

Air Traffic, Noise & Emissions Management in Practice

O'Hare Airport's Fly Quiet Program:
Its Development and Evolution During the Airport's
Reconfiguration and Modernization Program



**Federal Aviation
Administration**



**O'HARE NOISE
COMPATIBILITY
COMMISSION**

Arlene A. Juracek, O'Hare Noise Compatibility Commission
Rebecca MacPherson, Regional Administrator, FAA Great Lakes Region

O'Hare Noise Compatibility Commission

- O'Hare Noise Compatibility Commission (ONCC) established in 1996, following an invitation from the City of Chicago to suburban mayors to begin constructive dialogue on aircraft noise issues.
- Includes 44 communities and 22 school districts. These 66 members are represented by mayors, Chicago aldermen, Cook and DuPage Counties and school superintendents.
- Four standing committees:
 - Technical
 - Fly Quiet
 - Residential Sound Insulation
 - School Sound Insulation

Federal Aviation Administration

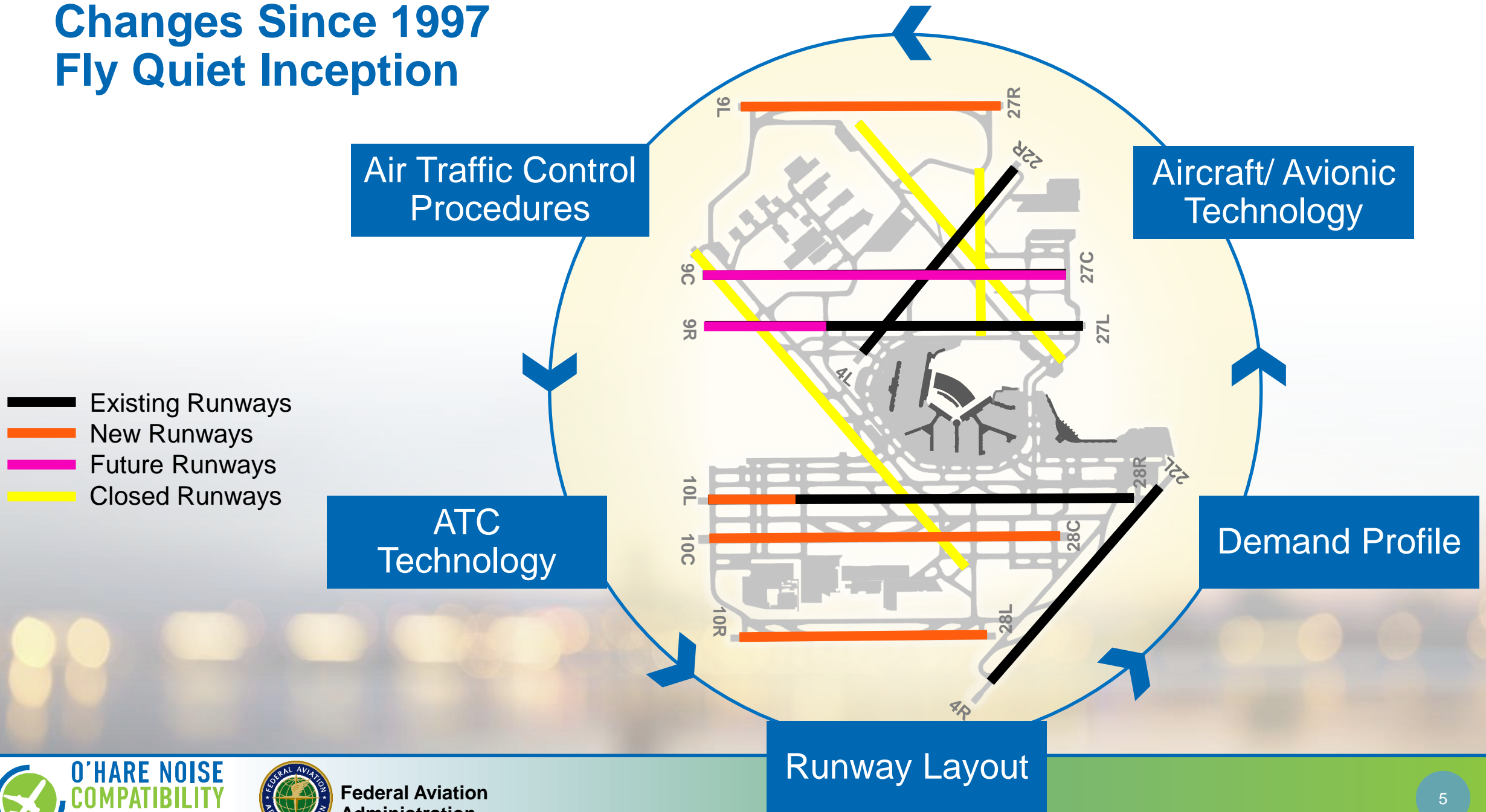
- The FAA's primary mission is to ensure the safety and efficiency of our nation's navigable airspace.
- FAA is committed to informing and involving the public and to giving meaningful consideration to community concerns.
- FAA recognizes the importance of developing and maintaining a strong strategy for supporting and promoting a good relationship with the ONCC.

The Fly Quiet Program at O'Hare:






- The Fly Quiet Program is a voluntary program that encourages pilots and air traffic controllers to use designated nighttime preferential runways and flight tracks developed by the CDA in cooperation with the O'Hare Noise Compatibility Commission (ONCC), the airlines and the air traffic controllers.
- These preferred routes are intended to direct aircraft over less-populated areas, such as forest preserves and highways, as well as commercial and industrial areas.

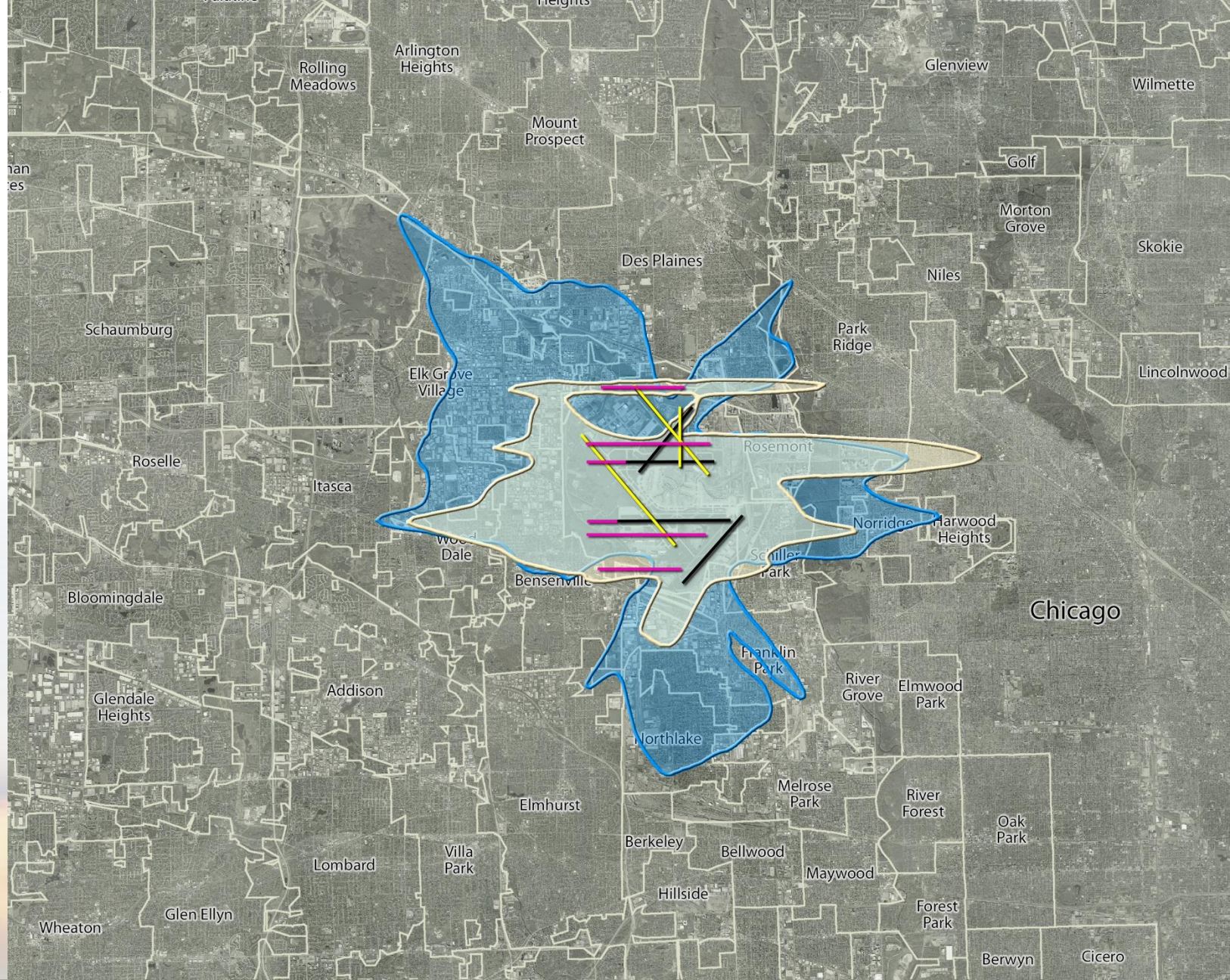


Changes Since 1997 Fly Quiet Inception



2000 Contour vs OMP Full Build-Out Contour

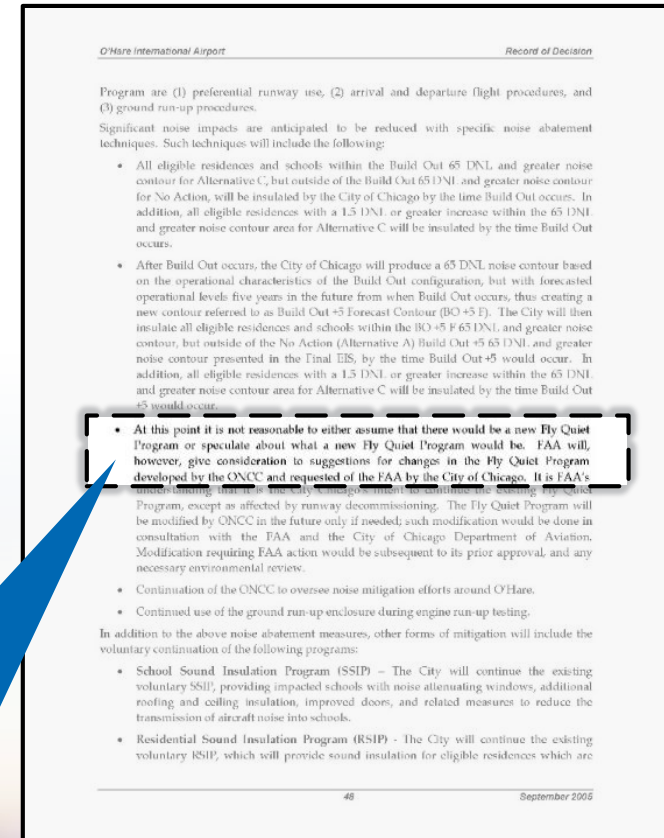
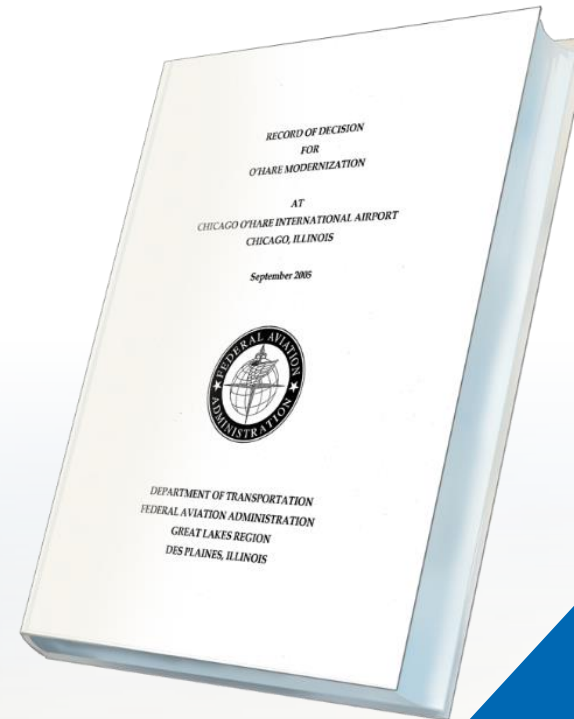
Contour	Square Miles
 2000 65 DNL	37.6
 Build-Out 65 DNL	17.6
 Runways (2002 Contour)	
 Runways (All Contours)	
 Runways (OMP Build-Out)	



Requirements of the O'Hare Modernization ROD

Record of Decision (ROD) was issued on September 30, 2005

- Provided environmental approval of OMP on the condition of many requirements including noise requirements
- Specifically designated ONCC with overseeing O'Hare noise programs and developing changes to Fly Quiet
- The collective efforts of the CDA, FAA, and ONCC to inform and engage the public in connection with the OMP have been among the most ambitious, most transparent, and most comprehensive of any airport project in the last two decades.”



“At this point it is not reasonable to either assume that there would be a new Fly Quiet Program or speculate about what a new Fly Quiet Program would be. FAA will, however, give consideration to suggestions for changes in the Fly Quiet Program developed by the ONCC and requested of the FAA by the City of Chicago.”

FAA Record of Decision for O'Hare Modernization, September 30, 2005, page 48)

Fly Quiet Redevelopment Process



**ONCC Fly
Quiet Committee**

Review &
Recommend*

**ONCC Full
Commission**

Consider &
Approve*

CDA

Submit Plan

FAA

Review Plan

*ONCC recommendations shall be based on a supermajority (2/3) vote.

Interim Fly Quiet Program

Applicable during the O'Hare Modernization Program (OMP) period

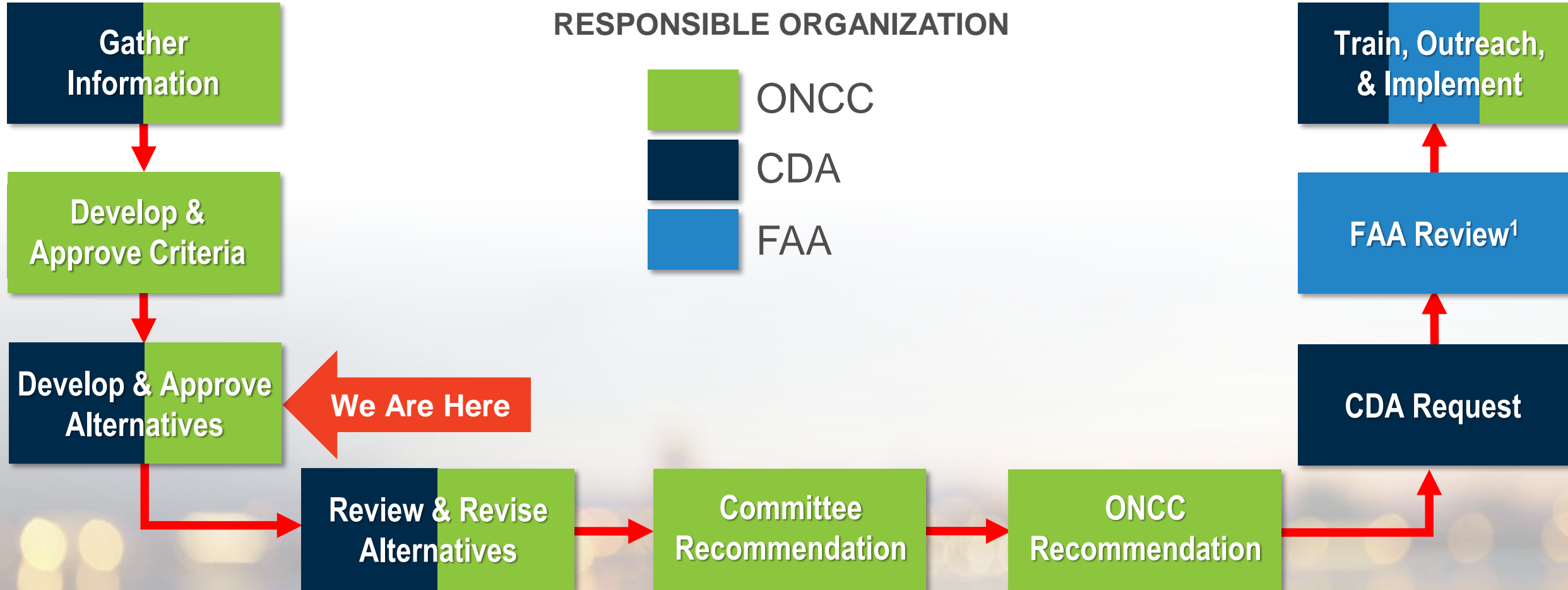
- The Interim Fly Quiet Runway Rotation Plan was proposed by the O'Hare Noise Compatibility Commission (ONCC), in collaboration with the Chicago Department of Aviation (CDA), in 2017 to provide relief from nighttime noise for the communities around O'Hare International Airport.
- The Fly Quiet committee oversaw a series of three runway rotation tests, which were conducted in order to find the best solution to balance nighttime noise impacts. Each test was less than 6 months in duration. Provided data and improvement opportunities for the final proposal.
- The IFQ features an eight-week runway rotation plan. For each week, a primary and secondary runway use configuration is provided to accommodate potential changes in wind direction.
- The runway use configurations have been determined and approved by the ONCC to balance noise exposure to the extent possible.

Fly Quiet 21 Criteria

Applicable in 2021 (upon completion of the OMP)

- Develop multiple alternatives based on the following criteria:
 1. Establish a Nighttime Noise Abatement Program
 2. Establish Runway Rotation Schedule
 3. Establish Flight Path Rotation Schedule
 4. Alternate Periods of East and West Flow
 5. Avoid Consecutive Impacts
 6. Avoid Overuse of Any Single Runway
- Final FQ21 proposal requires Fly Quiet Committee recommendation and full ONCC approval before being submitted to the FAA for Review.

Fly Quiet 21 Process



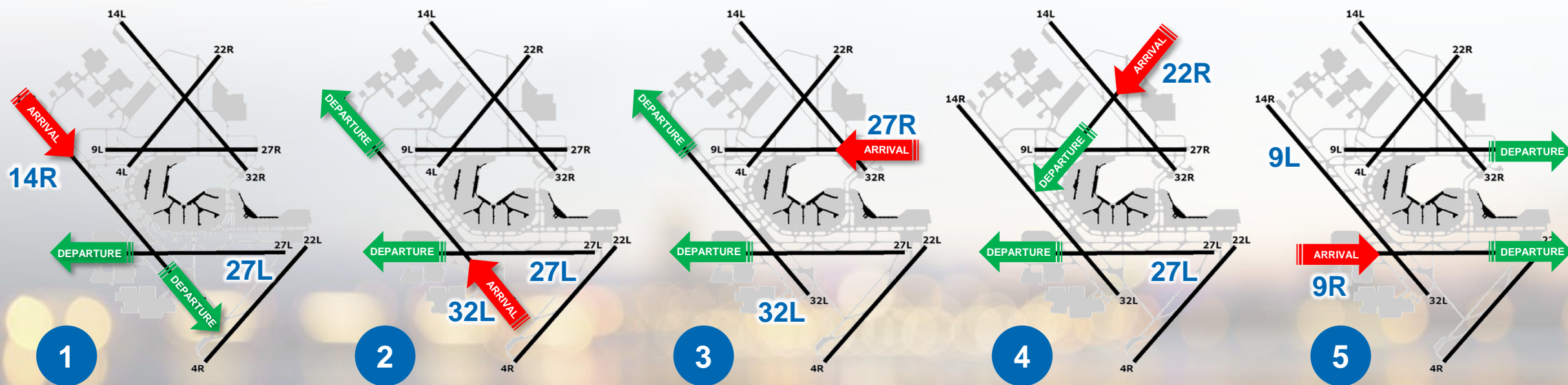
1: FAA Review includes but is not limited to Air Traffic and Environmental

Appendix

Preferential Nighttime Runway Use (2200-0700 Local)

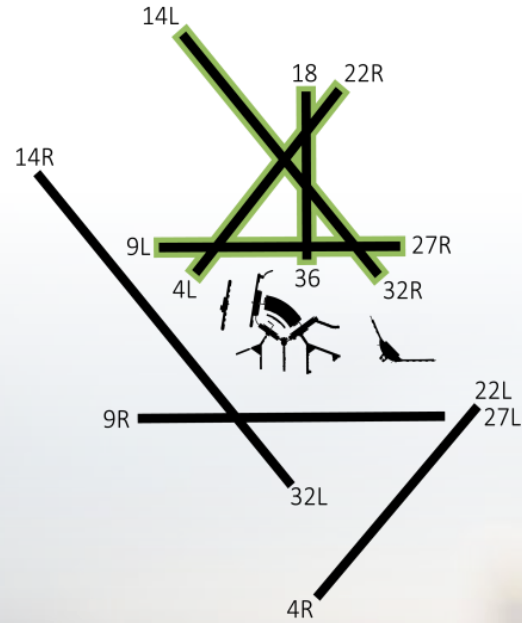


These configurations were rendered moot by the O'Hare Modernization Program and the associated construction. ONCC endeavored to develop an interim Fly Quiet to be used during the OMP buildout and Fly Quiet 21 to be used once buildout is complete.



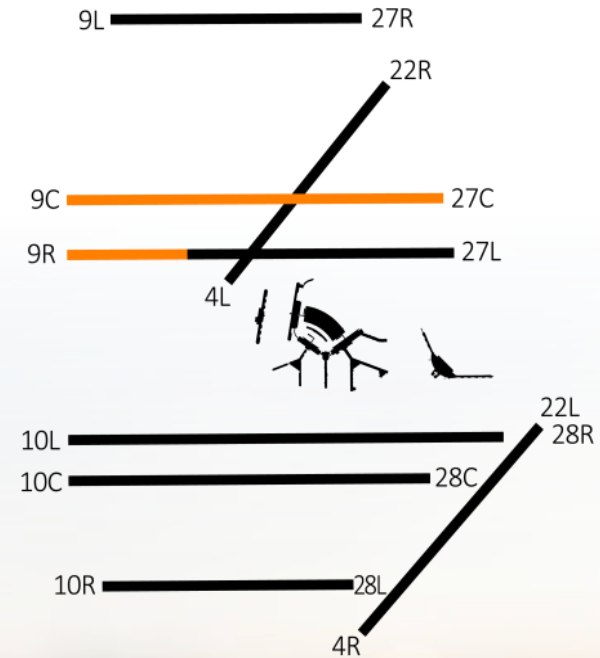
Parallel Runways are Safer and More Efficient

Intersecting Runway System (Pre-OMP Airfield)



Note: Green runways indicate the original “runway triangle” airfield.

Full Parallel Runway System

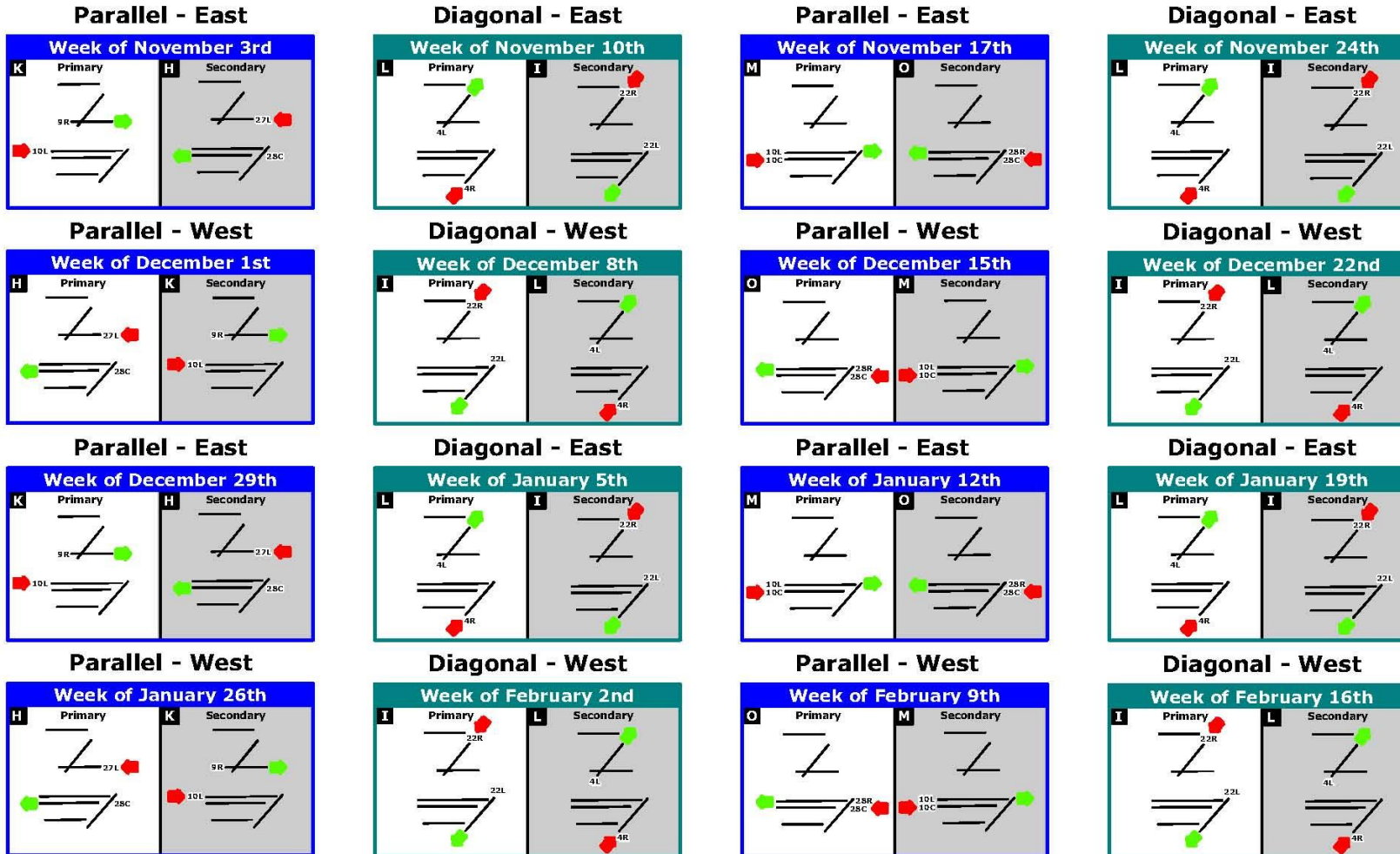


“...the essence of any successful plan to provide significant delay reduction at O’Hare involves correcting the existing “runway triangle” and realigning the airfield in sets of parallel runways that can handle more traffic, **safely and efficiently** in all weather conditions.”

(FAA Record of Decision for O’Hare Modernization, Sept. 2005)

INTERIM FLY QUIET RUNWAY ROTATION (Weeks 1-16)

The graphic below outlines the Interim Fly Quiet Runway Rotation Schedule. For each week, a primary and secondary runway use configuration is provided to accommodate potential changes in wind direction. The runway use configurations have been defined and approved by the ONCC to balance noise exposure to the extent possible. Special procedures have been defined to accommodate aircraft that require specific runways.



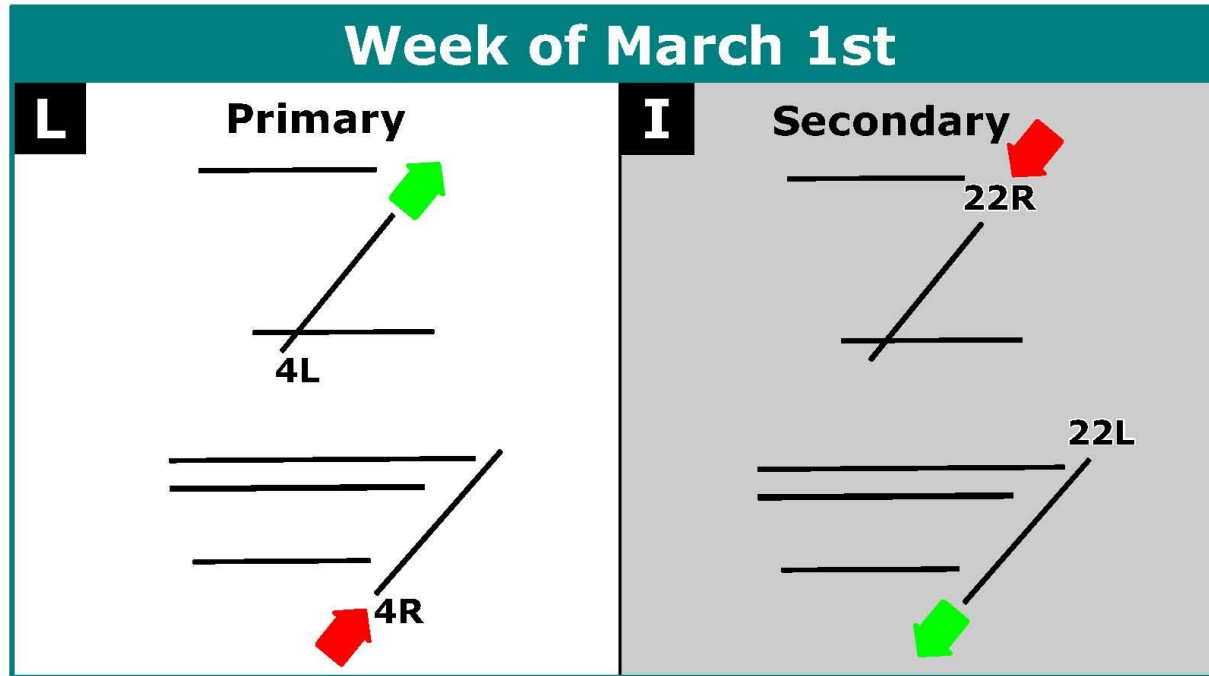
Week - Parallel Runways
Week - Diagonal Runways

Each weekly period will begin on Sunday evening at 10 p.m. or after when demand allows for one arrival and one departure runway.



INTERIM FLY QUIET RUNWAY ROTATION (Week 18)

The graphic below outlines the Interim Fly Quiet Runway Rotation Schedule. For each week, a primary and secondary runway use configuration is provided to accommodate potential changes in wind direction. The runway use configurations have been defined and approved by the ONCC to balance noise exposure to the extent possible. Special procedures have been defined to accommodate aircraft that require specific runways.



Notes

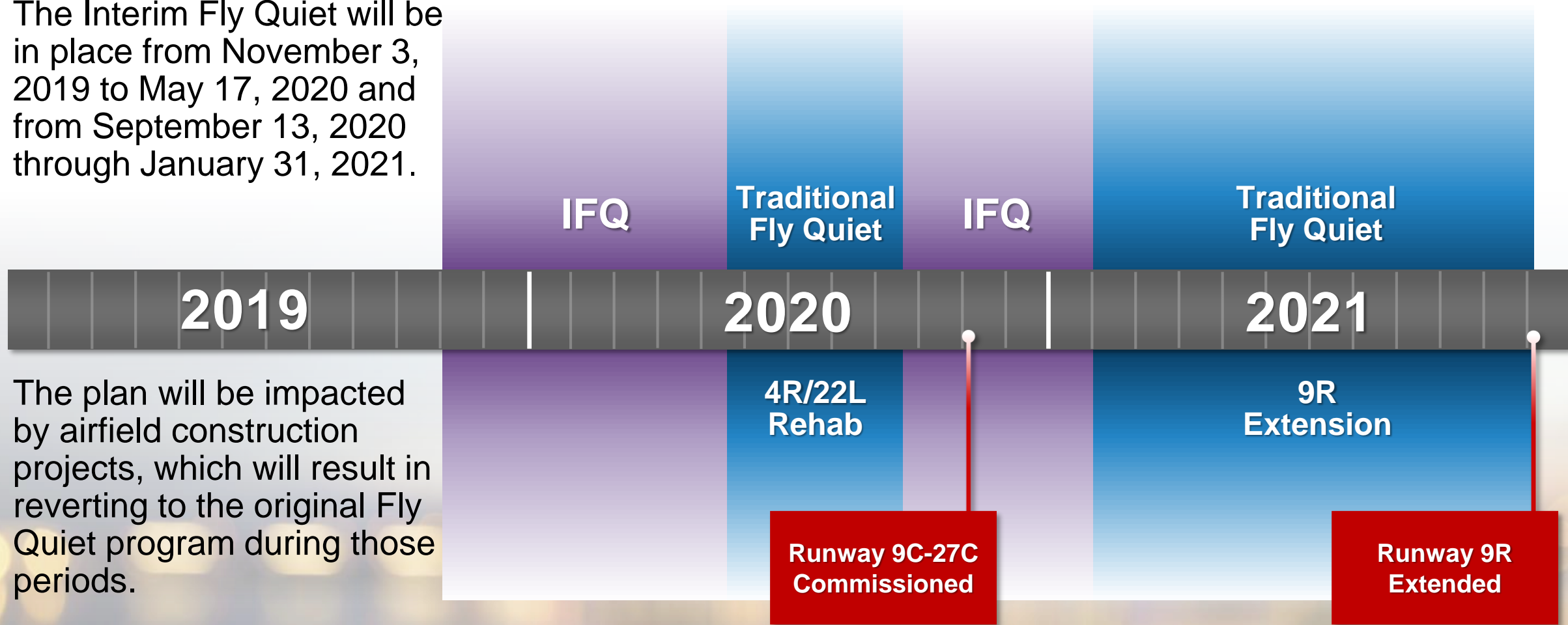
- Flights that require additional runway length should contact Chicago Department of Aviation (CDA) Operations at a minimum of 2 hours prior to arrival or departure.
- Alternative runways may be used to allow for construction, snow removal, runway maintenance, runway inspection and strong winds.
- Available runways are determined by CDA.



08/12/2019

Interim Fly Quiet Period

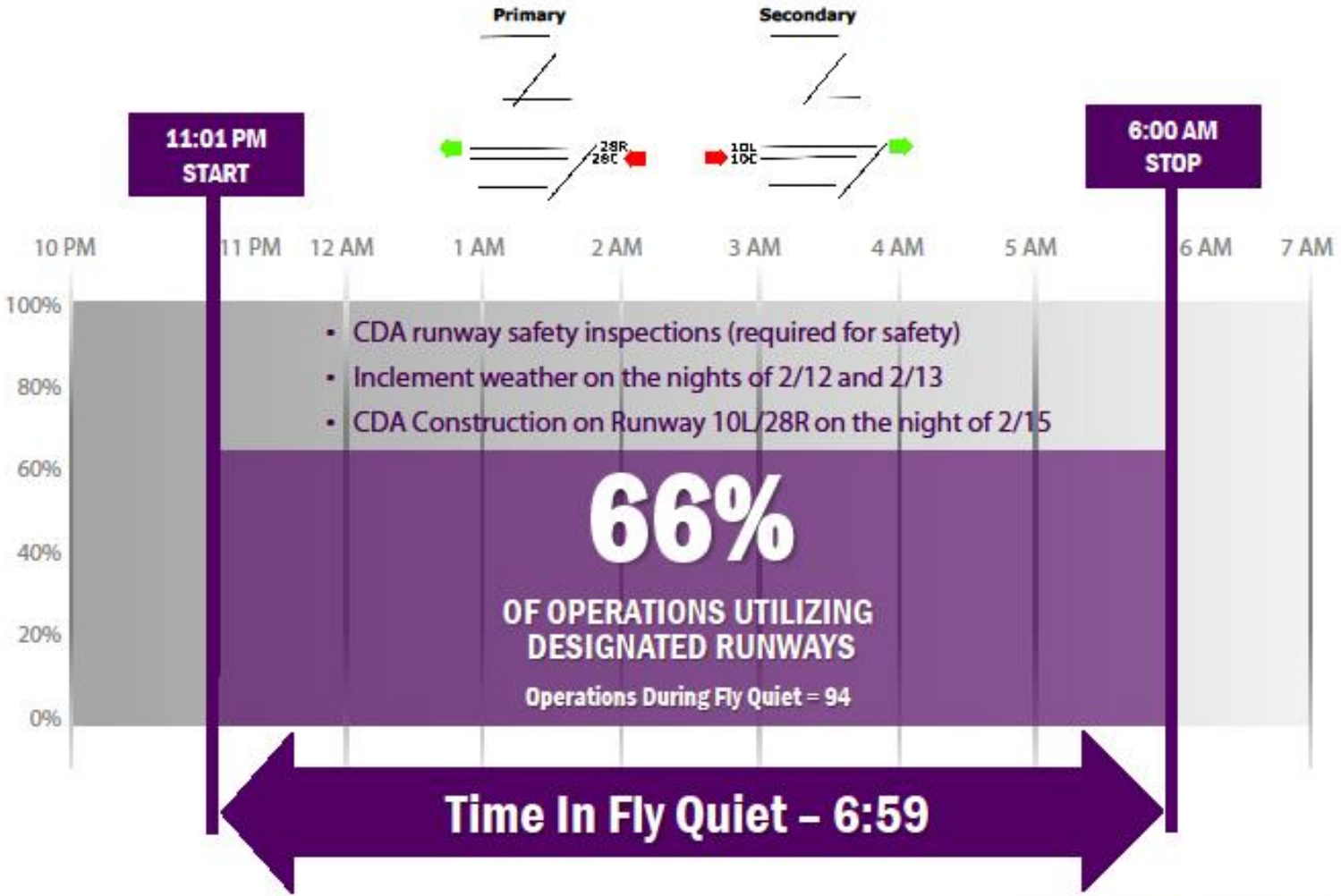
The Interim Fly Quiet will be in place from November 3, 2019 to May 17, 2020 and from September 13, 2020 through January 31, 2021.



The plan will be impacted by airfield construction projects, which will result in reverting to the original Fly Quiet program during those periods.

INTERIM FLY QUIET SUMMARY

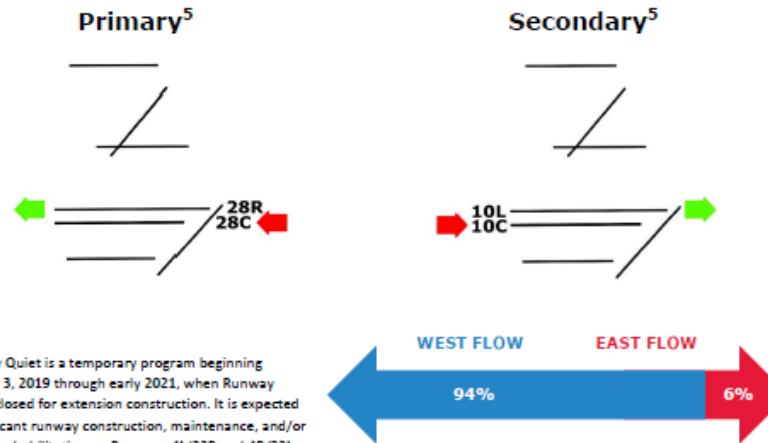
WEEK OF FEBRUARY 9, 2020 (Week 15)



Note: Values above represent the average for time period.

www.flychicago.com/oharenoise

Fly Quiet Mode ²						
Time				Runway Rotation Adherence		
Start	Stop	Duration (hrs: mins)	Percentage of Nighttime ³	Primary Configuration ⁴	Secondary Configuration ⁴	Operations
2/9/20 - 10:51 PM	2/10/20 - 05:59 AM	7:08	79%	95%	0%	93
2/10/20 - 10:33 PM	2/11/20 - 05:51 AM	7:18	81%	57%	0%	88
2/11/20 - 10:29 PM	2/12/20 - 06:04 AM	7:35	84%	92%	0%	108
2/13/20 - 12:56 AM	2/13/20 - 06:19 AM	5:23	60%	13%	33%	63
2/13/20 - 11:59 PM	2/14/20 - 06:00 AM	6:01	67%	51%	0%	87
2/14/20 - 10:02 PM	2/15/20 - 05:51 AM	7:49	87%	77%	1%	137
2/15/20 - 10:23 PM	2/16/20 - 06:01 AM	7:38	85%	26%	0%	81
Average (Week of February 9th)						
11:01 PM	6:00 AM	6:59	78%	63%	3%	94



Notes:

- Interim Fly Quiet is a temporary program beginning November 3, 2019 through early 2021, when Runway 9R/27L is closed for extension construction. It is expected that significant runway construction, maintenance, and/or pavement rehabilitation on Runways 4L/22R and 4R/22L would impact the Interim Fly Quiet during the 2019 and 2020 construction seasons, respectively. It is not anticipated that the Interim Fly Quiet would occur during these construction periods.
- Fly Quiet Mode is the period of time in which the nighttime operations are operating in accordance with the CDA's Fly Quiet Program.
- FAR Part 150 considers nighttime hours 10:00 PM - 07:00 AM.
- Percentage of operations on designated runways within Fly Quiet Mode.
- Runway 10L/28R is available for flights that require additional runway length and have contacted CDA Operations at a minimum of 2 hours prior to arrival or departure.

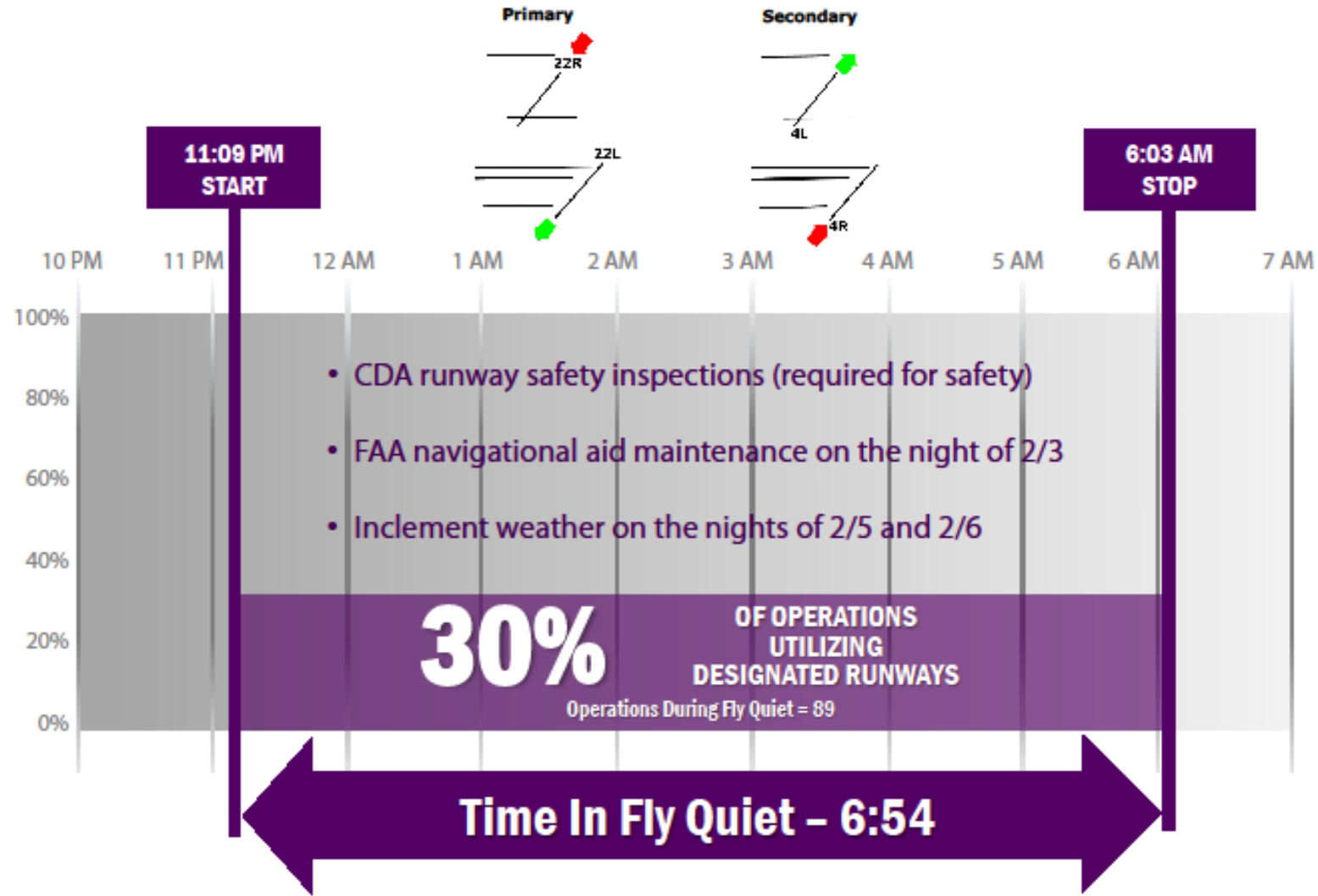
Comments:

- There were 0 requests granted for alternative runways during Fly Quiet Mode.
- On the nights of 2/12 and 2/13, the Rotation was restricted due to inclement weather.
- On the night of 2/15, the Rotation was restricted due to construction on Runway 10L/28R.

February 21, 2020

INTERIM FLY QUIET SUMMARY

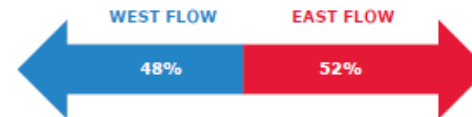
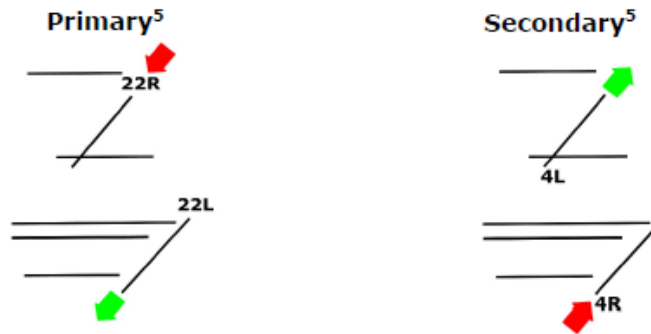
WEEK OF FEBRUARY 2, 2020 (Week 14)



Note: Values above represent the average for time period.

www.flychicago.com/oharenoise

Fly Quiet Mode ²						
Time				Runway Rotation Adherence		
Start	Stop	Duration (hrs: mins)	Percentage of Nighttime ³	Primary Configuration ⁴	Secondary Configuration ⁴	Operations
--	--	--	--	--	--	--
2/3/20 - 10:31 PM	2/4/20 - 06:01 AM	7:30	83%	0%	0%	96
2/4/20 - 10:26 PM	2/5/20 - 05:33 AM	7:07	79%	0%	60%	81
2/6/20 - 12:19 AM	2/6/20 - 06:12 AM	5:53	65%	0%	0%	73
2/7/20 - 12:52 AM	2/7/20 - 06:07 AM	5:15	58%	3%	0%	59
2/7/20 - 10:49 PM	2/8/20 - 06:07 AM	7:18	81%	49%	0%	105
2/8/20 - 10:00 PM	2/9/20 - 06:21 AM	8:21	93%	48%	0%	118
Average (Week of February 2nd)						
11:09 PM	6:03 AM	6:54	77%	21%	9%	89



Notes:

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- Fly Quiet Mode is the period of time in which the nighttime operations are operating in accordance with the CDA's Fly Quiet Program.
- FAR Part 150 considers nighttime hours 10:00 PM - 07:00 AM.
- Percentage of operations on designated runways within Fly Quiet Mode.
- Runway 10L/28R is available for flights that require additional runway length and have contacted CDA Operations at a minimum of 2 hours prior to arrival or departure.

Comments:

- There were 4 requests granted for alternative runways during Fly Quiet Mode.
- On the night of 2/2, radar data was unavailable.
- On the night of 2/3, the Rotation was restricted due to the FAA navigational aid maintenance on Runway 4R/22L.
- On the nights of 2/5 and 2/6, the Rotation was restricted due to inclement weather.

February 14, 2020