

SEATTLE PORT COMMISSION PANEL DISCUSSION

Airport Master Planning

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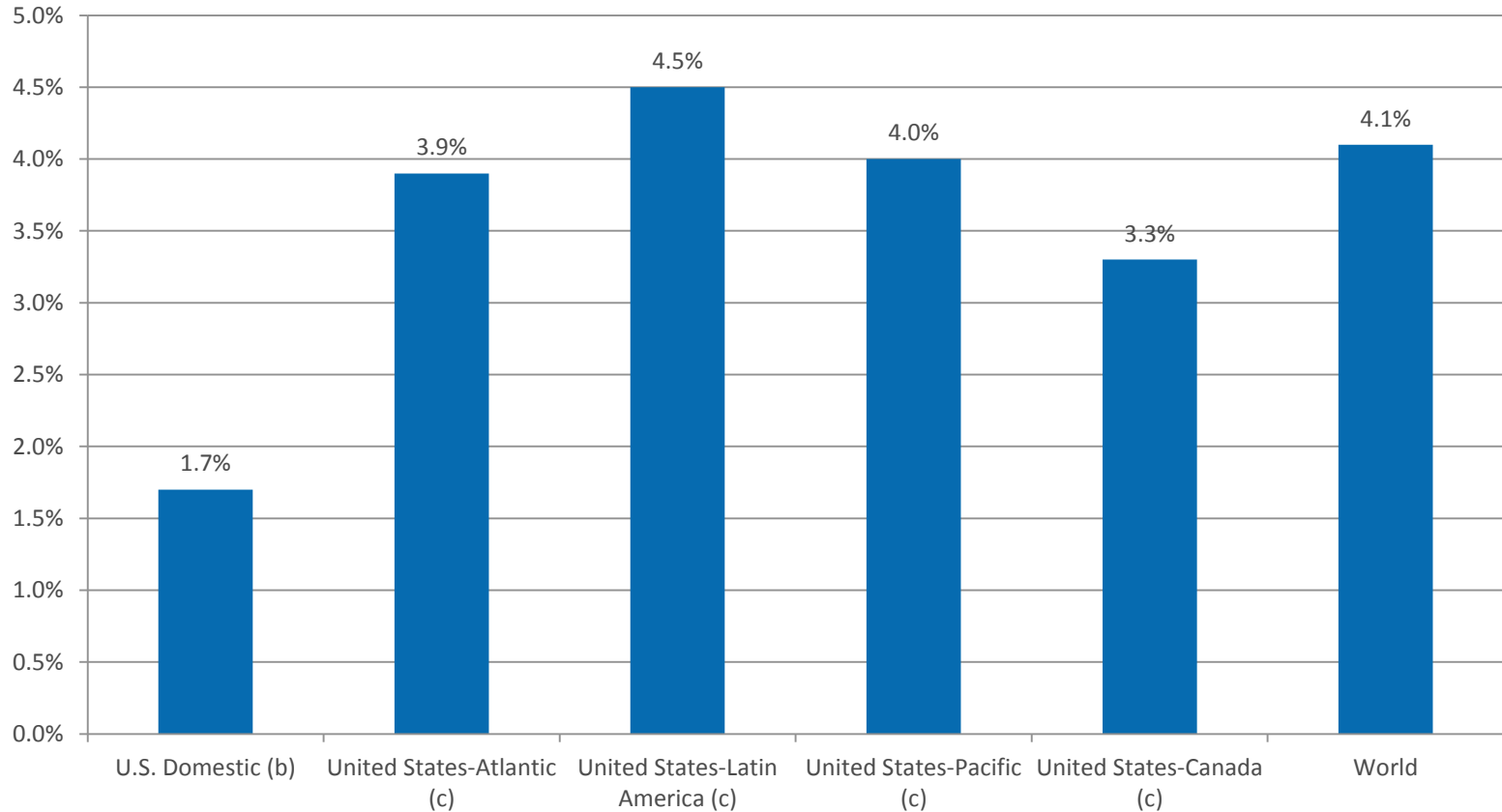
February 23, 2016



General Remarks on Industry Trends

- Long-term aviation activity forecasts
- Industry and world events related to aviation activity
- Airfield/airspace
- Terminal
- Ground transportation
- Commercial development
- Technology
- Sustainability

Forecast Passenger Growth, by Region, 2014 - 2035 (a)

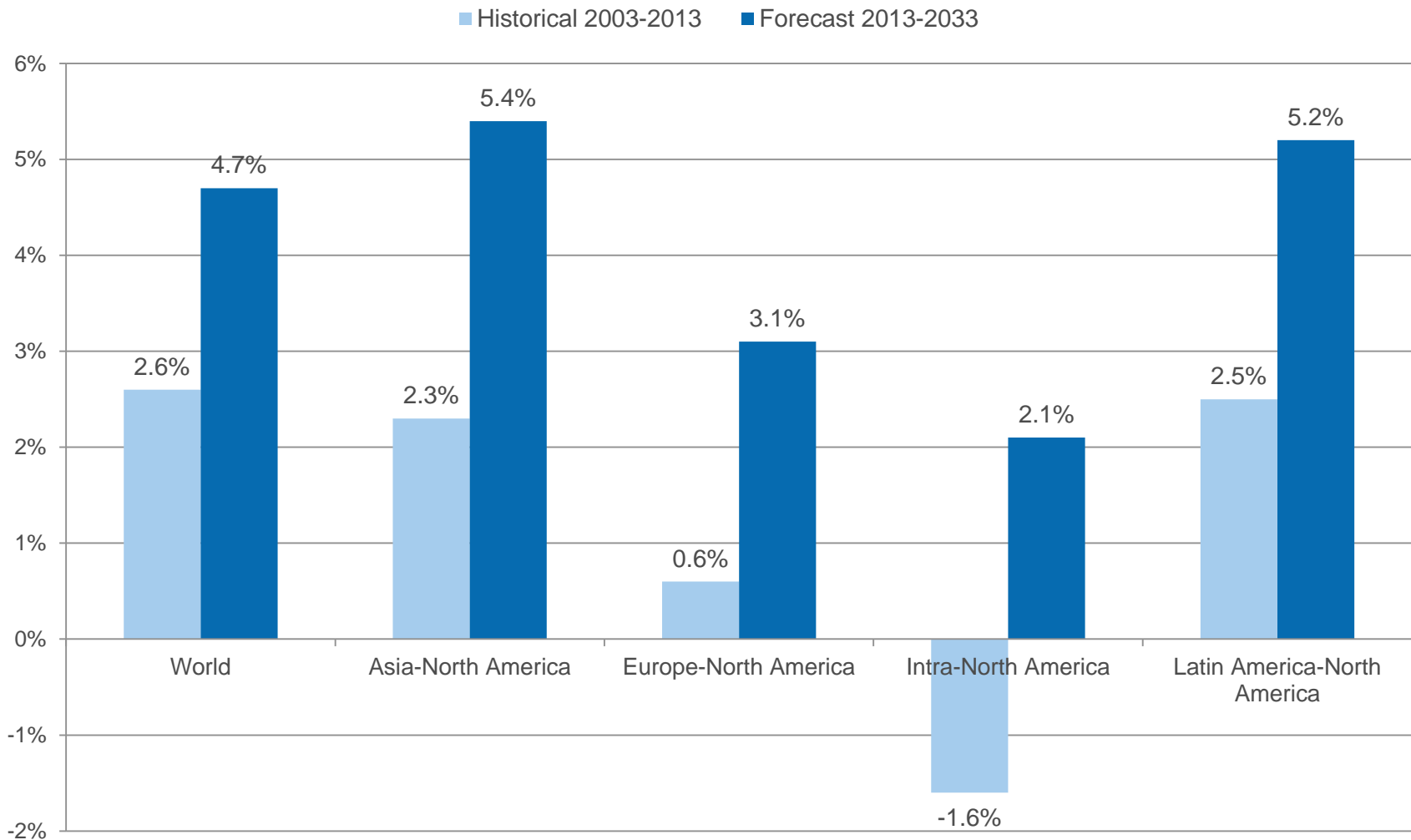


(a) Represents the compound average annual percent change for passengers.

(b) Includes U.S. mainline and regional airlines.

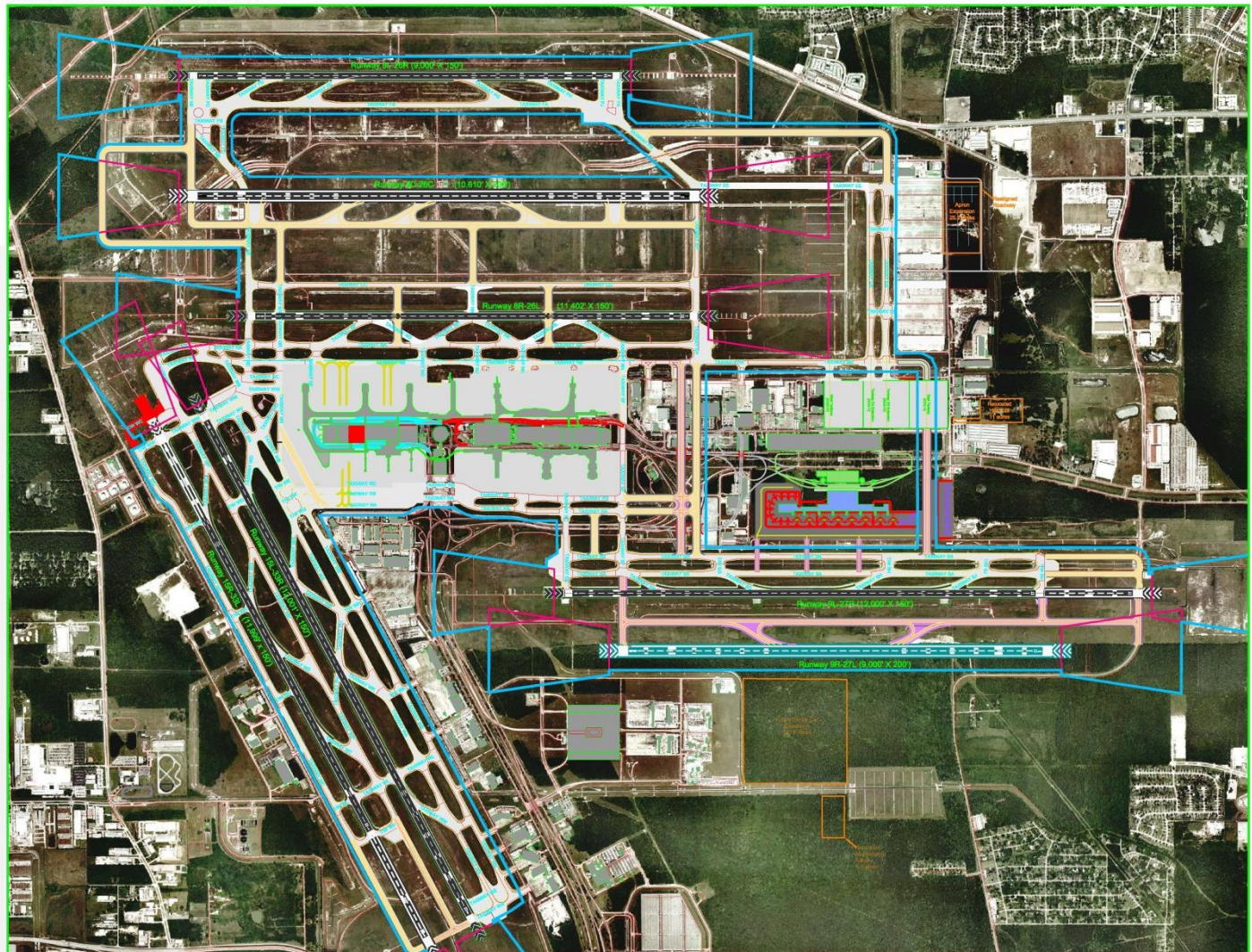
Source: U.S. Department of Transportation, FAA Aerospace Forecast, Fiscal Years 2015-2035, March 2015, www.faa.gov.

Historical and Forecast Air Cargo Growth Between North America and Selected Regions (a)



(a) Represents the compound average annual percent change for air cargo.

(b) Source: Boeing Corporation, World Air Cargo Forecast, 2014-2015, www.boeing.com.

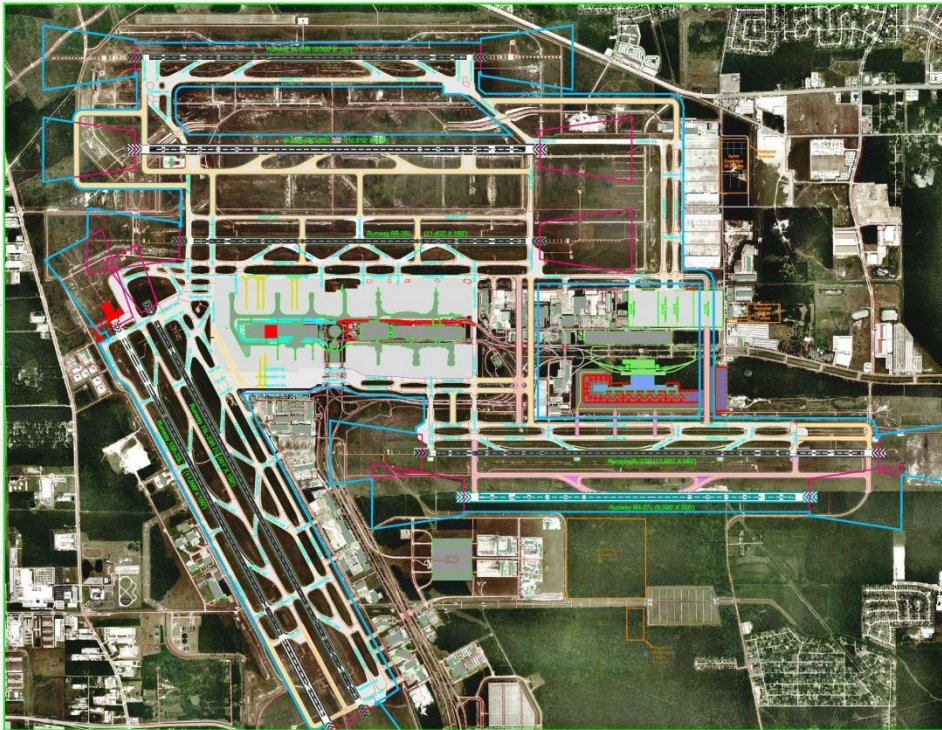


Physical Characteristics

- Airport size (acres):
11,000 acres
- Number of gates:
129
- Number of runways:
5

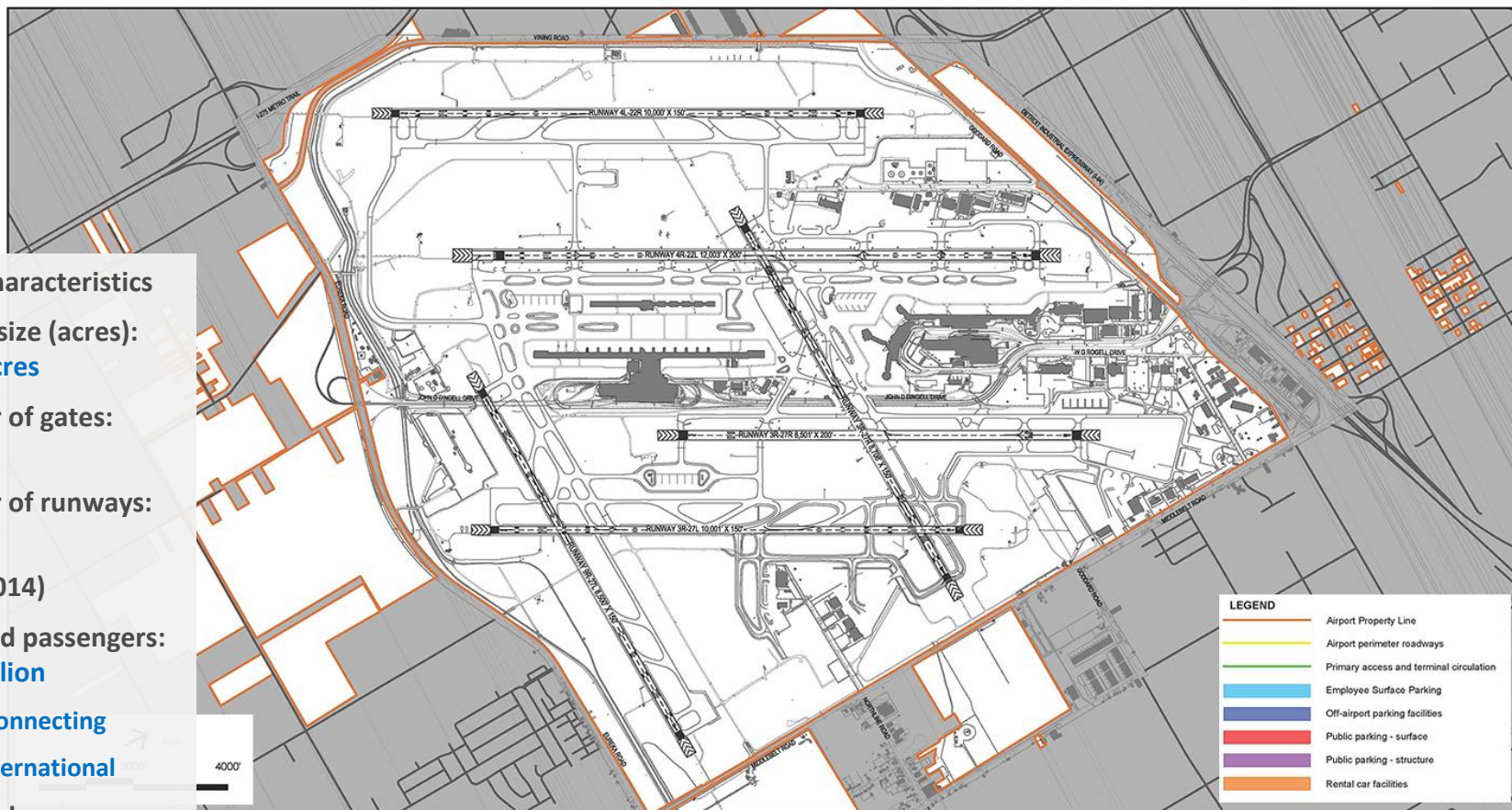
Activity (2014)

- Enplaned passengers:
21.5 million
 - 53% connecting
 - 25% international
- Enplaned cargo:
430,000 metric tons
- Aircraft operations:
503,000



- International facilities (new international terminal being developed)
- Terminal modernization—Terminal A modernization in project definition stage of development
- Airfield capacity—two new runways and accompanying taxiways considered
- Curbside congestion
- Parking

Overview



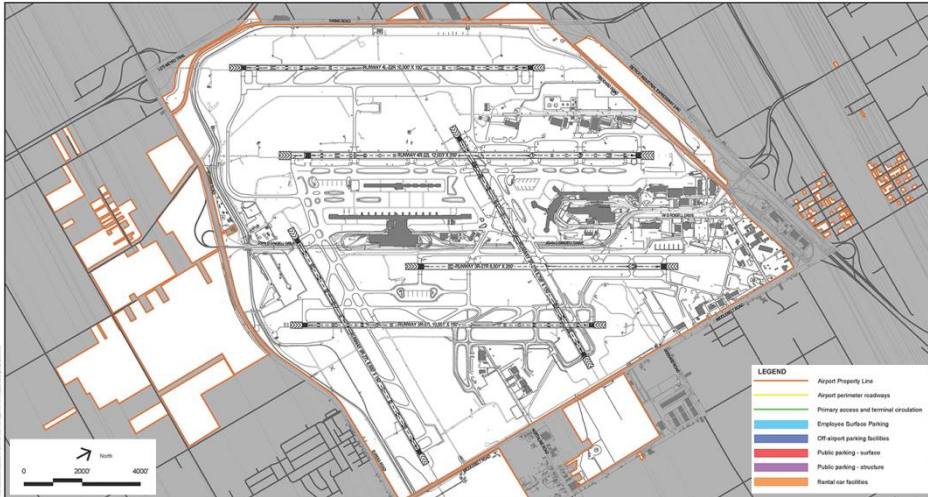
Physical Characteristics

- Airport size (acres): **6,200 acres**
- Number of gates: **131**
- Number of runways: **6**

Activity (2014)

- Enplaned passengers: **16.7 million**
 - **47% connecting**
 - **8% international**
- Enplaned cargo: **193,000 metric tons**
- Aircraft operations: **379,000**

Master Plan Issues



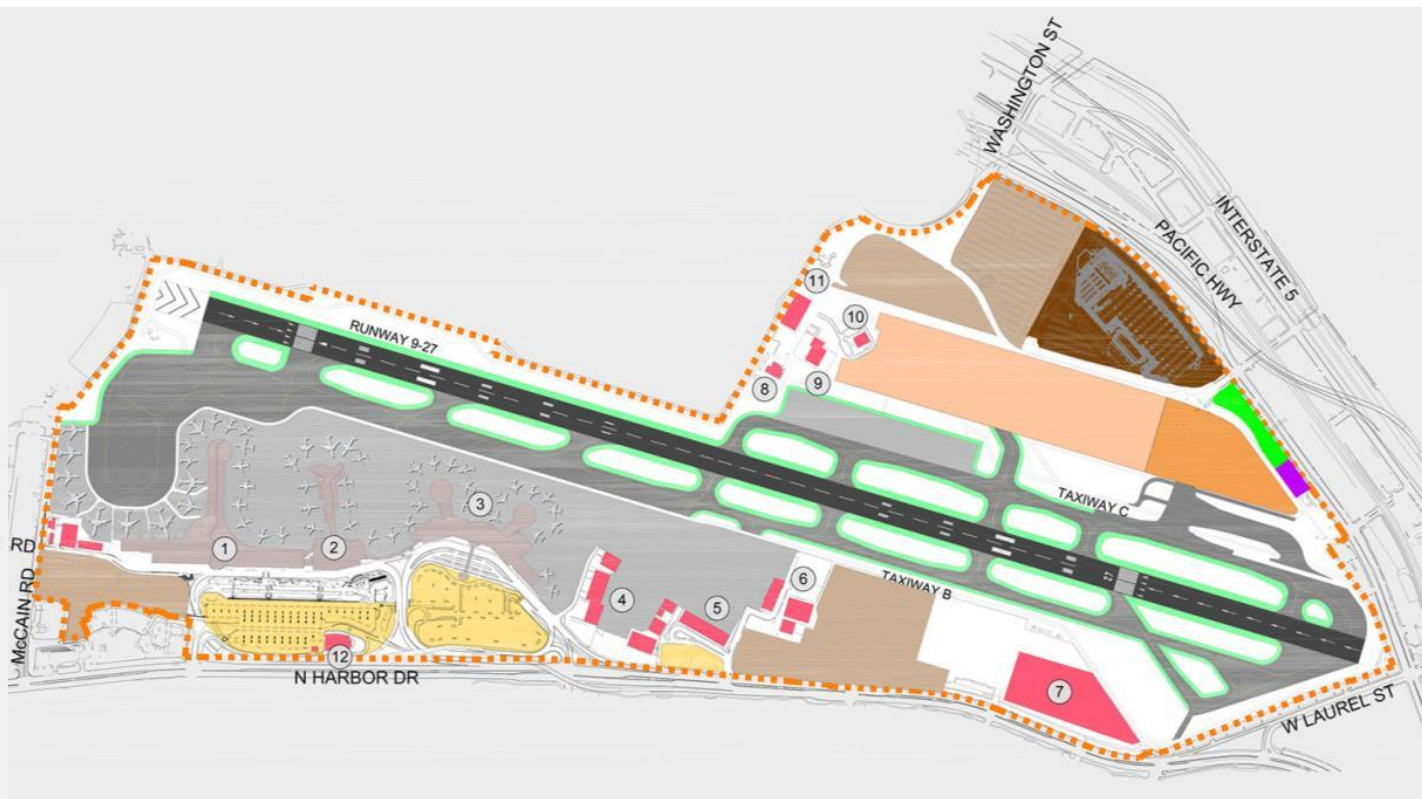
- Access – congestion, roadway design, and distribution of demand
- Location for consolidated rental car facility
- Optimum runway and taxiway configuration
- Repurposing vs demolishing under-used facilities
- Commercial development

Physical Characteristics

- Airport size (acres): **660 acres**
- Number of gates: **51**
- Number of runways: **1**

Activity (2014)

- Enplaned passengers: **10.1 million**
 - 6% connecting
 - 3% international
- Enplaned cargo: **162,000 metric tons**
- Aircraft operations: **194,000**



Master Plan Issues



- How to replace aging Terminal 1 and maintain operations during construction
- Development limitations due to the airport's small acreage, and presence of seismic fault lines and protected bird species on airport
- Mitigate airport-related traffic impacts on city streets
- Big issue not addressed in master plan--single runway airfield will reach capacity in 20 years

Overview



Physical Characteristics

- Airport size (acres): **2,300 acres**
- Number of gates: **68**
- Number of runways: **3**

Activity (2014)

- Enplaned passengers: **8.4 million**
 - **15% connecting**
 - **4% international**
- Enplaned cargo: **216,000 metric tons**
- Aircraft operations: **218,000**

Master Plan Issues



- Terminal development concept – centralized vs. decentralized
- Capacity of roadway intersections
- Improved productivity of cargo-related parcels
- Permanent land use designation



Physical Characteristics

- Airport size (acres): **2,300 acres**
- Number of gates: **83**
- Number of runways: **3**

Activity (2014)

- Enplaned passengers: **21.1 million**
 - **26% connecting**
 - **10% international**
- Enplaned cargo: **333,000 metric tons**
- Aircraft operations: **381,000**

Master Plan Issues



- International arrivals facility
- Long-term terminal concept
- Gates
- Airfield
- Roadway and curbside capacity
- Cargo capacity
- Sustainable development

Airport Comparisons

Physical Characteristics				2014 Activity			Key Percentages	
Airport	Size (acres)	Runways	Gates	Enplaned Passengers (millions)	Cargo (metric tons)	Operations	Connecting Passengers	International Passengers
IAH	11,000	5	129	20.6	461,000	500,000	55%	24%
DTW	6,224	6	131	16.5	202,000	393,000	48%	9%
SAN	661	1	51	10.1	156,000	192,000	4%	3%
PDX	2,300	3	68	8.0	208,000	216,000	15%	3%
SEA	2,300	3	83	21.2	319,000	340,000	26%	10%

Questions



Airport Master Planning—C.F. Booth, Director, LeighFisher Consultants—February 23, 2016