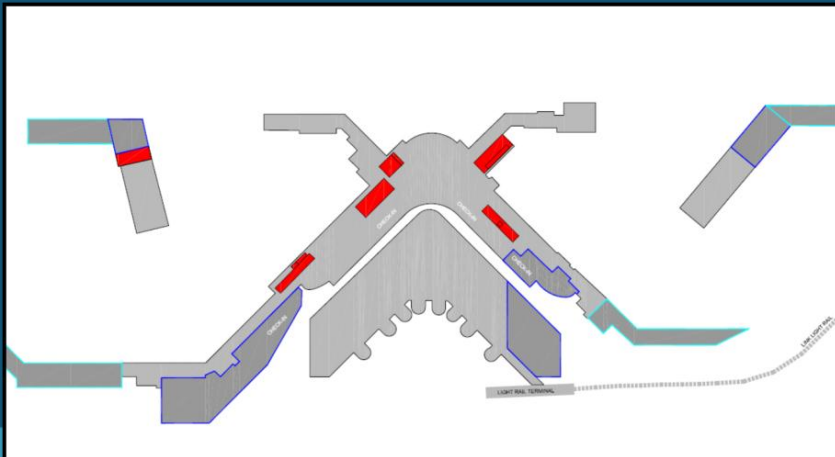
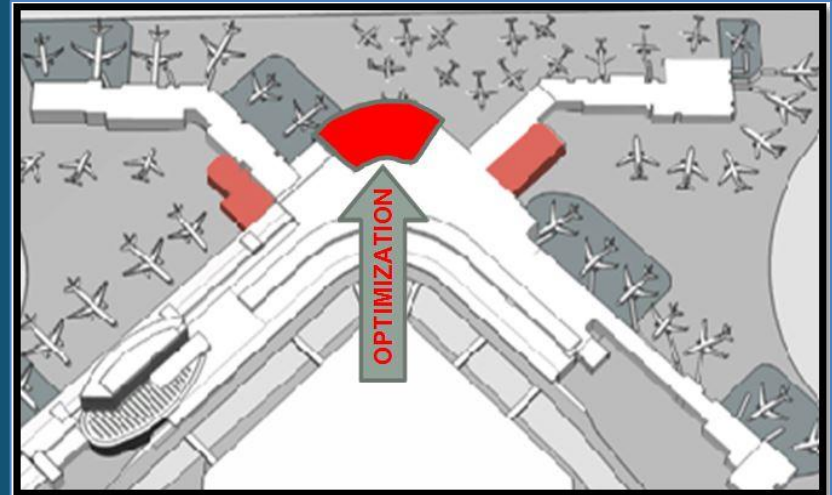


Baggage Optimization

Existing



Optimization





RUNWAY 16C/34C REPLACEMENT

Runway 16C/34C



RW 16C/34C Pavement Inspections





NORTHSTAR PROGRAM

Update And Key Issues

Agenda

- ❖ Origins of Project
- ❖ Collaboration with Alaska Air Group and other airlines
- ❖ Project Status
- ❖ Key Current Issues

Origins of Project

- ❖ Port staff planning upgrade to NSAT to address seismic, HVAC, and other issues
- ❖ ~2008 - AAG approached Port with interest in focused operations at NSAT and enhanced customer experience
- ❖ 2010 - Airline realignment planning initiated to facilitate AAG relocation to NSAT
- ❖ Q4 2010 - AAG retains consultant to articulate NSAT vision
- ❖ Q3 2011 - AAG presents north end development program to Port
- ❖ Q2 2012 - Port/AAG Letter of Understanding creates NorthSTAR Program; Commission authorizes initial funding
- ❖ Q2 2012 - Preliminary Project Notebook; Commission briefing defines \$300M NorthSTAR program

Collaboration with Airlines

- ❖ Since 2010 - Quarterly AAAC briefings re airline realignment
- ❖ Early 2012 – AAAC briefed on \$300M NorthSTAR Program
- ❖ Quarterly updates on progress of NorthSTAR program and specific projects; Q4 2013 NSAT expansion presented
- ❖ Four separate MII approvals for NSAT Design, Refurbish Baggage, Concourse C Vertical Circulation & NorthSTAR Program Management
- ❖ As chair of AAAC, AAG discusses program with other airlines

Project Status

- ❖ 4 of 5 projects authorized and active
 - Concourse C Vertical Circulation \$18.5M - starting construction
 - Baggage System \$21.5M - awarding construction contract
 - NSAT \$208.3M - 15% design complete; 30% design initiated
 - Main Terminal Improvements \$29.2M – in planning
 - Concourse C & D Exterior Stairs \$21.4M - still prospective project
- ❖ Briefing today / subsequent request to adjust scope
 - \$175.2M Five additional gates (\$ budget increase)
 - Design work underway consistent with expansion option
 - AAG indicated support in October, 2013; now completing 2nd look
 - Delta has requested additional gates

Key Issue – Dual Doors

- ❖ Alaska Air Group is evaluating benefit of adding scope to facilitate “dual door” operations at some NSAT gates
 - Allow passengers to enter/leave aircraft from front/rear doors
 - Could shorten the time required to “turn” an aircraft
- ❖ Would require addition of stairs, escalators, elevators, ramp-level passenger holdrooms, aircraft rear entry ramps
- ❖ Major questions:
 - Would this save sufficient time to justify AAG investment?
 - Would this allow airport to handle more aircraft at peak and, thus, reduce need for one or more gates?
- ❖ AAG committed to finalize its assessment and get Port staff concurrence by May 9

Key Issue – Add Five Parking Positions

- ❖ NSAT now has:
 - 12 jet bridge-equipped gates
 - 5 ramp loading positions for regional jets
- ❖ Current NorthSTAR NSAT scope:
 - 15 jet bridge-equipped gates
 - No (0) ramp loading positions for regional jets
- ❖ 2020 is first year completed NSAT will be available for peak summer period
- ❖ Airport last added gates in 2004 (replaced old 7-gate with new 14-gate Concourse A)
 - One gate since “lost” at Concourse D due to relocation of AA (addition of 757s) and restriping to accommodate winglets

Growth in Common Use Facilities

- ❖ Port works intensely to delay need to add gates or expand other terminal facilities
 - SLOA gate allocation process
 - Common use gates

	2000	2014
Common Use Gates	7	14
Airport Owned Passenger Loading Bridges	7	57
Common Use Baggage Make-Up Devices	1	16
Common Use Ticket Counters	0	62

Key Issue – Add Five Parking Positions

- ❖ Analysis indicates NorthSTAR should include expanded NSAT
- ❖ Reached conclusion following intense and quite conservative flight and gate analysis
- ❖ Cross-checked assumptions/inputs to ensure Seattle market could support
- ❖ Consistent with current airline business / network strategies

North Satellite Expansion Phase II



Gate Demand Analysis -- Background

- ❖ In mid-2013 AAG provided Port team with 2017 forecasted flight schedule for use in determining AAG gate demand
- ❖ Project team (with consulting assistance) gated this schedule using AAG operational “rules;” determined NSAT peak gate demand required 4 additional parking positions / gates to satisfy anticipated growth.
- ❖ Peak airline activity (5:45-8:30 AM, 8:15-12:00 AM) determines total number of required gates
- ❖ Q4 2013, AAG indicated support for NSAT expansion as most viable option for expanding gate availability (to meet AAG gate demand by 2020) – now confirming

Gate Demand Conservatism

- ❖ Assessing whether need more gates in 2020
- ❖ Used following airline schedule inputs
 - Alaska: 2017 projected schedule (as provided in mid-2013) - 13 more departures than 2013
 - Delta: 2014 actual schedule – 83 departures (not announced plans for 150 departures in 2017)
 - Other domestic airlines: 2013 schedule
 - International : Three more departures (beyond 2014 actuals)
- ❖ Assumed all gates available 24/7/365
 - No maintenance outages
 - No construction impacts




12 ungated flights require 4 additional gates

2020 NorthSTAR/Airport Wide Gating Analysis

NORTH SATELLITE

12 Ungated flights require 4 additional gates

Legend

-  Gate unavailable due to adjacent use
-  Aircraft on gate/RON
-  Buffer

Concourse	Position	Max AC Type	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM		
NSAT	N1	B-737-900WL						B-737-400 AS /ANC		B-737-800WL AS /ABQ	B-737-800WL AS SMC/SMF	B-737-800WL AS ABQ/ABQ	B-737-400 AS LAX/SIT		B-737-800WL AS SFO/SFO						B-737-400 AS SIT/KTN	B-737-800WL AS ANC/ANC	B-737-900WB-737-900WL AS DEN/					
NSAT	N2	B-737-900WL	B-737-800WL AS LAS/						B-737-800WL AS /SAN	B-737-800WL AS /LAS	B-737-800WL AS GEG/KOA	B-737-800WL AS /HNL	B-737-800WL AS /SAT	B-737-400 AS FAI/SMF		B-737-700WL AS LAS/ANC					B-737-900WL AS LAX/LAX	B-737-400 AS SLC/		B-737-400 AS /SIC	B-737-800WL AS ABQ/	B-737-400 AS LAX/		
NSAT	N3	B-737-900WL							B-737-900WL AS /SAN		B-737-400 AS /SFO	B-737-800WL AS DCA/STL										B-737-700WL AS PHX/BUR	B-737-700WL AS ANC/	B-737-400 AS FAI/	B-737-400 AS			
NSAT	N4	B-737-900WL						B-737-400 AS /JNU	B-737-900WL AS ANC/PHL	B-737-400 AS ONT/SAN	B-737-900WL AS DFW/ANC	B-737-900WL AS LAS/LAS	B-737-900WL AS LAS/DEN								B-737-800WL AS JNU/SFO	B-737-900WL AS SAN/LAX	B-737-800WL AS	B-737-800WL AS ABQ/				
NSAT	N5	B-737-900WL	B-737-400 AS JNU/					B-737-400 AS /KTN	B-737-800WL AS /JNU	B-737-900WL AS SAN/TUS	B-737-800WL AS ANC/DEN											B-737-800WL AS LAS/ANC	B-737-900WL AS DFW/	B-737-900WL AS SNA/				
NSAT	N6	B-737-900WL						B-737-900WL AS /SNA	B-737-900WL AS /ANC	B-737-800WL AS SLC/MCO			B-737-900WL AS ORD/LAS									B-737-900WL AS ONT/SFO	B-737-800WL AS	B-737-900WL AS ANC/BOJ				
NSAT	N7	B-737-900WL						B-737-900WL AS /MSP	B-737-800WL AS PHX/ANC	B-737-800WL AS SNA/SAN	B-737-400 AS PHX/AUS	B-737-900WL AS KTN/SLC	B-737-400 AS SMF/LAS	B-737-400 AS SFO/KTN								B-737-900WL AS TUS/SAN	B-737-800WL AS ABQ/ABQ	B-737-800WL AS LAX/LHX	B-737-800WL AS LHX/	B-737-800WL AS SAN/		
NSAT	N8	B-737-900WL						B-737-900WL AS ANC/OAK	B-737-400 AS /LAX	B-737-800WL AS /ABQ	B-737-800WL AS ABQ/ABQ											B-737-400 AS SFO/ONT	B-737-400 AS KTN/	B-737-400 AS /ANC				
NSAT	N9	B-737-900WL						B-737-700WL AS /DFW	B-737-900WL AS /ORD		B-737-700WL AS SNA/PSP											B-737-800WL AS DEN/LAS	B-737-800WL AS OAK/	B-737-400 AS EWR/GEG	B-737-800WL AS			
NSAT	N10	B-737-900WL						B-737-800WL AS /SMF	B-737-900WL AS LAX/BOJ		B-737-900WL AS EWR/SFO	B-737-900WL AS SLC/ORD										B-737-800WL AS LAS/	B-737-800WL AS IAH/	B-737-800WL AS LHX/	B-737-800WL AS JNU/			
NSAT	N11	B-737-900WL	B-737-900WL AS ANC/					B-737-900WL AS /ONT	B-737-800WL AS /ABQ		B-737-400 AS JNU/	B-737-400 AS DEN/JNU										B-737-800WL AS ABQ/ABQ	B-737-800WL AS SIC/SJC	B-737-800WL AS KOA/JNU	B-737-800WL AS SNA/ANC	B-737-800WL AS HNL/		
NSAT	N12	B-737-900WL						B-737-400 AS /ANC	B-737-400 AS /SNA	B-737-400 AS JNU/MCI	B-737-800WL AS DEN/JNU											B-737-800WL AS KOA/JNU	B-737-400 AS LAX/	B-737-800WL AS ORD/	B-737-900WL AS			
NSAT	N13	B-737-900WL						B-737-800WL AS /SFO	B-737-900WL AS OGG/		B-737-800WL AS /OGG											B-737-800WL AS LAX/SNA	B-737-700WL AS DFW/SNA	B-737-800WL AS LAX/SMF	B-737-800WB-7-7-400WL AS ATL/GEG	B-737-800WL AS PHX/OAK	B-737-800WL AS SFO/	
NSAT	N14	B-737-900WL						B-737-800WL AS /SIC	B-737-900WL AS /LAX	B-737-700WL AS LAS/OAK	B-737-800WL AS ABQ/ABQ	B-737-800WL AS SIC/	B-737-400 AS /PHX									B-737-800WL AS SIC/OGG	B-737-800WL AS KTN/HNL	B-737-900WL AS SAN/	B-737-900WL AS /FLL	B-737-900WL AS ANC/DFW		
NSAT	N15	B-737-900WL						B-737-800WL AS /SIC																B-737-900WL AS ABQ/ABQ	B-737-400 AS SAN/			
NSAT	New1	B-737-900WL						B-737-800WL AS FAI/	B-737-800WL AS BUR/															B-737-700WL AS BUR/	B-737-900WL AS SFO/			
NSAT	New2	B-737-900WL						B-737-900WL AS ANC/DGS																B-737-900WL AS PHL/	B-737-900WL AS /ANC			
NSAT	New3	B-737-900WL						B-737-800WL AS ANC/	B-737-800WL AS 7DCA															B-737-800WL AS ANC/	B-737-400 AS SIC/			
NSAT	New4	B-737-900WL																							B-737-800WL AS SAT/			

Examined Ability to Put Flights Elsewhere

- ❖ 12 “un-gated” AAG flights at the North Satellite – at morning and evening peak
- ❖ Could gate 10 of 12 flights on Concourses A, B and SSAT – if AAG were willing and no other growth
- ❖ Remaining un-gated flights means minimum of 2 additional NSAT gates (beyond 15 in scope)
- ❖ However, assumptions already out of date:
 - Assumed 2013 to 2017 AAG growth of only 13 flights
 - AAG 2014 schedule already up by 8 flights
 - AAG indicates that 2017 departures likely substantially more than what assumed in analysis

Gate Demand Analysis “Reality Check”

- ❖ Evaluated whether analytic assumptions are beyond what Seattle market can support
- ❖ Used additional departures, seats and load factors (LF), to calculate growth of enplanements between 2013 and 2020
- ❖ Equaled annual growth of:
 - 1.0% -- 70% load factor
 - 1.25% -- 85% load factor
- ❖ This compares to historical and projected passenger growth at Sea-Tac:
 - 2010-2013: 2.9% (since recovery from recession)
 - 2000-2013: 1.6% (includes impacts of 9/11; two recessions)
 - FAA approved long-range forecast: 2.3%

Greater Concern May Be That NSAT Gate Expansion May Not Be Enough

- ❖ Since completion of analysis, both AAG and DL indicate they expect to grow faster
 - AAG: Has announced more destinations from SEA
 - We expect AAG will allocate more aircraft to Seattle routes
 - DL: Remains committed to plans to grow to 150 daily departures in 2017 (~110 in 2015 and ~130 in 2016)
- ❖ Some of this growth could offset each other and some could “cannibalize” other airlines
- ❖ But very possible that Sea-Tac could see unusually fast growth for next few years (before settling back to long-term average growth)
 - Strategic location as international gateway
 - Seattle area economy is one of healthiest in nation
 - Airlines far more disciplined; seek sustainable expansion

Risk of Underbuilding Gates During NorthSTAR

- ❖ NSAT is by far the best – least expensive and most timely – location to add gates
- ❖ If we waited until after completion of current NSAT scope to add gates, would:
 - Need to take four gates out of service (airport would then have three fewer gates ~2021 to 2023 than today)
 - Need to re-procure designers and contractors
- ❖ Airlines would have to load and unload significant number of passengers at remote gates with busing to/from the terminal
- ❖ North Satellite would remain severely constrained in customer amenities – hold room capacity and concessions offerings

Implications of Building in Anticipation of Demand

❖ Pros:

- Construction closures less problematic
- Airlines do not limit plans due to capacity constraints
- Likely lower costs to airlines, measured as NPV
- Able to address shortage in concessions and other customer amenities

❖ Cons:

- Airline gate fees grow a little earlier
- Port costs (23% of terminal) increase earlier, offset by concessions revenue increases

Conclusion: Expand NSAT during NorthSTAR

- ❖ Very conservative assumptions underlie analysis demonstrating four gate shortfall
- ❖ Expanding North Satellite to provide 20 gates is all that is possible prior to having to “dogleg” NSAT for full expansion
 - Least cost option; consistent with long-range airport expansion plan
 - NSAT 15% design complete; good time to adjust scope
 - Additional gates would provide some buffer between 20-gate NSAT and subsequent expansion
 - Greatly enhances level of service for passengers -- increased concessions, holdrooms, and customer service areas

Next Steps re NSAT Expansion

- ❖ May 9, 2014 - Alaska Airlines final confirmation of scope re dual doors
- ❖ June 2014 - Majority in Interest vote of airlines
- ❖ July 22, 2014 - Request for Commission authorization to expand and complete design

Questions?

