

Houston Airport System

IAH Master Plan – 2035

Summary

INTRODUCTION

- The Houston Airport System owns/operates three airports
 - George Bush Intercontinental Airport (IAH) – the city’s largest airport and global gateway, serving over 40 million passengers annually
 - William P. Hobby Airport (HOU) – serving over 11 million passengers annually, with international flights to begin in the fall of 2015
 - Ellington Airport (EFD) – a commerce/aviation center; potential spaceport site
- Houston has nonstop service to 5 continents
- International traffic is rapidly growing at IAH
- The economic impact of IAH on the City of Houston is substantial
- What is an airport master plan?
 - A long-range guide for the orderly development of the airport, typically looking out about 25 years into the future
 - A plan that FAA requires airports to update periodically
 - Primary Plan components include:
 - ❖ An FAA approved Airport Layout Plan enabling the airport to receive federal funding for eligible improvements
 - ❖ A narrative report documenting the analyses and recommendations
- IAH Master Plan vision and goals
 - Master Plan 2035 provides a vision for the airport that is safe and efficient, increasingly cost-competitive, aesthetically pleasing, and highly effective in serving the greater Houston community.
 - ❖ Airfield: plan for a safe and operationally efficient airfield
 - ❖ Passenger Terminal: provide needed gate capacity and improve customer experience throughout the terminal complex
 - ❖ Landside/Access: provide efficient airport access
 - ❖ Environment and City: provide environmentally and socially conscious airport improvements
 - ❖ Financial: provide an affordable plan

REQUIREMENTS

- The Houston metro area is expected to grow by 3.4 million people (55%) by 2035
- Annual enplaned passengers could grow to over 30 million by 2035
- Annual aircraft takeoffs and landings could grow to over 600,000 by 2035
- Aircraft operations have been flat the last several years after peaking in 2007
- The runway capacity is sufficient for the next 20 years

AIRFIELD RECOMMENDATIONS

- Existing airfield has 5 runways
 - North Airfield (arrivals) – 2 runways (8R-26L, 8L-26R)
 - South Airfield (arrivals) – 1 runway (9-27)
 - West Airfield (departures) – 2 runways (15L-33R, 15R-33L)
- In the next 10 years, the airfield requires additional taxiway infrastructure
 - Taxiway NR – enables shorter taxi distances from the north airfield
 - Runway 15R-33L 2,000 foot extension – provides needed redundancy for long haul departures
 - Taxiway SL – provides additional crossfield connectivity

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AIRFIELD RECOMMENDATIONS (continued)

- In about 25 years, the addition of Runway 8C-26C would add a third departure runway in the North Airfield. Would be located between Runway 8L-26R and Runway 8R-26L
- Taxiway RA and RB require extensions to serve Runway 8C-26C
- In 2050, the South Airfield may require an additional runway and associated taxiways. Runway 9R-27L could be added, if needed, south of Runway 9L-27R.
- Runway 9L-27R could also be extended
- Taxiway SM and SD could be modified to serve the new runway

PASSENGER TERMINAL RECOMMENDATIONS

- Current complex consists of Terminals A, B, C, D, and E
- Passenger terminal requirements
 - More aircraft gates to provide for growing domestic and international service offerings
 - Modernized facilities and a consistent customer experience regardless of terminal
 - Additional space on the concourse
 - Investment in aging infrastructure to reduce operational costs
- International terminals – to keep pace with demand the airport needs additional gates to accommodate international flights
- Terminal Plans: 2015 – 2025
 - Mickey Leland International Terminal will replace Terminal D
 - ❖ It will be expanded to include two additional concourses
 - ❖ Accommodates 15 widebody or 27 narrowbody aircraft parking positions
 - ❖ Construction scheduled to begin in 2016 for 2020 opening
 - New North Concourse will be constructed for Terminal C
 - Parking Garage will be expanded on west side of Terminal C
 - Federal Inspection Services and Parking Garage will be expanded to the east
- Terminal Plans: 2025 – 2035
 - Terminal B North Concourse replacement
 - Terminal B ticketing and baggage claim expansion
 - Garage/Hotel expansion to the south of existing hotel
- Terminal Plans beyond 2035
 - Terminal A Concourse Redevelopment
 - Terminal A Garage expansion
 - Potential for additional concourses east of Terminal D and Terminal E
 - Potential for expansion of Federal Inspection Services to the east

ROADWAY RECOMMENDATIONS

- JFK Blvd intersections studied to determine future improvements
 - JFK Blvd and Greens Road
 - JFK Blvd and World Houston Parkway
 - JFK Blvd and Beltway 8
- JFK Blvd and Greens Road near-term recommendations
 - Provide acceleration lane along westbound Greens Road to facilitate free southbound right turn movement
 - Add an exclusive eastbound right-turn lane with channelization (additional right of way would be required)
 - Greens Road is to be widened through Houston Public Works and Engineering initiative.

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ROADWAY RECOMMENDATIONS (continued)

- JFK Blvd and Beltway 8 near-term recommendations
 - Add an exclusive southbound right-turn lane with channelization
 - Relocate driveway on Beltway 8 westbound Frontage Road further west to provide sufficient distance for new free-flow southbound right-turn acceleration lane
 - Add an exclusive northbound right-turn lane with channelization
 - Add an exclusive eastbound right-turn lane with channelization
- Several Will Clayton Boulevard intersections were studied
 - Will Clayton and Colonel Fisher
 - Will Clayton and Lee Road
 - Will Clayton and Humble Parkway
 - Will Clayton and McKay Blvd
 - Will Clayton and US 59 South
 - Will Clayton and US 59 North
- Will Clayton and Kenswick Drive Intersection
 - The airport is coordinating with Houston Public Works and Engineering to improve the Kenswick Drive and Will Clayton intersection
 - Kenswick Drive extension to connect to eastbound Will Clayton will relieve congestion on Lee road
- Cell phone lot improvements at JFK Boulevard and Rankin Road
 - Cell phone lot parking
 - Future commercial development
 - Restrooms
 - Fueling station and convenience store
- Cell phone lot improvements at Will Clayton Parkway and Lee Road
 - Cell phone lot parking
 - Future commercial development
 - Restrooms
 - Future fueling station and convenience store
- More public parking will be constructed along Will Clayton Parkway
 - EcoPark 3 Lot
 - Proposed cell phone lot
 - Proposed fuel/convenience store

ENVIRONMENTAL CONSIDERATIONS

- Flooding on the Airport's entry roadways has been addressed
- With the changes in the aircraft fleet, noise exposure areas are shrinking
 - FAA established initial noise standards in 1969
 - FAA introduced aircraft noise categories entitled "STAGES" in 1977
 - ❖ STAGE 1: aircraft have never been shown to meet any noise standards
 - ❖ STAGE 2: aircraft meet original limits
 - ❖ STAGE 3: aircraft meet more stringent revised limits
 - ❖ STAGE 4: effective January 2006
 - By December 15, 2015, all civil jet aircraft must meet STAGE 3 or STAGE 4 standards
 - STAGE 5 will be introduced in 2017 and 2020, depending on the weight of the aircraft

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NEXT STEPS

- IAH capital improvement program includes approximately \$2.7 billion in planned projects
 - Airfield - \$816 Million
 - Terminal - \$1,461 Million
 - Roadways/parking/commercial ground transportation - \$97 Million
 - Airport support/infrastructure - \$284 Million

- What will happen next?
 - Houston Airport System will review comments received from public and interested stakeholders
 - HAS will prepare an “Airport Layout Plan” to obtain formal FAA approval for recommendations, to obtain federal funding for projects
 - Environmental reviews will be conducted before projects are constructed

- Summary
 - Houston Airport Systems would like your input
 - All recommended improvements are located within existing airport property
 - No new runways are required for the next 20 to 25 years
 - Taxiway improvements will make the airfield more operationally efficient and flexible
 - Timing of improvements will be determined by demand
 - All improvements will be subject to environmental review
 - Terminal construction will begin this march

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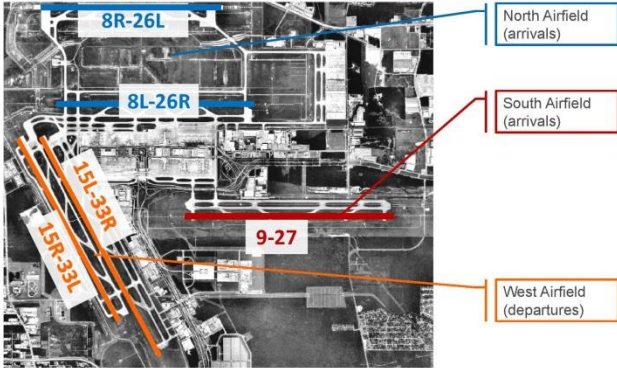
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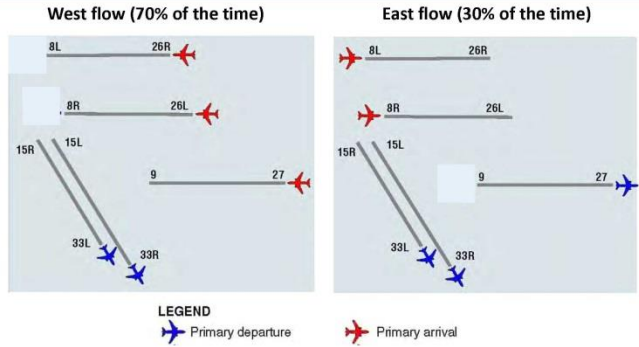
AIRFIELD RECOMMENDATIONS

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Overview of the existing airfield – 5 runways



Airfield Flow Diagrams

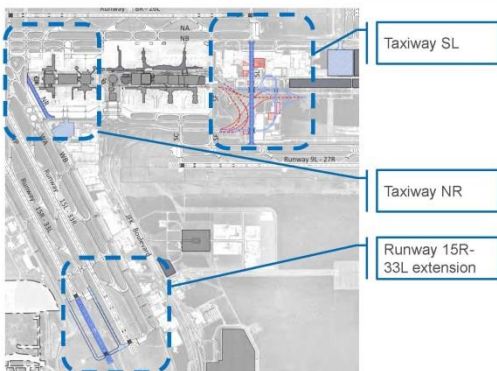


Source: Leigh Fisher, based on discussions with IAH Airport Traffic Control Tower, December 2012.

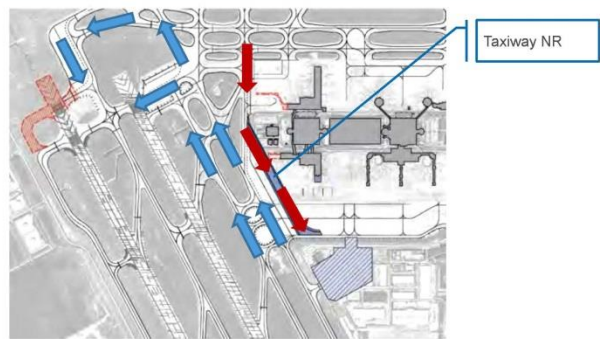
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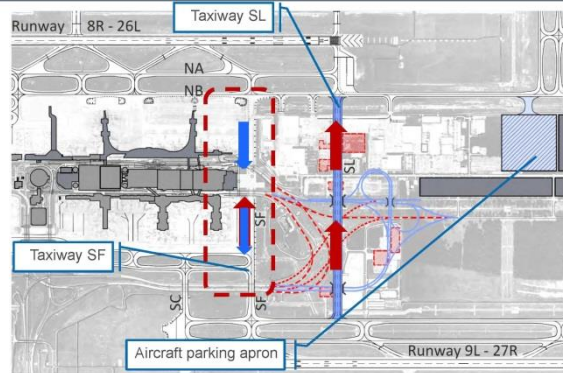
Taxiway NR enables shorter taxi distances from the north airfield



Runway 15R-33L extension provides needed redundancy for long haul departures



Taxiway SL provides additional crossfield connectivity



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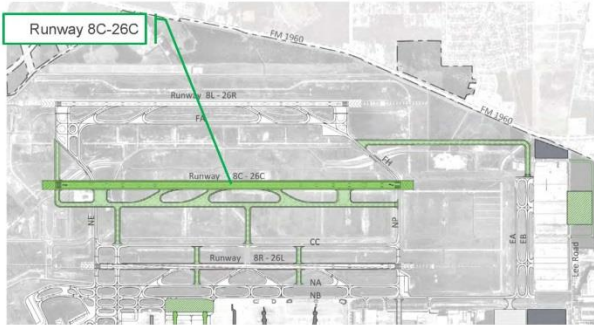
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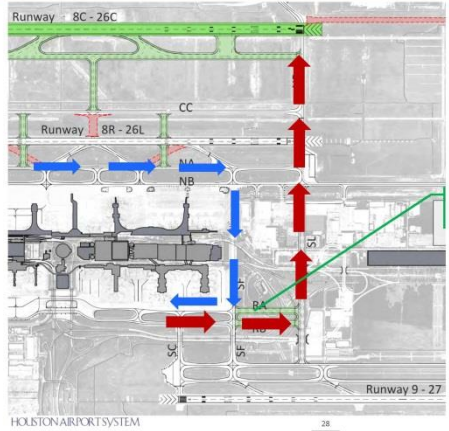
In about 25 years, Runway 8C-26C would add a third departure runway



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Taxiway RA and RB require extensions to serve Runway 8C-26C



Taxiways RA and RB



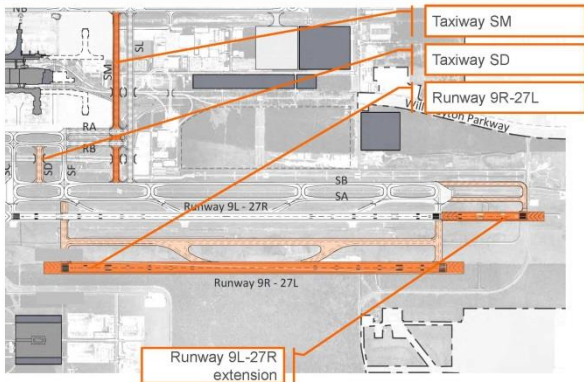
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In 2050, the airfield may require an additional runway and associated taxiways



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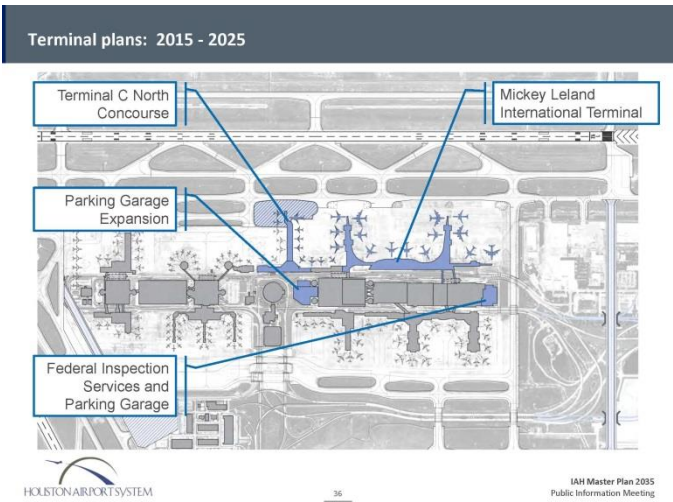
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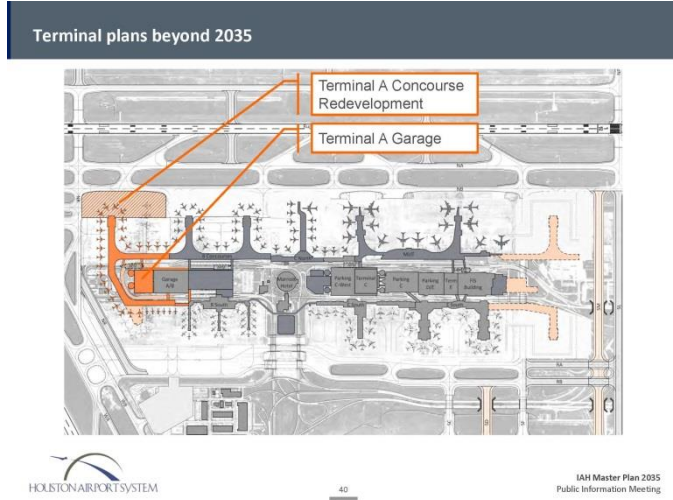
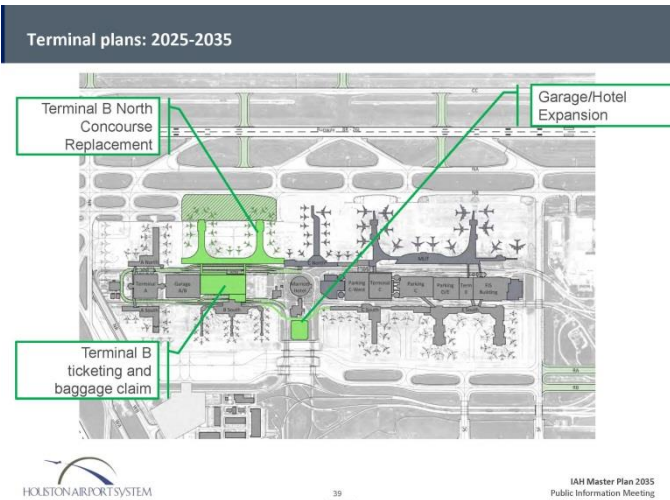


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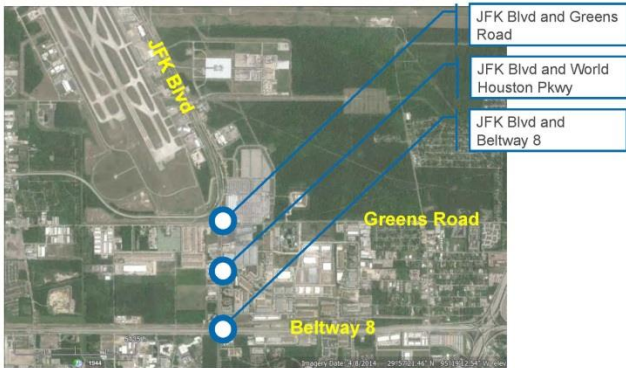
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JFK Boulevard intersections studied to determine future improvements



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JFK Blvd and Greens Road near-term recommendations



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JFK and Beltway 8 near-term recommendations



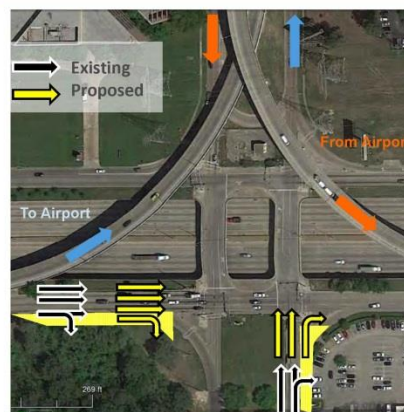
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JFK and Beltway 8 near-term recommendations (continued)



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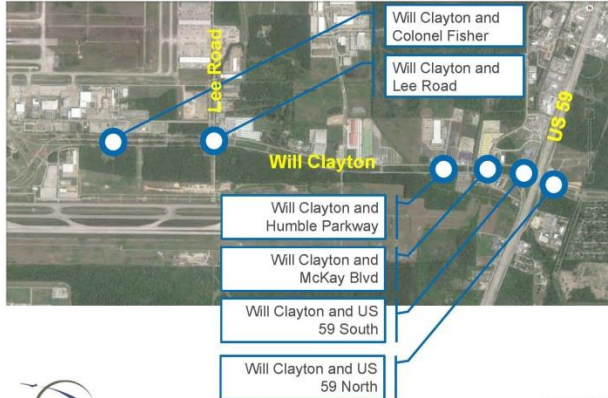
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Kenswick Drive extension to connect to eastbound Will Clayton will relieve congestion on Lee Road



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