CHICAGO DEPARTMENT OF AVIATION

CITY OF CHICAGO

March 17, 2017

Ms. Amy Hanson (CHI-ADO-603)
Chicago Airports District Office
Federal Aviation Administration
2300 E. Devon Avenue, Room 320
Des Plaines, IL 60018

Subject: Chicago O'Hare International Airport
Fly Quiet Runway Rotation Test for a Twelve-Week Period (Test 2)

Dear Ms. Hanson:

The Chicago Department of Aviation ("CDA") is respectfully submitting a second Fly Quiet Runway Rotation Test ("Test 2") to the Federal Aviation Administration ("FAA") for review and approval of a twelve-week test. The purpose of Test 2 is to test the capabilities of the different configurations in response to FAA concerns, as well as test new configurations that were not included in Test 1. Test 2 is intended to occur during the overnight hours when demand requires one arrival runway and one departure runway. This test includes a twelve-week schedule that consists of twelve weekly periods intended to balance the impacts of overnight noise; see attached narrative. Each new week would begin on Sunday evening at 10 p.m. or after when demand allows for one arrival and one departure runway. This plan includes stakeholder input from the following groups:

- O'Hare Noise Compatibility Commission (ONCC);
- Suburban O'Hare Commission (SOC);
- Fair Allocation in Runways Coalition (FAiR); and
- Federal Aviation Administration (FAA).

The CDA is requesting to commence Test 2 no later than 30 days after FAA approval. Additional Test 2 information is available online now and throughout the test period at www.flychicago.com/flyquiettest. As always, please do not hesitate to call me with any questions you may have.

Sincerely,

Aaron J. Frame
Deputy Commissioner of Environment

AJF/ajf

Enclosure

cc: Commissioner Ginger S. Evans, Aviation
Jonathan Leach, Aviation
George Lyman, Aviation
Jeanette Camacho, O'Hare Noise Compatibility Commission
CDA Environment Division file

CHICAGO O'HARE INTERNATIONAL AIRPORT

FLY QUIET RUNWAY ROTATION TEST 2

CHICAGO DEPARTMENT OF AVIATION

MARCH 17, 2017

1.0 BACKGROUND

The Chicago Department of Aviation (CDA) conducted a Fly Quiet Runway Rotation Test (Test 1) for a 25-week period in 2016 from the night of July 6, 2016 through the morning of December 25, 2016, as approved by the FAA. Based on the recommendation of the O'Hare Noise Compatibility Commission (ONCC), the CDA is submitting a second Fly Quiet Runway Rotation Test (Test 2) to the Federal Aviation Administration (FAA) for approval of a 12-week test period during Spring 2017. The purpose of the test is to:

1. Test the capabilities of the different configurations after responding to FAA concerns
2. Test new configurations that were not included in Test 1

Test 2 is intended to occur during the overnight hours when demand requires one arrival and one departure runway. Test 2 includes a 12-week schedule that consists of 12 weekly periods intended to balance the overnight noise. Each new week would begin on Sunday evening at 10 p.m. or after when demand allows for one arrival and one departure runway. This plan includes stakeholder input from the following groups:

- O'Hare Noise Compatibility Commission (ONCC)
- Suburban O'Hare Commission (SOC)
- Fair Allocation in Runways Coalition (FAiR)
- Federal Aviation Administration (FAA)

The subsequent sections outline a background on the Fly Quiet Program (Fly Quiet), the efforts undertaken to date, public involvement on the revisions to Fly Quiet, and the methodology used to develop the recommended Test 2

1.1 History of the Fly Quiet Program

Since the 1970s, the Chicago Department of Aviation (CDA) has implemented a nighttime noise abatement program at Chicago O'Hare International Airport (O'Hare). In 1996, the O'Hare Noise Compatibility Commission (ONCC) was formed to provide input and oversight to the implementation of all noise programs, including the Fly Quiet Program.

On June 17, 1997, the City of Chicago announced that airlines operating at O'Hare International Airport had agreed to use designated noise abatement flight procedures in accordance with the Fly Quiet Program. The Fly Quiet Program was implemented in an effort to reduce the impacts of aircraft noise on the surrounding neighborhoods further. 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, highways, and commercial and industrial areas. As part of the Fly Quiet Program, the CDA prepares a Quarterly Fly Quiet Report. This report is shared with the ONCC, the airlines, the FAA and the general public. The Fly Quiet Report contains detailed information regarding nighttime runway use, flight operations, flight tracks, noise complaints, and 24-hour tracking of ground aircraft engine run-ups (ground run-ups). The data presented in the Fly Quiet Report are compiled from the Airport Noise Management System (ANMS) and airport operation logs. The Fly Quiet Report was prepared in consultation with the O'Hare Noise Compatibility Commission.

O'Hare has eight runways that are utilized at different times depending primarily upon the prevailing wind conditions on the airfield, as well as other weather conditions, airfield conditions, and air traffic conditions. O'Hare is located in a noise sensitive area surrounded by residential communities. The preferential runway use plan at O'Hare is voluntary and advisory in nature and does not compromise safety. When feasible, these procedures should be implemented between 10:00 p.m. and 7:00 a.m. (2200 and 0700 hours local time) in order to minimize the effects of nighttime noise on the surrounding communities. Unless weather, runway closures, or loss of navigational aids dictate otherwise, the FAA, at its sole discretion will implement the following runway use configurations in no particular order:

- Arrivals on 15 and departures on 28R and 15
- Arrivals on 27L and departures on 28R and 33
- Arrivals on 22R and departures on 28R and 22R
- Arrivals on 10L and departures on 9R and 10L

Any runway may be closed on any given night for routine safety inspections.

The Fly Quiet Program includes the following arrival and departure procedures for noise abatement. These procedures are advisory in nature and do not compromise safety. Recommended Nighttime Arrival Procedures: 10 p.m. to 7 a.m. (2200-0700 hours local time) I. Descent: Aircraft should not be lower than 4,000 feet MSL when turning on final approach. II. Reverse Thrust: Limit the use of reverse thrust between 10 p.m. to 7 a.m. (2200-0700 hours local time) to reduce nighttime noise impacts on local communities.

More information on the Fly Quiet Program can be found on the CDA website at www.flychicago.com/ORDnoise

1.2 INTERIM FLY QUIET EVALUATION

The purpose of evaluating the Fly Quiet Program is to develop a balanced, cost-effective plan to reduce current aircraft noise impacts over noise-sensitive land uses and, where practical, to limit the potential for future noise impacts. FAA cooperation, through the involvement of air traffic control professionals and FAA review of the recommended change, is required before any change may occur. The general goals and objectives of the evaluating the Fly Quiet Program include:

- **Provide Near-Term Relief** – Test with Community Feedback
- **Reduce Impacts to the Highest Impacted Communities** – Provide relief to the highest impacted communities
- **Provide Predictability** – Publish a rotation schedule that allows citizens to predict periods of relief to the extent possible

2.0 PUBLIC INVOLVEMENT

2.1 ONCC FLY QUIET COMMITTEE MEETINGS

On September 18, 2015, the ONCC formed an ad hoc Fly Quiet Committee (Committee) to review, modify and make recommendations regarding nighttime noise abatement procedures at O'Hare. The Committee was formed as a result of the CDA's Noise Recommendations modifying the Fly Quiet Program which were announced during the MOU meetings. This role for the Committee is directly in line with the Federal Aviation Administration (FAA) Record of Decision (ROD) on the O'Hare Modernization Plan (OMP), which states that ONCC is the "official facilitating body with the responsibility to oversee O'Hare noise mitigation efforts, which include the Fly Quiet and Sound Insulation programs."

The Committee consists of nine members representing Chicago and suburban communities near O'Hare that are tasked to review and recommend modifications to the airport's nighttime noise abatement program. The Committee invited FAiR and SOC consultants to participate as official guests.

2.1.1 Fly Quiet Committee Meeting – February 8, 2017

The CDA met with the Committee and reviewed the draft results for Test 1 and began collecting feedback from committee members.

2.1.2 Fly Quiet Committee Meeting – February 22, 2017

The CDA met with the Committee regarding modifications to five configurations of Test 1 and a proposed Test 2. The CDA met with the Committee regarding the rotation of runway and new periods of Fly Quiet aimed at expanding the Fly Quiet Program. The Committee approved criteria for Test 2 and the configurations for Test 2. The criteria for Test 2 is as follows:

1. Establish Rotation Plan
2. Alternate East and West Flow
3. Avoid Consecutive Community Impacts
4. Reduce Use of Runway 10L/28R
5. Include Runway 15/33
6. Conduct a Test and Monitor Performance
7. Require ONCC Review

2.2 ONCC FULL MEETINGS

The ONCC has regularly scheduled meetings:

2.2.1 ONCC Meeting – March 10, 2017

The ONCC formally approved the Fly Quiet Test 2 with 36 of the 58 (62 percent) members voting in favor of implementing Test 2 for twelve weeks.

3.0 INTERIM FLY QUIET ROTATION TEST 2

3.1 Methodology

The following Fly Quiet Runway Rotation was developed based the above ONCC criteria:

There are 10 Fly Quiet runway operating configurations. These configurations are designed with the following operating characteristics:

- No more than two runways are used in each configuration consistent with ONCC Criterion 1.
- The configurations are designed to use either only the east/west runways or only the diagonal runways. This approach will assist in satisfying ONCC Criteria 3, 4 and 5.
- To the extent possible, departure and arrival runways on as many different runways as feasible. It is important to note that runway operating configurations that do not utilize Runway 10L/28R may still experience departure operations from Runway 10L/28R by aircraft having an operational requirement after prior coordination with CDA Operations.

Exhibit A depicts the Fly Quiet runway operating configurations. Runway operating configurations A, B, K, L, and M are east flow arrival configurations while runway operating configurations F, N, H, I, and O are west flow arrival configurations. There are 5 east flow arrival runway operating configurations with 3 configurations using only east/west runways and 2 configurations using only diagonal runways. Similarly, there are 5 west flow arrival runway operating configurations with 3 configurations using only east/west runways and 2 configurations using only diagonal runways.

East arriving runway operating configurations are:

- Configuration A arrives and departs Runway 10L.
- Configuration B arrives and departs Runway 15.
- Configuration K arrives Runway 10L and departs Runway 9R.
- Configuration L arrives Runway 4R and departs Runway 4L.
- Configuration M arrives Runway 10C and departs Runway 10L.

West arriving runway operating configurations are:

- Configuration F arrives and departs Runway 28R.
- Configuration N arrives Runway 22L and departs Runway 33.
- Configuration H arrives Runway 27L and departs Runway 28C.
- Configuration I arrives Runway 22R and departs Runway 22L.
- Configuration O arrives Runway 28C and departs Runway 28R.

Configurations M and O would likely necessitate the use of intersection departures. In these cases, the CDA requests to utilize intersections closest to the end of the runway to allow for the greatest runway length possible.

Runways 4L, 9R, and 22L have less than 9,600 ft. available for departure and are being utilized in configurations to disperse noise more equitably in the area.

Airline requests for runway 10L/28R will be accommodated with two-hour or greater advance notice to CDA Operations, unless the runway is closed. Permission will be given for less than two-hour notice, for weeks that diagonal runways are designated. If runway 10L/28R is closed, runway 10C/28C will be made available.

The runway operating configurations are utilized in a 12-week Runway Rotation Test. Important characteristics of the Test are:

- For each week, a primary runway operating configuration is designated with an alternate configuration designated to provide additional wind coverage if needed.
- The runway operating configurations are used such that a minimum amount of physical concrete is used. This attempts to minimize the disruption caused by nighttime runway maintenance and construction.
- The runway operating configurations are utilized to alternate between east flow arrivals and west flow arrivals configurations consistent with ONCC Criteria 1 and 2.
- The runway operating configurations are also utilized to alternate between configurations that use east/west runways oriented and diagonal runways to assist in satisfying ONCC Criteria 1, 3, 4 and 5.

The weekly Test 2 configurations are as follows:

- Week 1: The primary runway operating configuration is east (ONCC Criterion 2) flow arrival configuration A (arrivals and departures on Runway 10L) with west flow arrival configuration F (arrivals and departures on Runway 28R) serving as the alternate configuration.

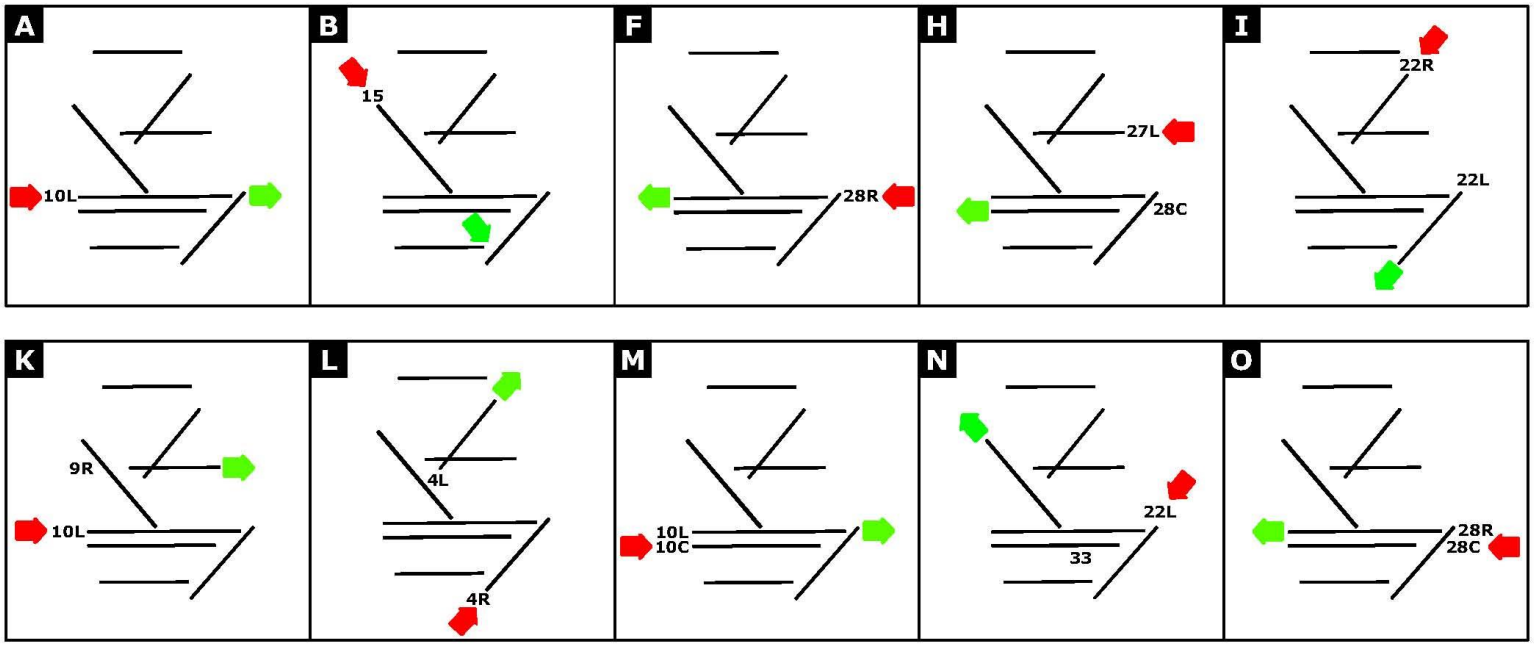
- Week 2: The primary runway operating configuration is west (ONCC Criterion 2) arrival flow configuration I (arrivals on Runway 22R and departures on Runway 22L) (ONCC Criteria 4 and 5) with east arrival configuration L (arrivals on Runway 4R and departures on Runway 4L) serving as the alternate configuration. The use of a diagonal orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 3: The primary runway operating configuration is east (ONCC Criterion 2) flow arrival configuration K (arrivals on Runway 10L and departures on Runway 9R) (ONCC Criteria 4) with west flow arrival configuration H (arrivals on Runway 27L and departures on Runway 28C) serving as the alternate configuration. The use of an east/west orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 4: The primary runway operating configuration is west (ONCC Criterion 2) flow arrival configuration N (arrivals on Runway 22L and departures on Runway 33) (ONCC Criteria 4 and 5) with east flow arrival configuration B (arrivals and departures on Runway 15) serving as the alternate configuration. The use of diagonal orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 5: The primary runway operating configuration is east (ONCC Criterion 2) flow arrival configuration M (arrivals on Runway 10C and departures on Runway 10L) (ONCC Criteria 4) with west flow arrival configuration O (arrivals on Runway 28C and departures on Runway 28R) serving as the alternate configuration. The use of an east/west orientated configuration minimizes additional impacts to the communities impacted the prior week (ONCC Criteria 3).
- Week 6: The primary runway operating configuration is west flow arrival configuration I (arrivals on Runway 22R and departures on Runway 22L) (ONCC Criteria 4 and 5) with east flow arrival configuration L (arrivals on Runway 4R and departures on Runway 4L) serving as the alternate configuration. The use of diagonal orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 7: The primary runway operating configuration is west flow arrival configuration F (arrivals and departures on Runway 28R) with east flow arrival configuration A (arrivals and departure Runway 10L) serving as the alternate configuration. The use of an east/west orientated configuration minimizes additional impacts to the communities impacted the prior week (ONCC Criteria 3).
- Week 8: The primary runway operating configuration is east (ONCC Criterion 2) flow arrival configuration B (arrivals and departures on

Runway 15) (ONCC Criteria 4 and 5) with west flow arrival configuration N (arrivals on Runway 22L and departures on Runway 33) serving as the alternate configuration. The use of a diagonal orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).

- Week 9: The primary runway operating configuration is west (ONCC Criterion 2) flow arrival configuration H (arrivals on Runway 27L and departures on Runway 28C) (ONCC Criteria 4) with east flow arrival configuration K (arrivals on Runway 10L and departures on Runway 9R) serving as the alternate configuration. The use of an east/west orientated configuration avoids additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 10: The primary runway operating configuration is east (ONCC Criterion 2) flow arrival configuration L (arrivals on Runway 4R and departures on Runway 4L) (ONCC Criteria 4 and 5) with west flow arrival configuration I (arrivals on Runway 22R and departures on Runway 22L) serving as the alternate configuration. The use of diagonal orientated configuration minimizes additional impacts to the communities impacted during Week 3 (ONCC Criteria 3).
- Week 11: The primary runway operating configuration is west (ONCC Criterion 2) flow arrival configuration O (arrivals on Runway 28C and departures on Runway 28R) (ONCC Criteria 4) with east flow arrival configuration M (arrivals on Runway 10C and departures on Runway 10L) serving as the alternate configuration. The use of an east/west orientated configuration minimizes additional impacts to the communities impacted during the prior week (ONCC Criteria 3).
- Week 12: The primary runway operating configuration is east flow arrival configuration B (arrivals and departures on Runway 15) (ONCC Criteria 4 and 5) with west flow arrival configuration N (arrivals on Runway 22L and departures on Runway 33) serving as the alternate configuration. The use of diagonal orientated configuration minimizes additional impacts to the communities impacted during Week 3 (ONCC Criteria 3).

The CDA consulted the construction managers and identified potential impacts to Weeks 3 and 9, which are noted on the schedule. In addition, through consultation with FAA Technical Operations, it was determined there were no planned extended outages during Spring 2017.

FLY QUIET TEST 2 CONFIGURATIONS



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.

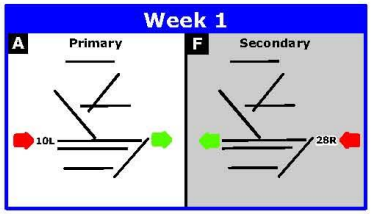
Arrival
Departure

3/17/2017

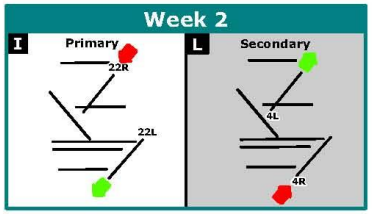
PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Weeks 1-12)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.

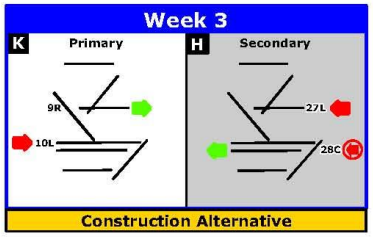
Parallel - East



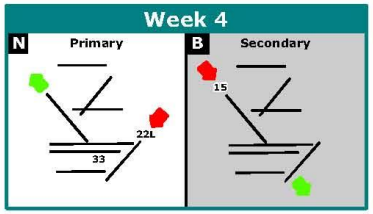
Diagonal - West



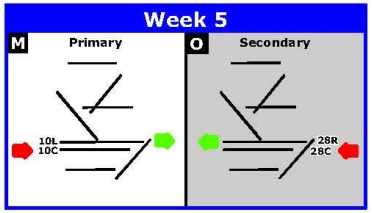
Parallel - East



Diagonal - West



Parallel - East



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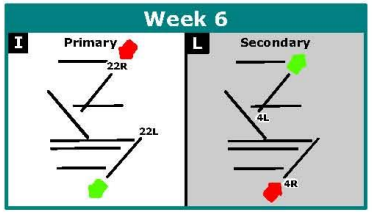

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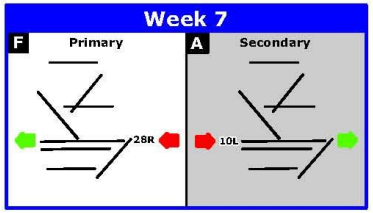
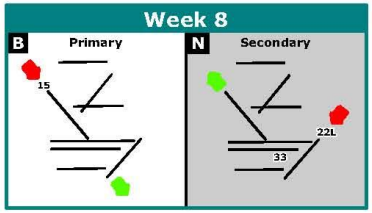
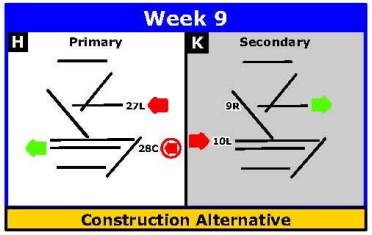


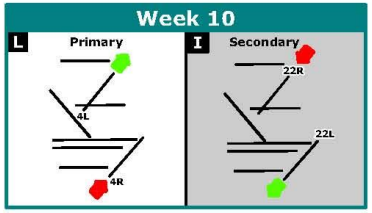
Diagonal - East



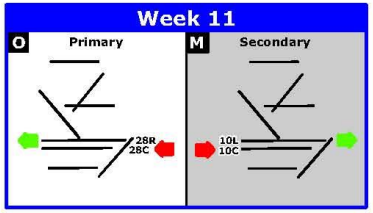
Parallel - West



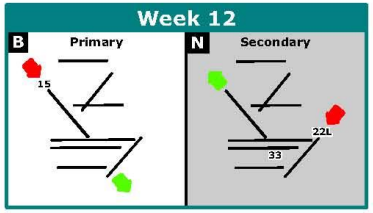
Diagonal - East



Parallel - West



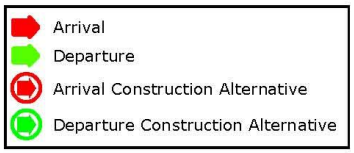
Diagonal - East



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.



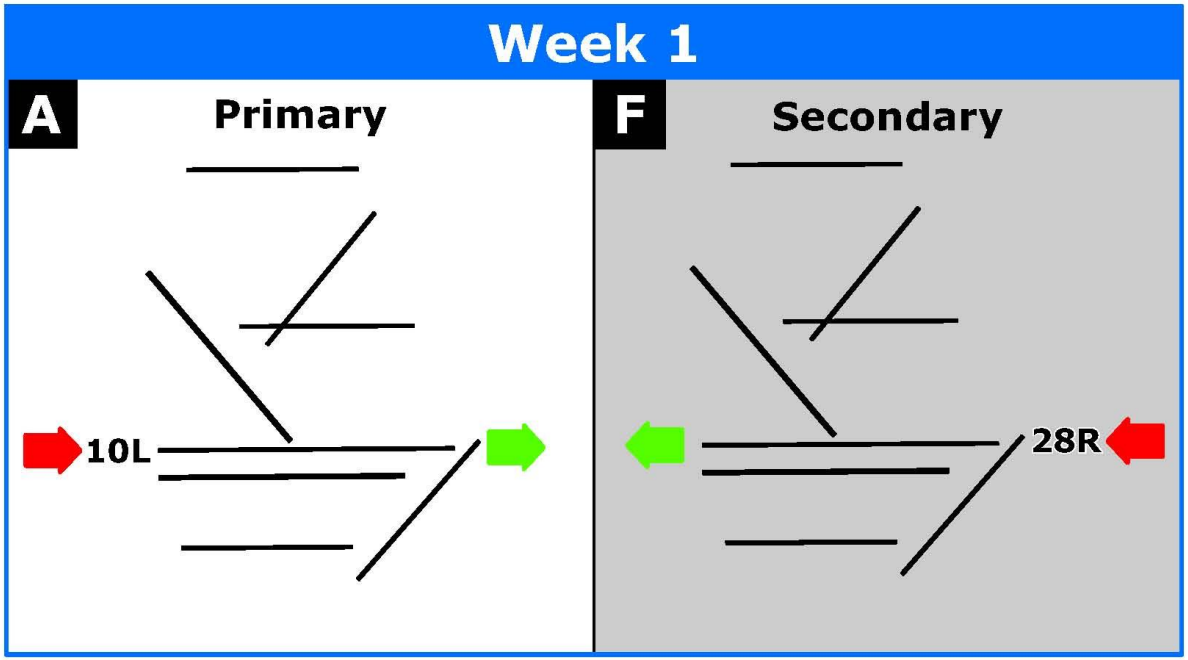
Notes

- 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.

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 1)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 1)

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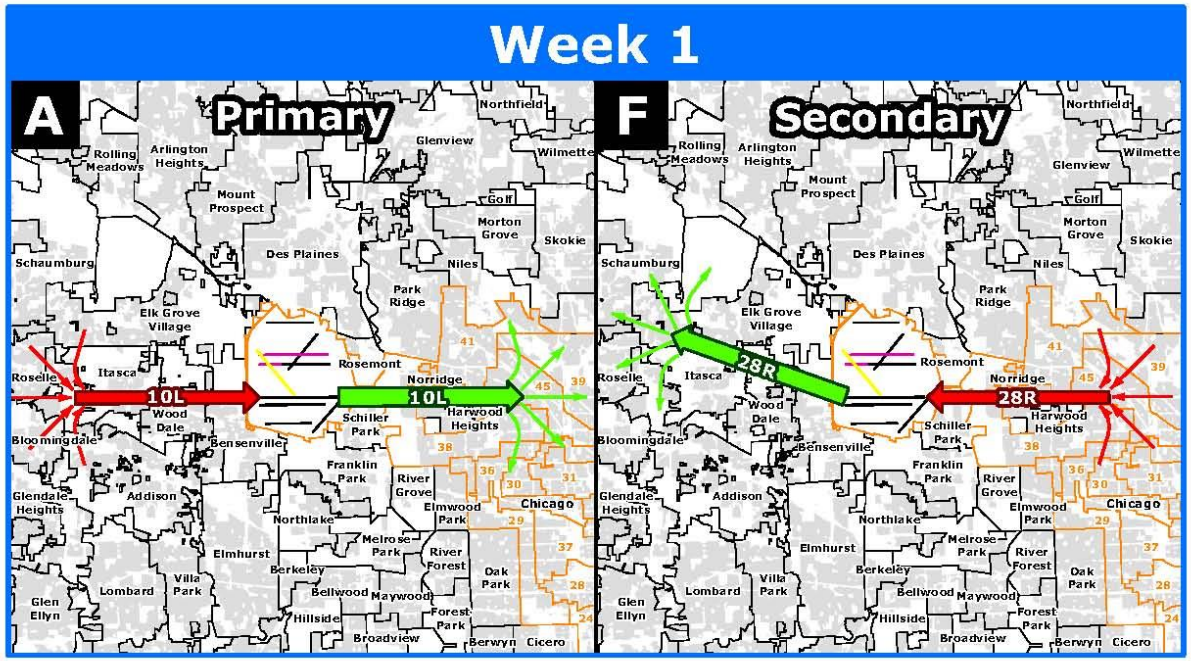

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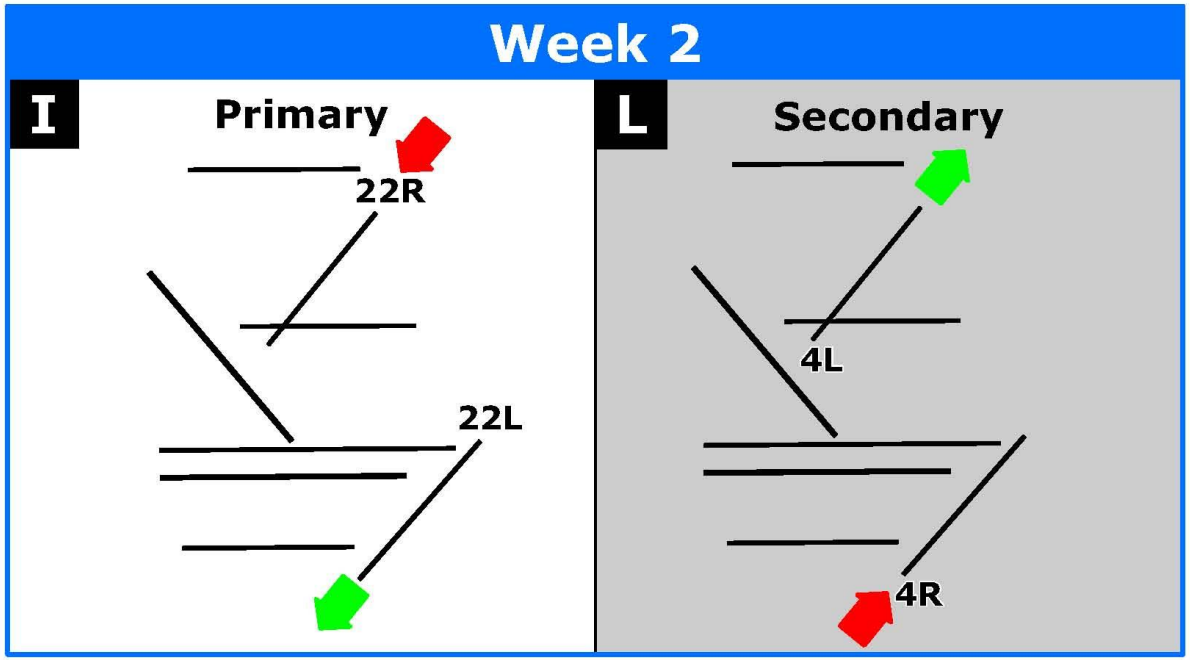
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 2)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 2)

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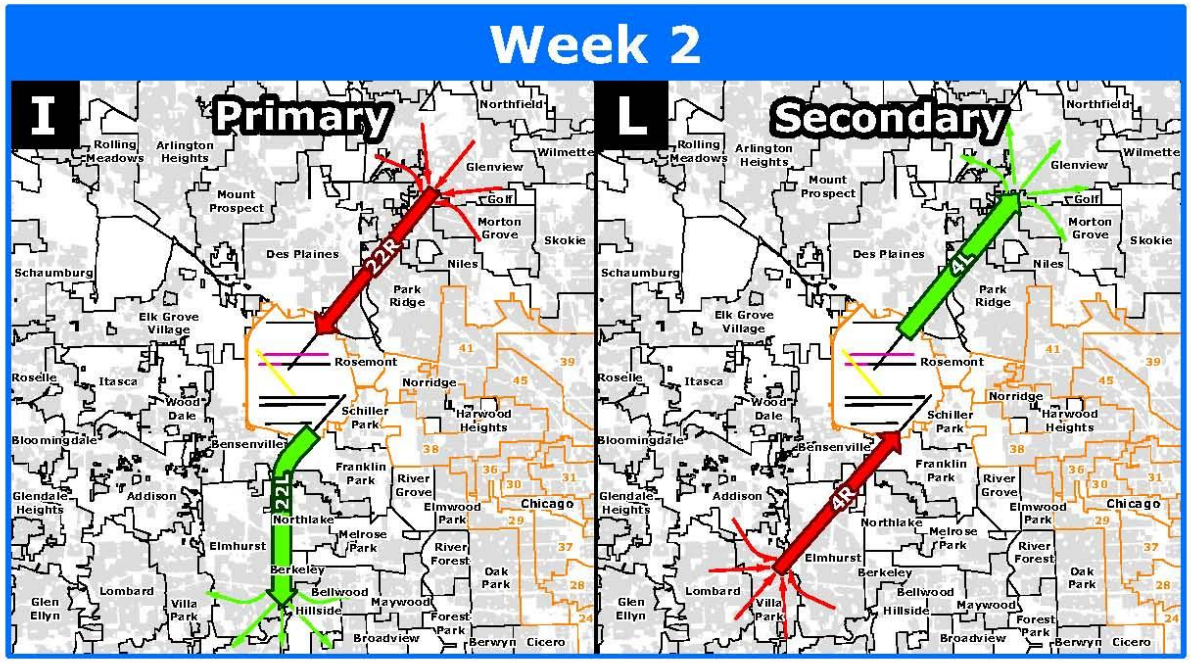

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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 3)

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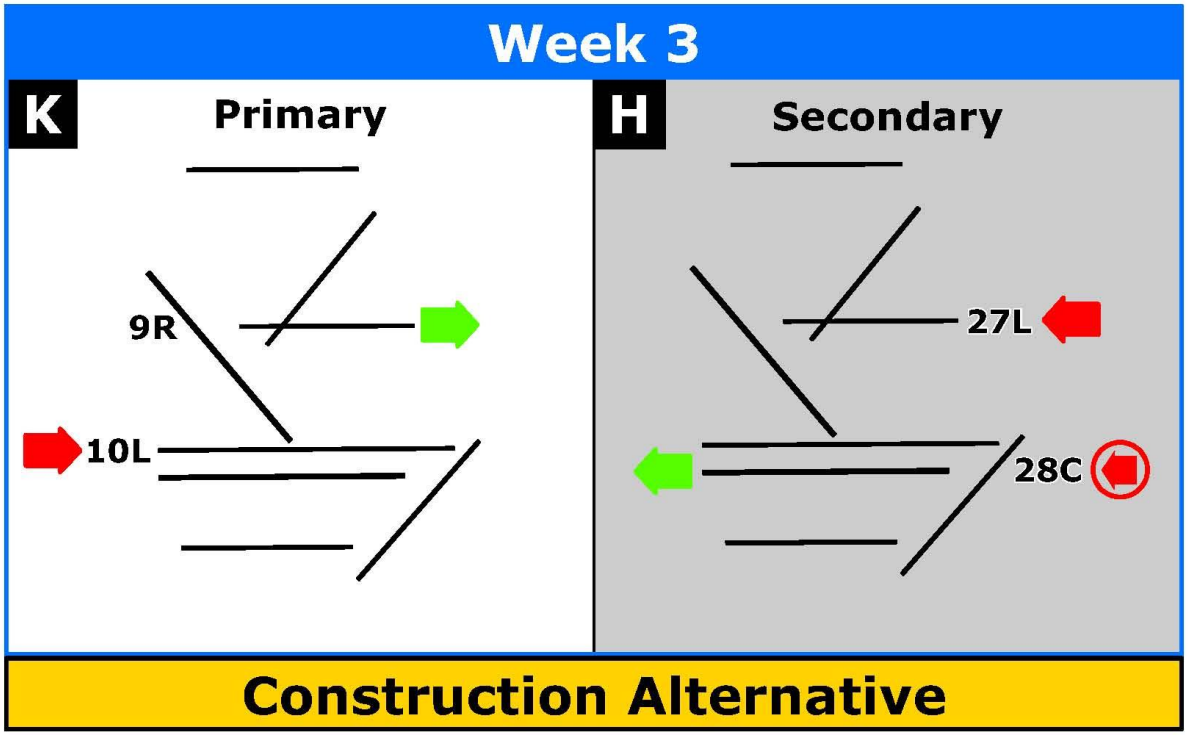

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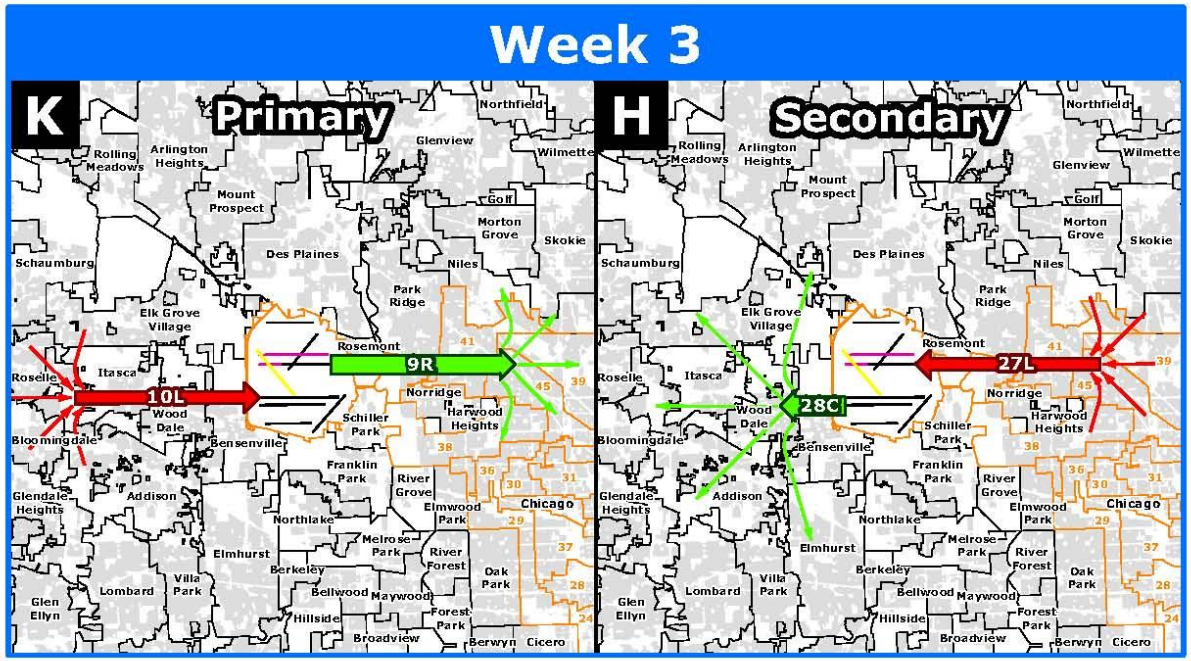
03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 3)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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

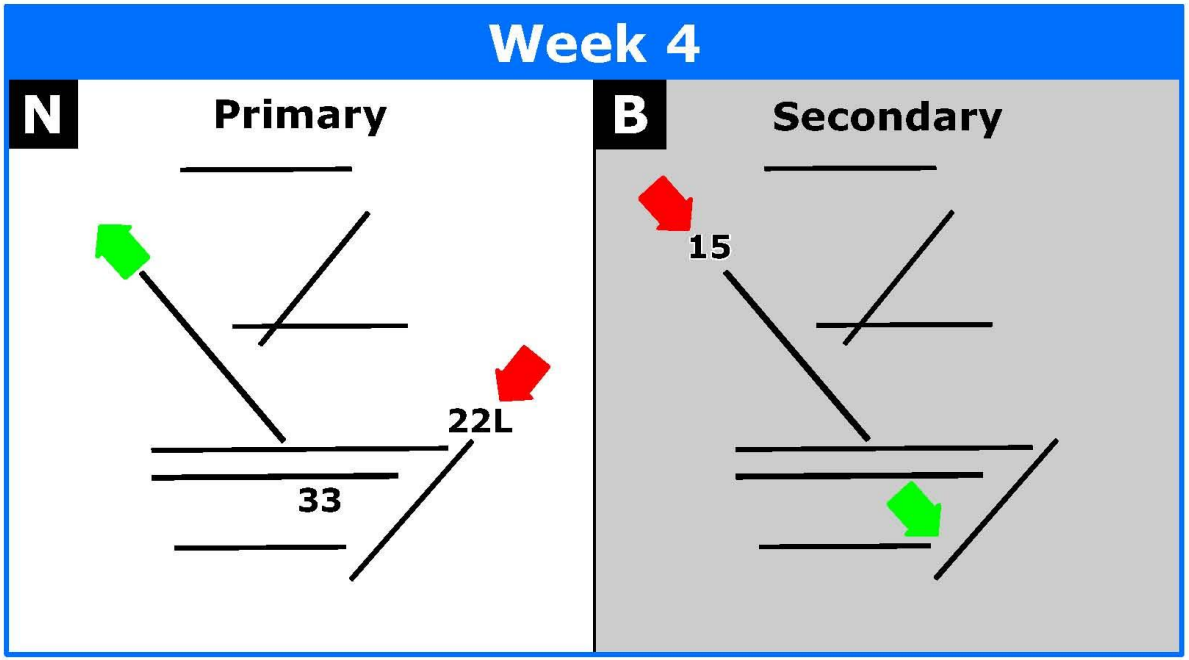
- Flights that require additional runway length should contact Chicago Department of Aviation (CDA) Operations at a minimum of 2 hours prior to arrival or departure.
- Alternative runways may be used to allow for construction, snow removal, runway maintenance, runway inspection and strong winds.
- Available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

Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 4)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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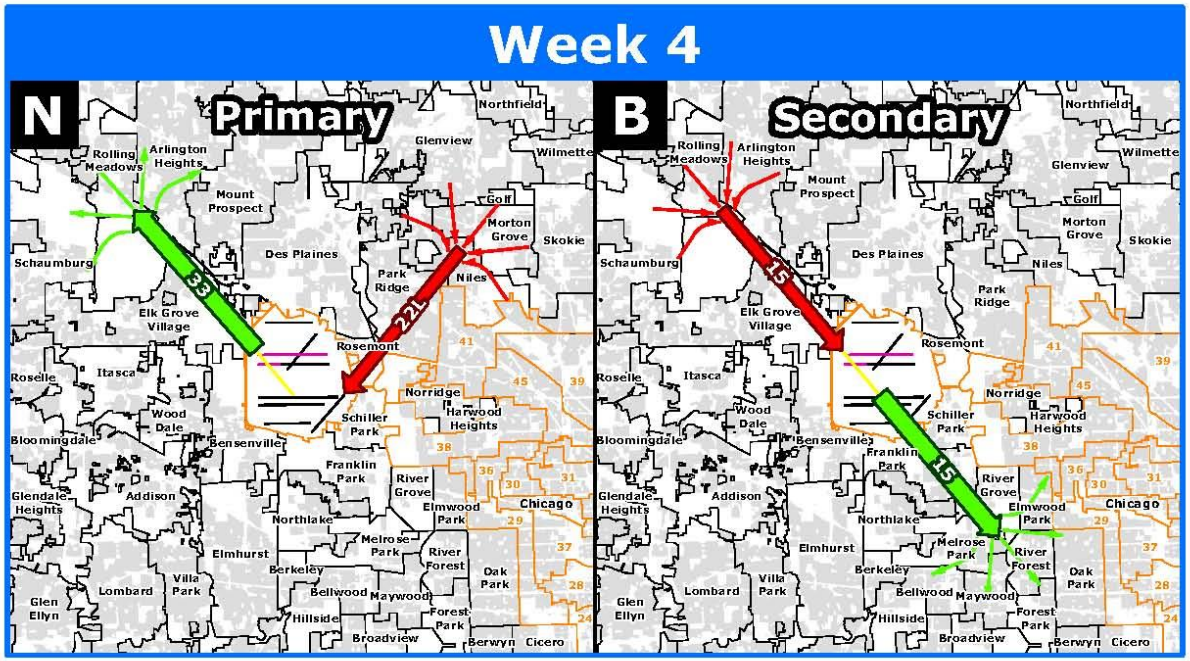
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 4)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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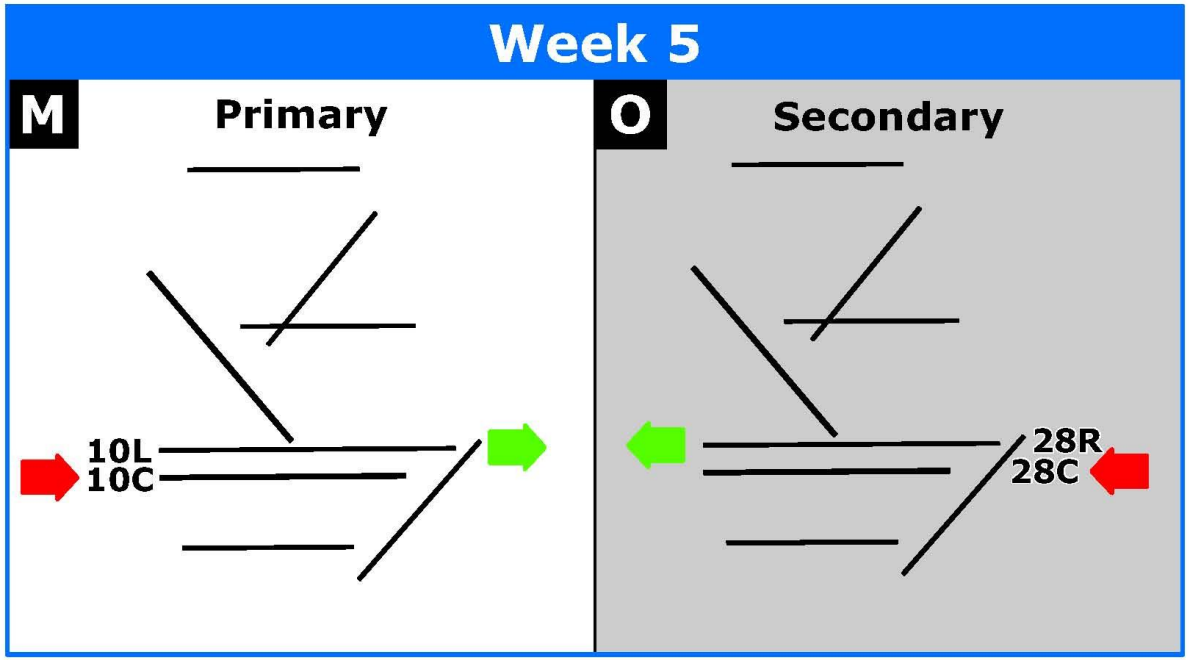
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 5)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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

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- Alternative runways may be used to allow for construction, snow removal, runway maintenance, runway inspection and strong winds.
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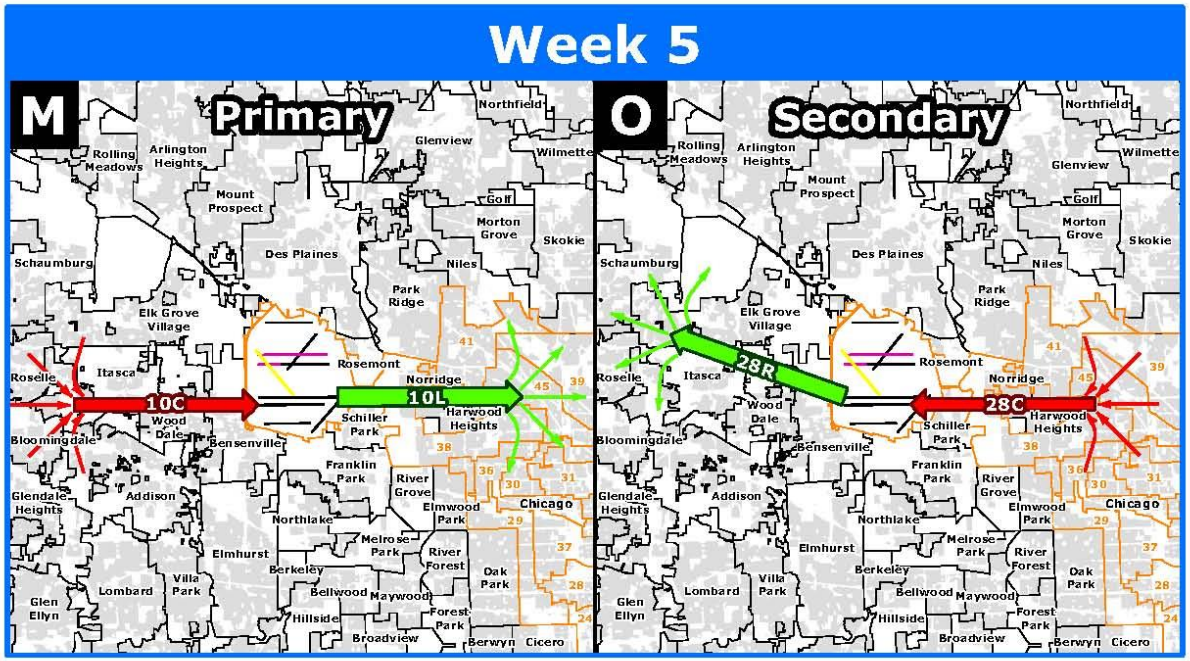
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 5)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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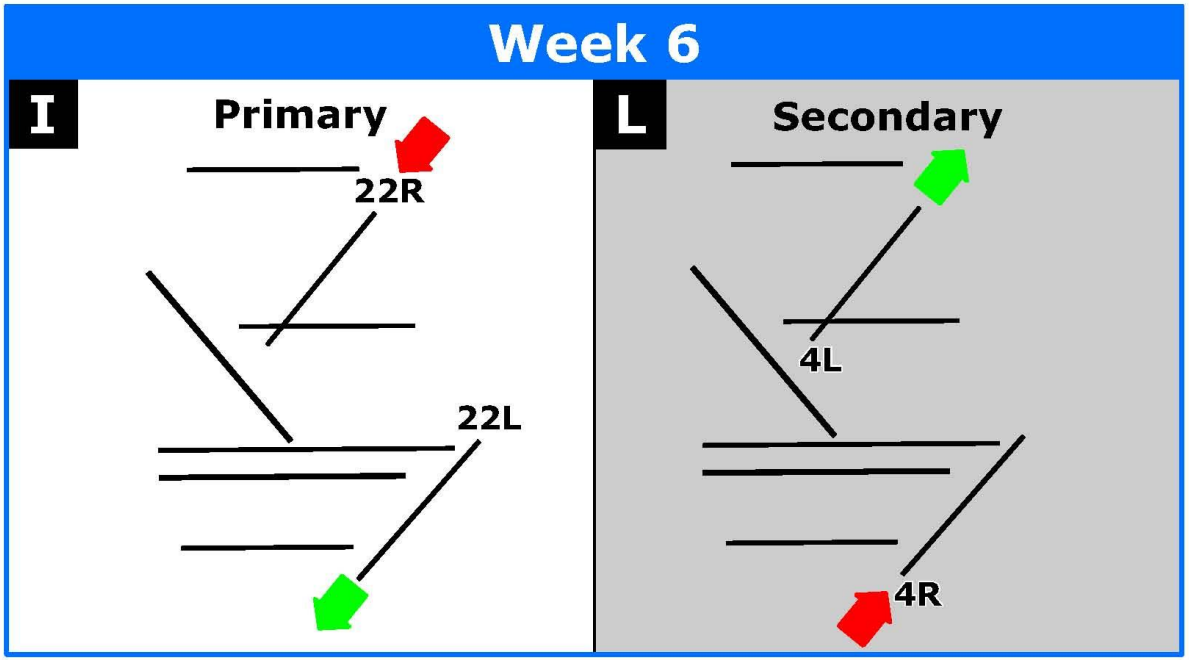
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 6)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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

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- Alternative runways may be used to allow for construction, snow removal, runway maintenance, runway inspection and strong winds.
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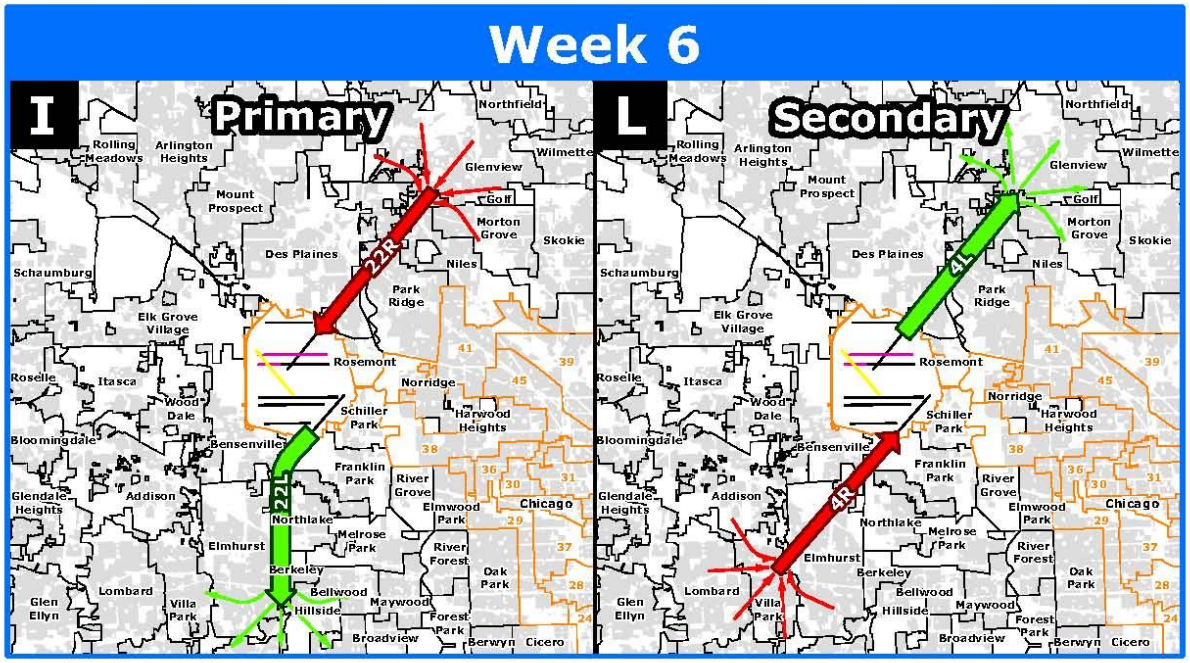
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 6)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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

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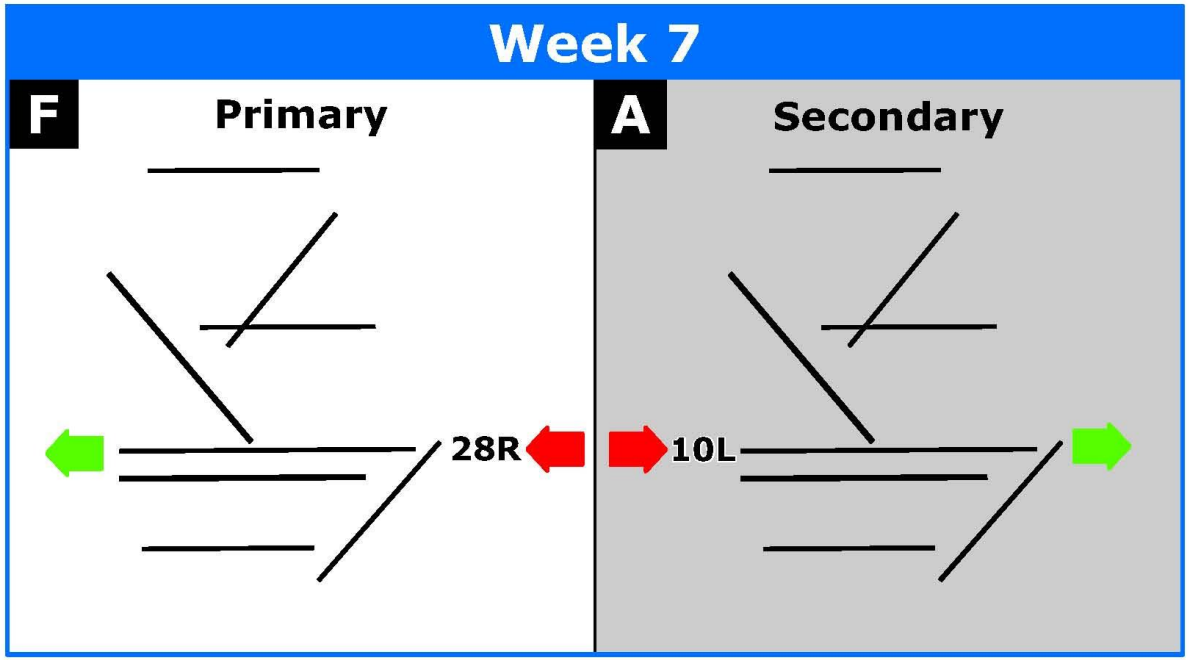
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 7)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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

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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 7)

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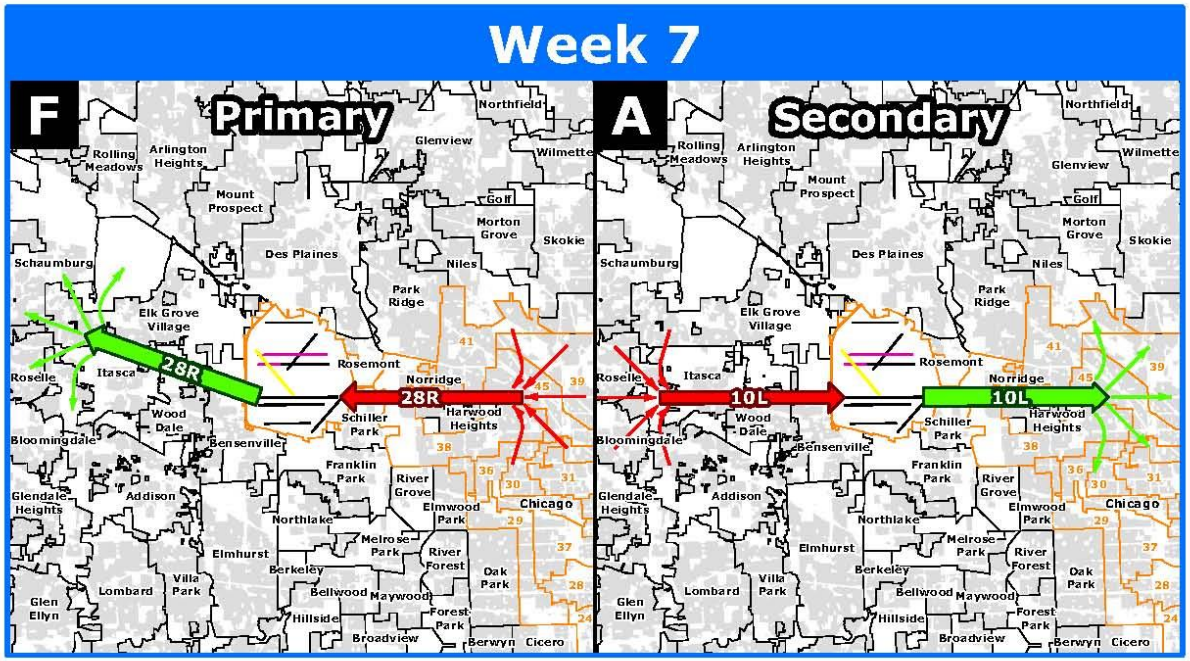

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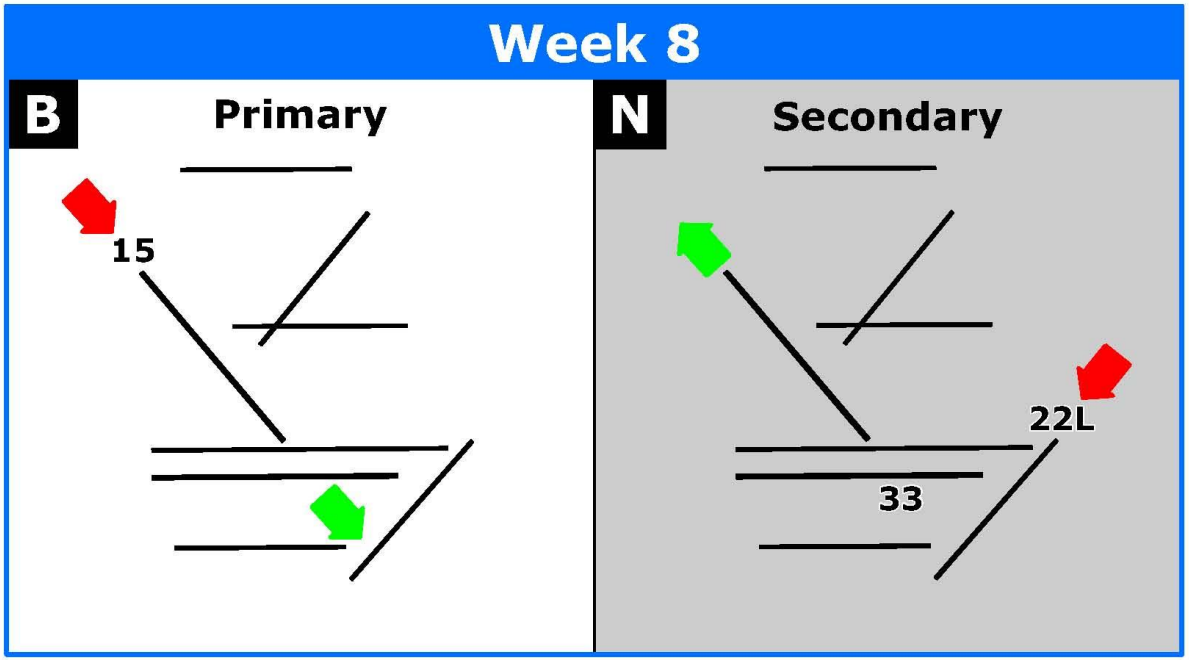
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 8)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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Arrival
Departure

03/17/2017

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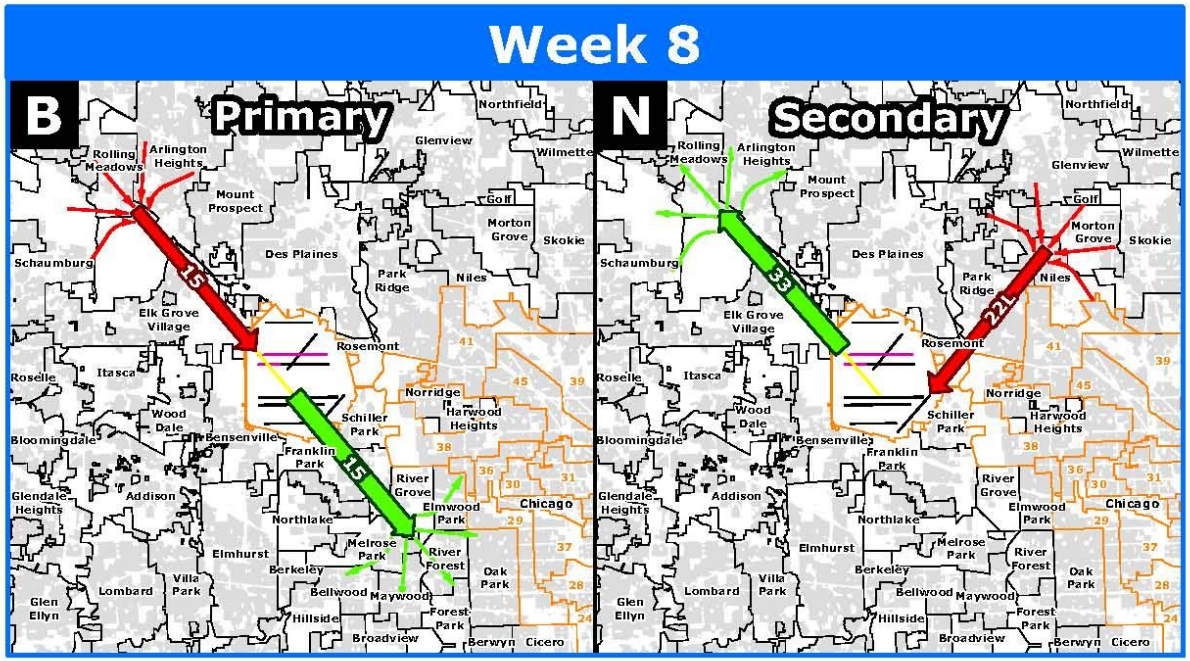

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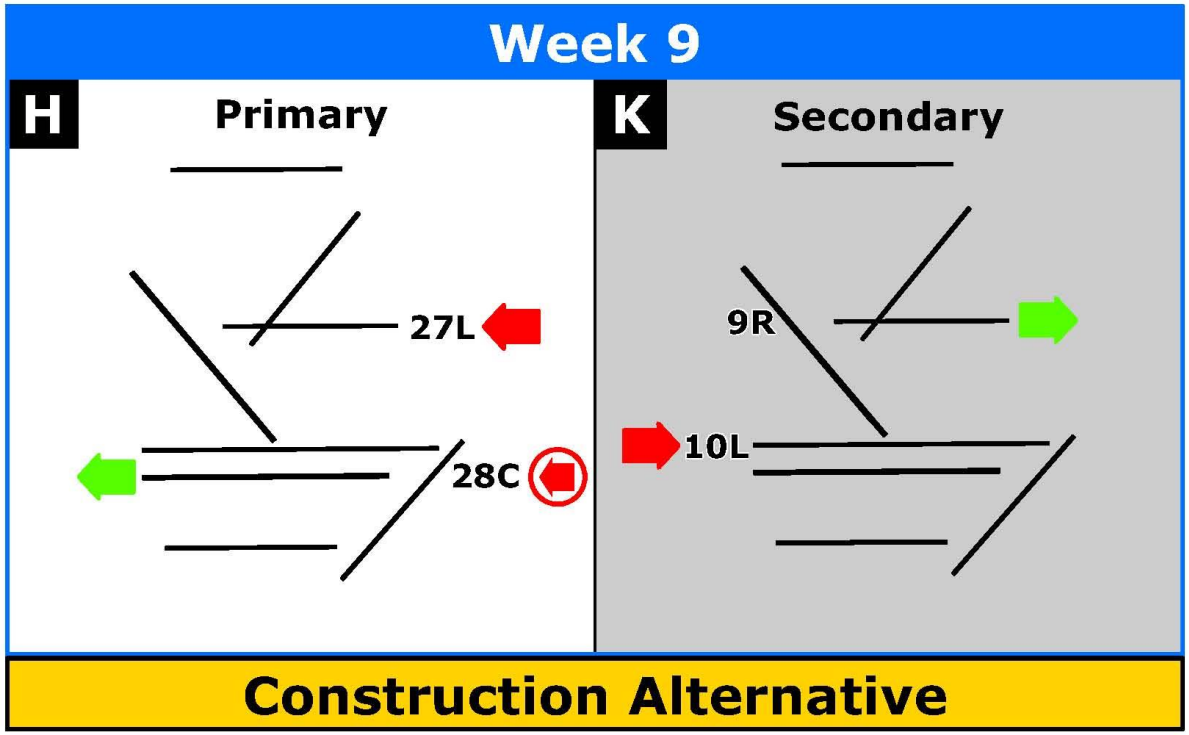
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 9)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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03/17/2017

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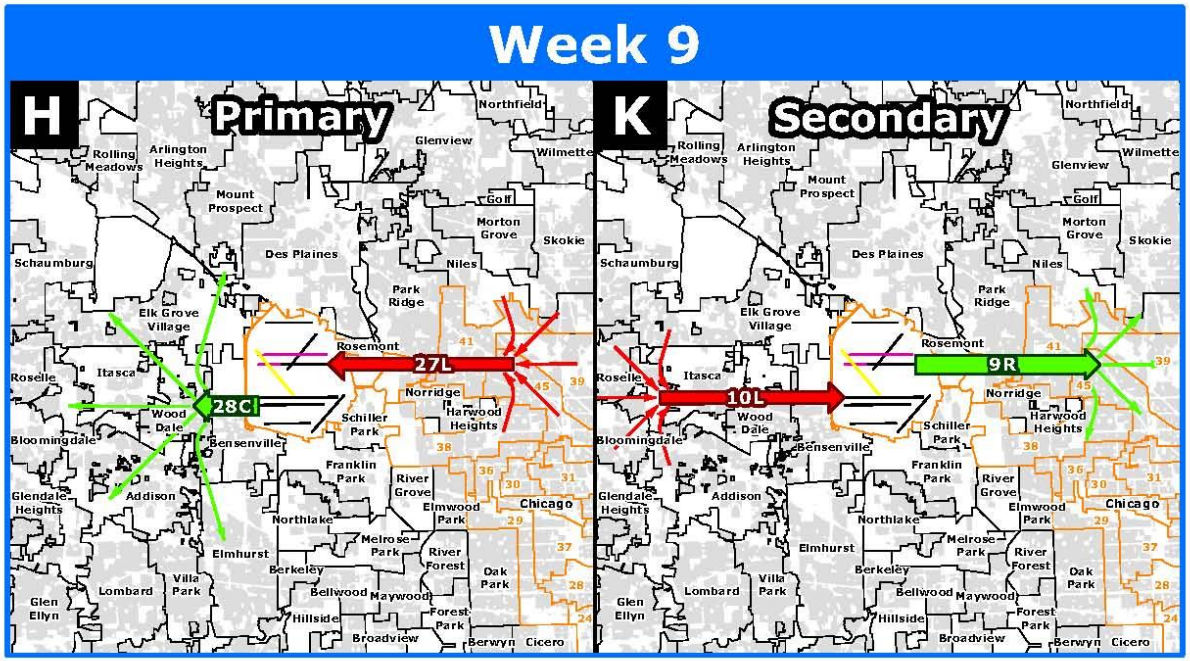

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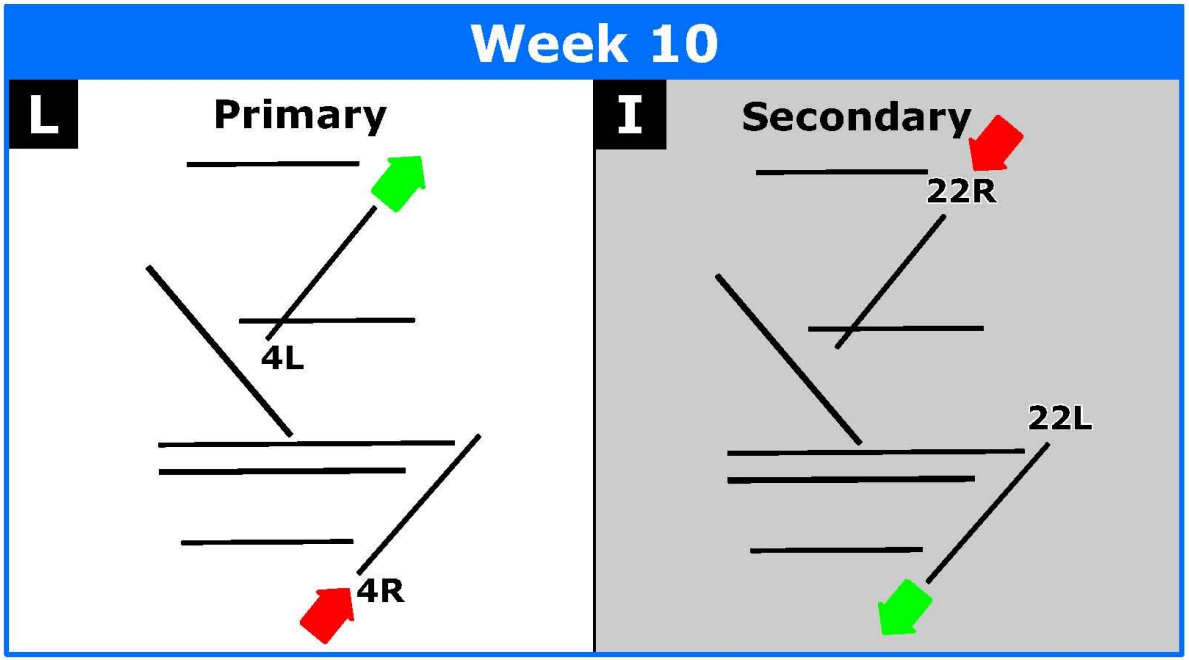
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 10)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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Arrival
Departure

03/17/2017

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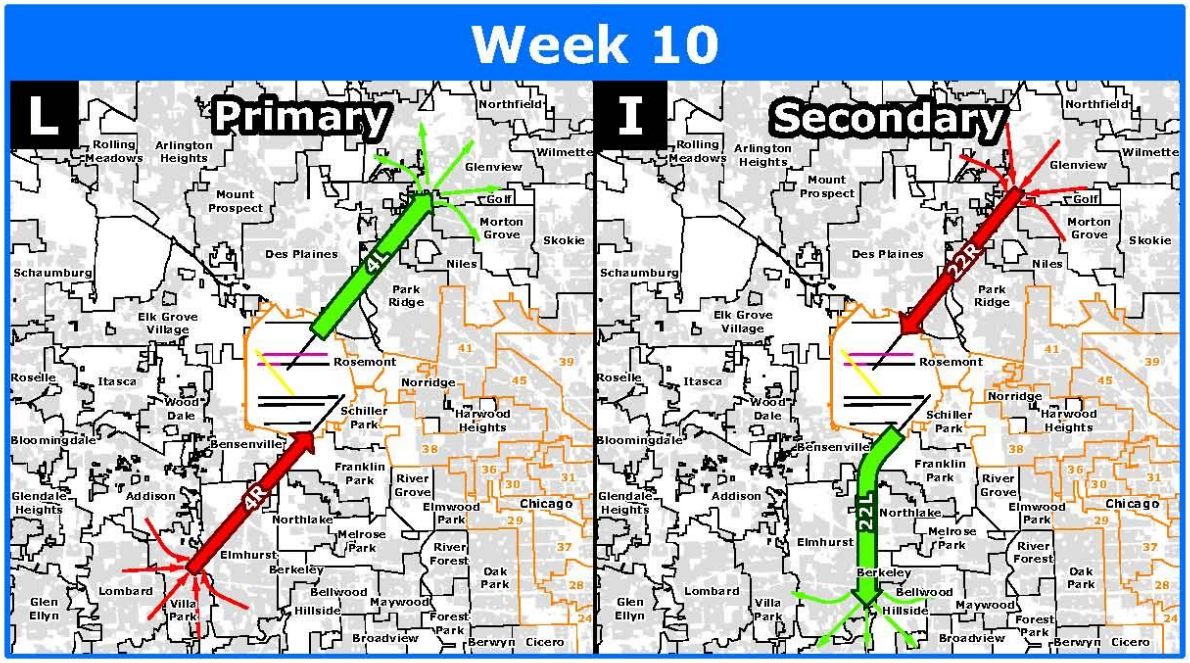

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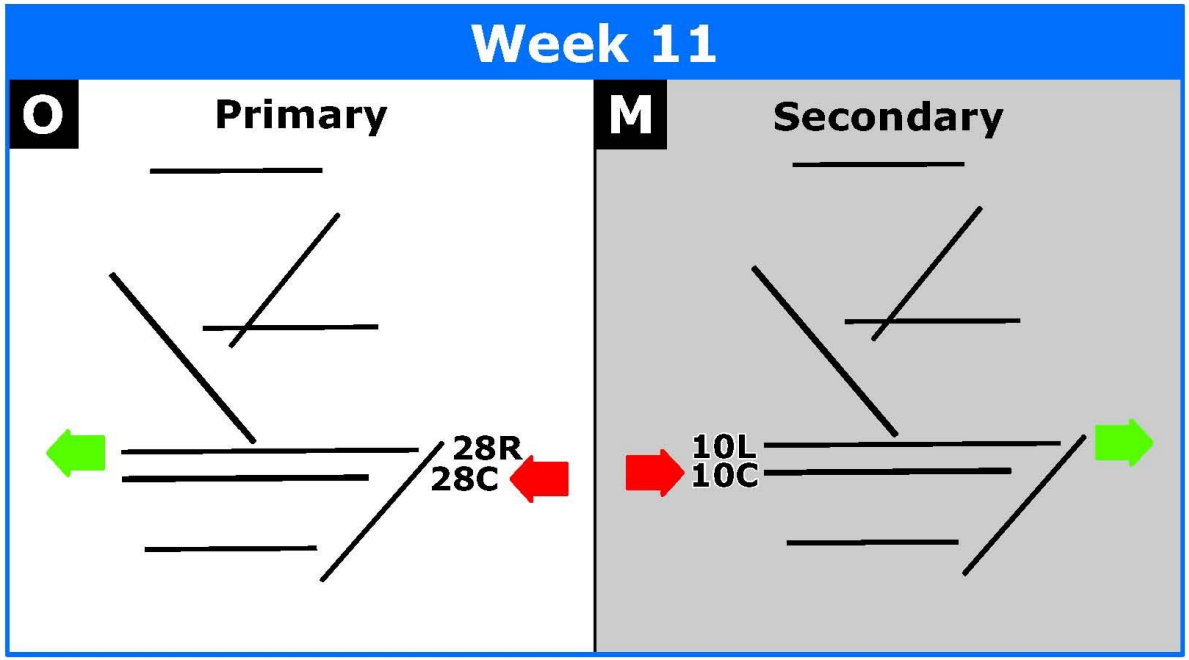
Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 11)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.



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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 11)

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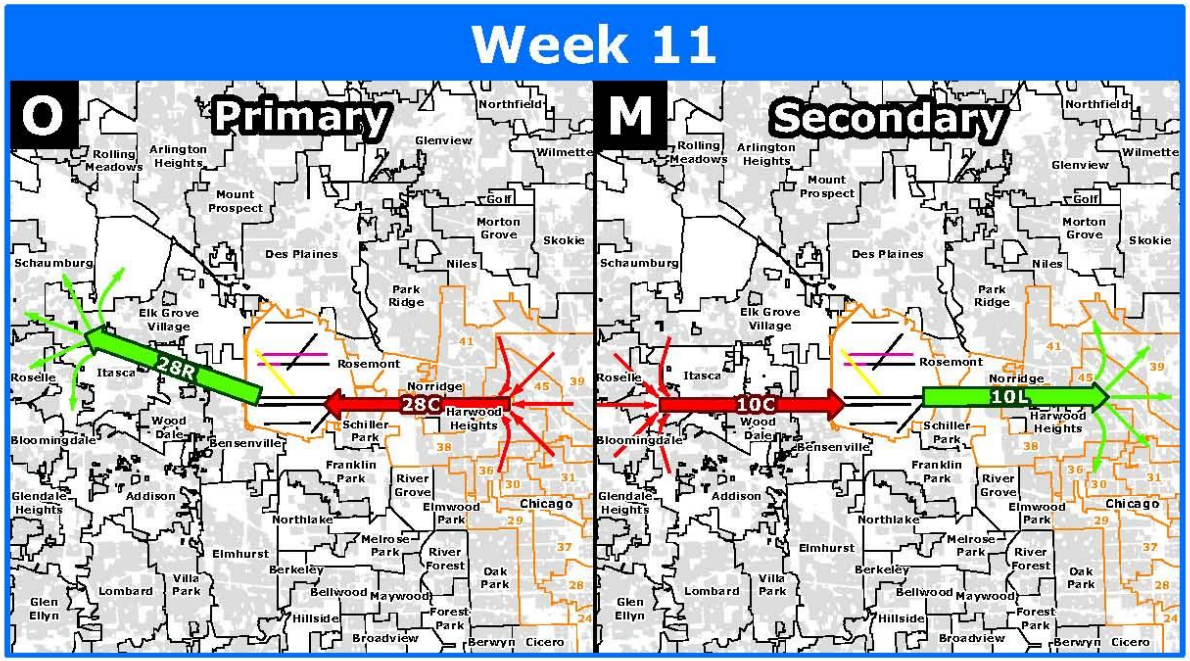

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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 12)

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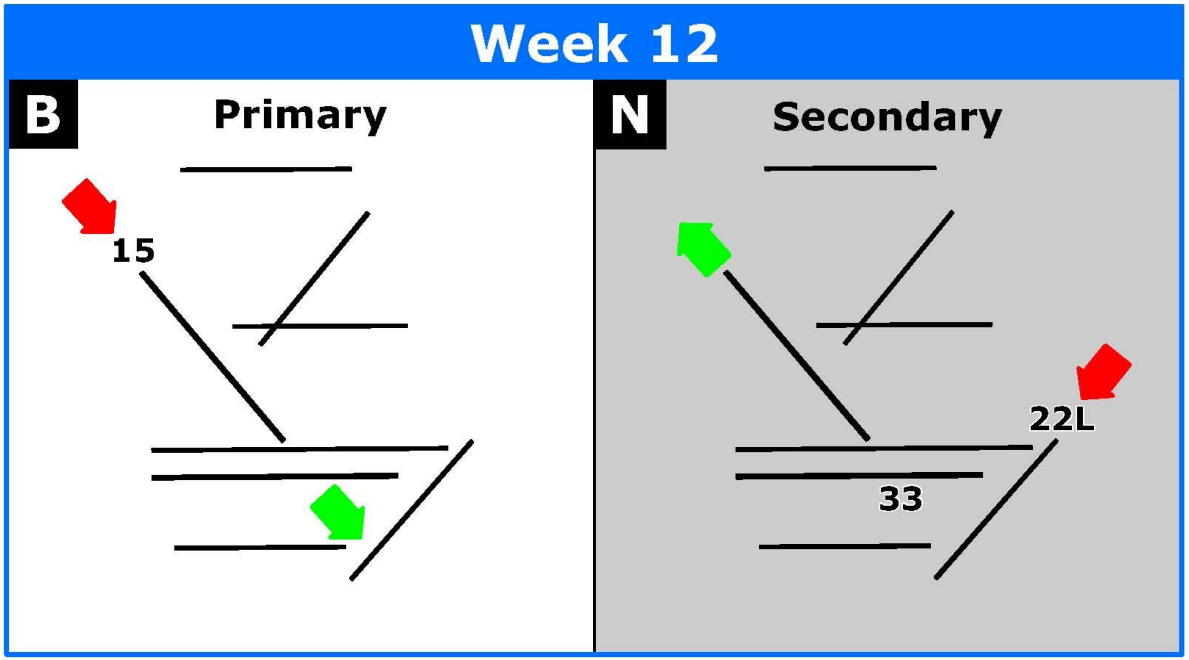

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Arrival
Departure

03/17/2017

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Week 12)

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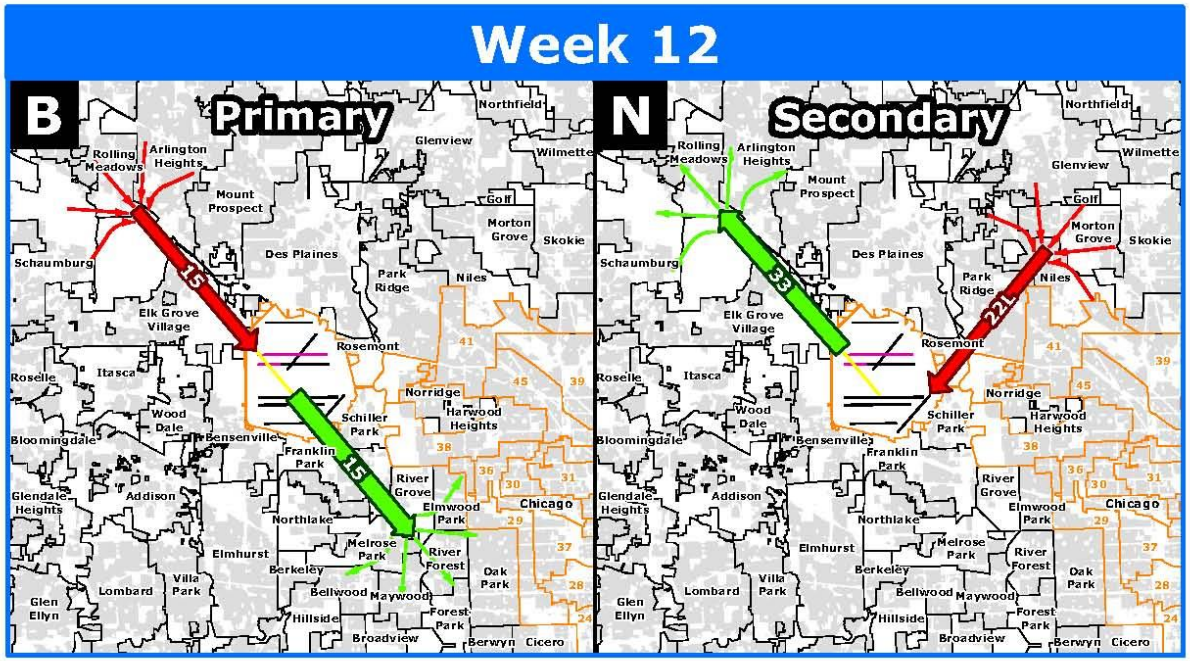

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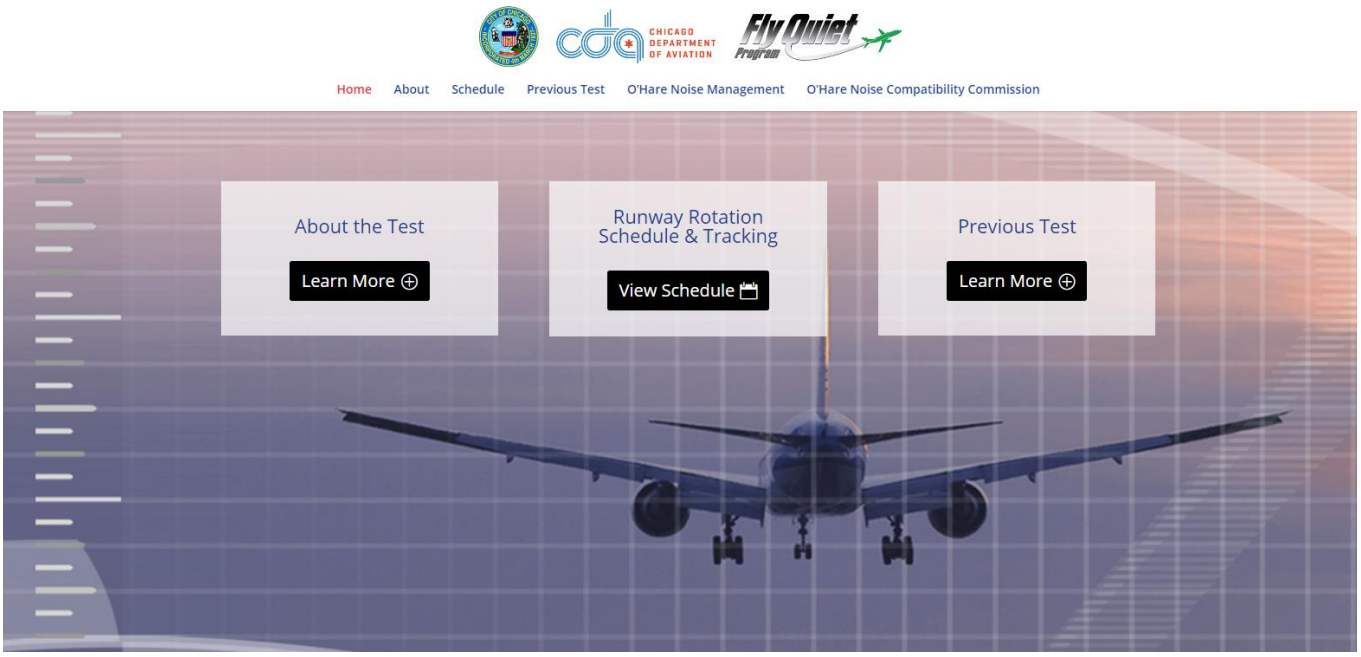
Arrival
Departure

03/17/2017

4.0 PROJECT WEBSITE

In order to provide information to the public, the CDA will administer a Test 2 website that includes the following:

- **Background Information** – Information on the Fly Quiet Program and Test 2
- **Test Schedules** – Downloadable Test 2 schedule in multiple formats



O'HARE MIDWAY
INTERNATIONAL AIRPORTS

FLY QUIET RUNWAY ROTATION TEST 2

ONCC MEETING

MARCH 10, 2017

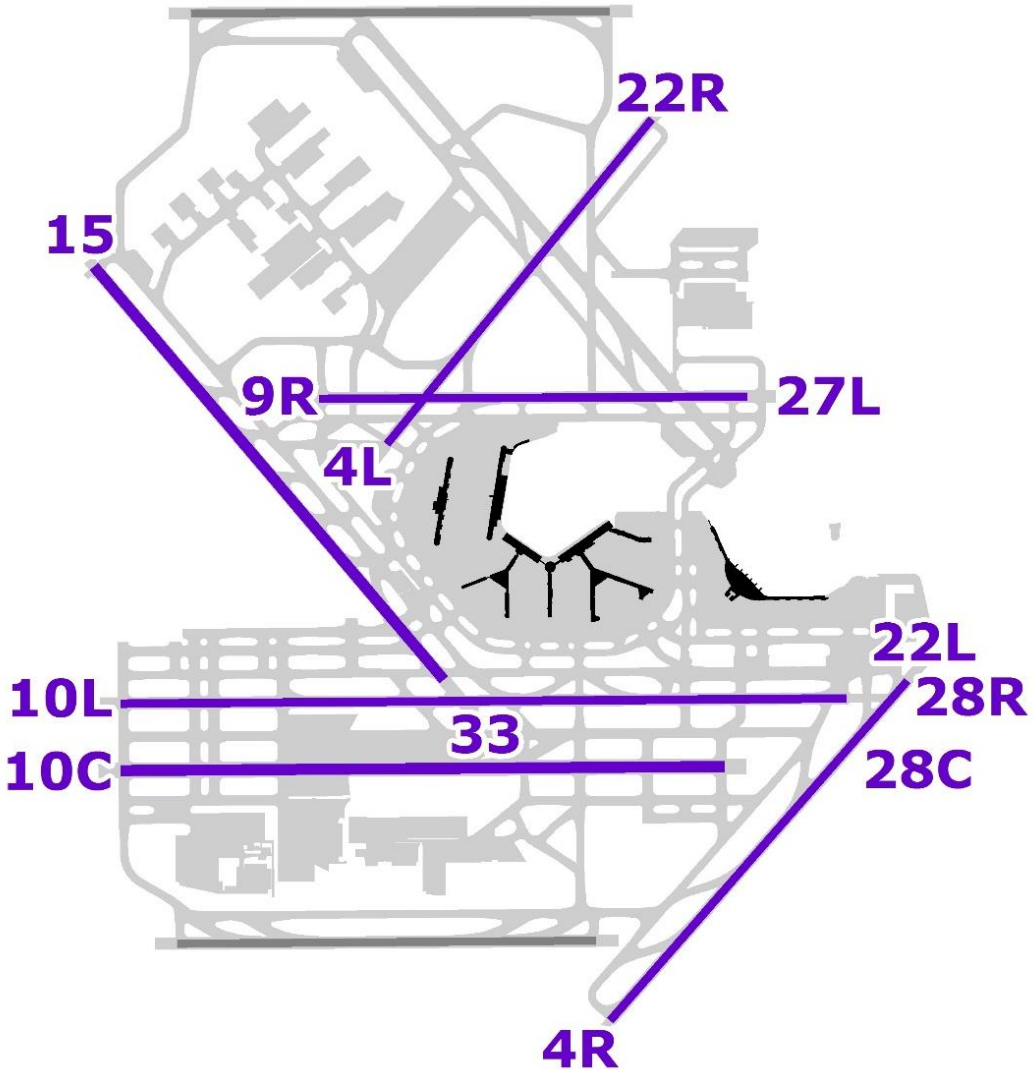
CHICAGO DEPARTMENT OF AVIATION

DRAFT

PROPOSED MODIFICATIONS

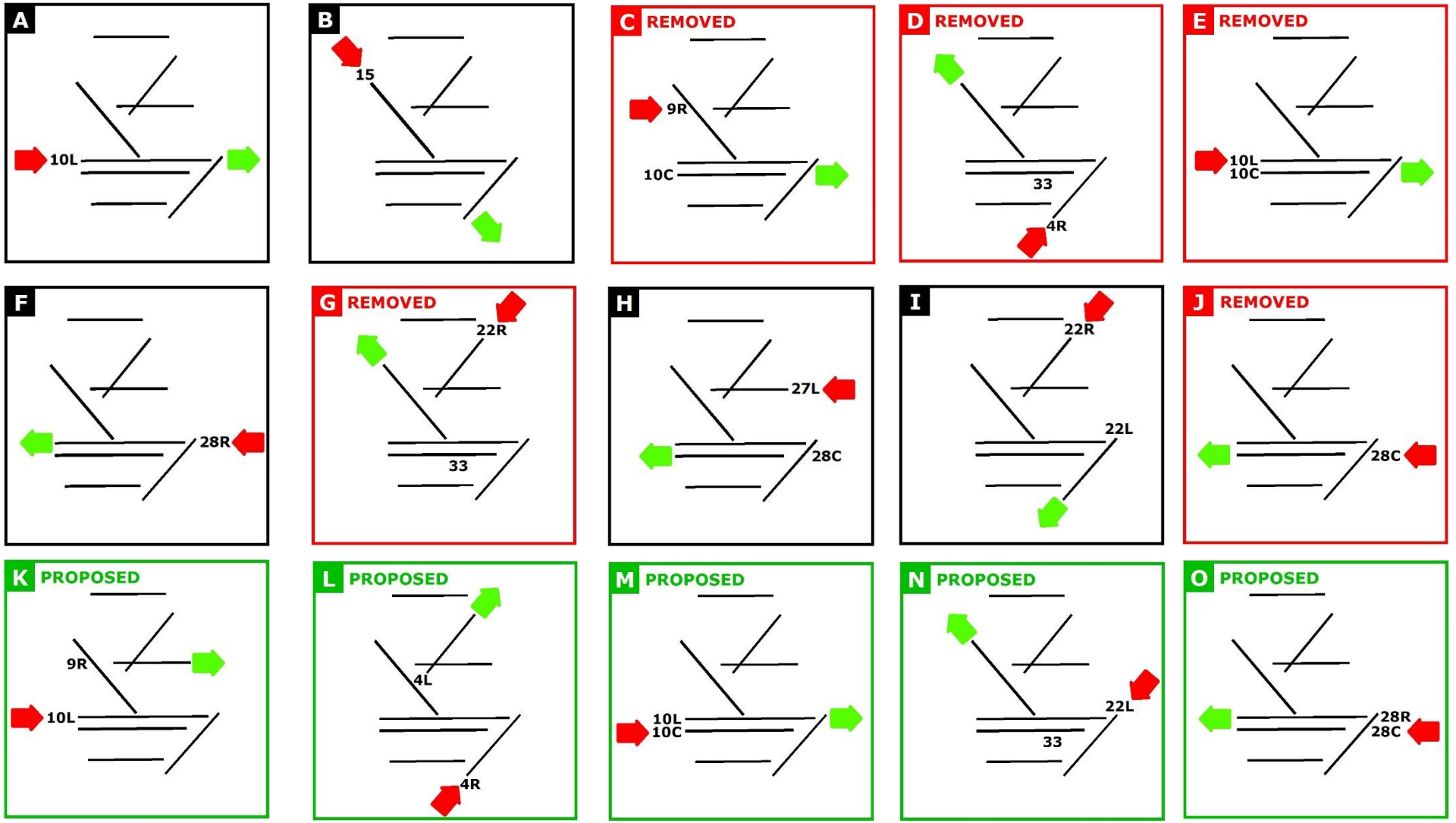
- 5 Configuration Modifications
  - 2 based on FAA feedback
  - 2 based on heavy runway use
  - 1 based on too many mixed-use configurations

Note: All proposed configurations have been reviewed by FAA

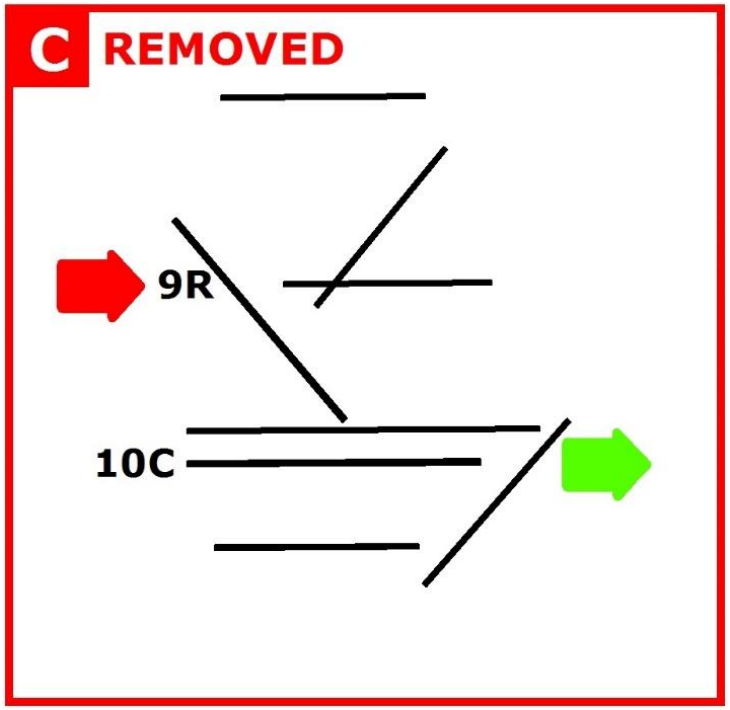


Runways available for Fly Quiet

PROPOSED TEST 2 CONFIGURATIONS

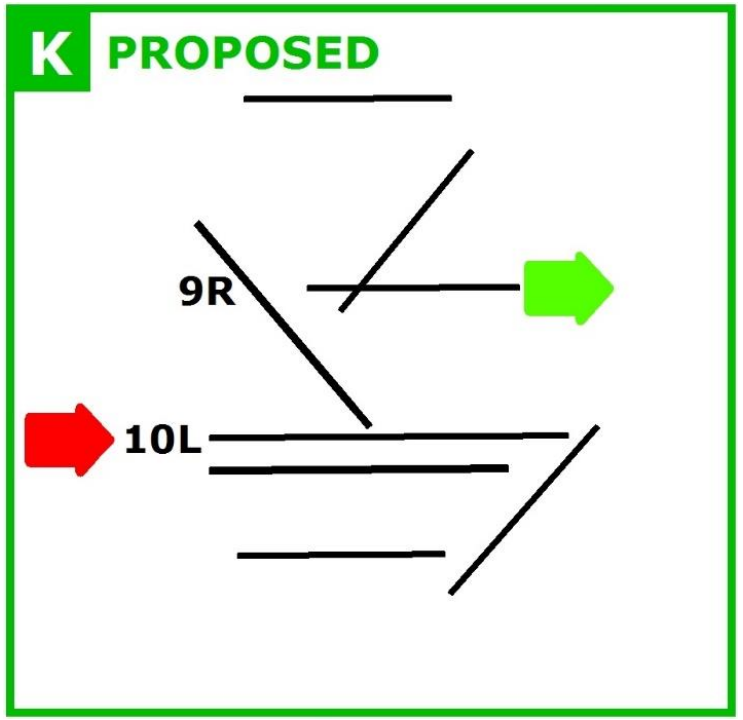


PROPOSED CHANGE 1



Problem

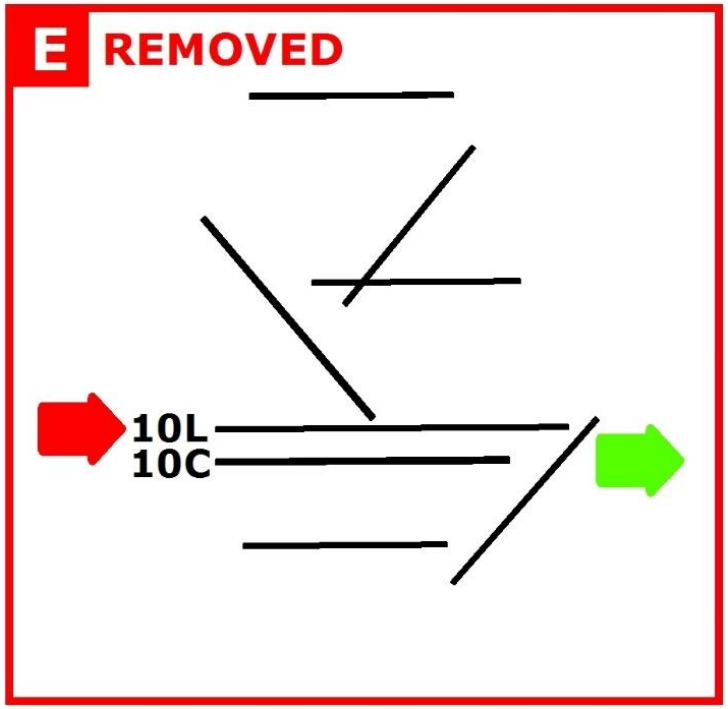
Aircraft taxiway movements on the ground conflict with 9R arrivals in the air



Solution

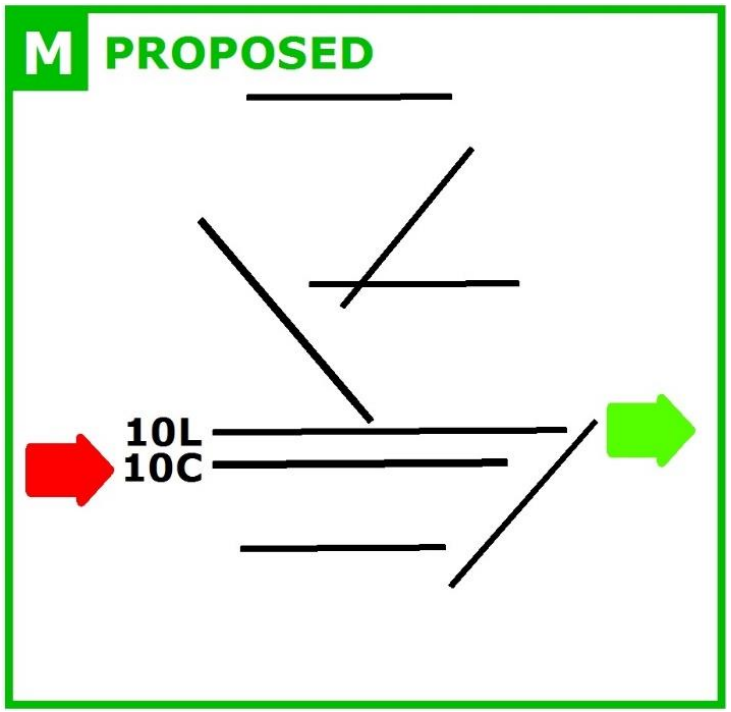
Avoid 9R arrivals and utilize 9R departures

PROPOSED CHANGE 2



Problem

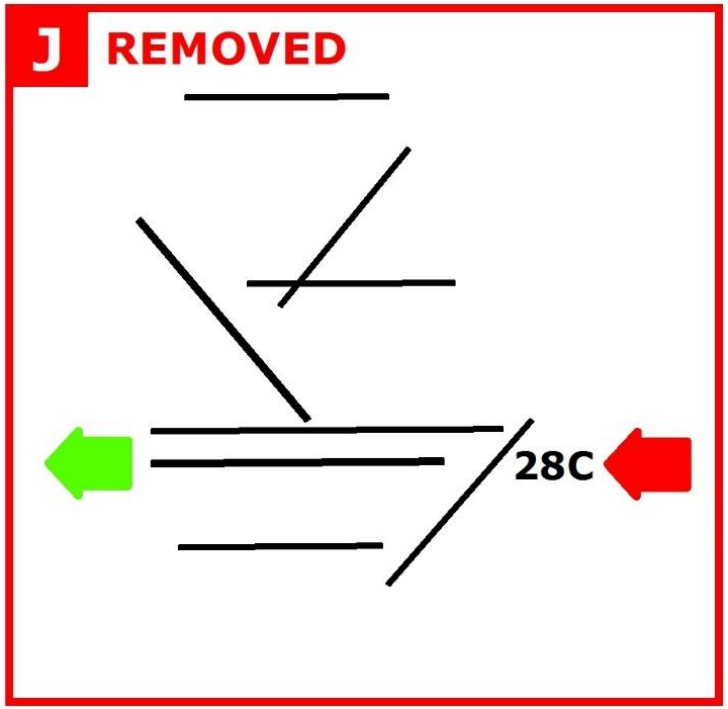
10C departures need to taxi across an active runway



Solution

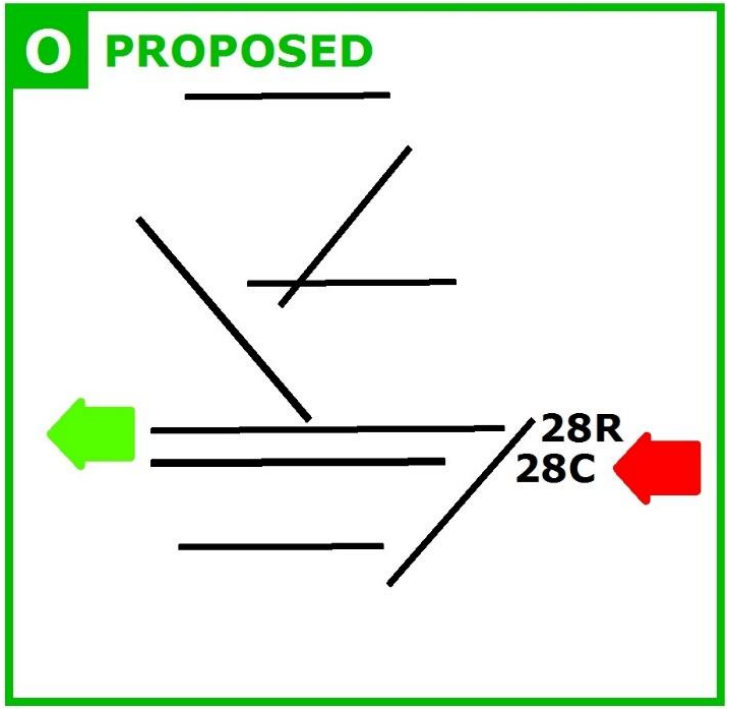
Switch departure and arrival runway and allow for intersection departures

PROPOSED CHANGE 3



Problem

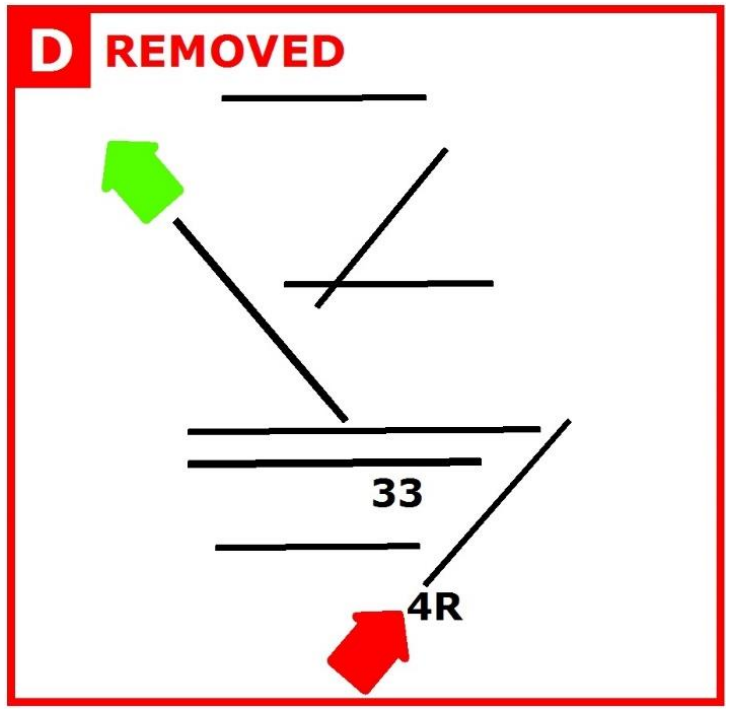
Too many configurations with mixed use runways

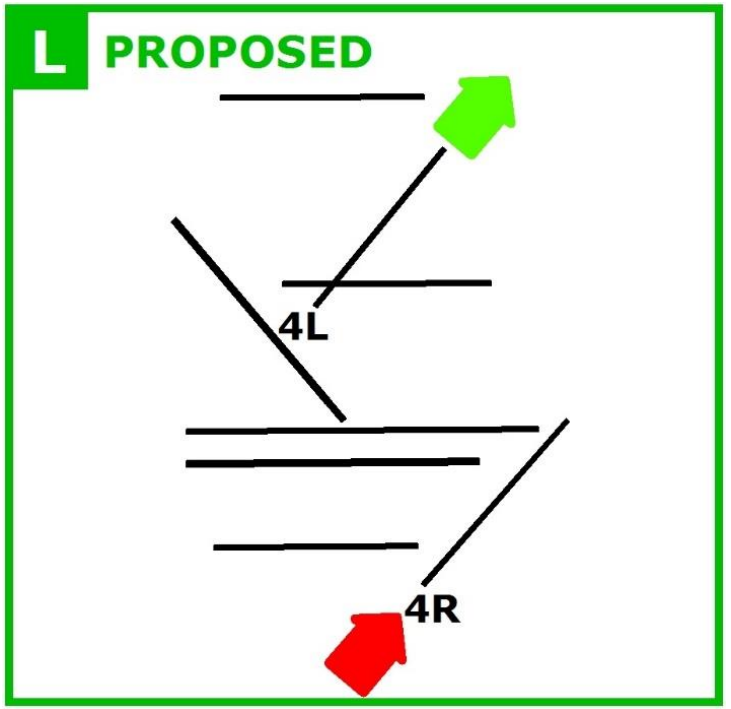


Solution

Separate departures and arrivals to increase configuration usage compared to J

PROPOSED CHANGE 4





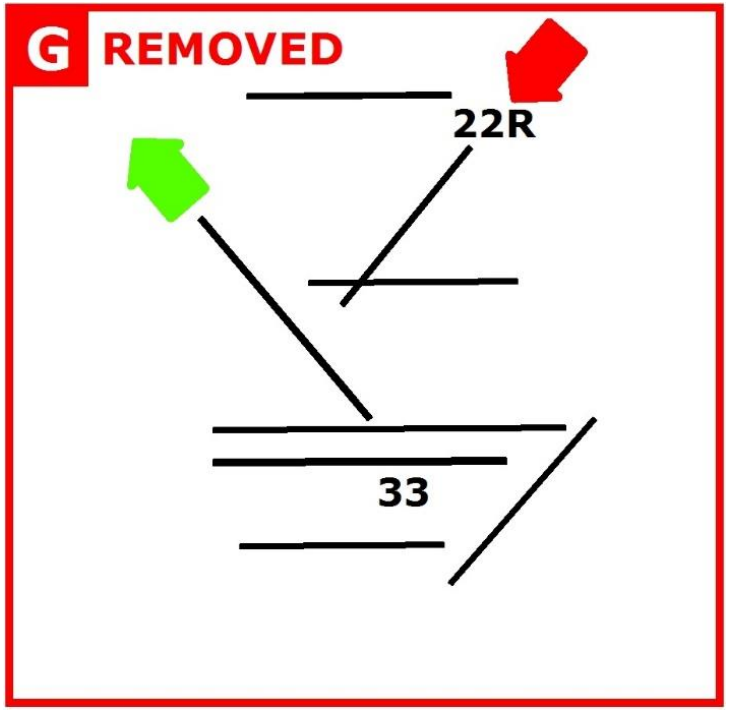
Problem

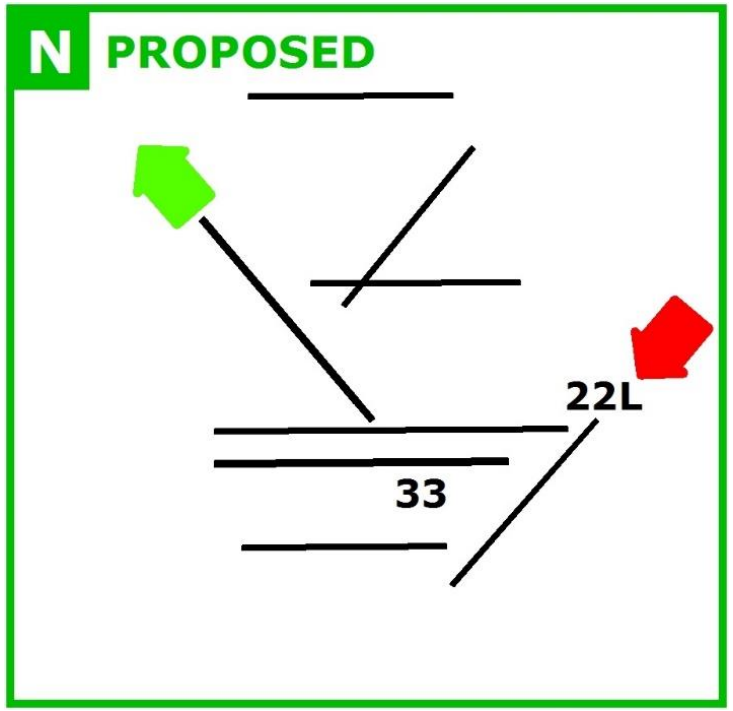
Too many 33 departures

Solution

Add 4L departures to balance runway use

PROPOSED CHANGE 5





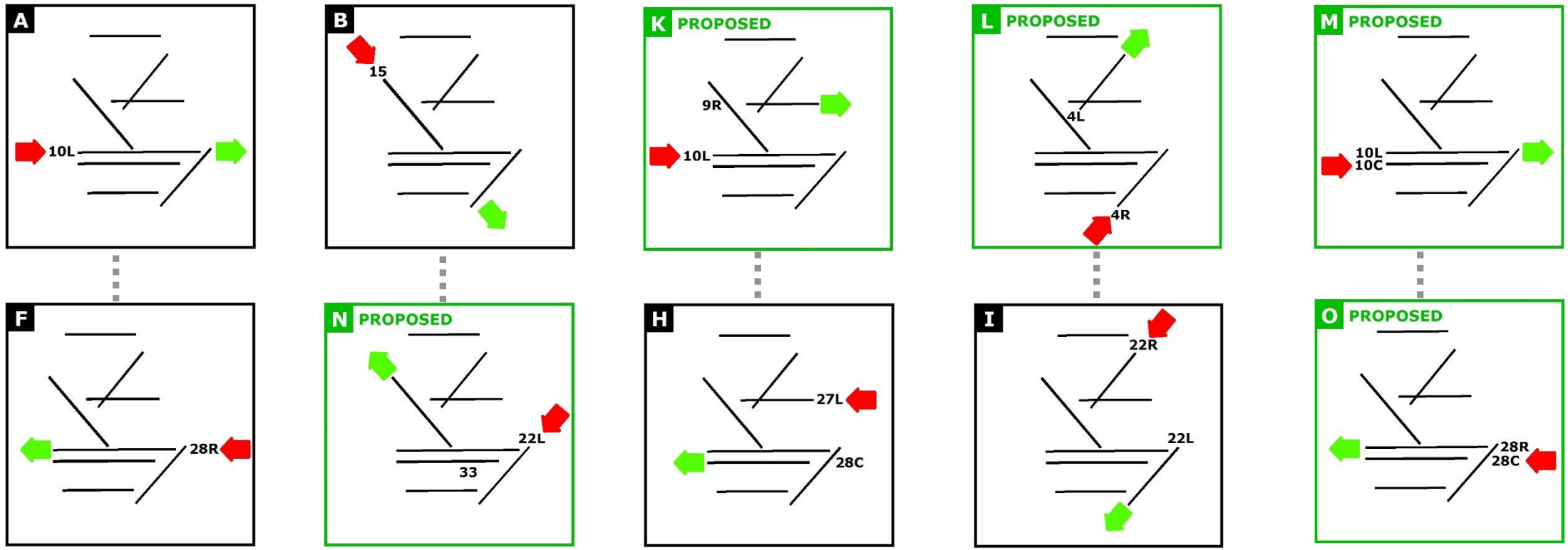
Problem

Too many 22R arrivals

Solution

Add 22L arrivals to balance runway use

PROPOSED TEST 2 CONFIGURATIONS



INCREASED COORDINATION

- Airlines and Representatives
- Chicago Airline Cargo Manager's Association (CACMA)
- CDA Operations
- Construction Managers (CMs)
- FAA Airports
- FAA Air Traffic
- FAA Technical Operations
- Short-Term Operational Phasing (STOP) Meetings
- Special Requests

TEST 2 GOALS AND GUIDELINES

1. **Provide Near-Term Relief** – Test with Community Feedback
2. **Reduce Impacts to the Highest Impacted Communities** – Provide Relief to Significantly Impacted Communities
3. **Provide Predictability** – Publish a rotation schedule that allows citizens to predict periods of relief to the extent possible

STRATEGIC	TACTICAL	PROCESS
1. Establish Rotation Plan 2. Alternate East and West Flow 3. Avoid Consecutive Community Impacts	4. Balance Runway Use	5. Conduct a Test and Monitor Performance

TEST 2 CRITERIA REVIEW

1. Establish Rotation Plan
2. Alternate East and West Flow
3. Avoid Consecutive Community Impacts
4. Reduce Use of Runway 10L/28R
5. Include Runway 15/33
6. Conduct a Test and Monitor Performance
7. Require ONCC Review

NEXT STEPS

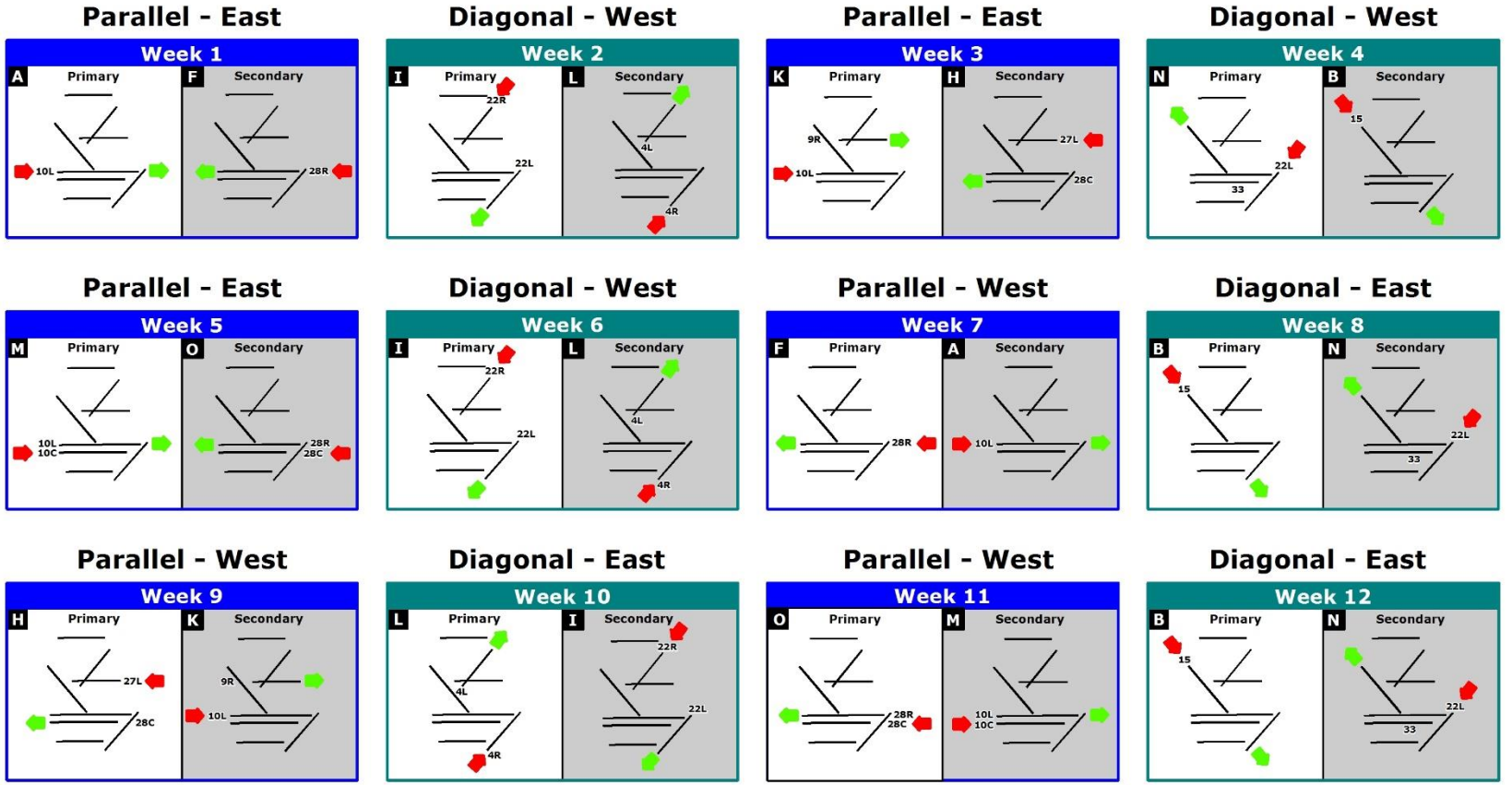
- ✓ Fly Quiet Committee Recommendation
- ONCC Approval
- Finalize Test 2 Schedule
- FAA Approval
- Begin Test 2
- Develop a Rotation Plan for Post Runway 15/33 Decommissioning

SCHEDULE

- 12 Week Schedule
- 6 Parallel and 6 Diagonal
- 6 East Flow and 6 West Flow
- Reviewed by FAA for air traffic feasibility

PROPOSED FLY QUIET RUNWAY ROTATION TEST 2 (Weeks 1-12)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 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.

Arrival

Departure

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.

02/27/2017

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CHICAGO DEPARTMENT OF AVIATION

GINGER S. EVANS, COMMISSIONER