

John F. Kennedy International Airport – Vision Plan Implementation

JFK Airport Committee
of the New York
Community Aviation
Roundtable

March 5, 2018



Issue: “JFK is not the airport passengers expect when arriving in one of the greatest cities in the world”...

(Airport Advisory Panel – January 4, 2017)

- JFK has insufficient terminal and gate capacity
- Decades of ad-hoc expansion with no master plan have resulted in a disconnected airport
- Access is unreliable and challenging and internal roadway networks are confusing
- Inefficient and aging Cargo Facilities
- Peak period overcrowding occurs in on-Airport transportation options
- Projected growth will continue, with 59 million passengers in 2016 with forecasts reaching 100 million by 2050
- As passenger demand increases, the already congested airfield, terminals, roadway and parking systems will be further strained
- Failure to appropriately meet demand will have economic consequences



Vision Objectives:

- Create a more unified, interconnected terminal layout
- Simplify the on-airport roadway network
- Centralize parking facilities
- Ensure world-class amenities
- Airside improvements to reduce ground delays
- Develop state-of-the-art cargo facilities
- Increase AirTrain JFK capacity
- Improve roadway access (VanWyck expansion) and expand rail mass transit (“one seat ride”) to JFK



Redevelopment Planning Authorization—\$50M

PA Board Authorization – Feb. 2017

- **Vision Plan**
- **Airfield Capacity**
- **Master Plan Studies**
 - **Roads & Utilities**
 - **Terminal 1 Replacement**
 - **Terminal 4 Phase III**
 - **Terminal 7 Replacement**
 - **Terminal 8 Parcel M+**
 - **Cargo Development**
- **Aviation Support Facilities (Separate Efforts)**
 - **Fuel Farm**
 - **AirTrain Expansion Fleet**
 - **CoGen**
 - **Airport Access**



JFK Redevelopment



JFK Redevelopment Efforts & Issues

- 1. 3rd Party Terminal Development Proposals for T1, T4, T5, T7 & T8 being Evaluated.**
- 2. Aviation Demand Forecast for JFK submitted and approved by FAA.**
- 3. Master Plan Team evaluating “ring road” options. Securing data to further analysis.**
- 4. Master Plan Team performing CTA modeling efforts**
- 5. Aviation initiated development of updated Terminal Development Standards**
- 6. Master Plan Team collaborative dialog w/ MTA LIRR w/regard to One-Seat Ride Potential**
- 7. Master Plan Team collaborative dialog w/ NYSDOT w/regard to VanWyck Managed Use Lane**

JFK Vision Plan



JFK Access Program Update

1. Van Wyck Expressway Managed Lanes Program - NYDOT
 - a. Public Scoping Meeting: Sept 2017
2. One Seat Ride – MTA LIRR
3. JFK AirTrain Capacity Enhancements – PA
4. Jamaica Station Modernization - MTA



Department of
Transportation

VAN WYCK EXPRESSWAY CAPACITY AND ACCESS IMPROVEMENTS TO JFK AIRPORT PROJECT

Wednesday, September 27, 2017

PROJECT SCOPING MEETING

4:30 p.m. - 7:30 p.m.

The Harvest Room

Greater Jamaica Development Corporation

90-40 160th Street

Jamaica, New York 11432

The New York State Department of Transportation (NYSDOT) and Federal Highway Administration (FHWA) invite the public to a Project Scoping Meeting on the Van Wyck Expressway (I-678) Capacity and Access Improvements to JFK Airport Project. The purpose of the meeting is to provide information and solicit comments on the project. The purpose of the project is to provide increased capacity on the Van Wyck Expressway between the Kew Gardens Interchange and JFK Airport to improve vehicular access to and from the airport. In addition, the project will address operational, geometric, and structural deficiencies on the Van Wyck Expressway between the Kew Gardens Interchange and JFK Airport.

Spanish language interpreters will be available.

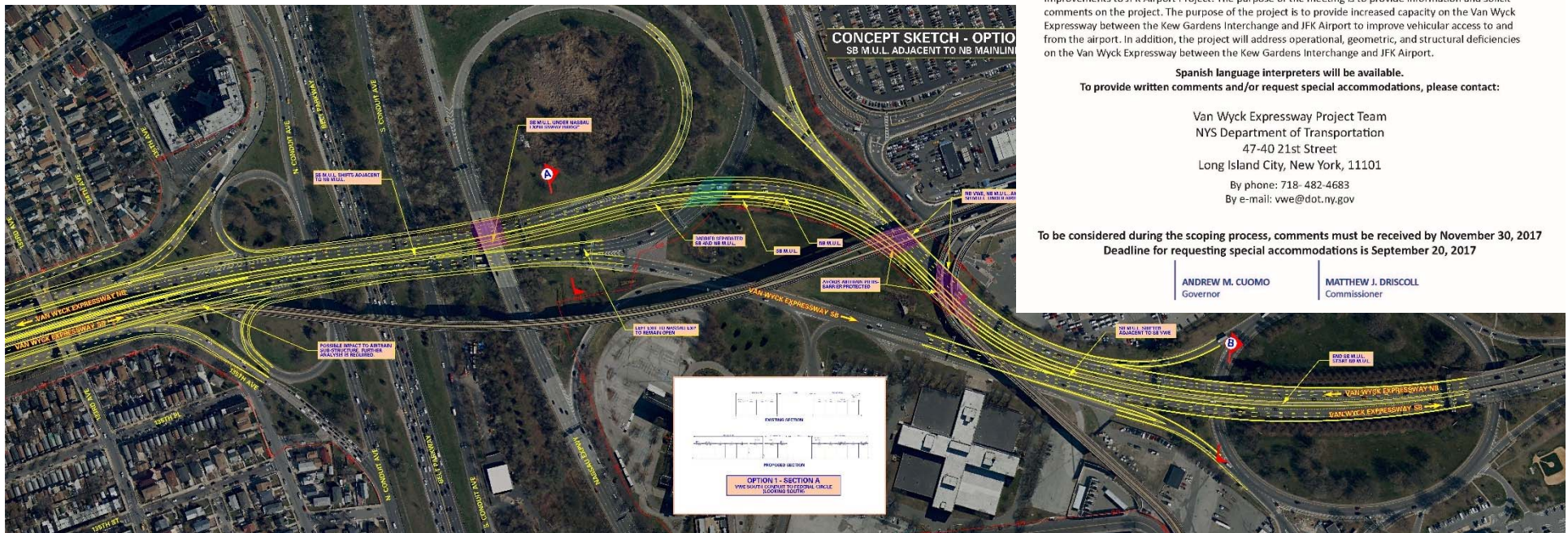
To provide written comments and/or request special accommodations, please contact:

Van Wyck Expressway Project Team
NYS Department of Transportation
47-40 21st Street
Long Island City, New York, 11101
By phone: 718-482-4683
By e-mail: vwe@dot.ny.gov

To be considered during the scoping process, comments must be received by November 30, 2017
Deadline for requesting special accommodations is September 20, 2017

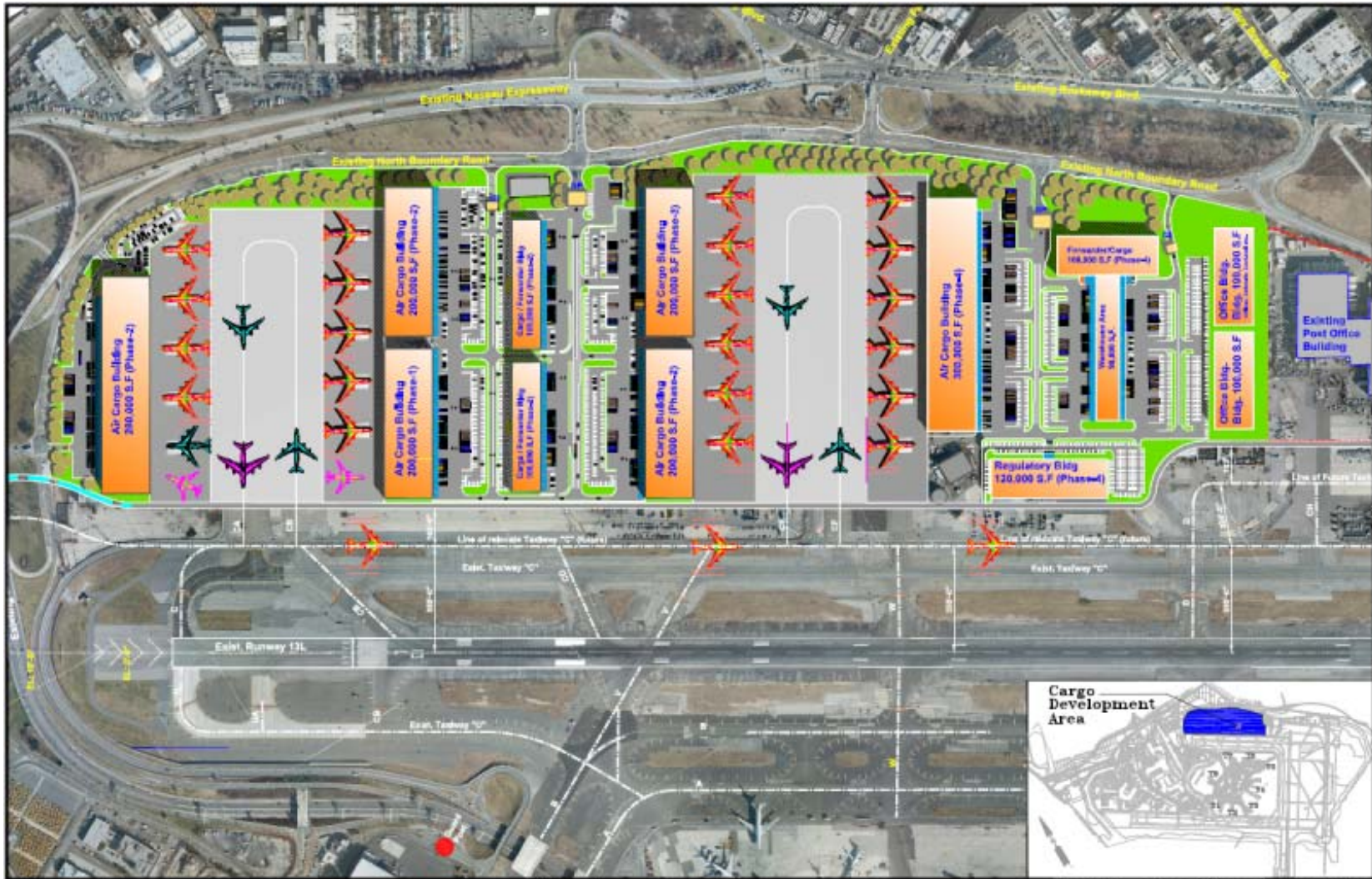
ANDREW M. CUOMO
Governor

MATTHEW J. DRISCOLL
Commissioner



THE PORT AUTHORITY OF NY & NJ

North Cargo Area - APD Cargo Village Concept

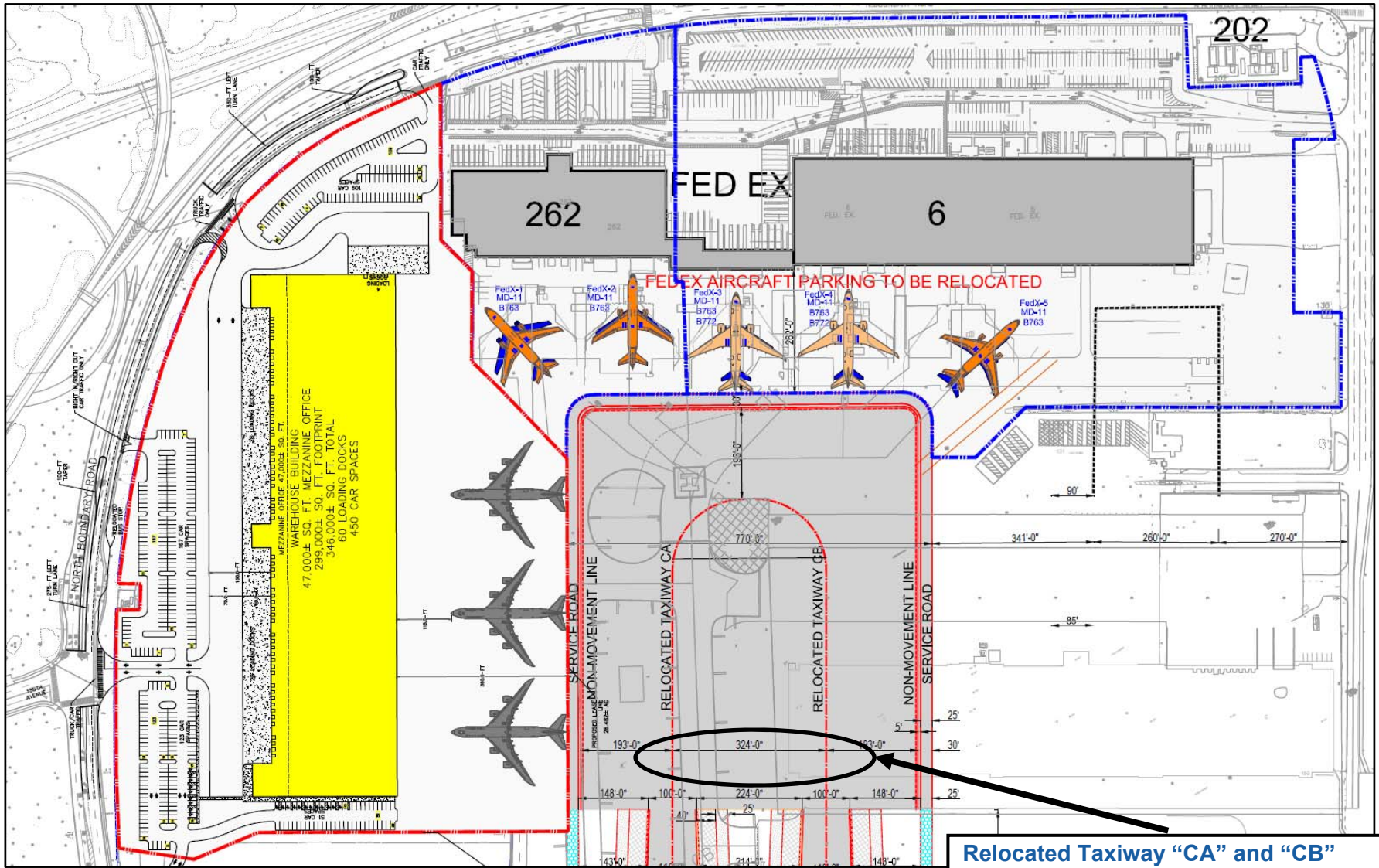


John F. Kennedy
International Airport

Cargo Development Study
Cargo Studies Concept - 2

THE PORT AUTHORITY OF NY & NJ
Aviation Department
Master and Site Planning
May 2011

Aeroterm Proposal – Cargo Warehouse Facility



Relocated Taxiway "CA" and "CB"
- Full ADG VI Compliance

Other Redevelopment Program Areas

1. Aviation Fuel Storage and Distribution
2. Kennedy International Airport Cogeneration (KIAC)
 - a. ConEd Brownsville Grid Proposal
 - b. Long Term Redevelopment (KIAC 2.0)

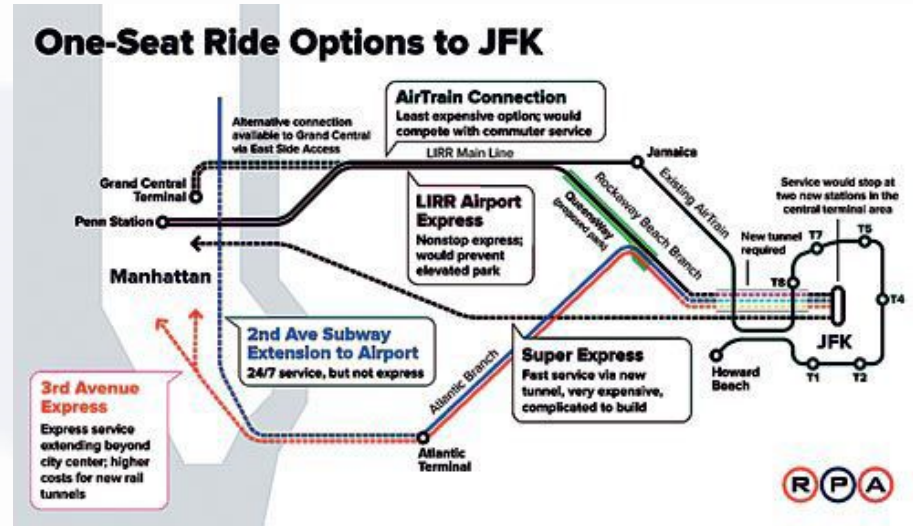


Questions ?

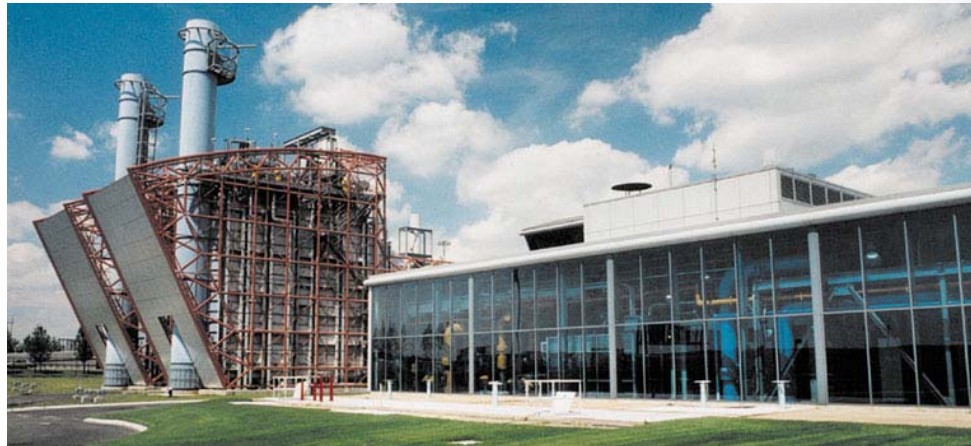
NYS DOT - Access to JFK



MTA - One Seat Ride



KIAC – Power & Thermal Energy



North Cargo Area Development



JFK Fueling



AirTrain Capacity Enhancements



Air Traffic Obstruction Evaluation Familiarization

Title 14 of Code of Federal Regulations (CFR) 14 Part 77 Obstruction Standards

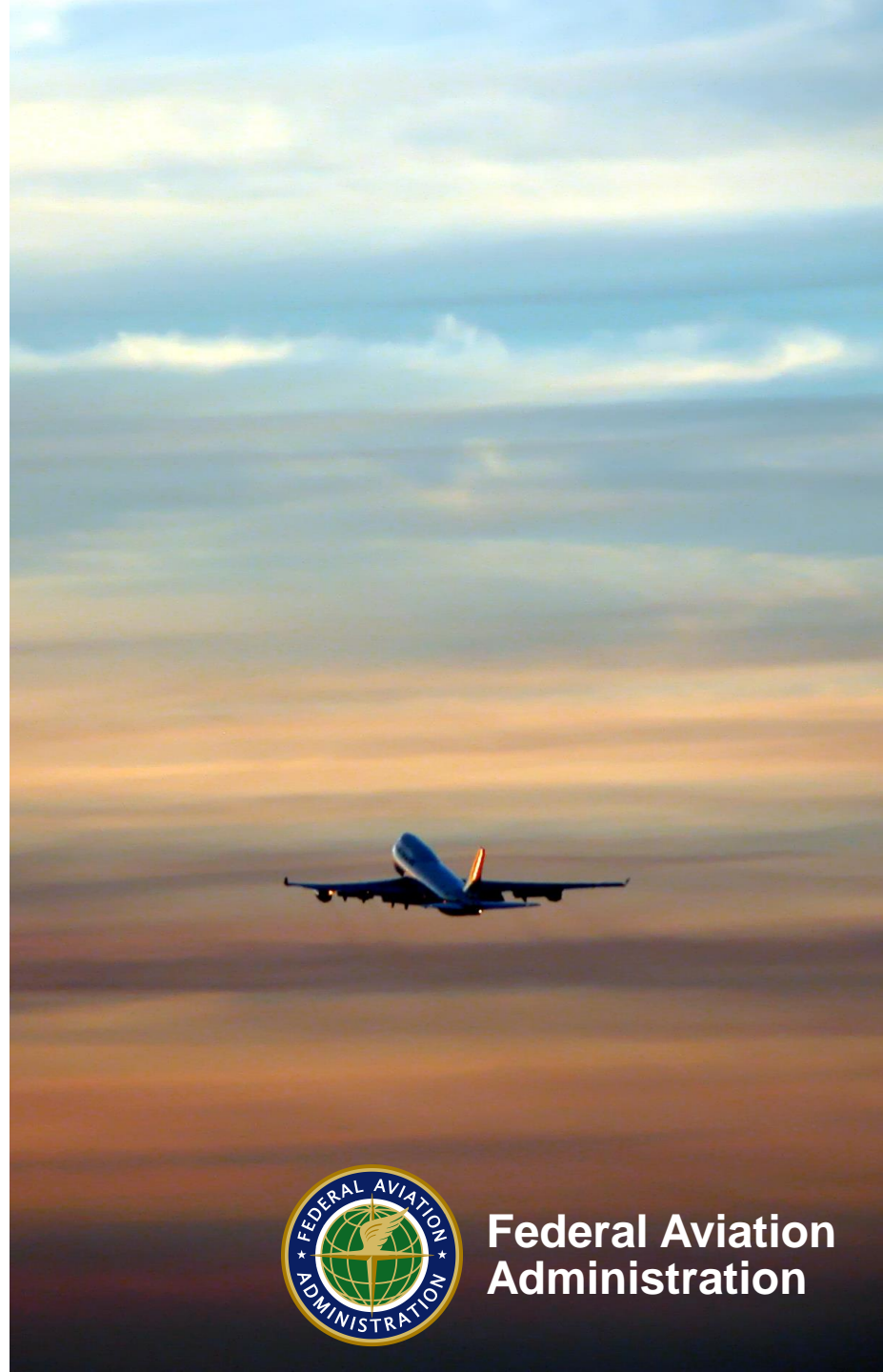
Presented to: JFK Airport Committee

By: Chris Shoulders, OEG

Date: March 5, 2018



**Federal Aviation
Administration**



Overview

- **Mission/Authority**
- **Obstruction Evaluation Stakeholders**
 - Flight Standards
 - Technical Operations
 - Flight Procedures
- **CFR 14 Part 77 Surfaces**
- **CFR 14 Part 77 Approach Surface Penetrations**
 - Permanent Structure
 - Trees & Vegetation
- **CFR 14 Part 77 Penetration Procedure**



Mission

- **Federal Aviation Administration:** Provide the **safest, most efficient aerospace system** in the world.
- **Air Traffic Obstruction Evaluation Group:** Conduct aeronautical studies to **protect navigable airspace and airport capacity**



Authority

- **FAA JO 7400.2L, 5-1-2 AUTHORITY**
- **a.** The FAA's authority to promote the safe and efficient use of the navigable airspace, whether concerning existing or proposed structures, is predominantly derived from [Title 49 U.S.C. Section 44718](#).
- **b.** [Title 14 of the Code of Federal Regulations \(14 CFR\) Part 77](#), Safe, Efficient Use, and Preservation of the Navigable Airspace, was adopted to establish notice standards for proposed construction or alteration that may result in an obstruction or an interference with air navigation facilities and equipment or the navigable airspace.



Obstruction Evaluation Stakeholders



Obstruction Evaluation Process

After verification of data, all stakeholders are required to provide comment:

- **No Objection**
Favorable Determination
- **Objection**
Notice of Presumed Hazard (NPH)

NPH is a pre-decisional notification that the FAA has concerns and invites sponsor's input or negotiations. The sponsor has 30-days to change the structure (i.e., reduce height), terminate the study or request further study



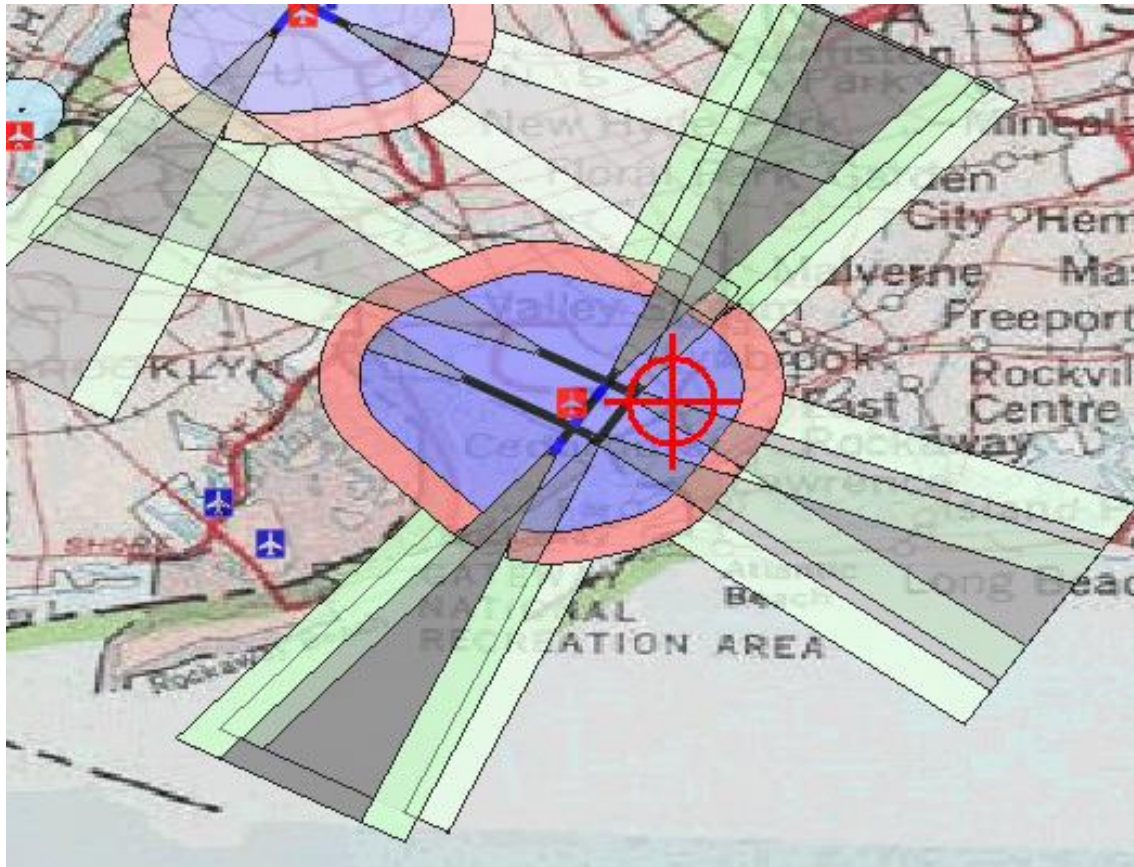
Part 77 Obstruction Standards

Obstacle would require further FAA study if:

- (1) A height of 499 feet AGL at the site of the object.
- (2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.
- (3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.
- (4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.
- (5) The surface of a takeoff and landing area of an airport or any imaginary surface established under §77.19, 77.21, or 77.23. However, no part of the takeoff or landing area itself will be considered an obstruction.



§77.19 Civil Airport Imaginary Surfaces



§77.19 Approach Surface Evaluation

Aeronautical Study: 2018-AEA-2640-OE

Latitude: 40 38 22.69 N

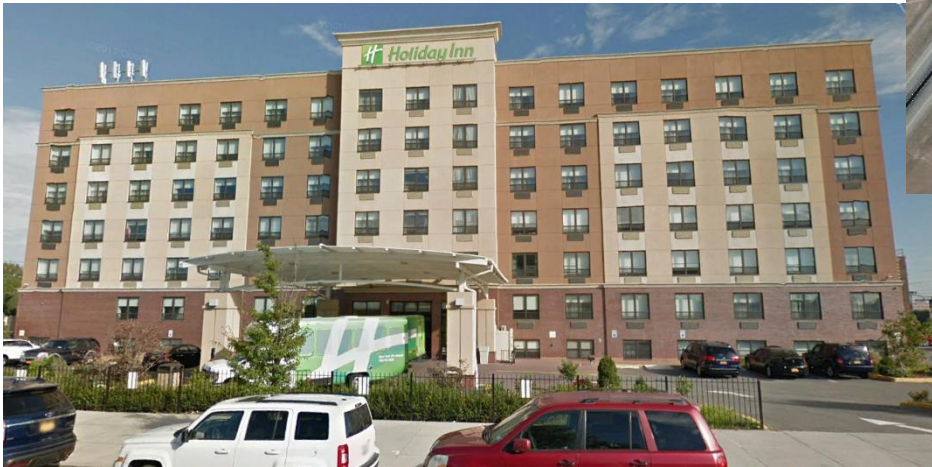
Longitude: 73 44 36.22 W

Site Elevation: 8 Feet

AGL: 80 Feet

AMSL: 88 Feet

THLD 31R Elevation: 11.8 Feet



§77.19 Approach Surface Evaluation

Calculations

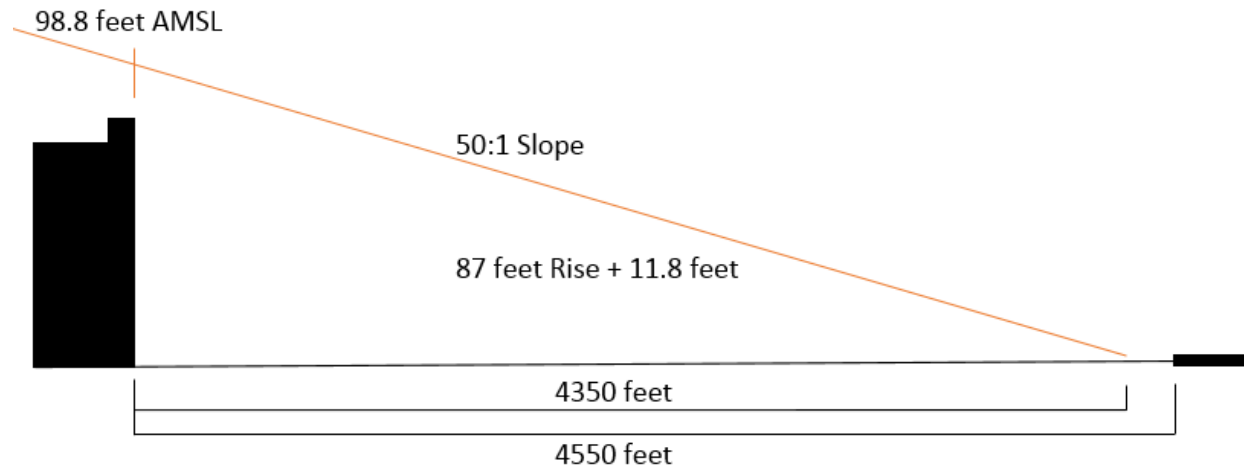
Centerline Distance: 4550 Feet
Primary Distance: 4350 Feet

$4350 / 50 = 87$ Feet Rise

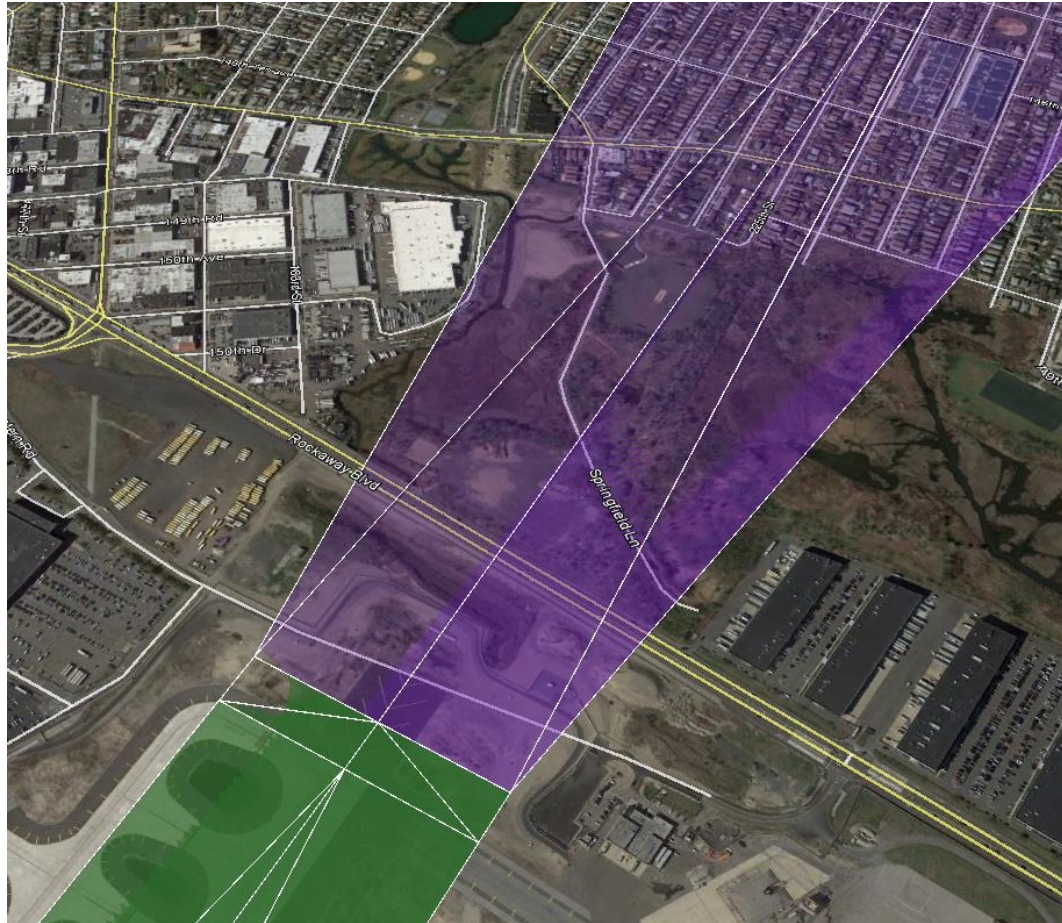
The AMSL height of the slope at the obstacle:

87 Feet Rise
+ 11.8 Thld Elevation
98.8 AMSL

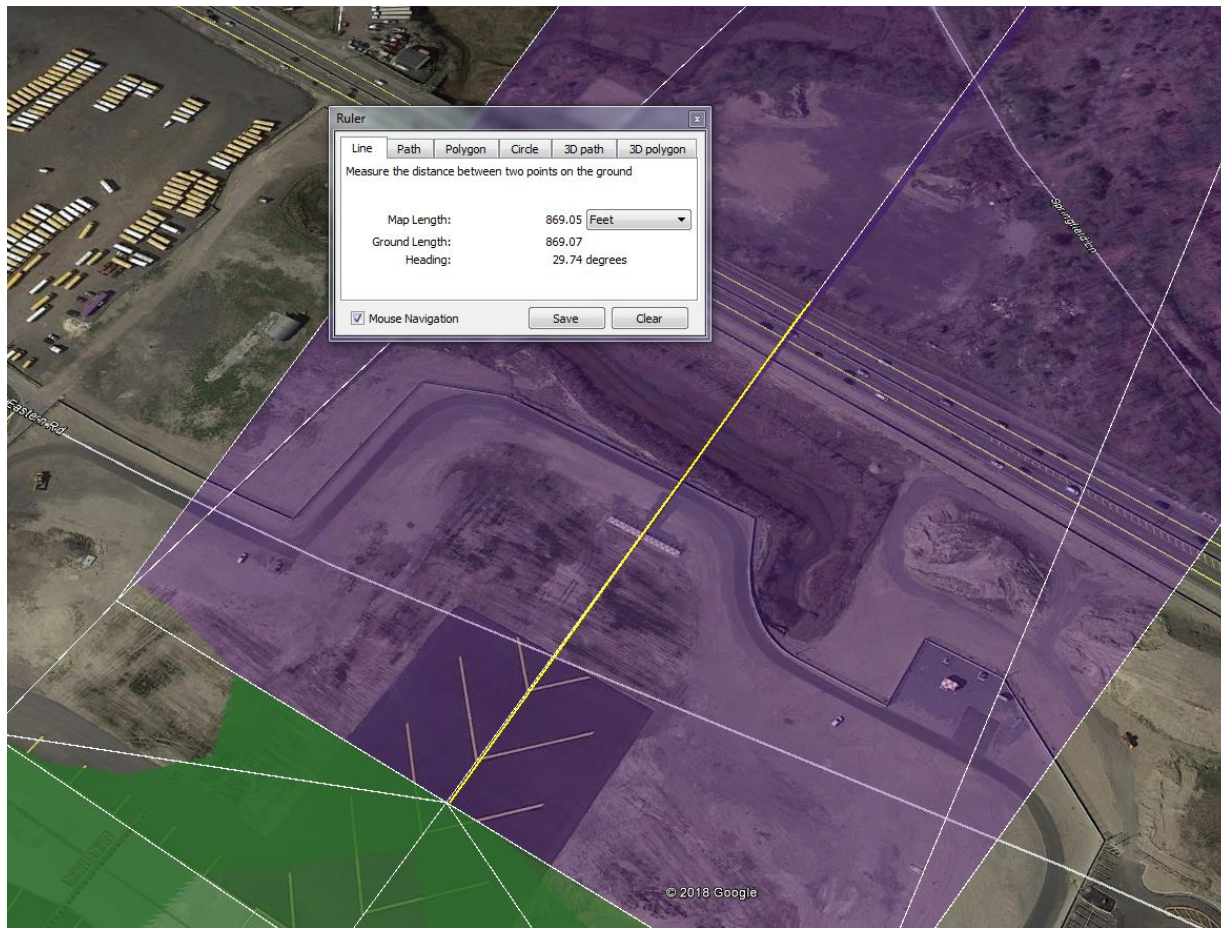
Since the height of the structure is 88 feet AMSL, the hotel does not penetrate.



§77.19 Approach Surface Evaluation Trees and Vegetation



§77.19 Approach Surface Evaluation Trees and Vegetation



•Primary Distance: 869.05 Feet

• $869.05 / 50 = 17.38$ Rise

• 17.38 Rise

• +11.2 Thld Elevation (Rwy 22R)

• 28.58 AMSL

•Any tree height exceeding 28.58 AMSL will penetrate the Part 77 Approach Surface.



Obstruction Evaluation Process

FAA JO 7400.2 K, 6-3-3 DETERMINING ADVERSE EFFECT

If a structure first exceeds the obstruction standards of Part 77, and/or is found to have physical or electromagnetic radiation effect on the operation of air navigation facilities, then the proposed or existing structure, if not amended, altered, or removed, has an adverse effect if it would:

- a. Require a change to an existing or planned IFR minimum flight altitude, a published or special instrument procedure, or an IFR departure procedure for a public-use airport.
- b. Require a VFR operation, to change its regular flight course or altitude.
- c. Restrict the clear view of runways, helipads, taxiways, or traffic patterns from the control tower cab.
- d. Derogate airport capacity/efficiency.
- e. Affect future VFR and/or IFR operations as indicated by plans on file.
- f. Affect the usable length of an existing or planned runway.



Obstruction Evaluation Process

FAA JO 7400.2K 6-3-4 DETERMINING SIGNIFICANT VOLUME OF ACTIVITY

The type of activity must be considered in reaching a decision on the question of what volume of aeronautical activity is “significant.”

For example, if one or more aeronautical operations per day would be affected, this would indicate regular and continuing activity, thus a significant volume no matter what the type of operation. However, an affected instrument procedure or minimum altitude may need to be used only an average of once a week to be considered significant if the procedure is one which serves as the primary procedure under certain conditions.

FAA JO 7400.2K 6-3-5. DETERMINING SUBSTANTIAL ADVERSE EFFECT

A proposed structure would have, or an existing structure has, a substantial adverse effect if it causes electromagnetic interference to the operation of an air navigation facility or the signal used by aircraft, or if there is a combination of:

- a. Adverse effect as described in paragraph 6-3-3, **Determining Adverse Effect**; and
- b. A significant volume of aeronautical operations, as described in paragraph 6-3-4, **DETERMINING SIGNIFICANT VOLUME OF ACTIVITY** would be affected.



Questions

