



LOUISVILLE  
MUHAMMAD ALI  
INTERNATIONAL AIRPORT

# Noise Compatibility Program Update

Community Noise Forum Meeting  
August 3, 2026



## LOUISVILLE NCP UPDATE

# Agenda

1

**NCP Update Overview**

2

**SDF NCP Land Use (Mitigation) Measures Review**

3

**SDF NCP Program Management Measures Review**

4

**SDF NCP Noise Abatement Measures Analysis**

5

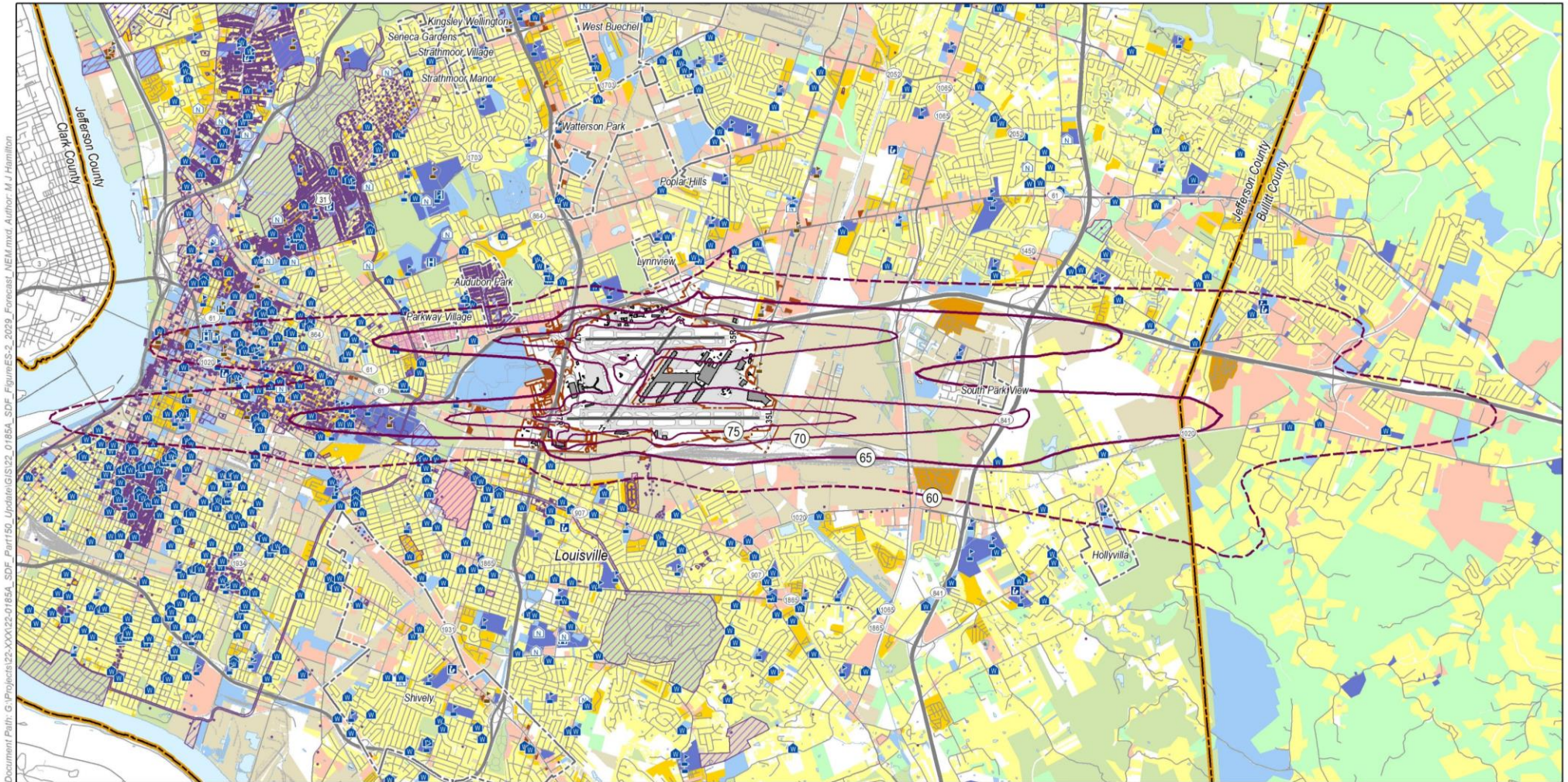
**Next Steps**



# NCP Update Overview



# 2029 SDF Noise Exposure Map



Document Path: G:\Projects\22-XXX\22-01854\_SDF\_Part150\_Update\GIS\22\_01854\_SDF\_FigureES-2\_2029\_Forecast\_NEI.mxd Author: M.J. Hamilton



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## Legend

- 2029 Forecast DNL Contour (60 dB)
- 2029 Forecast DNL Contour (65-75 dB)

Sound Insulation Completed

- Airport Boundary
- Runway / Pavement
- Buildings

- Municipal Boundary
- County Boundary

- Expressway
- Arterial
- Collector
- Local
- Railroad

- College/University
- Schools
- Hospital
- Nursing Home
- Library
- Place of Worship

- Historic District
- Non-District Historic Site
- Water / Wetland

- Single Family Residential
- Multi-Family Residential
- Mobile Home
- Transient Lodging
- Public Use 1 (Non-Compatible)
- Public Use 2 (Compatible)
- Agriculture
- Open Space / Cemeteries / Recreation
- Commercial Use
- Manufacturing, Production and Utility
- Vacant / Undefined

DNL 60 dB contour (dashed line) is shown for informational purposes only. Land use compatibility analysis focuses on areas exposed to DNL greater than 65 dB



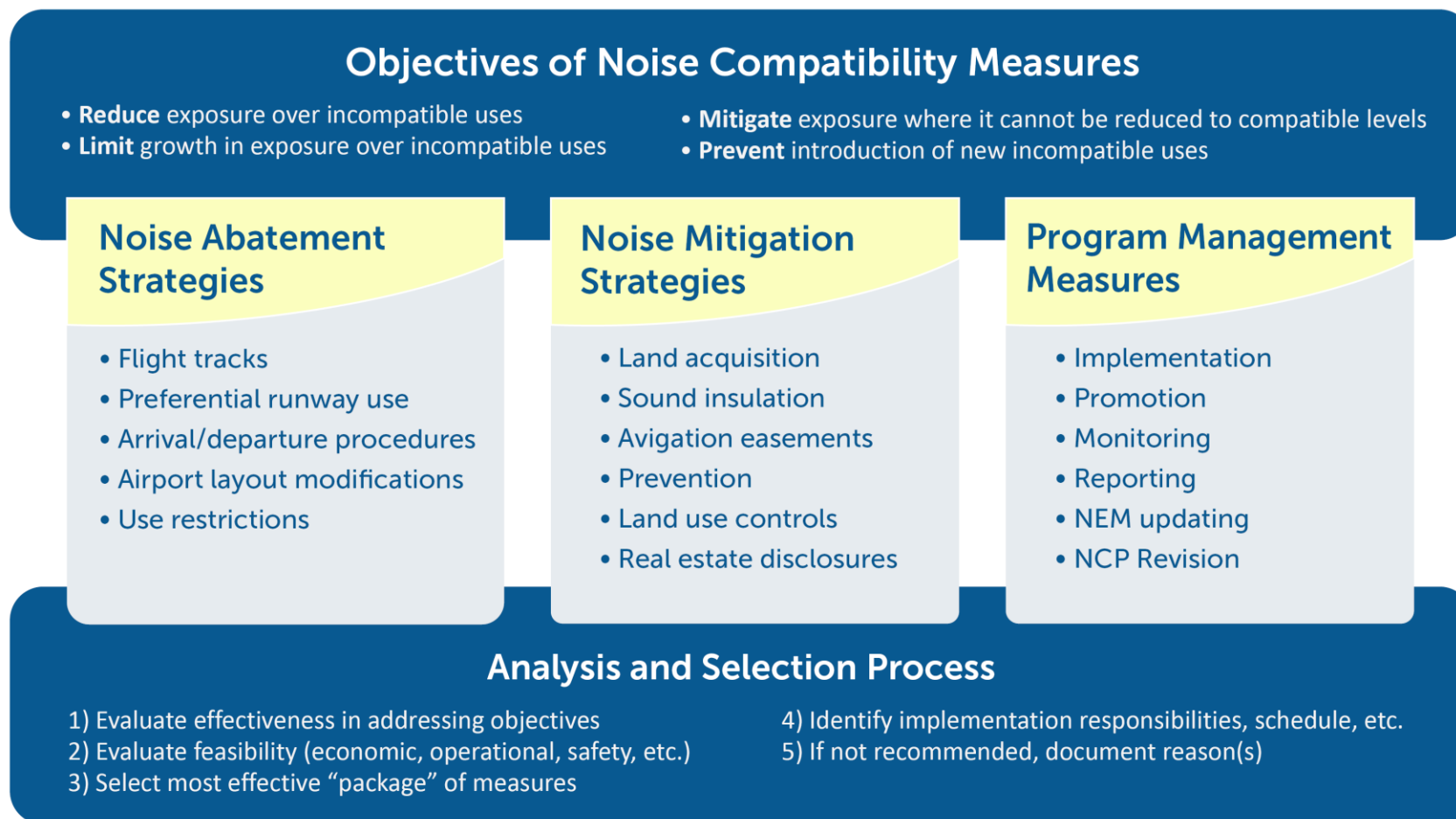
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Figure: ES-2

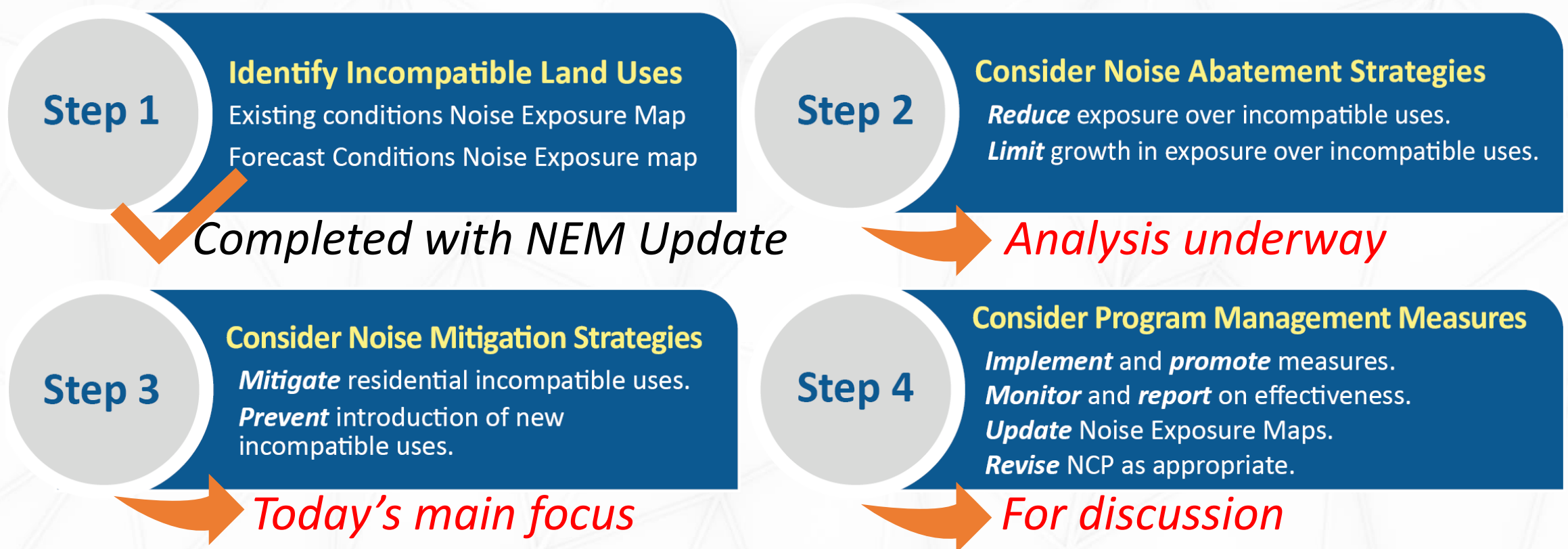
Forecast Condition (2029) Noise Exposure Map



# Noise Compatibility Program Overview



# Noise Compatibility Program Development



# SDF NCP Land Use (Mitigation) Measures Review



## Noise Mitigation Measures

### *Land Acquisition, Sales Assistance and Easement Measures*

| Number | Measure                                                                                                                                                                          | Status          | For Consideration           |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|
| M-1    | Continue the Current Voluntary Residential Acquisition Program Including the Innovative Housing Program                                                                          | Implemented     | Modify and combine with M-2 |
| M-2    | Expanded Voluntary Residential Acquisition Program Within the DNL 65 dB Contour to the South of the Airport That Will Continue to be Exposed to Significant Noise levels in 2008 | Implemented     | Combine with M-1            |
| M-5    | Residential Sales Assistance Program Within DNL 65 dB                                                                                                                            | Not Implemented | Eliminate                   |
| M-18   | Avigation Easement Purchase Within DNL 65 dB                                                                                                                                     | In Progress     | Combine with M-3            |
| M-19   | Avigation Easement Purchase Within DNL 60 dB to DNL 65 dB                                                                                                                        | Not Implemented | Eliminate                   |

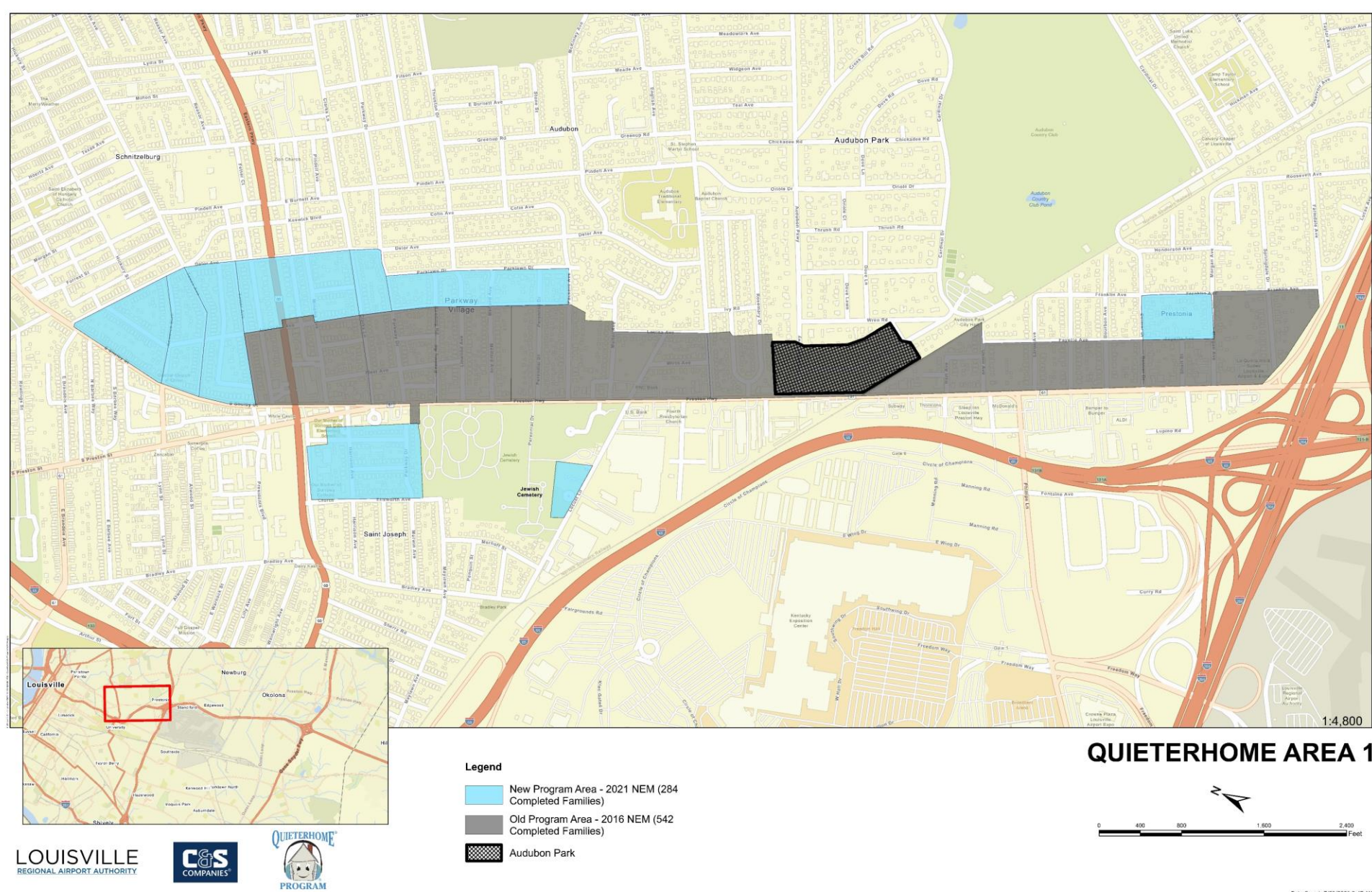
# LOUISVILLE 2003 NCP UPDATE

## Noise Mitigation Measures

### *Sound Insulation and Physical Barrier Measures*

| Number | Measure                                                                                                                                                                                 | Status          | For Consideration                            |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------|
| M-3    | Provide Soundproofing in Residential Areas Within the DNL 65 dB Contour to the North of the Airport                                                                                     | Implemented     | Modify for all areas within DNL 65 dB        |
| M-4    | Offer Sound Insulation for Non-Compatible Institutional Areas Within DNL 65                                                                                                             | In Progress     | Continue                                     |
| M-9    | Residential Sound Insulation for Areas Between DNL 60 dB and DNL 65 dB that Would Experience a 3 dB increase in Noise Levels as a Result of Recommended Noise Abatement Measures        | Not Implemented | Eliminate                                    |
| M-10   | Offer Sound Insulation to Non-Compatible Institutional Land Uses Between DNL 60 dB to DNL 65 dB that Would Experience a 3 dB increase in Noise levels from the Noise Abatement Measures | Not Implemented | Eliminate                                    |
| M-6    | Construct an Earth Berm Along the Northwest Side of the Airfield to Reduce Ground Noise Associated with Aircraft Takeoffs on Runway 17R                                                 | Implemented     | Eliminate                                    |
| M-7    | Study Potential Noise Barrier for Preston Park Neighborhood                                                                                                                             | Not Implemented | Active Noise Control                         |
| M-8    | Construct Ground Run-Up Enclosure if Required to Reduce Noise from Maintenance Run-Up Activity                                                                                          | Not Implemented | Consider ground run-up enclosure along TWY A |

# Sound Insulation Program Areas – To Date

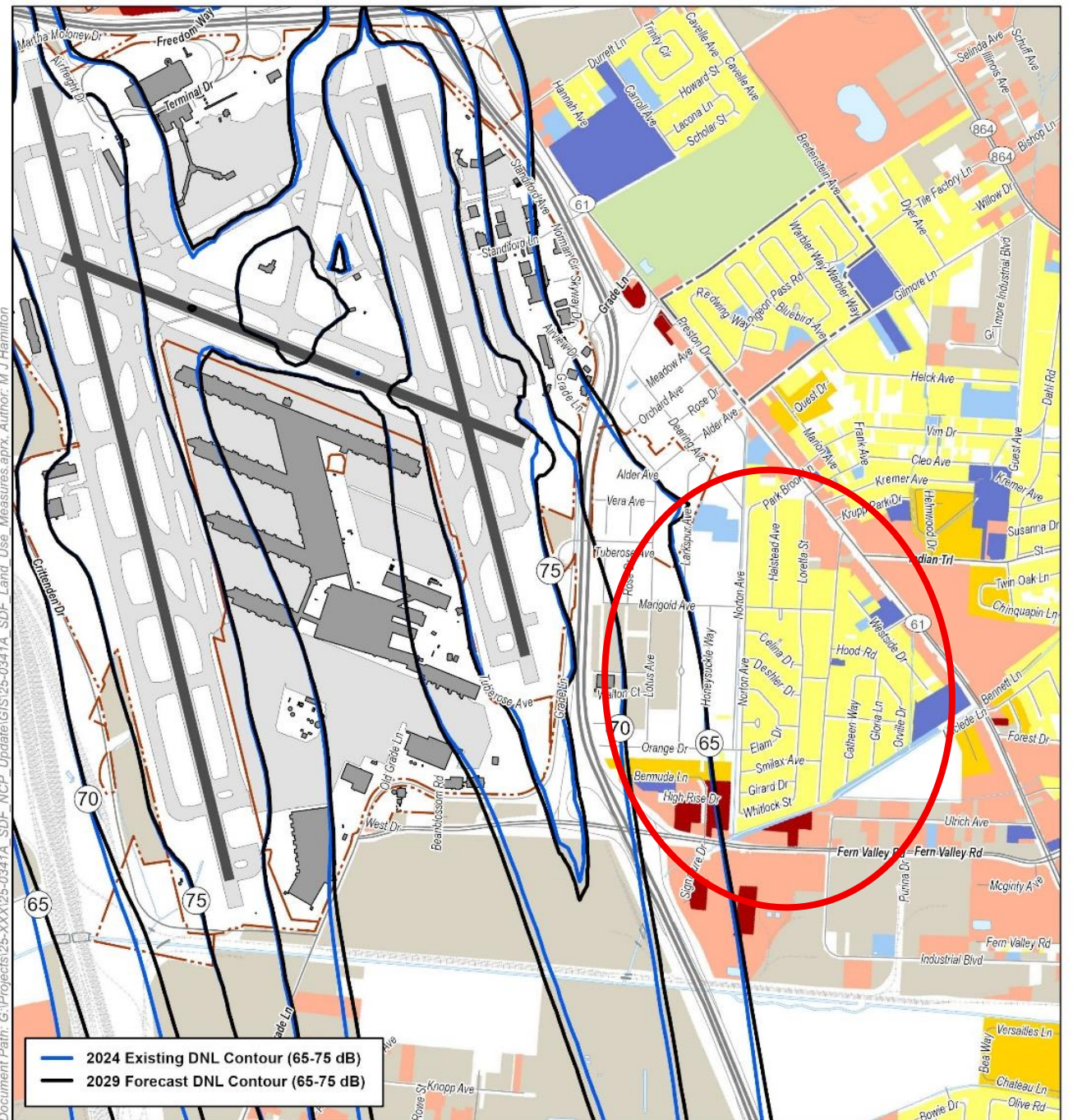


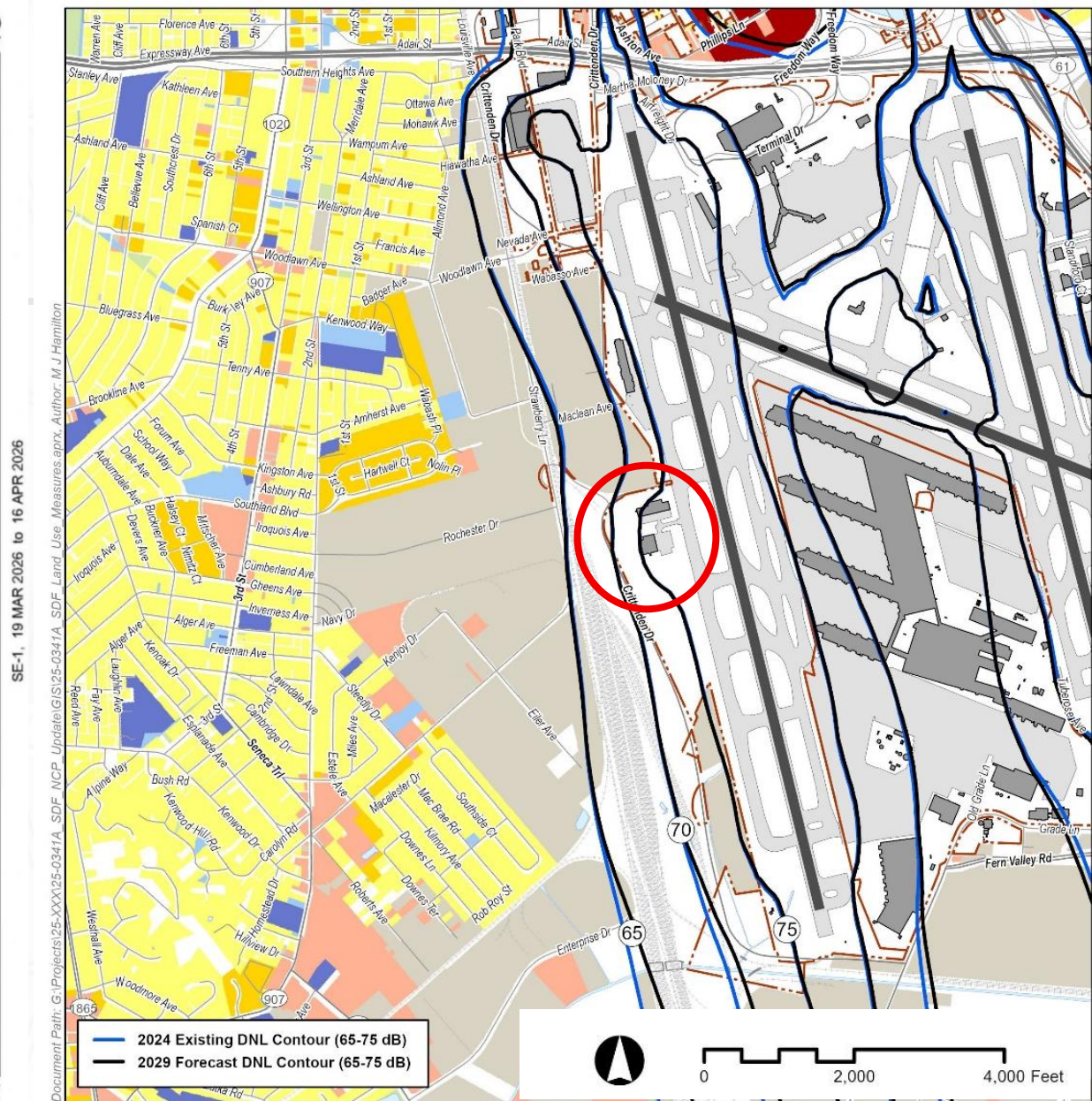
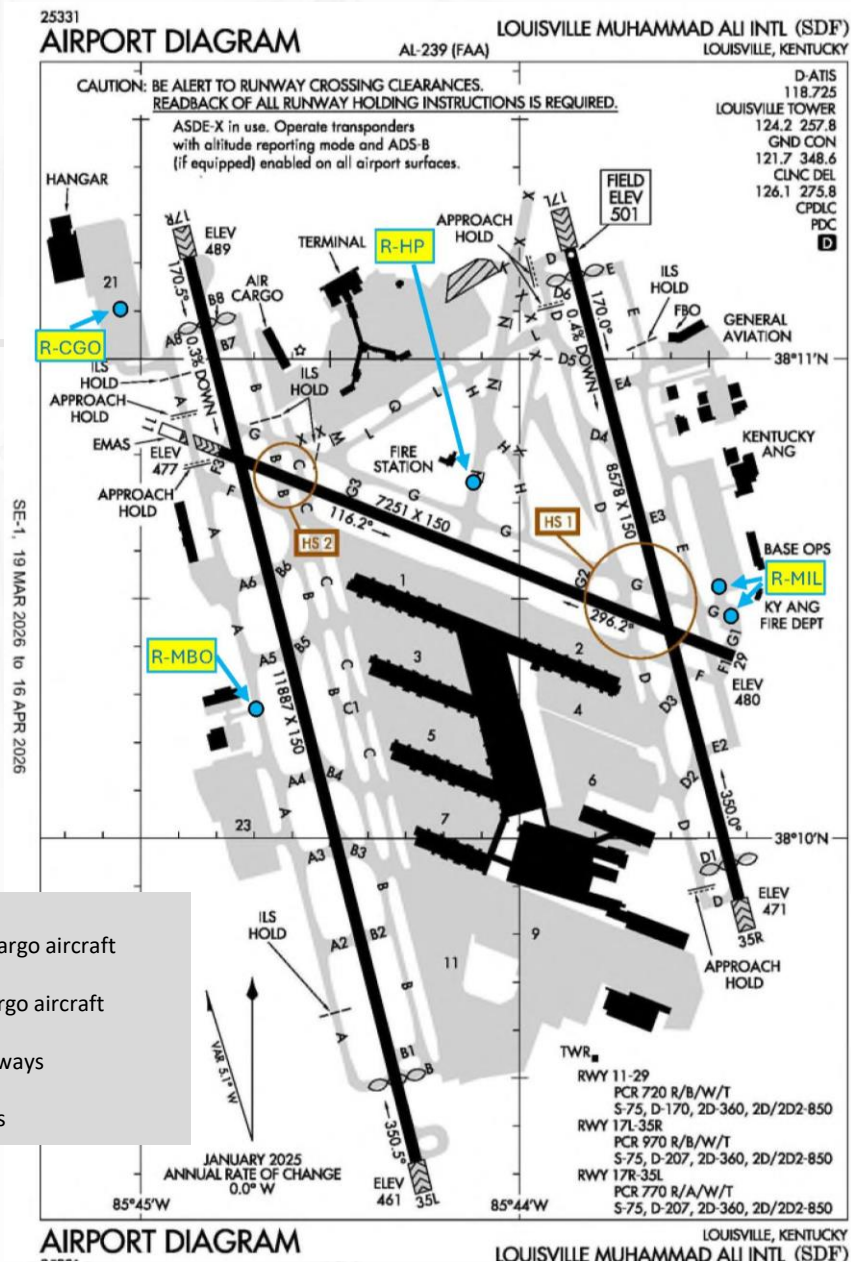
# Potential Active Noise Control Area



0 2,000 4,000 Feet

Document Path: G:\Projects\125-XXX\125-0341A\_SDF\_NCP\_Update\GIS\125-0341A\_SDF\_Land\_Use\_Measures.aprx. Author: M J Hamilton





# Noise Mitigation Measures

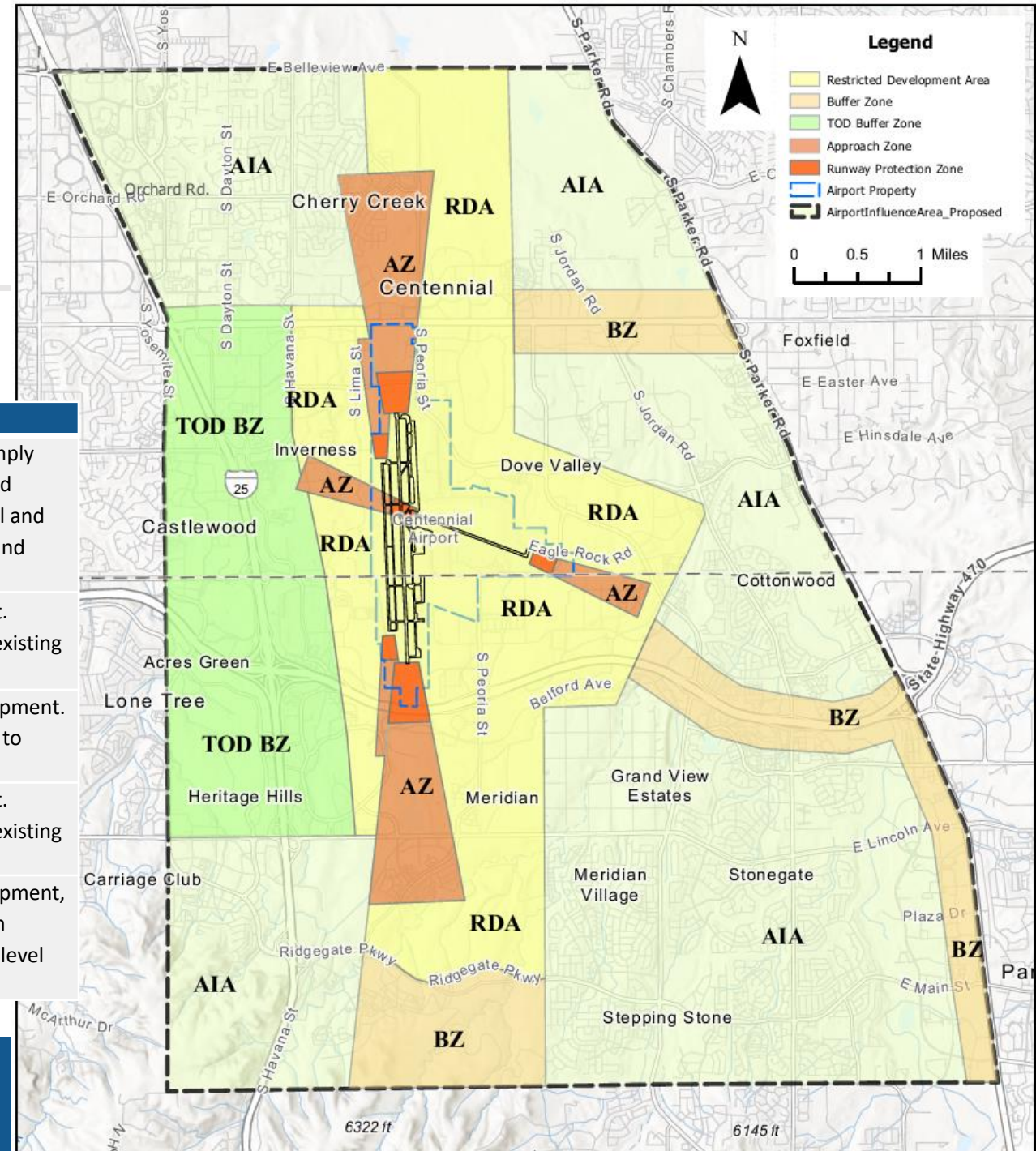
*Land Use Planning Measures – under control of local land use jurisdictions*

| Number | Measure                                                                                                                                                 | Status                | For Consideration                                                            |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------------------------------------------------------------|
| M-11   | Compatible Land Use Planning                                                                                                                            | Partially Implemented | Work with the Planning Commission to update into an implementable measure(s) |
| M-12   | LRAA Would Coordinate with the Planning Commission to Adopt a Policy Concerning Rezoning from Compatible to Non-Compatible Uses in the Airport Environs | Not Implemented       |                                                                              |
| M-13   | Subdivision Regulations                                                                                                                                 | Not Implemented       |                                                                              |
| M-14   | LRAA Would Consider Participation in a Redevelopment Program Initiative                                                                                 | Implemented           |                                                                              |
| M-15   | LRAA Would Work with the Planning Commission to Develop an Overlay Zone, to Supplement Other Land Use Planning Techniques                               | Not Implemented       |                                                                              |
| M-16   | Building Code Revision                                                                                                                                  | Not Implemented       |                                                                              |
| M-17   | Consider Disclosure Ordinances                                                                                                                          | Not Implemented       |                                                                              |

# Example Noise Overlay Zone

## Centennial Airport (Denver, CO)

| Zones                                                    | Airport Influence Area Zones                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Airport Influence Area (AIA)</b>                      | Refer all plats and development plans to ACPAA for review. Comply with FAR Part 77. Require Avigation Easement by landowner and Public Disclosure to prospective buyers and tenants. Residential and other noise sensitive development requires a 7-day noise test and development is prohibited in areas at 65 DNL and above. |
| <b>Restricted Development Area (RDA)</b>                 | Prohibit new residential and other noise sensitive development. Building height must comply with FAR Part 77 surface criteria, existing or future, whichever is more restrictive.                                                                                                                                              |
| <b>Buffer Zone (BZ)</b>                                  | Recommend no new residential or other noise sensitive development. Governmental entity with zoning and building permit authority to develop specific restrictions.                                                                                                                                                             |
| <b>Approach Zone (AZ)</b>                                | Prohibit new residential and other noise sensitive development. Building height must comply with FAR Part 77 surface criteria, existing or future, whichever is more restrictive.                                                                                                                                              |
| <b>Transit Oriented Development Buffer Zone (TOD BZ)</b> | Recommend no new residential or other noise sensitive development, other than multifamily (per HB24-1313) with sound attenuation required for construction to achieve an expected interior noise level of 45 dB or less.                                                                                                       |



# Land Use Measures *Under Consideration*

*Formerly Called Mitigation Measures*

## Property and Land Use Measures

### Land Acquisition

M-1,2

In neighborhoods mostly already acquired, eliminates isolated properties and completes planned areas.

### Airport Overlay Zone

M 11-17

Limits new incompatible land uses within high noise exposure areas from SDF operations.

### Sound Insulation

M-3, 4, 18

Continues treatment for eligible properties; adds avigation easements where treatment doesn't qualify.

Continue residential  
Continue institutional  
Avigation easements

## Noise Control

### Active Noise Control

M-7

Reduces start-of-takeoff-roll noise east of the south end of Runway 35R.

### Ground Run-up Enclosure

M-8

Designates Taxiway A for run-ups, avoiding active runway crossings, and builds an enclosure to contain noise.

## Ground Operations

### Engine Run-Up Restrictions

NA-17

Continues limiting hours and locations for maintenance run-ups near adjacent communities.

# SDF NCP Program Management Measures Review



## LOUISVILLE 2003 NCP UPDATE

# Program Management Measures

| Number | Measure                                                                                  | Status      | For Consideration              |
|--------|------------------------------------------------------------------------------------------|-------------|--------------------------------|
| PM-1   | Establish New LRAA Staff Position Dedicated to Management of Noise Compatibility Program | Implemented | Continue with modified wording |
| PM-2   | Establish Advisory Committee                                                             | Implemented | Continue with modified wording |
| PM-3   | Acquire Portable Noise Monitoring Equipment                                              | Implemented | Continue with modified wording |
| PM-4   | Acquire Equipment to Monitor Aircraft Operations                                         | Implemented | Continue with modified wording |
| PM-5   | Airport Noise Office to Collect and Disseminate Information                              | Implemented | Modify                         |

# SDF Flight Tracking System Pop-up Information Box

URL: <https://flighttracker.casper.aero/sdf/>

The screenshot displays the SDF Flight Tracking System interface. At the top, a purple header bar shows navigation icons and the URL [flighttracker.casper.aero/sdf/](https://flighttracker.casper.aero/sdf/). Below this, an orange status bar displays weather information: 79 °F, a cloud icon, a compass icon pointing north, and wind speed of 11 kt. The date and time are shown as 2026-07-22 17:10:02. The main area is a map of Louisville, Kentucky, with various flight paths and aircraft icons. Two specific aircraft are highlighted: UPS5218 and N537JF. A pop-up information box titled "17L-35R Construction" is visible in the bottom right corner, providing details about runway construction from August 8 to September 21, 2026. The box includes a scroll bar and navigation buttons. The bottom of the interface shows a version number "v.3.2.0" and a "Leaflet | Map: © OpenStreetMap contributors" attribution.

URL: <https://flighttracker.casper.aero/sdf/>

79 °F north north east 11 kt 2026-07-22 17:10:02

UPS5218 N537JF 1200

Messages

**17L-35R Construction**

From August 8 through September 21, 2026, all aircraft arrivals and departures at SDF will be impacted by construction on the East Runway (Runway 17L-35R). During this time, aircraft arrivals and departures will operate entirely into the wind. Typically, aircraft at SDF can operate on a preferred runway with up to 8 knots of tailwind when the pavement is dry; however, during

v.3.2.0 Leaflet | Map: © OpenStreetMap contributors

# Program Management Measures *Under Consideration*

## Public Engagement Measures

Establish New LRAA Staff Position Dedicated to Management of Noise Compatibility Program PM-1

Establish Advisory Committee PM-2

## Monitoring Measures

Acquire Portable Noise Monitoring Equipment PM-3

Acquire Equipment to Monitor Aircraft Operations PM-4

## Reporting Measures

**NEM** New  
Regular updates of the Noise Exposure Map

## Public Information Measures

**Information Sharing** PM-5  
Airport Noise Office to Collect and Disseminate Information

**Runway use change notifications** New  
Share runway use change notifications with members of the public who opt-in to receive them

**GIS Data** New  
Add a noise layer to the publicly-available Louisville/Jefferson County Information Consortium (LOJIC) Geographic Information System (GIS) data

**NCP** New  
Periodic evaluation and update of the Noise Compatibility Program when necessary

# SDF NCP Noise Abatement Measures Analysis Results



# LOUISVILLE NCP UPDATE

## Noise Abatement Measures *Under Consideration*

### Runway and Airspace Measures

#### Runway Use Program

NA 1-3, 5-6

Define preferred runway use, avoiding overflight of incompatible land to the north.

#### Offset Approach to 17R

NA-7

Reduce noise over Old Louisville, routing arrivals over an industrial corridor instead.

#### Flight Track Measures Already Implemented by the FAA/ATCT

NA-4, 7-14

Documents current flight paths reflecting prior NCP measures.

Offset departure, 35L

Southbound divergence

Airspace redesign

Intercept approach fix

### Infrastructure

#### Taxiway Extension

New

Allows full-length departures from 35L, so aircraft climb higher before reaching homes.

### Flight Procedures

#### Optimized Profile Descent

NA-15

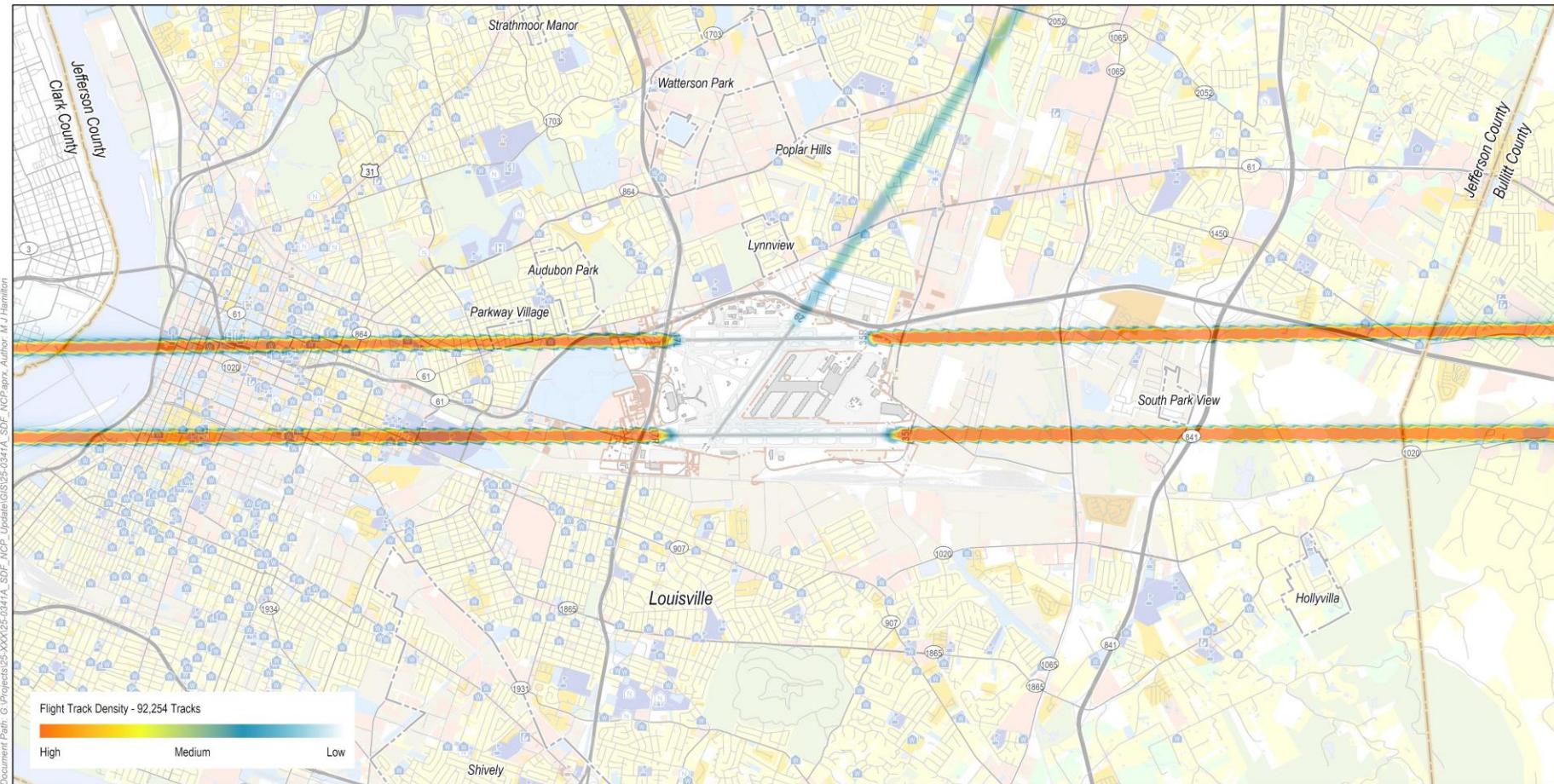
Eliminates level-flight segments to cut arrival noise farther from the airport.

#### Noise Abatement Departure Profiles

NA-16

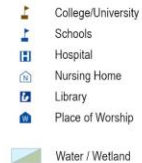
Optimizes power and altitude shortly after takeoff to reduce noise close to the airport.





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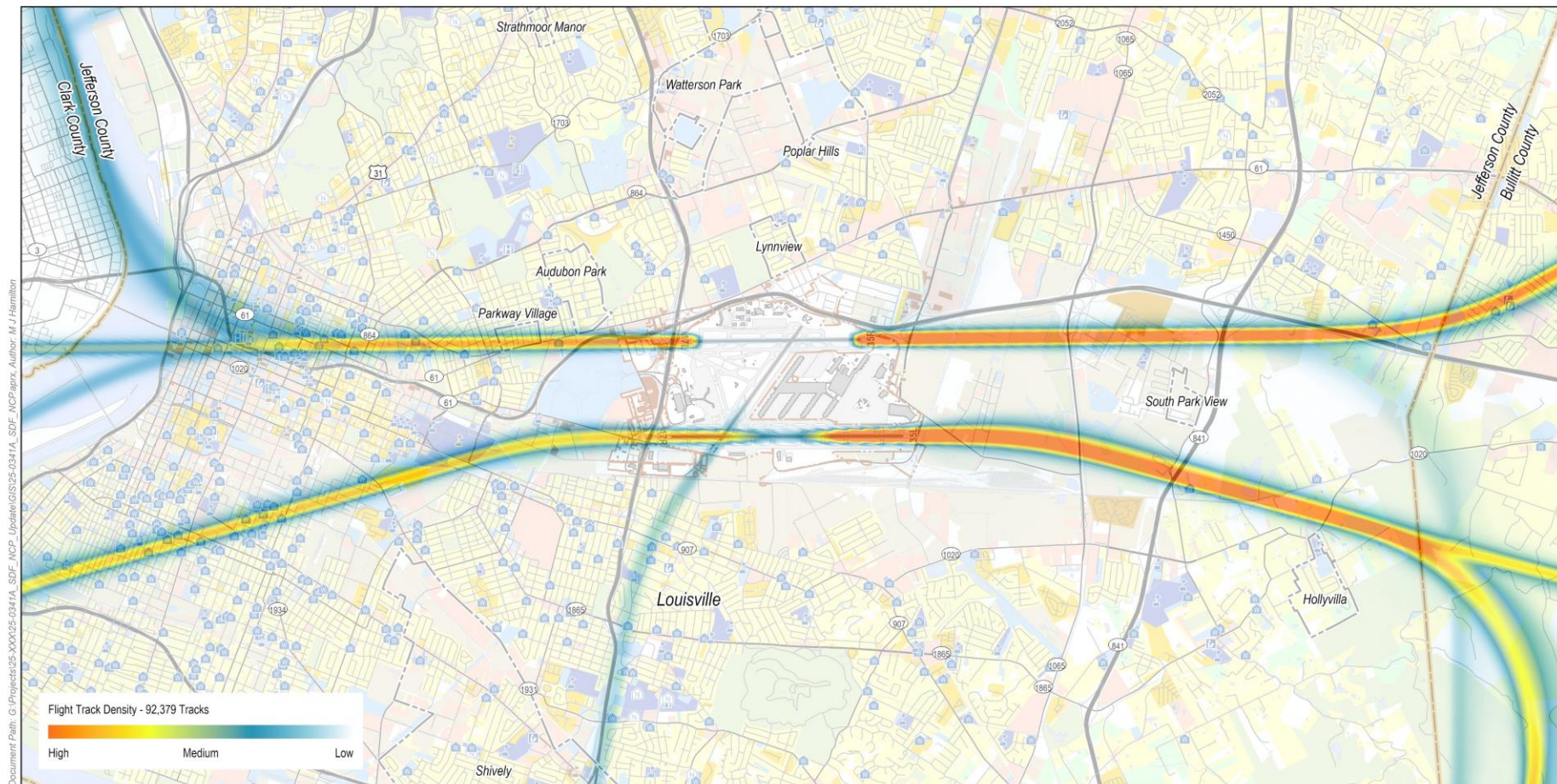
#### Legend



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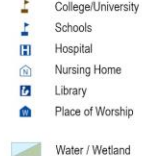
Arrival Track Density Plot - All Aircraft





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#### Legend

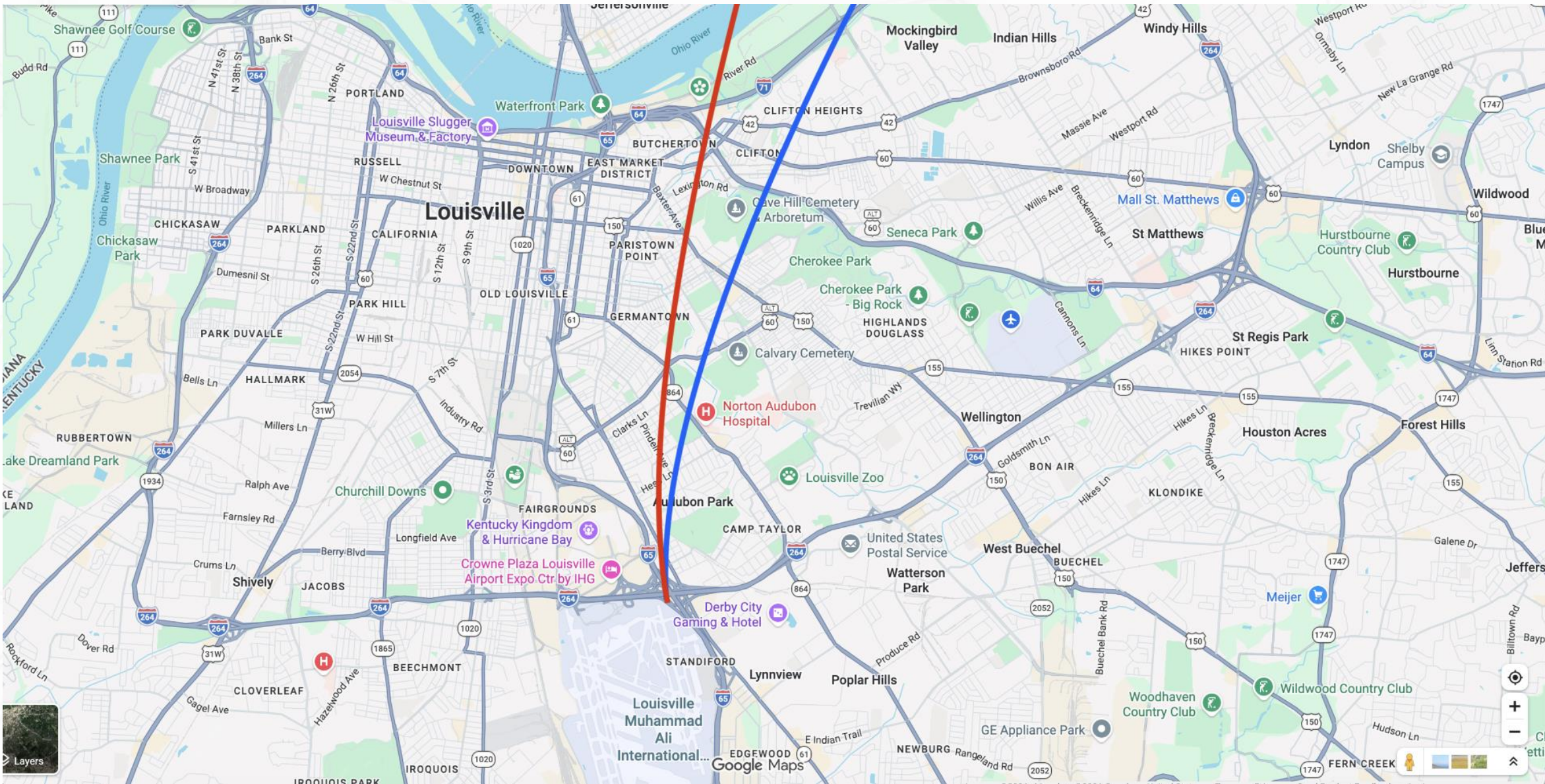


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Departure Track Density Plot - All Aircraft



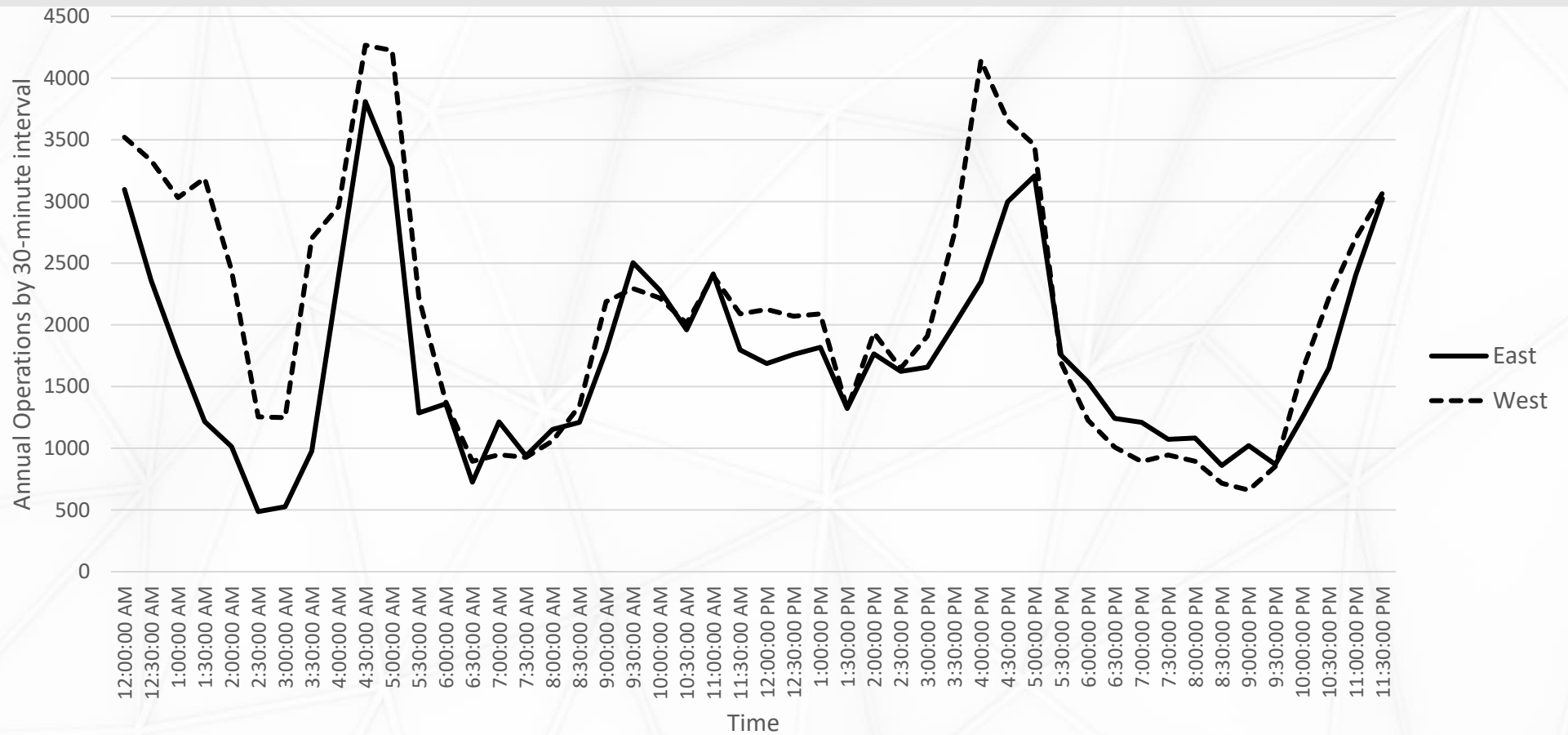
# Current Departure Flight Track Density Plot



# Discussion of CNF Idea

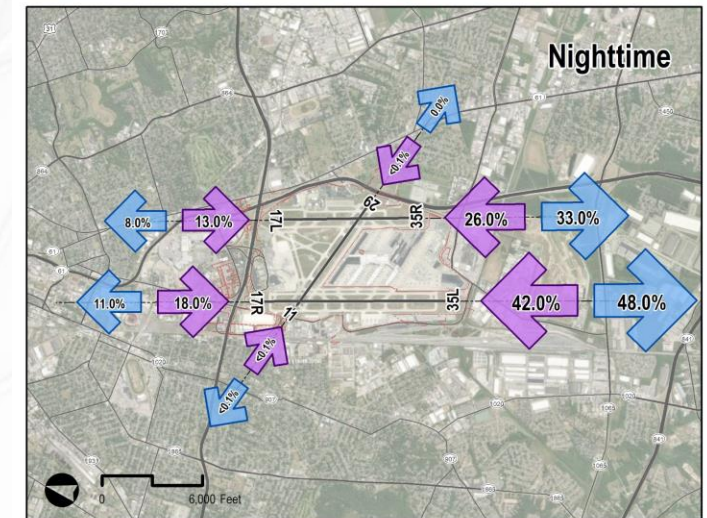
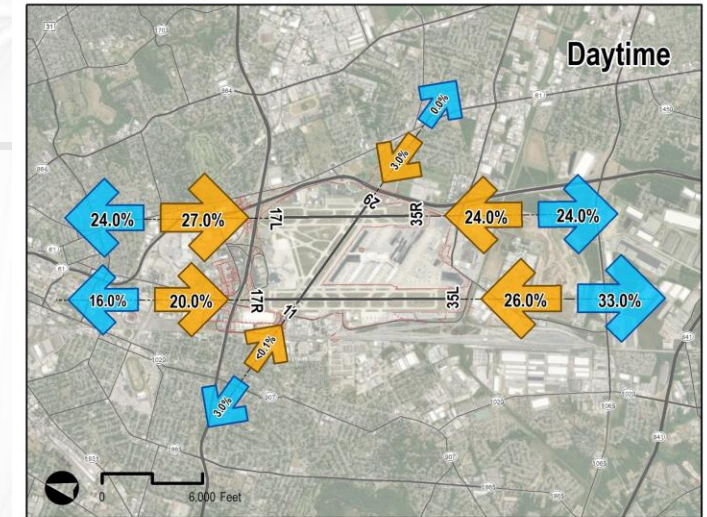
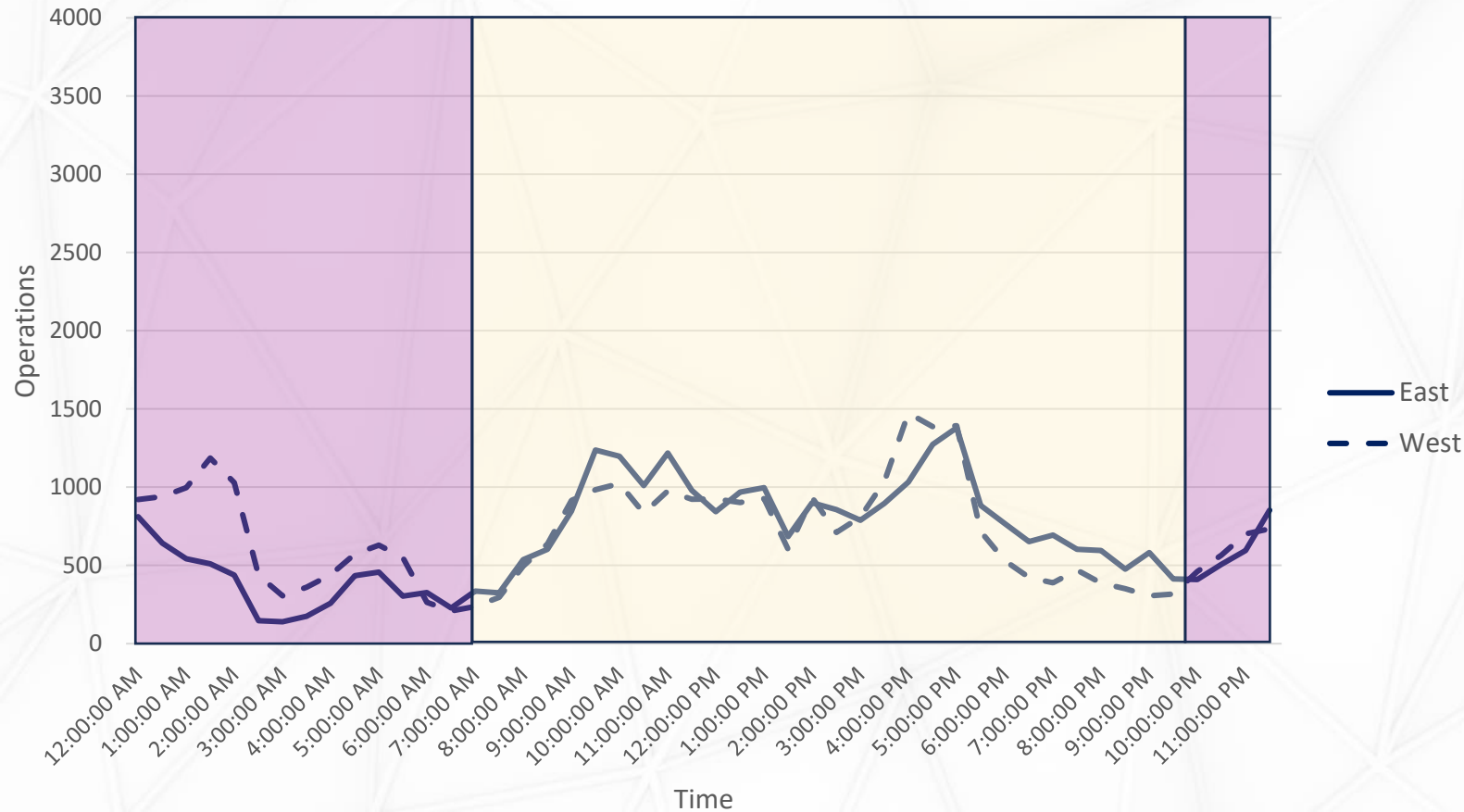
# Investigate East-West Runway Preference

2025 SDF Total Operations by Runway Usage (East vs. West)

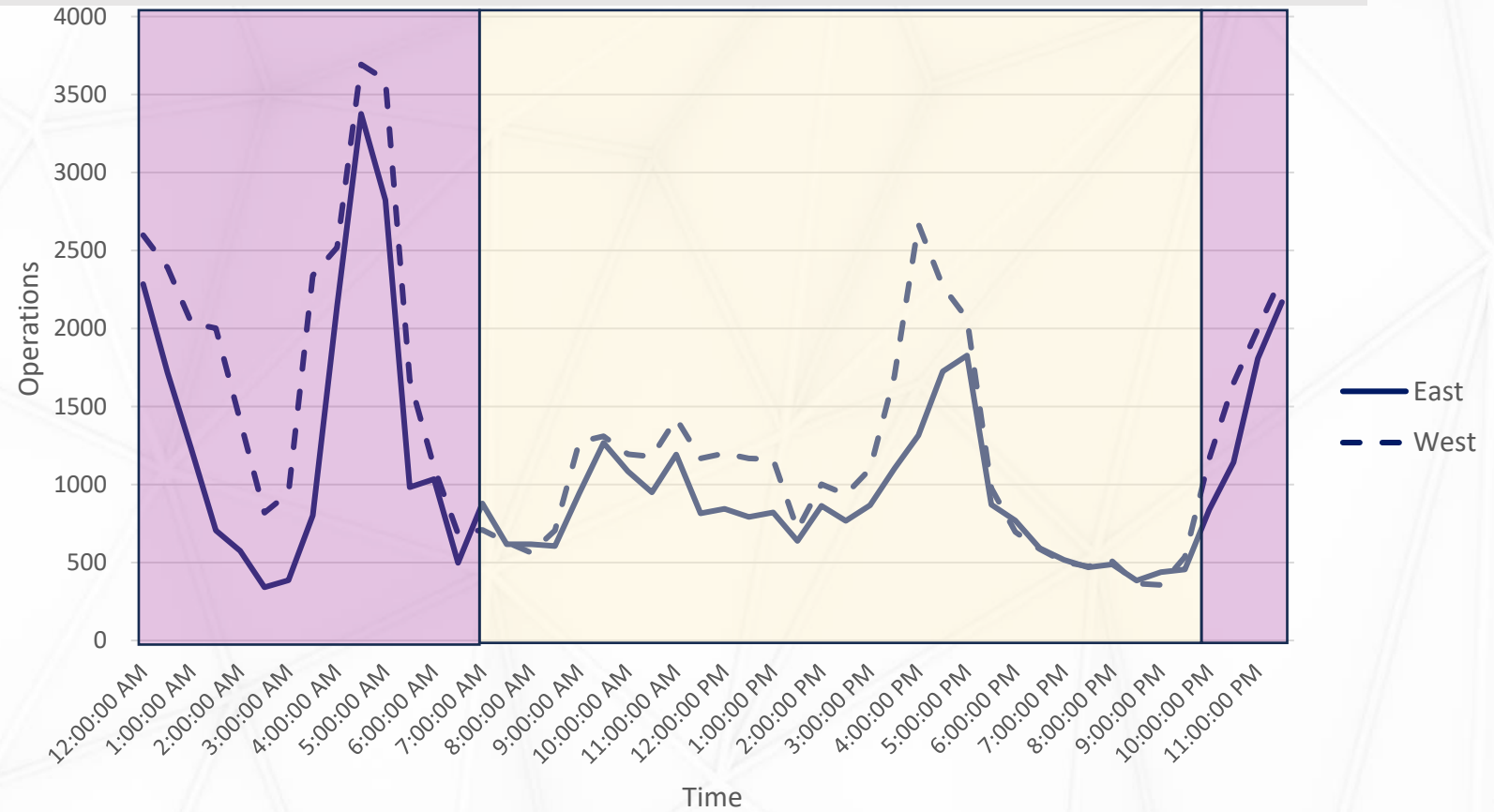


# Investigate East-West Runway Preference

2025 Total Operations by Runway Usage (East vs. West) on North Side of Airport

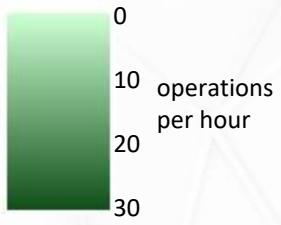


### 2025 Total Operations by Runway Usage (East vs. West) on South Side of Airport

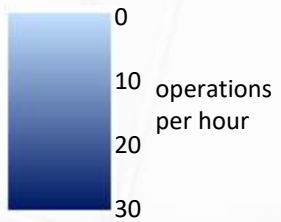


Legend:

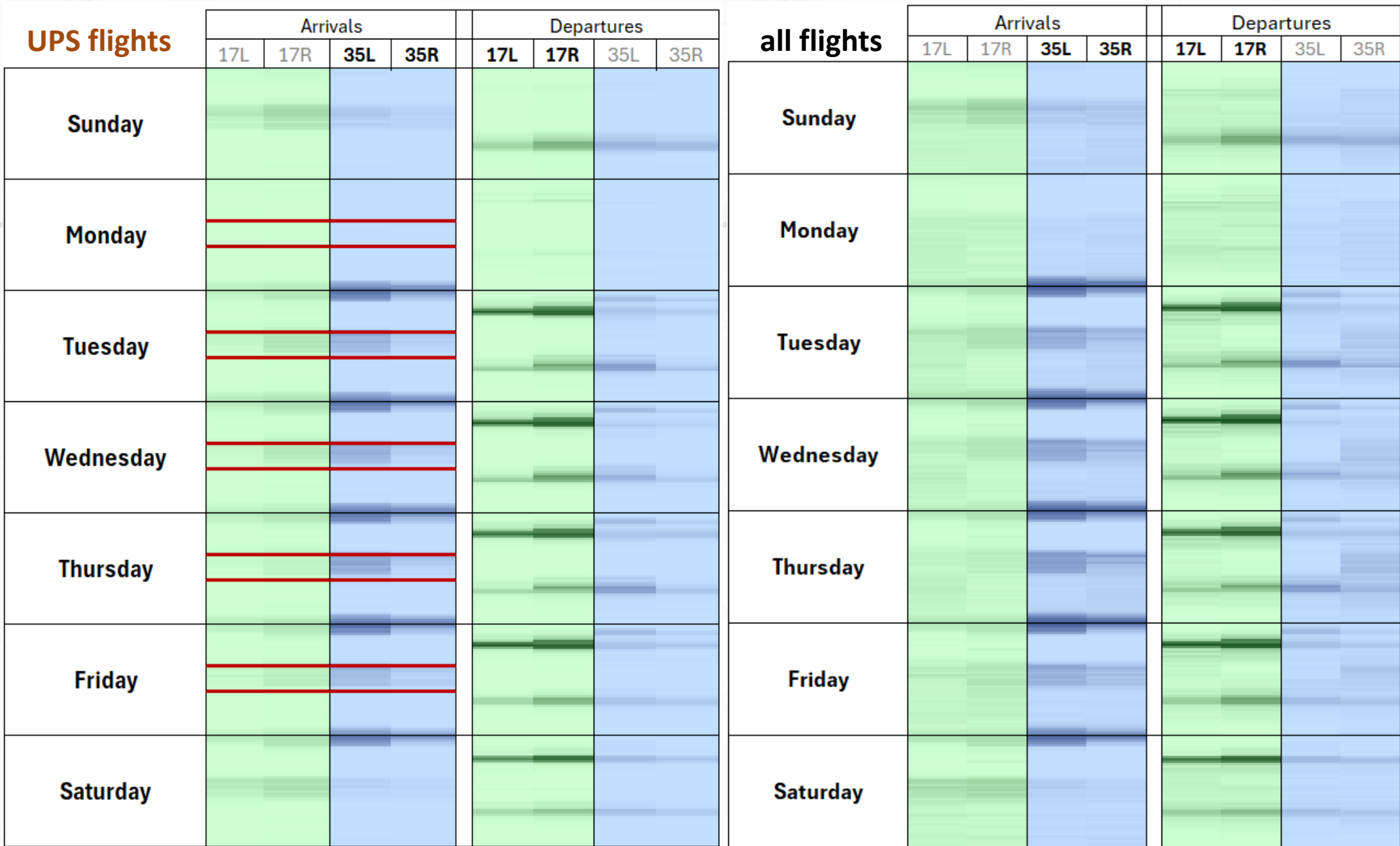
*south flow*

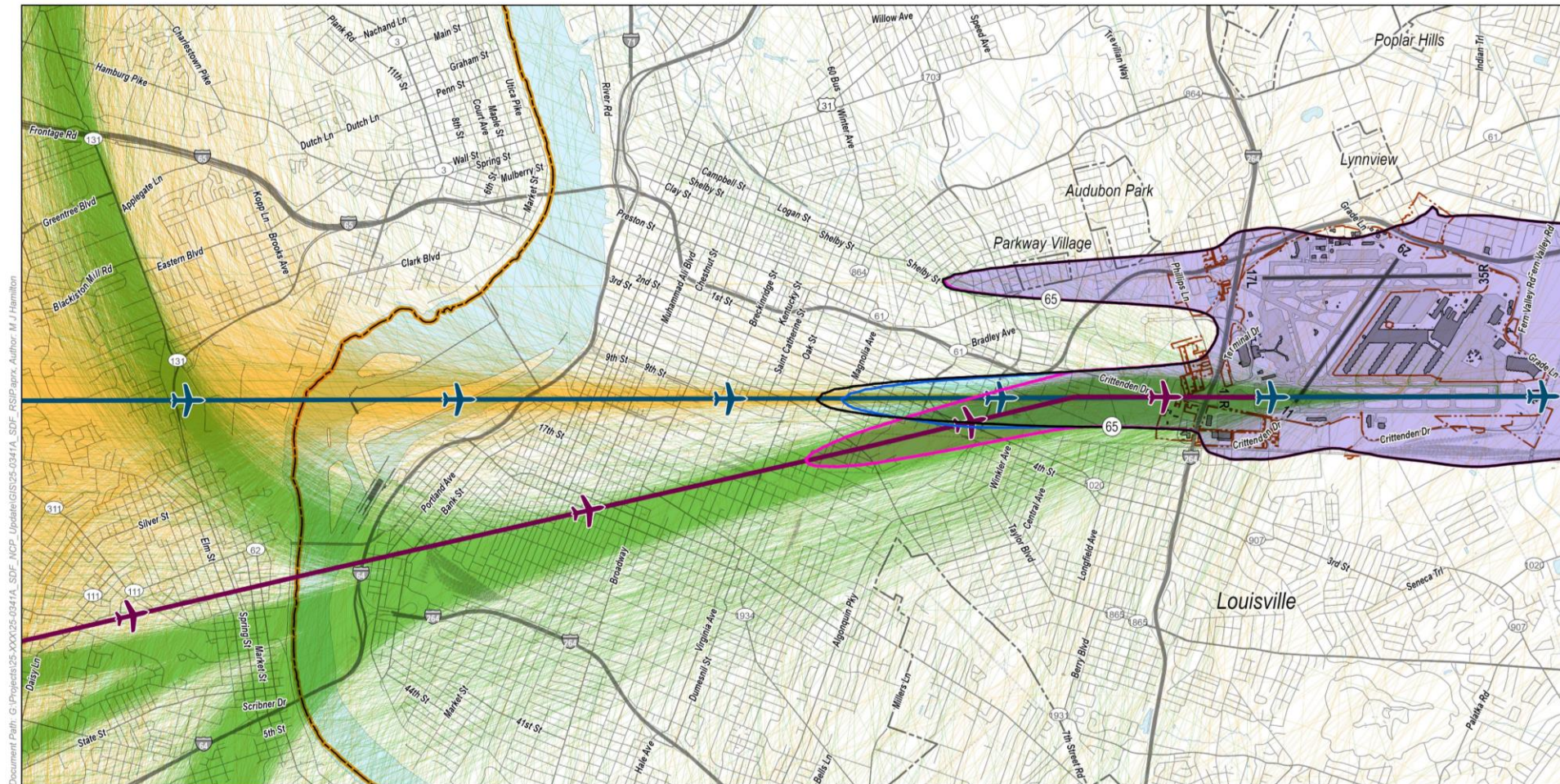


*north flow*



Red lines represent  
9:00 am to 2:00 pm





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DNL 60 dB contour (dashed line) is shown for informational purposes only. Land use compatibility analysis focuses on areas exposed to DNL greater than 65 dB



#### Legend

- 17R Offset Approach
- 17R Straight In Approach
- 2029 Forecast DNL Contour (65 dB)
- 17R Offset Approach Contour (65 dB)
- 17R Offset Approach Non-Wide Body DNL Contour (65 dB)
- Arrival NOMS Tracks
- Departure NOMS Tracks

- Municipal Boundary
- County Boundary
- Airport Boundary
- Runway / Pavement
- Buildings

- Water / Wetland
- Expressway
- Arterial
- Collector
- Local
- Railroad



Figure:  
**Potential Offset Approach to Runway 17R;  
Effect on DNL contours**



# Potential Offset Approach to Runway 17R

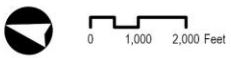


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**Legend**

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- Public Use 2 (Compatible)
- Agriculture
- Open Space / Cemeteries / Recreation
- Commercial Use
- Manufacturing, Production and Utility
- Vacant / Undefined



Figure:  
**Potential Offset Approach to Runway 17R;  
Effect on DNL contours**



# Potential Offset Approach to Runway 17R

# Analysis of Potential Offset Approach to Runway 17R

## Estimated Residential Population within Forecast (2029) and Offset Approach Hypothetical DNL Contours

| Contour Interval                         | Estimated Population | Estimated Single Family Units | Estimated Multi-Family Units | Estimated Total Housing Units |
|------------------------------------------|----------------------|-------------------------------|------------------------------|-------------------------------|
| <b>2029 Forecast Condition</b>           |                      |                               |                              |                               |
| Total >65 DNL                            | 5,340                | 1,075                         | 1,602                        | 2,677                         |
| <b>17R Offset Approach All Aircraft</b>  |                      |                               |                              |                               |
| Total >65 DNL                            | 5,348                | 1,035                         | 1,130                        | 2,165                         |
| <b>17R Offset Approach Non-Wide Body</b> |                      |                               |                              |                               |
| Total >65 DNL                            | 5,229                | 1,033                         | 1,496                        | 2,529                         |

Note: Population and housing units estimated using 2020 US Census data

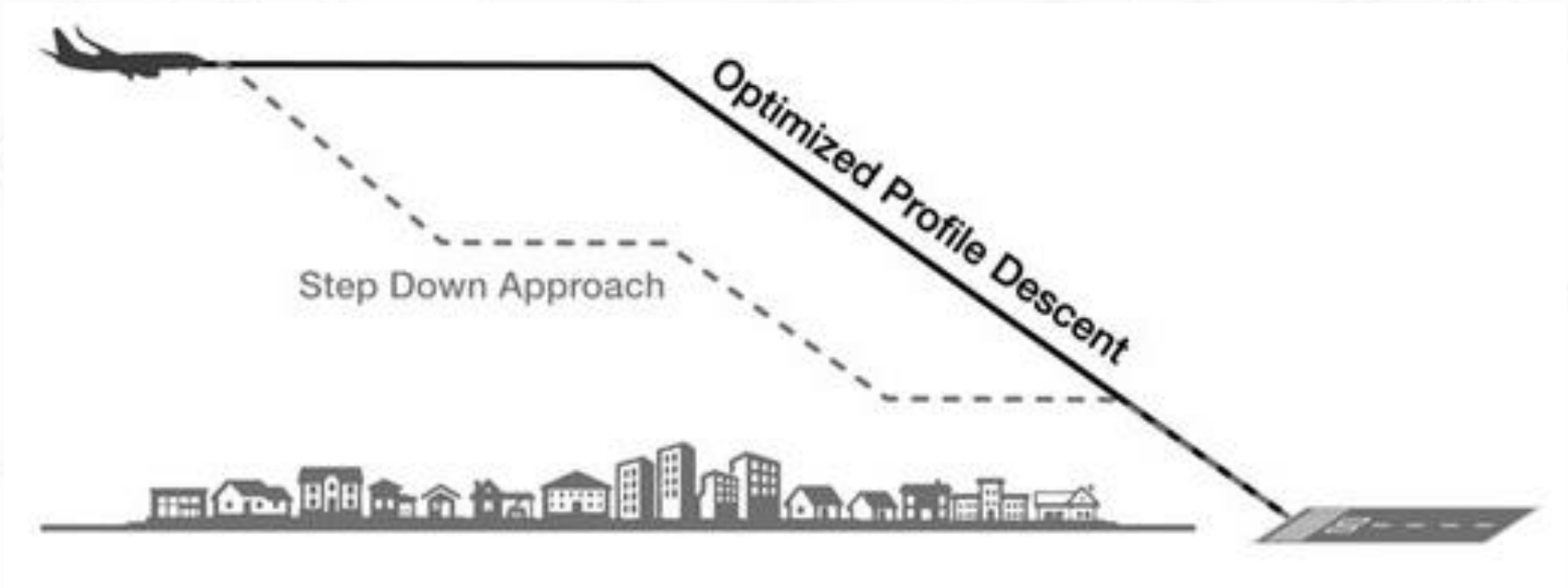
Sources: US Census 2020 and HMMH analysis, 2026

## Noise-Sensitive Sites Exposed to DNL 65 or greater

| Contour Interval | Schools  |            |                      | Places of Worship |            |                      | Historic Districts |            |                      | Historic Properties |            |                      |
|------------------|----------|------------|----------------------|-------------------|------------|----------------------|--------------------|------------|----------------------|---------------------|------------|----------------------|
|                  | 2029 NEM | Offset-All | Offset-Non-Wide Body | 2029 NEM          | Offset-All | Offset-Non-Wide Body | 2029 NEM           | Offset-All | Offset-Non-Wide Body | 2029 NEM            | Offset-All | Offset-Non-Wide Body |
| Total >65 DNL    | 8        | 7          | 10                   | 6                 | 5          | 7                    | 11                 | 12         | 11                   | 200                 | 25         | 151                  |

Sources: LOJIC Data and HMMH Analysis, 2026

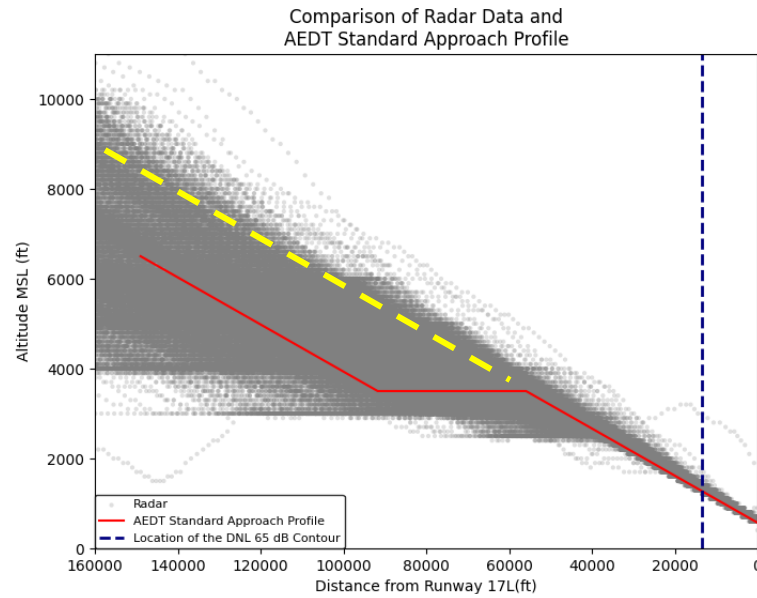
# Optimized Approach Profile



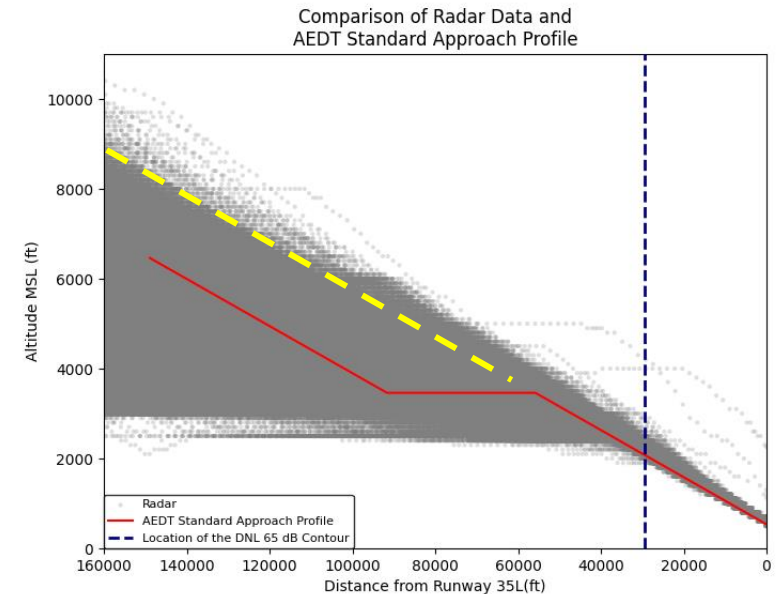
## Optimized Profile Descent Compared to Step Down Approach

Source: <https://www.faa.gov/newsroom/faa-implements-more-efficient-descent-procedures-reduce-fuel-burn-emissions>

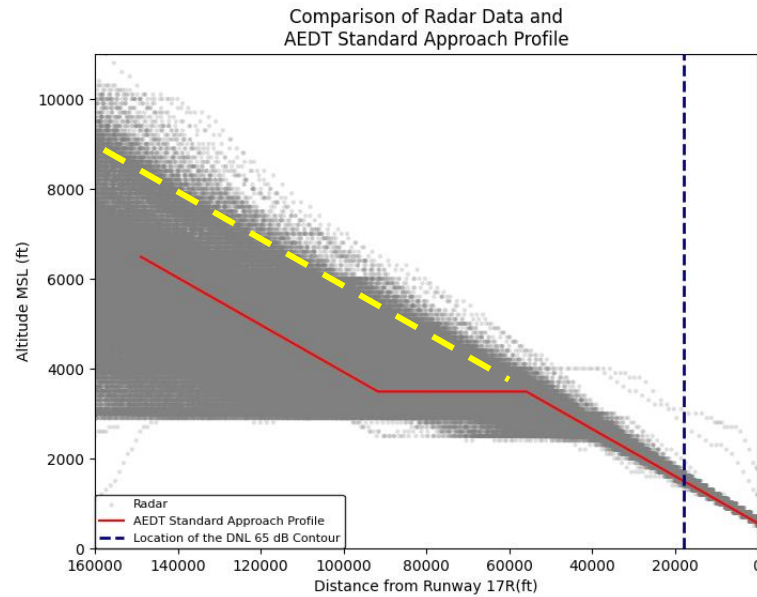
17L



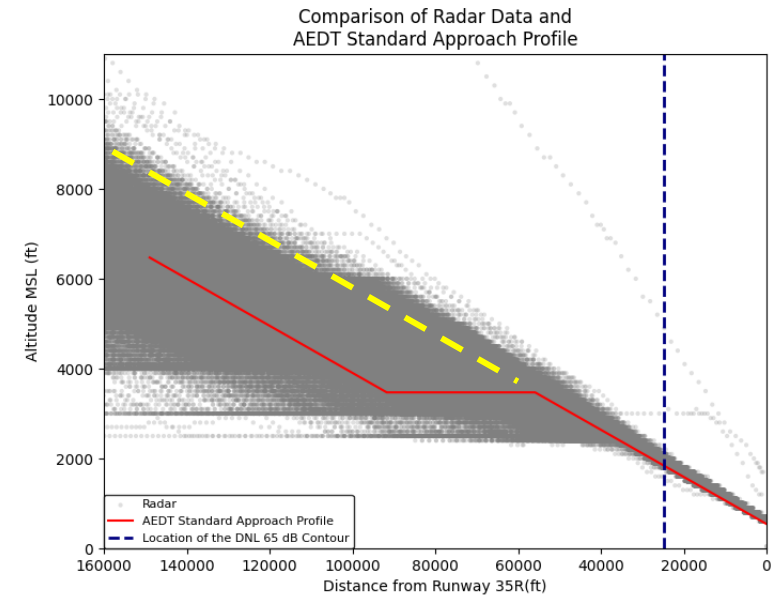
35L



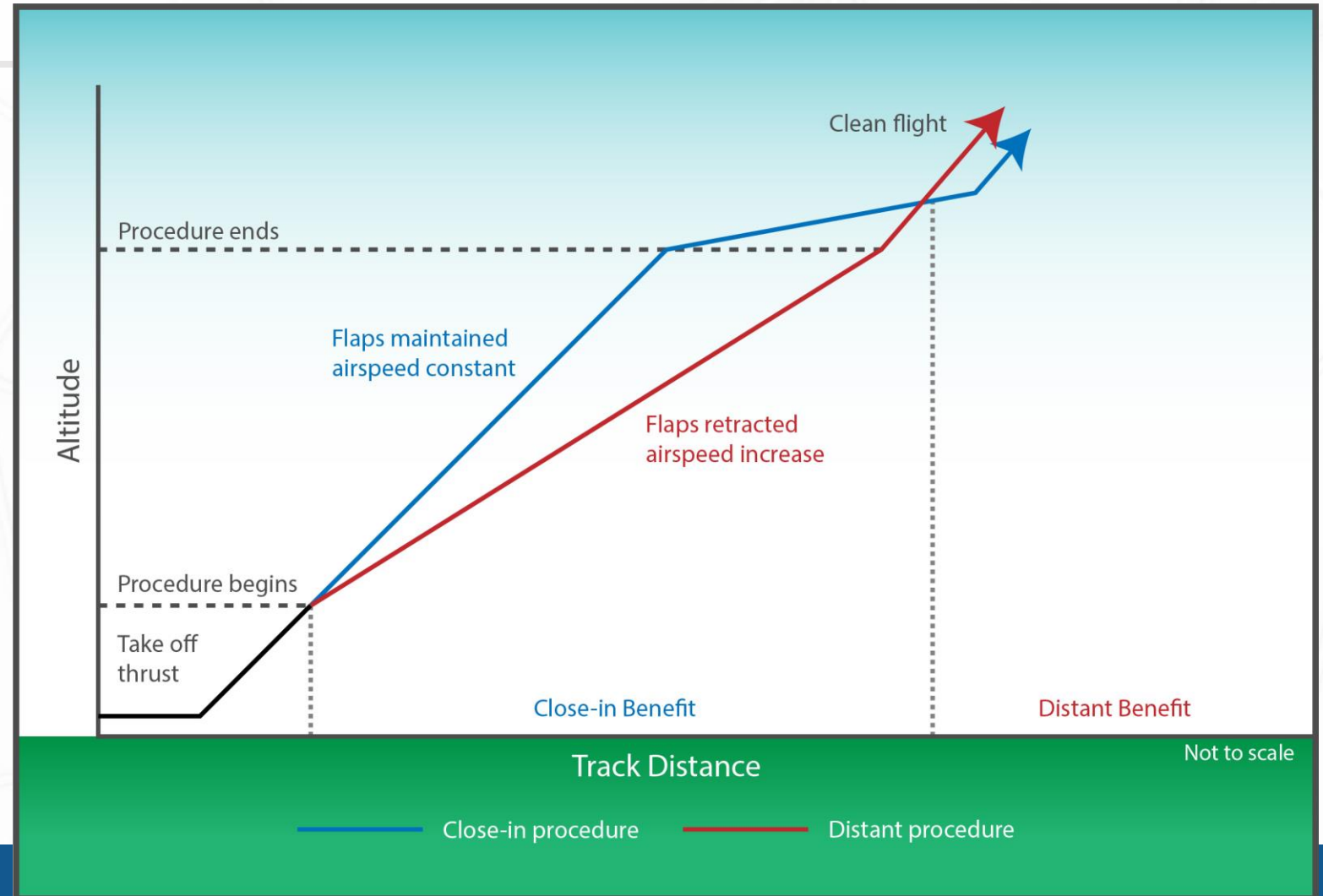
17R

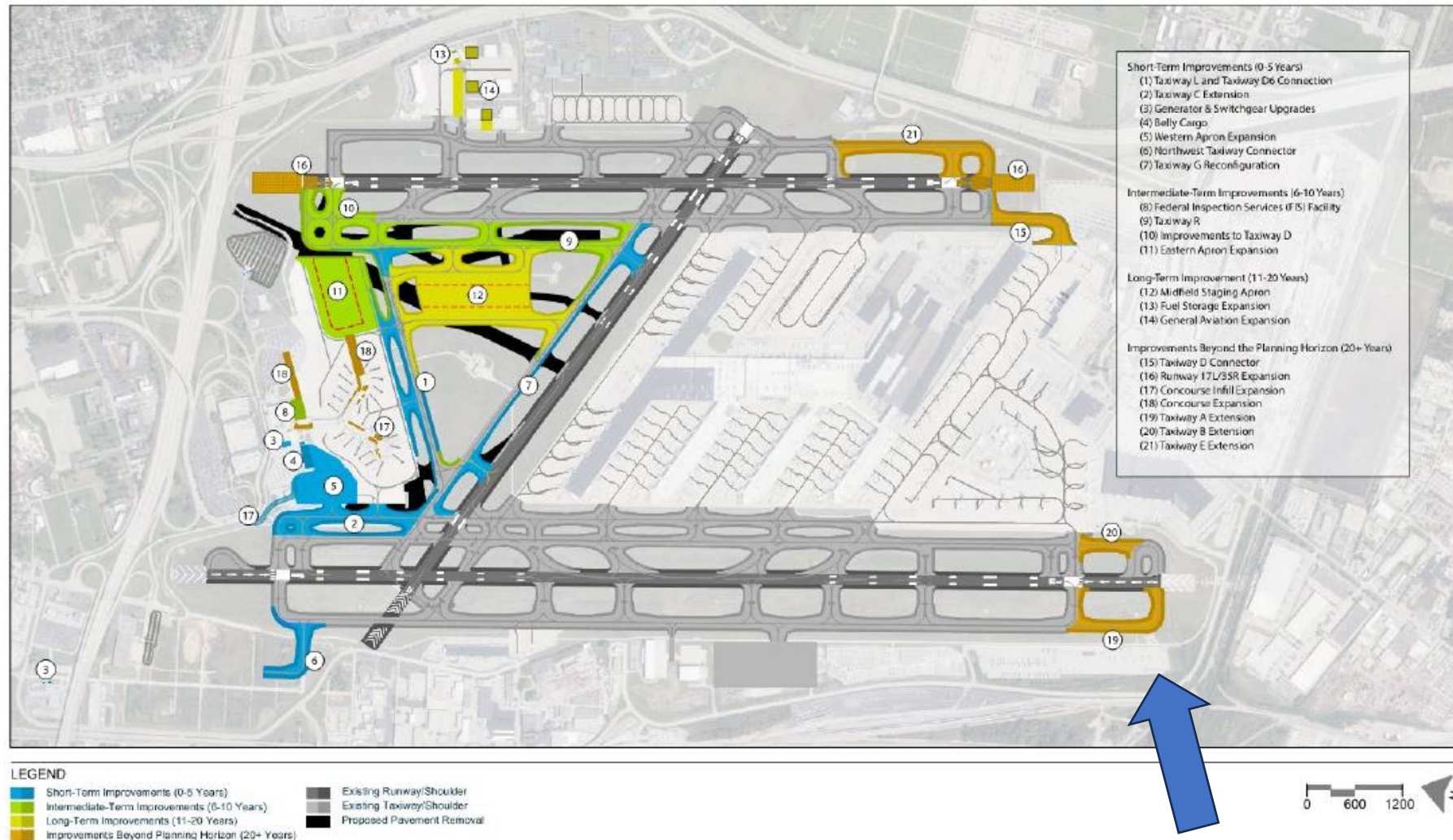


35R



# FAA-recommended Noise Abatement Departure Procedures





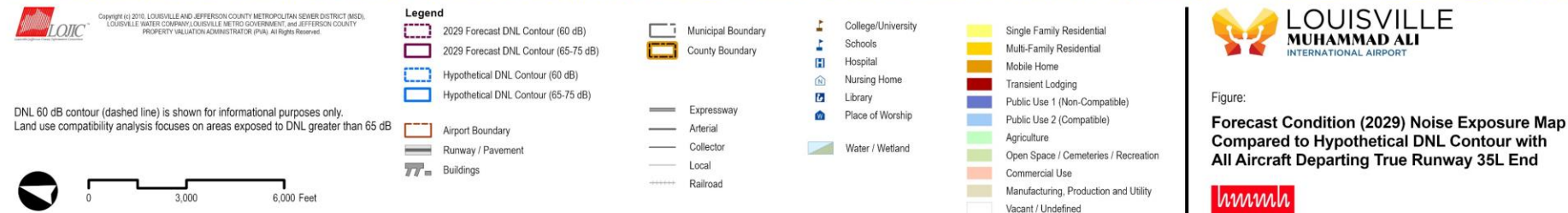
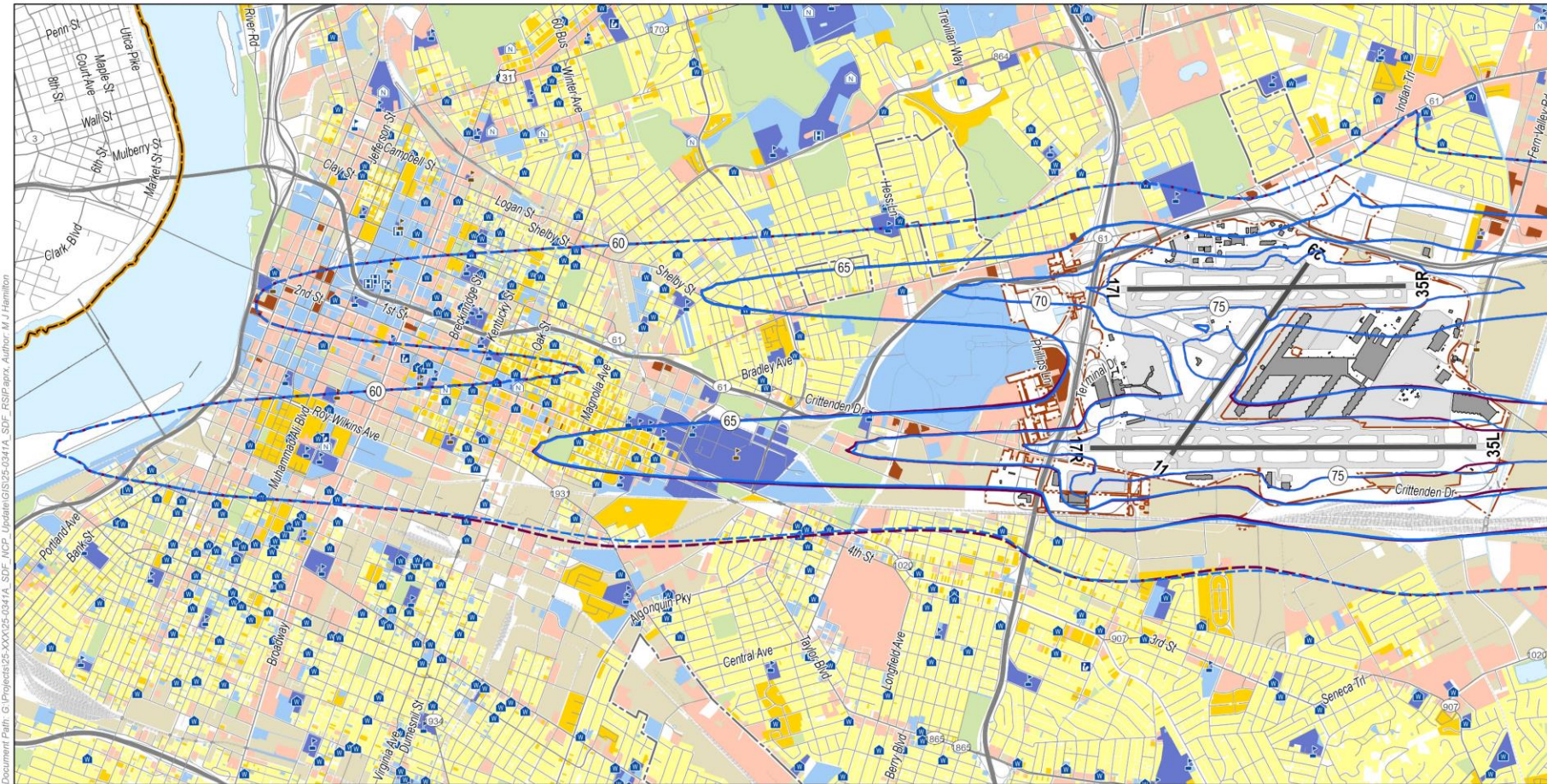
Prepared by: Kimley-Horn, 2020

Note: Timing of improvements may change due to funding or other considerations.

Kimley-Horn

FIGURE 5.1 Recommended Development Plan

Louisville Muhammad Ali International Airport Master Plan



# Next Steps



# LOUISVILLE NCP UPDATE

## Schedule

| Meetings/Milestone                                 | Topic                       | Expected Timeframe                    |
|----------------------------------------------------|-----------------------------|---------------------------------------|
| CNF Meeting 1                                      | NCP Kickoff                 | <i>February 2026</i>                  |
| CNF Meeting 2, TAC Meeting 1 & Public Open House 1 | Noise Abatement Strategies  | <i>May 2026</i>                       |
| CNF Meeting 3, TAC Meeting 2 & Public Open House 2 | Noise Mitigation Strategies | <i>August 2026</i>                    |
| CNF Meeting 4 and TAC Meeting 3                    | LRAA-Recommended Measures   | <del>September</del> October 2026     |
| <b>Submit Preliminary Draft NCP to FAA</b>         |                             | <del>October</del> November 2026      |
| CNF Meeting 5, TAC Meeting 4 & Public Open House 3 | Draft NCP                   | <del>October 2026</del> January 2027  |
| NCP Public Comment Period and NCP Public Hearing   |                             | <del>December 2026</del> Jan/Feb 2027 |
| <b>Submit Final NCP to FAA</b>                     |                             | January Spring 2027                   |



# Thank you!

Website: [www.flyLouisville.com/NCPUpdate](http://www.flyLouisville.com/NCPUpdate)

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# Investigate East-West Runway Preference

2025 SDF Operations by Runway Usage (East vs. West)

