14 CFR Part 150 Noise Compatibility Program Update

John Glenn Columbus International Airport

Final – April 2025

PREPARED FOR
Columbus Regional Airport Authority

Volume 1 of 2

PRESENTED BY
Landrum & Brown, Incorporated

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COLUMBUS
REGIONAL AIRPORT AUTHORITY

April 24, 2025

Ms. Misty Peavler
FAA, Great Lakes Region
Detroit Airports District Office
11677 South Wayne Road, Ste. 107
Romulus, MI 48174

Subject: Submission of Part 150 Study, Including Noise Exposure Maps and Noise Compatibility Program for John Glenn Columbus International Airport

Dear Ms. Peavler:

Please find the enclosed copy of the above referenced document submitted pursuant to 14 CFR Part 150 for appropriate Federal Aviation Administration (FAA) determination. The Columbus Regional Airport Authority (CRAA) requests FAA review of the Existing (2024) Noise Exposure Map (NEM) and Future (2029) NEM; and approval of the Noise Compatibility Program (NCP) update for the John Glenn Columbus International Airport (CMH). The Future (2029) NEM reflects implementation of the NCP. The Existing (2024) NEM and Future (2029) NEM are revisions to NEMs that were previously determined by the FAA to be in compliance with 14 CFR Part 150 on December 5, 2007.

The Existing (2024) NEM is based on reasonable planning assumptions developed in this Part 150 Study. The Existing (2024) NEM was developed based on actual flight activity from September 2022 through August 2023. The Future (2029) NEM, with the implementation of the NCP, is based on reasonable forecasts and planning assumptions that were prepared for this Part 150 Study. The underlying data and assumptions are described in the enclosed report.

The measures included in the NCP represent the recommendations of the CRAA, as owner and operator of CMH. The elements of the NCP have been coordinated with representatives of the agency or user groups having responsibility for implementation. While it is not practical to obtain formal agreements from every agency or group prior to this submission, each group is aware of these actions which fall within their respective jurisdictions.

On behalf of CRAA, I would like to express appreciation to the FAA for its support in conducting this Part 150 Study.

Sincerely,

Mark Kelby

Mark Kelby
Airport Planner

4600 International Gateway | Columbus, Ohio 43219
614.239.4000 | FlyColumbus.com

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STATEMENT OF CERTIFICATION AND PUBLIC NOTIFICATION

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Maps for the John Glenn Columbus International Airport submitted in accordance with 14 CFR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief. I verify that the data used to develop the Existing (2024) Noise Exposure Map and the Future (2029) Noise Exposure Map is representative of the best available information and reasonable assumptions at the time the noise modeling began.

Interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft Noise Exposure Maps and descriptions of the forecast of aircraft operations.

Joseph R. Nardone

Date 4-23-25

Joseph R. Nardone
President & CEO
Columbus Regional Airport Authority

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AIRPORT NAME: John Glenn Columbus International Airport REVIEWER: _____

NEM Checklist	Yes / No / NA	Page No.\Other Reference
I. IDENTIFICATION AND SUBMISSION OF MAP DOCUMENT:		
A. Is this submittal appropriately identified as one of the following, submitted under 14 CFR Part 150:		
1. a NEM only	No	N/A
2. a NEM and NCP	Yes	Letter of Transmittal
3. a revision to NEMs which have previously been determined by FAA to be in compliance with Part 150?	Yes	Letter of Transmittal
B. Is the airport name and the qualified airport operator identified?	Yes	Letter of Transmittal, Chapter 1, page 1-1
C. Is there a dated cover letter from the airport operator which indicates the documents are submitted under Part 150 for appropriate FAA determinations?	Yes	Letter of Transmittal
II. CONSULTATION: [150.21(b), A150.105(a)]		
A. Is there a narrative description of the consultation accomplished, including opportunities for public review and comment during map development?	Yes	Chapter 1, Pages 1-5 to 1-7, Appendix G, Public Involvement
B. Identification:		
1. Are the consulted parties identified?	Yes	Appendix G, Public Involvement
2. Do they include all those required by 150.21(b) and A150.105(a)?	Yes	Chapter 1, Pages 1-5 to 1-7, and Appendix G
C. Does the documentation include the airport operator's certification, and evidence to support it, that interested persons have been afforded adequate opportunity to submit their views, data, and comments during map development and in accordance with 150.21(b)?	Yes	Sponsor's Certification
D. Does the document indicate whether written comments were received during consultation and, if there were comments, that they are on file with the FAA region?	Yes	Appendix G.

NEM Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
III. GENERAL REQUIREMENTS: [150.21]		
A. Are there two maps, each clearly labeled on the face with year (existing condition year and 5-year)?	Yes	Exhibits NEM-1 & NEM-2
B. Map currency:		
1. Does the existing condition map year match the year on the airport operator's submittal letter?	No	Letter of Transmittal & Exhibit NEM-1
2. Is the 5-year map based on reasonable forecasts and other planning assumptions and is it for the fifth calendar year after the year of submission?	Yes	Chapter 1, Page 1-4; Appendix C, Page C-52; and Appendix H, Page H-1
3. If the answer to 1 and 2 above is no, has the airport operator verified in writing that data in the documentation are representative of existing condition and 5-year forecast conditions as of the date of submission?	Yes	Appendix C, Page C-70
C. If the NEM and NCP are submitted together:		
1. Has the airport operator indicated whether the 5-year map is based on 5-year contours without the program vs. contours if the program is implemented?	Yes	Letter of Transmittal & Chapter 4, Page 4-49
2. If the 5-year map is based on program implementation:		
a. are the specific program measures which are reflected on the map identified:	Yes	Chapter 4
b. does the documentation specifically describe how these measures affect land use compatibilities depicted on the map?	Yes	Chapter 4
3. If the 5-year NEM does not incorporate program implementation, has the airport operator included an additional NEM for FAA determination after the program is approved which shows program implementation conditions and which is intended to replace the 5-year NEM as the new official 5-year plan?	N/A	N/A

NEM Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
IV. MAP SCALE, GRAPHICS, AND DATA REQUIREMENTS: [A150.101, A150.103, A150.105, 150.21(a)]		
A. Are the maps of sufficient scale to be clear and readable (they must not be less than 1" to 8,000'), and is the scale indicated on the maps?	Yes	Exhibits NEM-1 & NEM-2
B. Is the quality of the graphics such that required information is clear and readable?	Yes	Exhibits NEM-1 & NEM-2
C. Depiction of the airport and its environs.		
1. Is the following graphically depicted to scale on both the existing condition and 5-year maps:		
a. airport boundaries	Yes	Exhibits NEM-1 & NEM-2
b. runway configurations with runway end numbers	Yes	Exhibits NEM-1 & NEM-2
2. Does the depiction of the off-airport data include:		
a. a land use base map depicting streets and other identifiable geographic features	Yes	Exhibits NEM-1 & NEM-2
b. the area within the 65 Ldn (or beyond, at local discretion)	Yes	Exhibits NEM-1 & NEM-2
c. clear delineation of geographic boundaries and the names of all jurisdictions with planning and land use control authority within the 65 Ldn (or beyond, at local discretion)	Yes	Exhibits NEM-1 & NEM-2
D. 1. Continuous contours for at least the Ldn 65, 70, and 75?	Yes	Exhibits NEM-1 & NEM-2
2. Based on current airport and operational data for the existing condition year NEM, and forecast data for the 5-year NEM?	Yes	Letter of Transmittal, Exhibits NEM-1, NEM-2, & Appendix C

NEM Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
E. Flight tracks for the existing condition and 5-year forecast time frames (these may be on supplemental graphics which must use the same land use base map as the existing condition and 5-year NEM), which are numbered to correspond to accompanying narrative?	Yes	Appendix C, Exhibits C-10, C-11, C-12, C-13, C-14, C-15, and C-16
F. Locations of any noise monitoring sites (these may be on supplemental graphics which must use the same land use base map as the official NEMs)	Yes	Exhibit B-1
G. Noncompatible land use identification:		
1. Are noncompatible land uses within at least the 65 Ldn depicted on the maps?	Yes	NEM-1, NEM-2, and Appendix B,
2. Are noise sensitive public buildings identified?	Yes	Exhibit D-1 and Table D-2
3. Are the noncompatible uses and noise sensitive public buildings readily identifiable and explained on the map legend?	Yes	Exhibits NEM-1 & NEM-2
4. Are compatible land uses, which would normally be considered noncompatible, explained in the accompanying narrative?	Yes	Exhibits NEM-1 & NEM-2, and Chapter 3
V. NARRATIVE SUPPORT OF MAP DATA: [150.21(a), A150.1, A150.101, A150.103]		
A. 1. Are the technical data, including data sources, on which the NEMs are based adequately described in the narrative?	Yes	Chapter 3, Appendix C
2. Are the underlying technical data and planning assumptions reasonable?	Yes	Chapter 3, Appendix C
B. Calculation of Noise Contours:		
1. Is the methodology indicated?		
a. is it FAA approved?	Yes	Chapter 3, Appendix C
b. was the same model used for both maps?	Yes	Appendix C, Page C-22
c. has AEE approval been obtained for use of a model other than those which have previous blanket FAA approval?	N/A	N/A

NEM Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
2. Correct use of noise models:		
a. does the documentation indicate the airport operator has adjusted or calibrated FAA-approved noise models or substituted one aircraft type for another?	No	Appendix B, Page B-12
b. if so, does this have written approval from AEE?	N/A	N/A
3. If noise monitoring was used, does the narrative indicate that Part 150 guidelines were followed?	Yes	Appendix B, Pages B-1 to B-2
4. For noise contours below 65 Ldn, does the supporting documentation include explanation of local reasons? (Narrative explanation is highly desirable but not required by the Rule.)	Yes	Chapter 3, Page 3-1
C. Noncompatible Land Use Identification:		
1. Does the narrative give estimates of the number of people residing in each of the contours (Ldn 65, 70 and 75, at a minimum) for both the existing condition and 5-year maps?	Yes	Chapter 3
2. Does the documentation indicate whether Table 1 of Part 150 was used by the airport operator?	Yes	Appendix A, Table A-1
a. If a local variation to Table 1 was used:		
(1) does the narrative clearly indicate which adjustments were made and the local reasons for doing so?	N/A	N/A
(2) does the narrative include the airport operator's complete substitution for Table 1?	N/A	N/A
3. Does the narrative include information on self-generated or ambient noise where compatible/noncompatible land use identifications consider non-airport/aircraft sources?	N/A	N/A

NEM Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
4. Where normally noncompatible land uses are not depicted as such on the NEMs, does the narrative satisfactorily explain why, with reference to the specific geographic areas?	N/A	N/A
5. Does the narrative describe how forecasts will affect land use compatibility?	Yes	Chapter 3, Page 3-6, Appendix D
VI. MAP CERTIFICATIONS: [150.21(b), 150.21(e)]		
A. Has the operator certified in writing that interested persons have been afforded adequate opportunity to submit views, data, and comments concerning the correctness and adequacy of the draft maps and forecasts?	Yes	Sponsor's Certificate
B. Has the operator certified in writing that each map and description of consultation and opportunity for public comment are true and complete?	Yes	Sponsor's Certificate

AIRPORT NAME: John Glenn Columbus International Airport REVIEWER: _____

NCP Checklist	Yes / No / NA	Page No.\Other Reference
I. IDENTIFICATION AND SUBMISSION OF PROGRAM:		
A. Submission is properly identified:		
1. 14 CFR Part 150 NCP?	Yes	Letter of Transmittal
2. NEM and NCP together?	Yes	Letter of Transmittal
3. Program revision?	Yes	Letter of Transmittal
B. Airport and Airport Operator's name identified?	Yes	Letter of Transmittal & Chapter 1, Page 1-1
C. NCP transmitted by airport operator cover letter?	Yes	Letter of Transmittal
II. CONSULTATION: [150.23]		
A. Documentation includes narrative of public participation and consultation process?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
B. Identification of consulted parties:		
1. all parties in 150.23(c) consulted?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
2. public and planning agencies identified?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
3. agencies in 2., above, correspond to those indicated on the NEM?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
C. Satisfies 150.23(d) requirements:		
1. documentation shows active and direct participation of parties in B., above?	Yes	Exhibits NEM-1 & NEM-2
2. active and direct participation of general public?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
3. participation was prior to and during development of NCP and prior to submittal to FAA?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
4. indicates adequate opportunity afforded to submit views, data, etc.?	Yes	Chapter 1, pages 1-5 to 1-7 and Appendix G
D. Evidence included of notice and opportunity for a public hearing on NCP?	Yes	Appendix G
E. Documentation of comments:		
1. includes summary of public hearing comments, if hearing was held?	Yes	Appendix G

NCP Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
2. includes copy of all written material submitted to operator?	Yes	Appendix G
3. includes operator's responses / disposition of written and verbal comments?	Yes	Appendix G
F. Informal agreement received from FAA on flight procedures?	N/A	Chapter 4 Measures NA-3, NA-4, & NA-6 are currently implemented. There are no newly recommended flight procedures that would require any agreement.
III. NOISE EXPOSURE MAPS: [150.23, B150.3; 150.35(f)] (This section of the checklist is not a substitute for the Noise Exposure Map checklist. It deals with maps in the context of the Noise Compatibility Program submission.)		
A. Inclusion of NEMs and supporting documentation:		
1. Map documentation either included or incorporated by reference?	Yes	Attached to Checklist, Exhibits NEM-1 & NEM-2, Appendix C
2. Maps previously found in compliance by FAA?	Yes	Letter of Transmittal
3. Compliance determination still valid?	Yes	Letter of Transmittal
4. Does 180-day period have to wait for map compliance finding?	Yes	None
B. Revised NEMs submitted with program: (Review using NEM checklist if map revisions included in NCP submittal)		
1. Revised NEMs included with program?	Yes	Attached to Checklist, Exhibits NEM-1 & NEM-2
2. Has airport operator requested FAA to make a determination on the NEM(s) when NCP approval is made?	Yes	Letter of Transmittal

NCP Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
C. If program analysis uses noise modeling:		
1. AEDT or FAA-approved equivalent?	Yes	Appendix C
2. Monitoring in accordance with A150.5?	Yes	Appendix B
D. Existing condition and 5-year maps clearly identified as the official NEMs?	Yes	Attached to Checklist, Exhibits NEM-1 & NEM-2
IV. CONSIDERATION OF ALTERNATIVES: [B150.7, 150.23(e)]		
A. At a minimum, are the alternatives below considered?		
1. land acquisition and interests therein, including air rights, easements, and development rights?	Yes	Appendix F, Alternative LU-A
2. barriers, acoustical shielding, public building soundproofing	Yes	Chapter 4, Measures NA-2, NA-8 & NA-9
3. preferential runway system	Yes	Chapter 4, Measure NA-3 & NA-4; and Appendix E Alternatives NA-E & NA-F
4. flight procedures	Yes	Chapter 4, Measures NA-6 & NA-7, Appendix E, Alternatives NA-A, NA-B, NA-C, and NA-D
5. restrictions on type/class of aircraft (at least one restriction below must be checked)		
a. deny use based on Federal standards	No	N/A
b. capacity limits based on noisiness	No	N/A
c. noise abatement takeoff/approach procedures	No	N/A
d. landing fees based on noise or time of day	No	N/A
e. nighttime restrictions	Yes	Appendix E, Alternative NA-G

NCP Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
6. other actions with beneficial impact	Yes	Chapter 4; Appendix E
7. other FAA recommendations	No	N/A
B. Responsible implementing authority identified for each considered alternative?	Yes	Chapter 4
C. Analysis of alternative measures:		
1. measures clearly described?	Yes	Chapter 4, Appendices E & F
2. measures adequately analyzed?	Yes	Chapters 4, Appendices E & F
3. adequate reasoning for rejecting alternatives?	Yes	Appendices E & F
D. Other actions recommended by the FAA: Should other actions be added? (list separately on back of this form actions and discussions with airport operator to have them included prior to the start of the 180-day cycle)	No	N/A
V. ALTERNATIVES RECOMMENDED FOR IMPLEMENTATION: [150.23(e), B150.7(c); 150.35(b), B150.5]		
A. Document clearly indicates:		
1. alternatives recommended for implementation?	Yes	Chapter 4
2. final recommendations are airport operator's not those of consultant or third party?	Yes	Letter of Transmittal
B. Do all program recommendations:		
1. relate directly or indirectly to reduction of noise and noncompatible land uses?	Yes	Chapter 4
2. contain description of contribution to overall effectiveness of program?	Yes	Chapter 4
3. noise/land use benefits quantified to extent possible?	Yes	Chapter 4
4. include actual/anticipated effect on reducing noise exposure within noncompatible area shown on NEM?	Yes	Chapter 4
5. effects based on relevant and reasonable expressed assumptions?	Yes	Chapter 4

NCP Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
6. have adequate supporting data to support its contribution to noise/land use compatibility?	Yes	Chapter 4
C. Analysis appears to support program standards set forth in 150.35(b) and B150.5?	Yes	Chapter 4
D. When use restrictions are recommended:		
1. Are alternatives with potentially significant noise/compatible land use benefits thoroughly analyzed so that appropriate comparisons and conclusions can be made?	N/A	N/A
2. Use restriction coordinated with APP-600 prior to making determination on start of 180-days?	N/A	N/A
E. Do the following also meet Part 150 analytical standards:		
1. formal recommendations which continue existing practices?	Yes	Chapter 4
2. new recommendations or changes proposed at end of Part 150 process?	No	N/A
F. Documentation indicates how recommendations may change previously adopted plans?	Yes	Chapter 4
G. Documentation also:		
1. identifies agencies which are responsible for implementing each recommendation?	Yes	Chapter 4, Table 4-1
2. indicates whether those agencies have agreed to implement.	Yes	Letter of Transmittal
3. Indicates essential government actions necessary to implement recommendations.	Yes	Chapter 4
H. Timeframe:		
1. includes agreed-upon schedule to implement alternatives?	Yes	Chapter 4, Page 4-54
2. indicates period covered by the program?	Yes	Chapter 4, Page 4-54

NCP Checklist, *(continued)*	**Yes / No / NA**	**Page No.\Other Reference**
I. Funding/Costs:		
1. includes costs to implement alternatives?	Yes	Chapter 4, Table 4-1 and Table 4-3
2. includes anticipated funding sources?	Yes	Chapter 4
VI. PROGRAM REVISION: [150.23(e)(9)] Supporting documentation includes provision for revision?	Yes	Chapter 4, Measure PM-5 and Page 4-54

OFFICIAL NOISE EXPOSURE MAPS

The following pages contain small-scale representations of the official Noise Exposure Maps (NEMs) for Existing (2024) and Future (2029) conditions and supporting maps for the John Glenn Columbus International Airport. The official NEMs and supplemental maps, at a scale of 1 inch equals 2,000 feet, are included at the back of this document. The Existing (2024) NEM is based on data developed between 2022 and 2023 as further explained in this document in Chapter Three, *Baseline Noise Exposure* and Appendix C, *Noise Methodology*. In accordance with Federal Policy, the 65 DNL is the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) are considered significantly impacted. Below the 65 DNL, all land uses are determined to be compatible for Part 150 noise compatibility planning purposes. The Columbus Regional Airport Authority (CRAA) has chosen to show the 60 DNL because it indicates marginal noise levels and is useful for land use planning purposes.

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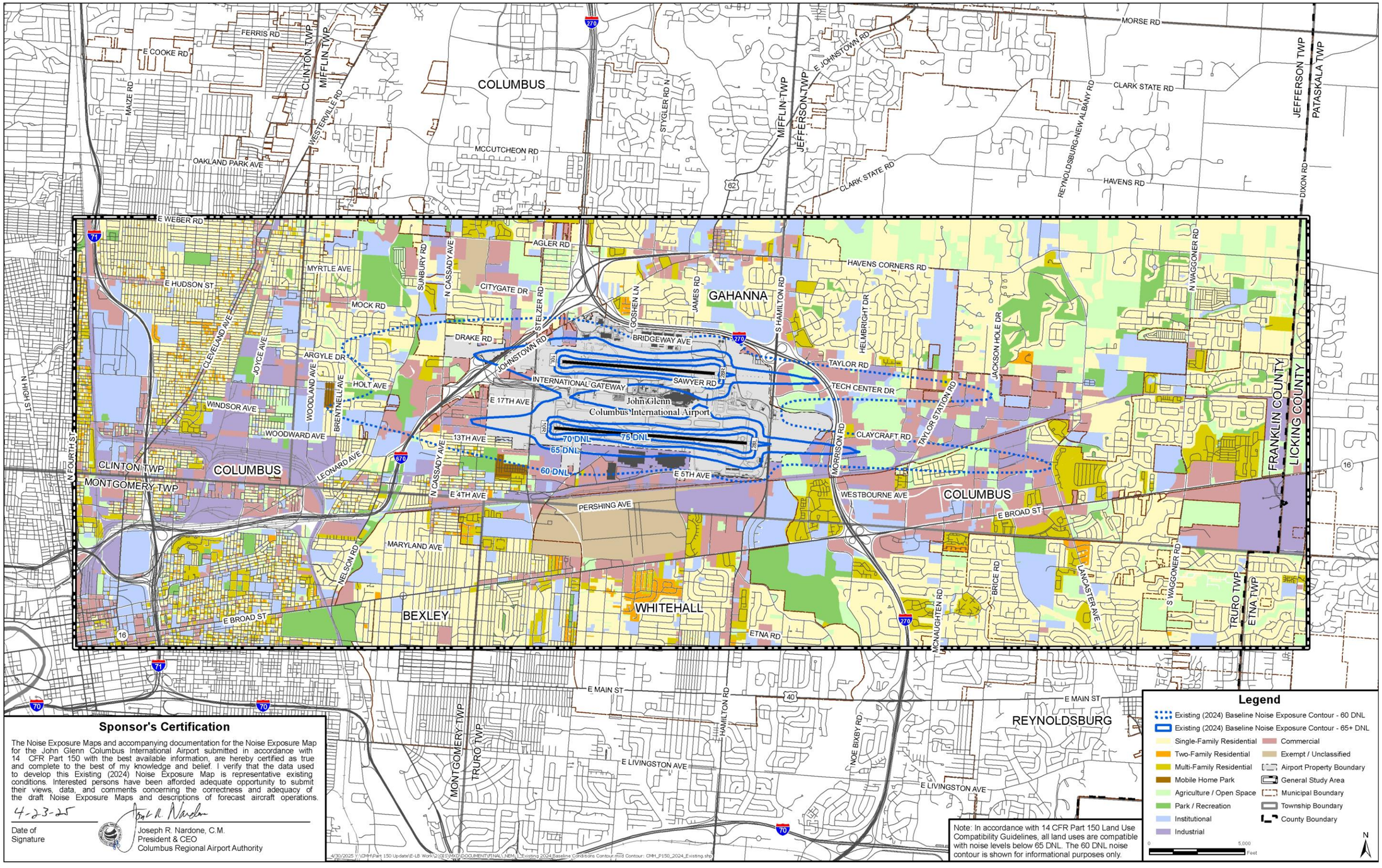
NEM-1 Existing (2024) Noise Exposure Map



Sponsor's Certification

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for the John Glenn Columbus International Airport submitted in accordance with 14 CFR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief. I verify that the data used to develop this Existing (2024) Noise Exposure Map is representative existing conditions. Interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft Noise Exposure Maps and descriptions of forecast aircraft operations.

4-23-25

Date of Signature

Joseph R. Nardone, C.M.
President & CEO
Columbus Regional Airport Authority

Note: In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The 60 DNL noise contour is shown for informational purposes only.

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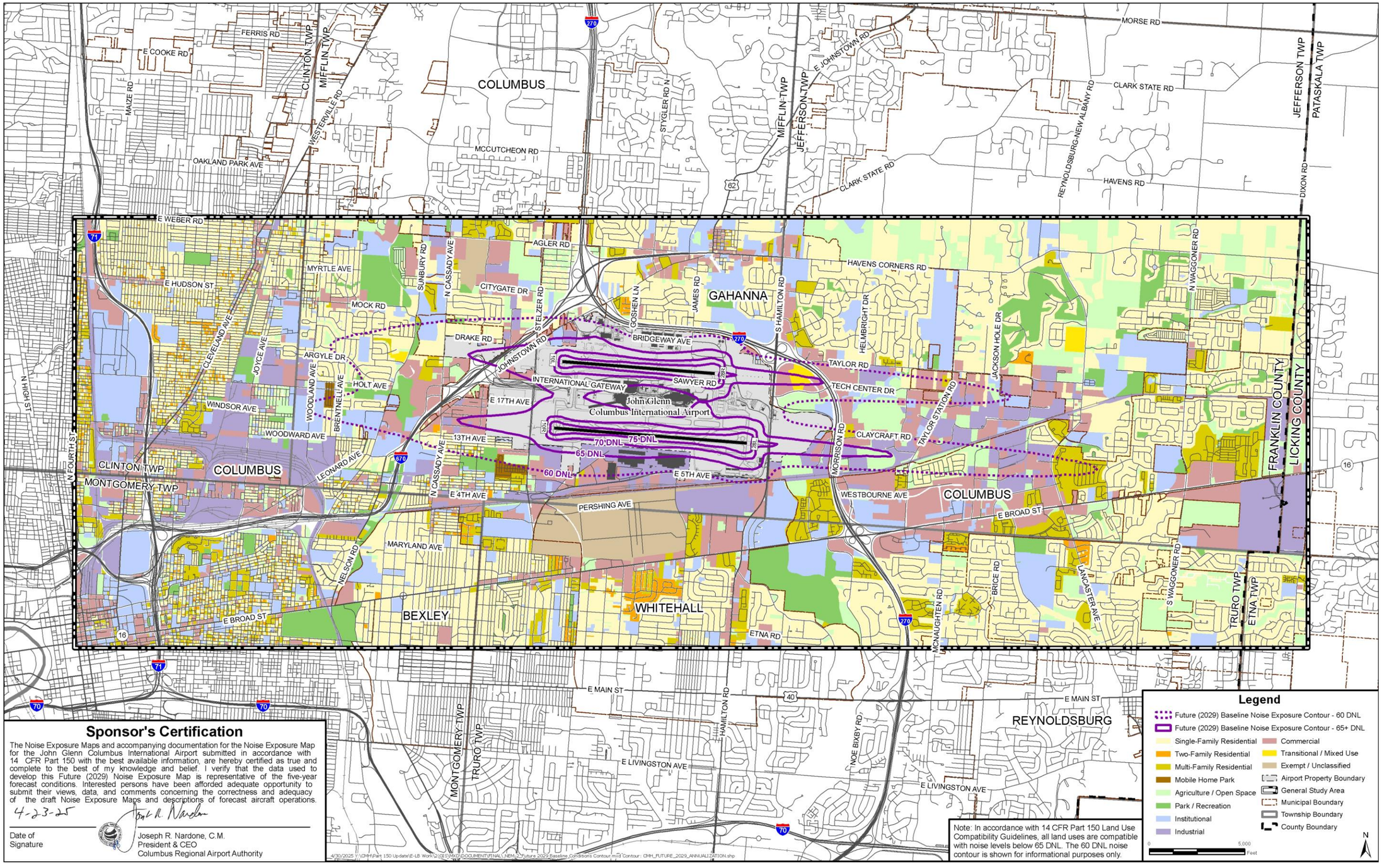
NEM-2 Future (2029) Noise Exposure Map



Sponsor's Certification

The Noise Exposure Maps and accompanying documentation for the Noise Exposure Map for the John Glenn Columbus International Airport submitted in accordance with 14 CFR Part 150 with the best available information, are hereby certified as true and complete to the best of my knowledge and belief. I verify that the data used to develop this Future (2029) Noise Exposure Map is representative of the five-year forecast conditions. Interested persons have been afforded adequate opportunity to submit their views, data, and comments concerning the correctness and adequacy of the draft Noise Exposure Maps and descriptions of forecast aircraft operations.

4-23-25

Date of Signature

Joseph R. Nardone, C.M.
President & CEO
Columbus Regional Airport Authority

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GLOSSARY

Airport Improvement Program (AIP) – A Federal funding program for airport improvements. AIP is periodically reauthorized by Congress with funding appropriated from the Aviation Trust Fund. Proceeds to the Trust Fund are derived from excise taxes on airline tickets, aviation fuel, etc.

Airport Layout Plan (ALP) – A scaled drawing of existing and proposed land and facilities necessary for the operation and development of the airport. The ALP shows boundaries and proposed additions to all areas owned or controlled by the airport operator for airport purposes, the location and nature of existing and proposed airport facilities and structures, and the location on the airport of existing and proposed non-aviation areas and improvements thereon.

Airport operations – Landings (arrivals) and takeoffs (departures) from an airport.

Airport Surveillance Radar (ASR) – A radar system which allows air traffic controllers to identify an arriving or departing aircraft's distance and direction from an airport.

Airport Traffic Control Tower (ATCT) – The airport traffic control facility located on an airport that is responsible for traffic separation within the immediate vicinity of the airport and on the surface of the airport to provide for safe and efficient flow of aircraft.

Air Route Traffic Control Center (ARTCC or Center) – A FAA facility established to provide air traffic control service to aircraft operating on Instrument Flight Rules (IFR) flight plans within controlled airspace during the en route portion of flight.

Air Traffic Control (ATC) – A service operated to promote the safe, orderly, and expeditious flow of air traffic.

Ambient noise – The total sum of noise from all sources in a given place and time.

Approach Light Systems (ALS) – A series of lights that assists the pilot when aligning aircraft with the extended runway centerline on final approach.

Area Navigation (RNAV) – RNAV enables aircraft to fly on any desired flight path within the coverage of ground- or space – based navigation aids, within the limits of the capability of aircraft self-contained systems, or a combination of both capabilities.

Attenuation – Acoustical phenomenon whereby sound energy is reduced between the noise source and the receiver. This energy loss can be attributed to atmospheric conditions, terrain, vegetation, other natural features, and man-made features (e.g., sound insulation).

Automated Radar Terminal System (ARTS) – Computer-aided radar display subsystems capable of associating alphanumeric data – such as aircraft identification, altitude, and airspeed – with aircraft radar returns.

Aviation Environmental Design Tool (AEDT) – FAA developed software system that models aircraft performance in space and time to estimate fuel consumption, emissions, noise, and air quality consequences.

A-weighted sound (dBA) – A system for measuring sound energy that is designed to represent the response of the human ear to sound. Energy at frequencies more readily detected by the human ear is more heavily weighted in the measurement, while frequencies less well detected are assigned lower weights. A-weighted sound measurements are commonly used in studies where the human response to sound is the object of the analysis.

Bank – A cluster of arrivals or departures in a short period of time, characteristic of an airline hub operation.

Baseline Condition – The existing condition or conditions prior to future development or the enactment of additional noise abatement procedures, which serve as a foundation for analysis.

Building Restriction Line (BRL) – A line drawn on an airport layout plan, which distinguishes, between areas that are suitable for buildings and areas that are unsuitable. The BRL is drawn to exclude the runway protection zones, the runway visibility zones required for clear line of sight from the airport traffic control tower, and all airport areas with a clearance of less than 35 feet (10.5 meters) beneath the Federal Aviation Regulation (FAR) Part 77 surfaces.

Commuter aircraft – Commuters are commercial operators that provide regularly scheduled passenger or cargo service with aircraft seating less than 60 passengers. A typical commuter flight operates over a trip distance of less than 300 miles.

Connecting passenger – An airline passenger who transfers from an arriving aircraft to a departing aircraft in order to reach his or her ultimate destination.

Controlled airspace – Airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. Controlled airspace is designated as Class A, Class B, Class C, Class D, or Class E. Aircraft operators are subject to certain pilot qualifications, operating rules, and equipment requirements as specified in FAR Part 91, depending upon the class of airspace in which they are operating.

Crosswind leg – A flight path at right angles to the approach runway end off of its upwind end.

Day-night average sound level (DNL) – A noise measure used to describe the average sound level over a 24-hour period, typically an average day over the course of a year. In computing DNL, an extra weight of 10 decibels is assigned to noise occurring between the hours of 10:00 p.m. and 7:00 a.m. to account for increased annoyance when ambient noise levels are lower and people are trying to sleep. DNL may be determined for individual locations or expressed in noise contours.

Decibel (dB) – Sound is measured by its pressure or energy in terms of decibels. The decibel scale is logarithmic. A ten-decibel increase in sound is equal to a tenfold increase in sound energy.

DGPS antenna – Differential Global Positioning System is a way to correct the various inaccuracies in the GPS system by placing a reference antenna on a point that has been accurately surveyed. This antenna receives the same GPS signals as an aircraft but corrects the GPS signal for any inaccuracies.

Displaced Threshold – A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold may be available for takeoffs in both directions and landings from the opposite direction.

Distance measuring equipment (DME) – A flight instrument that measures the line-of-sight distance of an aircraft from a navigational radio station in nautical miles.

Double-clear zone – The double-clear zone is an area on the ground, up of land up to 1,250 feet from each side of the runway centerline and extending 5,000 feet beyond each end of the primary runway surface. It is also known as the approach transitional area for runways serving or anticipated to serve turbojet aircraft or having an existing or planned precision instrument runway.

Easement – The legal right of one party to use part of the rights of a piece of real estate belonging to another party. This may include, but is not limited to, the right of passage over, on or below the property; certain air rights above the property, including view rights; and the rights to any specified form of development or activity.

Enplanements – The number of passengers boarding an aircraft at an airport. Does not include arriving or through passengers.

En route system – That part of the National Airspace System where aircraft are operating between origin and destination airports.

En route control – The control of IFR traffic en route between two or more adjacent approach control facilities.

Environmental Assessment (EA) – A concise document that assesses the environmental impacts of a proposed Federal Action. It discusses the need for, and environmental impacts of, the proposed action and

alternatives. An environmental assessment should provide sufficient evidence and analysis for a Federal determination whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). Public participation and consultation with other Federal, state, and local agencies is a cornerstone of the EA process.

Environmental Impact Statement (EIS) – An EIS is a document that provides a discussion of the significant environmental impacts which would occur as a result of a proposed project, and informs decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts. Public participation and consultation with other Federal, state, and local agencies is a cornerstone of the EIS process.

Equivalent sound level (Leq) – The average A-weighted sound level over any specified time period.

Federal Aviation Administration (FAA) – The FAA is the Federal agency responsible for insuring the safe and efficient use of the nation's airspace, for fostering civil aeronautics and air commerce, and for supporting the requirements of national defense. The activities required to carry out these responsibilities include: safety regulations; airspace management and the establishment, operation, and maintenance of a system of air traffic control and navigation facilities; research and development in support of the fostering of a national system of airports, promulgation of standards and specifications for civil airports, and administration of Federal grants-in-aid for developing public airports; various joint and cooperative activities with the Department of Defense; and technical assistance (under State Department auspices) to other countries.

Federal Aviation Regulations (FAR) – The body of Federal regulations relating to aviation. Published as Title 14 of the Code of Federal Regulations.

Final approach – A flight path that follows the extended runway centerline. It usually extends from the base leg to the runway.

Finding of No Significant Impact (FONSI) – If, following the preparation of an environmental assessment, the Federal agency determines a proposed project will not result in any significant environmental impact, a finding of no significant impact (FONSI) is issued by the Federal Agency. A FONSI is a document briefly explaining the reasons why an action will not have a significant effect on the human environment and for which an EIS, therefore, is not necessary.

Fixed-base operator (FBO) – A business located on the airport that provides services such as hangar space, fuel, flight training, repair, and maintenance to airport users.

Flight track utilization – The use of established routes for arrival and departure by aircraft to and from the runways at the airport.

FMS/GPS – Flight Management System/Global Positioning System equipment onboard an aircraft takes advantage of various radio navigation and/or GPS routes to guide the aircraft.

Glide slope (GS) – Provides vertical guidance for aircraft during approach and landing. The glide slope consists of the following:

> Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS, or
>
> Visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

Geographic Information Systems (GIS) – An information system that is designed for storing, integrating, manipulating, analyzing, and displaying data referenced by spatial or geographic coordinates.

Global Positioning System (GPS) – A system of 24 satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude. The accuracy of the system can be further refined by using a ground receiver at a known location to calculate the error in the satellite range data. This is known as differential GPS (DGPS).

Grid analysis – A type of aircraft noise analysis that evaluates the noise levels at individual points rather than through generation of noise contours.

Ground effect – Noise attenuation attributed to absorption or reflection of noise by man-made or natural features on the ground surface.

Hub – An airport that services airlines that have hubbing operations.

Hubbing – A method of airline scheduling that times the arrival and departure of several aircraft in a close period of time in order to allow the transfer of passengers between different flights of the same airline in order to reach their ultimate destination. Several airlines may conduct hubbing operations at an airport.

Infill – Urban development occurring on vacant lots in substantially developed areas. May also include the redevelopment of areas to a greater density

Instrument approach – A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing, or to a point from which a landing may be made visually.

Instrument flight rules (IFR) – That portion of the Federal Aviation Regulations (14 CFR 91) specifying the procedures to be used by aircraft during flight in Instrument Meteorological Conditions. These procedures may also be used under visual conditions and provide for positive control by ATC. (See also VFR).

Instrument Landing System (ILS) – An electronic system installed at some airports which helps to guide pilots to runways for landing during periods of limited visibility or adverse weather.

Instrument meteorological conditions (IMC) – Weather conditions expressed in terms of visibility, distance from clouds, and cloud ceilings during which all aircraft are required to operate using instrument flight rules (IFR).

Integrated Noise Model (INM) – A computer model developed, updated and maintained by the FAA to predict the noise exposure generated by aircraft operations at an airport. INM has been replaced by AEDT as the approved computer noise model.

Knots – Airspeed measured as the distance in nautical miles (6,076.1 feet) covered in one hour. (Approximately equal to 1.15 miles per hour.)

Land and Hold Short Operations (LAHSO) – An air traffic control procedure intended to increase overall airport capacity without compromising safety. LAHSO include landing and holding short of an intersecting runway, taxiway, or some other designated point on a runway or taxiway.

Land use compatibility – The ability of land uses surrounding the airport to coexist with airport-related activities with minimum conflict.

Landing and takeoff (LTO) cycle – The time that an aircraft is in operation at or near an airport. An LTO cycle begins when an aircraft starts its final approach (arrival) and ends after the aircraft has made its climb-out (departure).

Ldn – See **DNL**. Ldn is used in place of DNL in mathematical equations only.

Leq – Equivalent Sound Level. The steady A-weighted sound level over any specified period of time (not necessarily 24 hours) that has the same acoustic energy as the fluctuating noise during that period (with no consideration of nighttime weighting). It is a measure of cumulative acoustical energy. Because the time interval may vary, it should be specified by a subscript (such as Leq_8 for an 8-hour exposure to noise) or be clearly understood from the context.

Local passenger – A passenger who either enters or exits a metropolitan area on flights serviced by the area's airport. A local passenger is the opposite of a connecting passenger.

Localizer – The component of an ILS which provides lateral course guidance to the runway.

Loudness – The subjective assessment of the intensity of sound.

Mean sea level (MSL) – The average height of the surface of the sea for all stages of the tide; used as a reference for elevations. Also called sea level datum.

Merge – Combining noise events that exceed a given threshold level and occur within a selected period of time.

Missed approach – A prescribed procedure to be followed by aircraft that cannot complete an attempted landing at an airport.

Narrow-body aircraft – A commercial passenger jet having a single aisle and maximum of three seats on each side of the aisle. Common narrow-body aircraft include A320, B717, B727, B737, B757, DC9, MD80, and MD90.

National Airspace System (NAS) – The common network of U.S. airspace; air navigation facilities, equipment, services, airports, or landing areas; aeronautical charts, information, and services; rules, regulations, and procedures; technical information, manpower, and materials, all of which are used in aerial navigation.

National Environmental Policy Act of 1969 (NEPA) – The original legislation establishing the environmental review process for proposed Federal actions.

Nautical mile – A measure of distance equal to one minute of arc on the earth's surface (6,076.1 feet or 1,852 meters).

NAVAIDs (Navigational Aids) – Any facility used by an aircraft for navigation.

Navigational fix – A geographical position determined by reference to one or more radio navigational aids.

Noise abatement – A measure or action that minimizes the amount of impact of noise on the environs of an airport. Noise abatement measures include aircraft operating procedures and use or disuse of certain runways or flight tracks.

Noise berm – A manmade soil structure designed to interrupt the direct transmission of noise from a source to a noise-sensitive area.

Noise contour – A map feature representing average-annual noise levels summarized by lines connecting points of equal noise exposure.

Noise Compatibility Program (NCP) – Program developed in accordance with FAR Part 150 guidance that contains provisions for the abatement of aircraft noise through aircraft operating procedures, air traffic control procedures, or airport facility modifications. It also includes provisions for land use compatibility planning and may include actions to mitigate the impact of noise on incompatible land uses and recommendations for amending local land use controls to affect future land uses and development. The program must contain provisions for updating and periodic revision.

Noise Compatibility Study – The process, methods, and procedures provided in the FAR Part 150 guidance to develop a Noise Compatibility Program, including the development of noise exposure maps, a noise compatibility program, and public participation.

Noise Exposure Map (NEM) – A geographic depiction of an airport, its noise contours for existing conditions and as forecast for five years in the future, and surrounding area developed in accordance with FAR Part 150 guidance. Documentation of the Noise Exposure Maps must include airport operating characteristics for existing conditions and all reasonable and foreseeable airport operating characteristics for the future condition.

Nondirectional beacon (NDB) – A beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his bearing to and from the station. When the radio beacon is installed in conjunction with the ILS marker, it is normally called a compass locator.

Nonprecision approach – A standard instrument approach procedure providing runway alignment but no glide slope or descent information.

Operation – A takeoff or landing by an aircraft.

Outer fix – An air traffic control term for a point in the airspace from which aircraft are normally cleared to the approach fix or final approach course.

Performance Based Navigation (PBN) - comprised of Area Navigation (RNAV) and Required Navigation Performance (RNP) and describes an aircraft's capability to navigate using performance standards.

Positive control – The separation of all air traffic within designated airspace as directed by air traffic controllers.

Precision Approach Path Indicator (PAPI) – Provides visual approach slope guidance to aircraft during an approach. It is similar to a VASI but provides a sharper transition between the colored indicator lights.

Precision Approach Procedure – A standard instrument approach procedure in which an electronic glide slope/glide path is provided (e.g., ILS and PAR***).***

Precision Approach Radar (PAR) – Navigational equipment located on the ground adjacent to the runway, and consisting of one antenna, which scans the vertical plane, and a second antenna, which scans the horizontal plane. The PAR provides the controller with a picture of the descending aircraft in azimuth, distance, and elevation, permitting an accurate determination of the aircraft's alignment relative to the runway centerline and the glide slope.

Primary Commercial Service Airport – A commercial airport which enplanes 0.01 percent or more of the total annual U.S. enplanements.

Primary Runway – The runway on which the majority of operations take place.

Profile – The position of the aircraft during an approach or departure in terms of altitude above the runway and distance from the runway end.

Propagation – Sound propagation is the spreading or radiating of sound energy from the noise source. It usually involves a reduction in sound energy with increased distance from the source. Atmospheric conditions, terrain, natural objects, and manmade objects affect sound propagation.

Public use airport – An airport open to public use without prior permission, and without restrictions within the physical capabilities of the facility. It may or may not be publicly owned.

Reliever airport – An airport which, when certain criteria are met, relieves the aeronautical demand on a busier air carrier airport.

Required Navigation Performance (RNP) – Similar to Area Navigation (RNAV) with the addition of an onboard performance monitoring and alerting capability. RNP enables the aircraft navigation system to monitor the navigation performance it achieves and inform the crew if the requirement is not met during an operation. This onboard monitoring and alerting capability enhances the pilot's situational awareness and can enable reduced obstacle clearance.

Run-up – A routine procedure for testing aircraft systems by running one or more engines at a high power setting. Engine run-ups are normally conducted by airline maintenance personnel checking an engine or other on-board systems following maintenance.

Runway End Identifier Lights (REIL) – Two synchronized flashing lights, one on each side of the runway threshold, which identify the approach end of the runway.

Runway Protection Zone (RPZ) – An area, trapezoidal in shape and centered about the extended runway centerline, designated to enhance the safety of aircraft operations. It begins 200 feet (60 M) beyond the end of the area usable for takeoff or landing. The RPZ dimensions are functions of the aircraft, type of operation and visibility minimums. (Formerly known as the clear zone).

Runway Safety Area (RSA) – A defined surface surrounding the runway prepared or suitable for reducing the risk or damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

Runway threshold – The beginning of that portion of the runway usable for landing.

Runway use program – A noise abatement runway selection plan crafted to further noise abatement efforts for communities around airports. A runway selection plan is developed into a runway use program. It typically applies to all turbojet aircraft 12,500 pounds or heavier. Turbojet aircraft less than 12,500 pounds are included only if the airport proprietor determines that the aircraft creates a noise problem. These programs are coordinated with the FAA in accordance with FAA Order 8400.9, *National Safety and Operational Criteria for Runway Use Programs*, and are administered as either "formal" or "informal" programs.

> **Formal** – An approved runway use program outlined in a Letter of Understanding between the FAA–Flight Standards, FAA–Air Traffic Service, the airport proprietor, and the users. It is mandatory for aircraft operators and pilots as provided for in FAR Section 91.87.
>
> **Informal** – An approved runway use program that does not require a Letter of Understanding. Participation in the program by aircraft operators and pilots is voluntary.

Single event – One noise event. For many kinds of analysis, the sound from single events is expressed using the Sound Exposure Level (SEL) metric.

Slant-range distance – The distance along a straight line between an aircraft and a point on the ground.

Sound – Sound is the result of vibration in the air. The vibration produces alternating bands of relatively dense and sparse particles of air, spreading outward from the source in the same way as ripples do on water after a stone is thrown into it. The result of the movement is fluctuation in the normal atmospheric pressure or sound waves.

Sound exposure level (SEL) – A standardized measure of a single sound event, expressed in A-weighted decibels, that takes into account all sound above a specified threshold set at least 10 decibels below the maximum level. All sound energy in the event is integrated over one second.

Special Use Airspace – Airspace of defined dimensions identified by an area on the earth's surface wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations, which are not part of those activities.

Standard instrument departure procedure (SID) – A planned IFR air traffic control departure procedure published for pilot use in graphic and textual form. SIDs provide transition from the terminal to the en route air traffic control structure.

Standard terminal arrival route (STAR) – A planned IFR air traffic control arrival procedure published for pilot use in graphic and textual form. STARs provide transition from the en route air traffic control structure to an outer fix or an instrument approach fix in the terminal area.

Statute mile – A measure of distance equal to 5,280 feet.

TACAN – Tactical Air Navigation. A navigational system used by the military. TACAN provides both azimuth and distance information to a receiver on board an aircraft.

Terminal Radar Approach Control (TRACON) – An FAA Air Traffic Control Facility which uses radar and two-way communication to provide separation of air traffic within a specified geographic area in the vicinity of one or more airports.

Terminal Radar Service Area (TRSA) – Airspace surrounding certain airports where ATC provides radar vectoring, sequencing, and separation on a full-time basis for all IFR and participating VFR aircraft.

Through passenger – An airline passenger who arrives at an airport and departs without deplaning the aircraft.

Time Above (TA) – The amount of time that sound exceeds a given decibel level during a 24-hour period (e.g., time in minutes that the sound level is above 75 dBA).

Touchdown Zone Lighting (TDZ) – A system of two rows of transverse light bars located symmetrically about the runway centerline, usually at 100-foot intervals and extending 3,000 feet along the runway.

Traffic pattern – The traffic flow for aircraft landing and departure at an airport. Typical components of the traffic pattern include: upwind leg, crosswind leg, downwind leg, base leg, and final approach.

UNICOM – A nongovernment communication facility, which may provide airport information at certain airports. Aeronautical charts and publications show the locations and frequencies of UNICOMs.

Upwind Leg – A flight path parallel to the approach runway in the direction of approach.

Vector – Compass heading instructions issued by ATC in providing navigational guidance by radar.

Very High Frequency Omnidirectional Range (VOR) Station – A ground-based radio navigation aid transmitting signals in all directions. A VOR provides azimuth guidance to pilots by reception of electronic signals.

Very High Frequency Omnidirectional Range Station with Tactical Air Navigation (VORTAC) - A navigational aid providing VOR azimuth and TACAN distance measuring equipment (DME) at one site.

Visual approach – An approach conducted on an IFR flight plan, which authorizes the pilot to proceed visually and clear of clouds to the airport.

Visual approach slope indicator (VASI) – A visual aid to final approach to the runway threshold, consisting of two wing bars of lights on either side of the runway. Each bar produces a split beam of light – the upper segment is white, the lower is red.

Visual flight rules (VFR) – Rules and procedures specified in 14 CFR 91 for aircraft operations under visual conditions. Aircraft operations under VFR are not generally under positive control by ATC. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate a type of flight plan.

Visual meteorological conditions (VMC) – Weather conditions expressed in terms of visibility, distance from cloud, and cloud ceiling equal to or greater than those specified in 14 CFR 91.155 for aircraft operations under Visual Flight Rules (VFR).

Wide-body aircraft - A commercial jet with a wingspan generally greater than 155 feet and, in passenger configuration, having two aisles with 8 to 11 seats across in a row. Common wide-body aircraft include the A300, A310, B747, B767, B777, DC-10, and MD-11.

Yearly Day-Night Average Sound Level – see DNL

Chapter 1 Background

The Columbus Regional Airport Authority (CRAA) has prepared this update to its Part 150 Noise Compatibility Study (Study) to document the noise levels from aircraft operations at the John Glenn Columbus International Airport (Airport or CMH) in accordance with the requirements defined in Title 14 Code of Federal Regulations (CFR) Part 150, *Airport Noise Compatibility Planning*. The Part 150 Noise Compatibility Planning process provides a structured approach for airport sponsors, airlines, pilots, neighboring communities, Federal, state, and local agencies, and other stakeholders to collaborate on efforts to reduce aircraft noise impacts upon noncompatible land uses. Title 14 CFR Part 150 is the regulation that prescribes the procedures, standards, and methodology governing the development, submission, and review of a Part 150 Noise Compatibility Study. This chapter provides an introduction and background under which the Part 150 Noise Compatibility Study Update was prepared.

1.1 14 Code of Federal Regulations (CFR) Part 150

Title 14 Part 150 is a section of the CFR that sets forth rules and guidelines for airports desiring to undertake airport noise compatibility planning. The regulations were promulgated by the Federal Aviation Administration (FAA) pursuant to the Aviation Safety and Noise Abatement Act (ASNA) of 1979, Public Law 96-193. ASNA was enacted to "…provide and carry out noise compatibility programs, to improve assistance to assure continued safety in aviation and for other purposes." The FAA was vested with the authority to implement and administer this act. This legislation required the establishment of a single system for measuring aircraft noise, determining noise exposure, and identifying land uses, which are normally compatible with various noise exposure levels. Through 14 CFR Part 150, the FAA established regulations governing the technical aspects of aircraft noise analysis and the public participation process for airports choosing to prepare airport noise compatibility plans.

1.1.1 Purpose of Conducting a Part 150 Noise Compatibility Study

The purpose for conducting an update to the Noise Compatibility Study is to identify noise noncompatible land uses surrounding an airport through the development of Noise Exposure Maps (NEMs), and to recommend measures to both mitigate existing noncompatible land uses and to prevent future noncompatible land uses through the development of a Noise Compatibility Program (NCP). By following the process, the airport operator is assured of the FAA's cooperation through the involvement of air traffic control professionals in the study and the FAA's review of the recommended Noise Compatibility Program (NCP). An airport with an FAA-approved NCP also becomes eligible for funding assistance for the implementation of approved measures in the NCP.

Among the general goals and objectives addressed by a Noise Compatibility Study are the following:

- To reduce, where feasible, existing and forecasted noise levels over existing noise-sensitive land uses;
- To reduce new noise-sensitive developments near the airport;
- To mitigate, where feasible, adverse impacts in accordance with Federal guidelines;
- To provide mitigation measures that are sensitive to the needs of the community and its stability;
- To minimize the impact of mitigation measures on local tax bases; and
- To be consistent, where feasible, with local land use planning and development policies.

The FAA recommends updating an airport Part 150 Noise Compatibility Study periodically to reflect current operating conditions. Updates are recommended when there is a notable change in operating levels or a change to the airfield that affects how aircraft operate.

1.1.2 History of Part 150 Noise Compatibility Planning at CMH

The CRAA completed the original Part 150 Noise Compatibility Study for CMH in 1987, which included NEMs and a NCP. The NEMs and NCP were updated in 2000-2001 and updated again in 2007-2008. The most recent Noise Compatibility Study for CMH was completed in 2007 and was approved by the FAA in May 2008. The FAA also conducted a concurrent Environmental Impact Statement (EIS), which assessed the proposed relocation of Runway 10R/28L at CMH. The FAA issued a Record of Decision (ROD) for the proposed runway relocation in August 2009. The ROD stipulated that the CRAA conduct a Part 150 Noise Compatibility Study to assess operational and noise conditions after the relocated runway became operational. Construction of the relocated runway was completed in August 2013. In 2016, the CRAA reconstructed Runway 10L/28R by rehabilitating and replacing the existing runway pavement. Therefore, the Part 150 Study Update was delayed until after the rehabilitation of Runway 10L/28R was complete in order to assess conditions using actual data that included a full 12 months of operations after the airfield was fully operational. This Part 150 Noise Compatibility Study represents the first update since Runway 10R/28L was relocated. As such, this Study is aimed to identify noise noncompatible land uses and evaluate a variety of strategies to reduce noise in communities surrounding CMH given the recently completed airfield improvements.

This Part 150 Noise Compatibility Study began in 2018 using data that was developed prior to the outbreak of the COVID-19 pandemic. The Study was submitted to the FAA for approval in September 2021. in March 2023, the FAA requested that the Study be updated with current and forecast operating levels due to the length of time that has passed since the document's submittal.

1.1.3 Part 150 Noise Compatibility Study Planning Process

The Noise Compatibility Study planning process involves the methods and procedures an airport operator must follow when developing NEMs and a NCP. The decision to undertake noise compatibility planning is entirely voluntary on the part of the airport operator. If the airport operator chooses to prepare a Noise Compatibility Study, the FAA will provide funding assistance if the operator follows the regulations of 14 CFR Part 150. As a further encouragement to undertake noise compatibility planning, an airport operator becomes eligible for Federal funding assistance for the implementation of FAA-approved measures in a NCP. See **Exhibit 1-1, *Noise Compatibility Planning Process***, for a flowchart of the planning process.

A Noise Compatibility Study involves six major steps:

- Study initiation, including identification of airport noise and land use issues and data collection;
- Definition of current and future noise exposure patterns;
- Evaluation of alternative measures for abating noise (e.g., changing aircraft flight paths), mitigating the impact of noise (e.g., sound insulation), and managing local land uses (e.g., airport-compatible zoning);
- Development of an NCP;
- Development of an implementation and monitoring plan; and
- FAA review and approval of the recommended NCP, including the analysis of alternatives, the compatibility plan, and the implementation and monitoring plan.

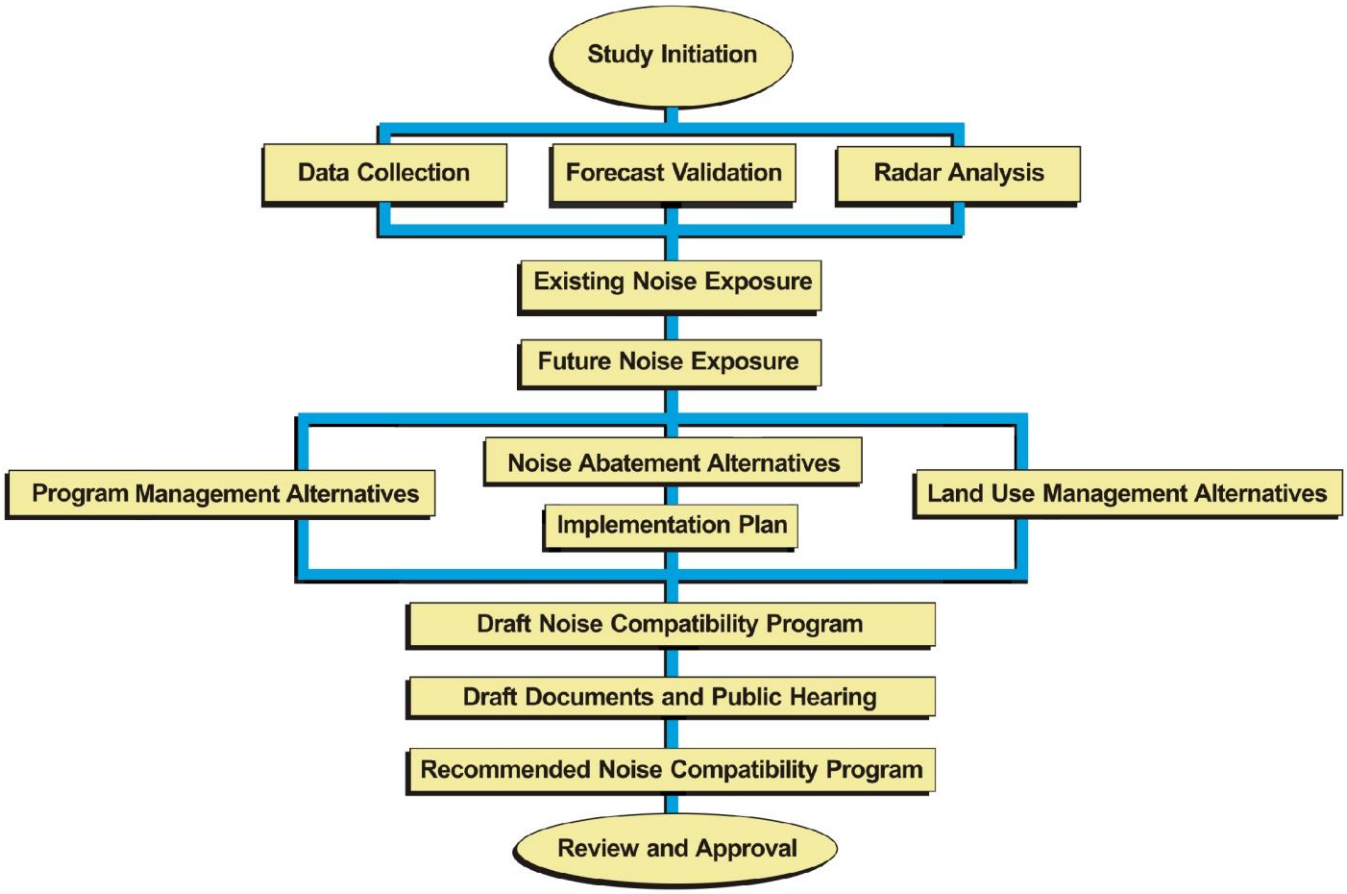
The Noise Compatibility Study process is designed to identify noise incompatibilities surrounding an airport, and to recommend measures to both correct existing incompatibilities and to prevent future incompatibilities. For Noise Compatibility Study purposes, noise incompatibilities are generally defined as residences or public use noise-sensitive facilities (libraries, churches, schools, nursing homes, and hospitals) within the 65 Day-Night Average Sound Level (DNL) noise contour. See **Appendix A, *FAA Policies, Guidance, and Regulations,*** for more information on land use and noise compatibility guidelines contained in 14 CFR Part 150.

The planning process has both technical and procedural components. The first component involves the preparation of Noise Exposure Maps (NEMs), which requires the use of specific technical criteria and methods to complete analyses of aircraft noise exposure, potential noise abatement, and land use mitigation measures. NEMs show the official noise contours for the airport. For this Study, NEMs were prepared for existing conditions (2024) and for five years in the future. The future year NEM for this Noise Compatibility Study is labeled 2029. The NEMs must be prepared according to 14 CFR Part 150 guidelines with regard to methodology, noise metrics, identification of noncompatible land uses, and public participation. More detailed information regarding the NEM process is included in **Section 1.1.3** of this chapter.

The second component of the planning process involves the development of an NCP. The NCP sets forth measures intended to mitigate the impacts of significant noise exposure on residential or other noise-sensitive areas near an airport, and to limit, to the extent possible, the introduction of new noncompatible land uses at locations exposed to significant noise levels. Levels of significant noise are identified in 14 CFR Part 150 (see Appendix A).

The regulations also require that potentially affected airport users, local governments, and the public be consulted during the study, with the process culminating in the opportunity for a public hearing on the recommended NCP. More detailed information regarding the NCP process is included in **Section 1.1.4** of this chapter.

Exhibit 1-1 Noise Compatibility Planning Process



1.1.4 Noise Exposure Maps (NEMs)

The NEM component of a Noise Compatibility Study presents airport noise exposure contours for the existing condition and a forecast condition five years from the date of submission of the documentation for FAA review. The current year NEM is labeled 2024. The data collection and analysis for this Noise Compatibility Study Update began in 2019 and continued through 2024.[1] The Existing (2024) Baseline Noise Exposure Contour is based on data from September 2022 through August 2023, and represents the Existing (2024) NEM. The total of annual aircraft operations during this period was 118,397, which converts to 324.4 average-annual day operations.

The Future (2029) NEM/NCP Noise Exposure Contour is based on an Aviation Activity Forecast that was prepared for this Study. This forecast projects annual operations to be 142,601 for the year 2029 or 390.7 average-annual day operations. The year 2029 is used as the future year because it is five years from the date of submission of this Noise Compatibility Study for FAA review. Furthermore, the Future (2029) NEM/NCP Noise Exposure Contour includes the implementation of all new recommended noise abatement procedures identified in **Chapter 4**.

The noise exposure contours are superimposed on a land use map to show areas of noncompatible land use, as defined in 14 CFR Part 150 and presented in Appendix A of this document. **Appendix C, *Noise Methodology***, contains detailed information on the inputs and methodology for preparing the noise exposure contours, including use of the DNL noise metric. The official NEMs are located at the front of this document with the NEM and NCP checklist.

14 CFR Part 150 requires the use of standard methodologies and metrics for analyzing and describing noise. It also establishes the guidelines for the identification of land uses that are noncompatible with noise of different levels. Section 150.21(d) of 14 CFR Part 150 states that airport proprietors are required to update NEMs when changes in the operation of the airport would create any new, substantial noncompatible use. This is considered to be an increase in DNL noise levels of 1.5 decibels (dB) over noncompatible land uses when the aircraft noise level exceeds 65 DNL. Of course, the airport operator may update the NEMs at any time based on their own needs and concerns. As previously stated, this is the first update to the NEMs since Runway 10R/28L was relocated.

The airport proprietor can gain limited protection through preparation, submission, and publication of NEMs. ASNA provides in Section 107(a), as codified in U.S.C. Title 49 section 47506, that:

> "No person who acquires property or an interest therein after the date of enactment of the Act in an area surrounding an airport with respect to which a noise exposure map has been submitted under section 47503 of the Act shall be entitled to recover damages with respect to the noise attributable to such airport if such person had actual or constructive knowledge of the existence of such noise exposure map unless, in addition to any other elements for recovery of damages, such person can show that:
>
> i. A significant change in the type or frequency of aircraft operations at the airport; or
>
> ii. A significant change in the airport layout; or
>
> iii. A significant change in the flight patterns; or

[1] Efforts to update the CMH Part 150 Study Update began in 2018. This Study included two NEMS: the Existing (2020) NEM that was based on actual operating conditions from 2018-2019, and the Future (2025) NEM/NCP that was based on an aviation activity forecast that was prepared prior to the outbreak of the COVID-19 pandemic. The FAA requested that the NEMs be updated due to the length of time that has passed and the differences between the underlying data and current and forecast operating levels. Therefore, the current NEMs are labeled 2024 and 2029.

iv. A significant increase in nighttime operations; occurred after the date of acquisition of such property or interest therein and that the damages for which recovery is sought have resulted from any such change or increase."

ASNA provides that "constructive knowledge" shall be imputed to any person if a copy of the NEM was provided to them at the time of property acquisition or if notice of the existence of the NEM was published three times in a newspaper of general circulation in the area.

In addition, Part 150 defines "significant increase" as an increase of 1.5 dB of DNL. For purposes of this provision, FAA officials consider the term "area surrounding an airport" to mean an area within the 65 DNL contour. (See 14 CFR Part 150, Section 150.21(d), (e), (f)(1), and (f)(2)). An acceptance of the NEMs by the FAA is required before the FAA will approve an NCP for the airport.

1.1.5 Noise Compatibility Program (NCP)

A NCP includes provisions for the abatement of aircraft noise through aircraft operating procedures, air traffic control procedures, or airport facility modifications. It also includes provisions for land use compatibility planning and may include actions to mitigate the impact of noise on noncompatible land uses. **Chapter Four, *Noise Compatibility Program***, includes detailed information for the recommended NCP. The NCP must also contain provisions for updating and periodic revision.

FAR Part 150 NCP establishes procedures and criteria for FAA evaluation of the NCP. Two criteria are of particular importance: the airport proprietor may not take any action that imposes an undue burden on interstate or foreign commerce; nor may the proprietor unjustly discriminate between different categories of airport users.

The FAA also reviews changes in flight procedures proposed for noise abatement for potential effects on flight safety, safe and efficient use of the navigable airspace, management and control of the national airspace and traffic control systems, security and national defense, and compliance with applicable laws and regulations. Because the FAA has the ultimate authority for air traffic control and flight procedures related to air traffic control requirements, any measures relating to these subjects that are recommended in an NCP must be explicitly approved by the FAA and may not be implemented unilaterally by the airport proprietor.

FAA approval or disapproval of NCP measures is issued through a ROA. After issuance of a ROA, the FAA will perform environmental, safety, and other types of reviews for each approved noise abatement measure in the NCP prior to determining whether the measure can be implemented. After these reviews are completed, the airport sponsor will decide to pursue implementation of the measures identified in the NCP and is responsible for applying for FAA funds associated with FAA-approved eligible items included in the NCP.

1.2 Public Involvement

As discussed previously, a key element in the Noise Compatibility Study planning process is public involvement. In order to inform and gather input from the public regarding the findings of the Noise Compatibility Study, a Technical Advisory Committee (TAC) was convened and met to review Study progress and provide input as necessary. Public Information Meetings were held in the community at key points throughout the Study.

1.2.1 Technical Advisory Committee (TAC)

A TAC was organized early in the planning process to provide feedback and advice to the planning team on the contents and preparation of the Noise Compatibility Study. The TAC provided residents, airport users, agencies, and local officials an opportunity to be involved in developing the NEMs and NCP. In refining the

NEMs and NCP, staff from the CRAA, as well as the consultant team wanted to benefit from the TAC members' special viewpoints and the people and resources they represented. A process was therefore designed to encourage the open exchange of creative ideas to achieve results. The members of the TAC assisted the process in several ways.

- **As a Sound Board** – The TAC provided a forum in which the consultant team and other TAC members could present information, findings, ideas, and recommendations. All benefited from listening to the diverse viewpoints and concerns of the wide range of interests represented on the committee.
- **As a Link to the Community** – Each member represented a key constituent interest – local neighborhoods, local governments, public agencies, or airport users. Committee members provided a link between the study team and the people they represented. They were asked to inform their constituents about the study as it progressed, and to convey the views of others at committee meetings.
- **As a Critical Reviewer** – The consultant team wanted to have its work scrutinized closely for completeness of detail and clarity of thought. The committee membership was urged to review the consultant's work and provide any input to help improve it.
- **As an Aid to Implementation** – Each member has a unique role to play in implementing the plan, ranging from making changes in flight procedures to changes in local land use plans and regulations.

The TAC operated informally, with no compulsory attendance, no voting, and no officers. The final decision on which measures to include in the Part 150 NCP rests with the CRAA. The meetings were conducted by the consultant team and were conducted at key points in the Study when committee input was especially needed. Members were urged to attend the general public information meetings held during the study to listen firsthand to the concerns that were raised and to speak with members of the consultant team and representatives of the CRAA one-on-one. Many organizations were contacted and invited to designate a representative to serve on the TAC. The resulting membership represents a broad range of interests that includes pilots, airlines, commerce, community, environmental, air traffic controllers, government and planning, as well as interested and affected citizens. A roster of the membership of the TAC is provided in **Appendix G, *Public Involvement***.

1.2.2 Public Information Meetings

During the course of the Noise Compatibility Study Update, two sets of public information meetings were held in local communities, and a third set of meetings was scheduled in conjunction with the release of a Draft Noise Compatibility Study. Meeting dates and times are noted below. The public information meetings were attended by interested citizens, elected officials, and local media representatives. Appendix G, *Public Involvement*, includes copies of meeting notices, sign-in sheets, comments received, and meeting handouts.

Public Information Meeting #1 – April 8 & 9, 2020

The first set of Public Information Meetings were scheduled for April 8th and April 9th, 2020. However, due to the outbreak of the COVID-19 virus and recommended precautions to prevent the spread of the virus and to protect public health, the public meetings were cancelled. All meeting materials were posted on the project website and methods for submitting public questions and comments were advertised online and in local newspapers.

Public Information Meeting #2 – September 2, 2020

The second Public Information Meeting was held on September 2, 2020. The meeting was conducted via online webinar with a question and answer session. Information was published on the project website before the meeting and the presentation and transcript were posted on the project website after the meeting.

Public Information Meeting #3 – July 29, 2021

The third and final Public Information Meeting was held on July 29, 2021 and was conducted concurrently with a Public Hearing. The meeting was conducted as a web meeting and allowed participants to submit comments during the meeting or online through the project website's contact page or mail by August 13, 2021.

1.2.3 Public Hearing and Comment Period

14 CFR Part 150 requires that Draft Part 150 Noise Compatibility Study documents be made available to the public prior to conducting a Public Hearing. The 2021 Draft Part 150 Noise Compatibility Study document was made available to the public at local libraries, the Airport, and online. A Public Meeting/Hearing was held on July 29, 2021. The Study was submitted to the FAA for approval in September 2021. In March 2023, the FAA requested that the Study be updated due to the length of time that has passed and the differences between the underlying data and current and forecast operating levels due to the effects of the COVID-19 pandemic and subsequent socioeconomic impacts upon air travel. Therefore, a second public hearing was conducted on January 30, 2025 to present the updates to the Study and provide an opportunity for public comment prior to submitting the updated 2024 Part 150 Noise Compatibility Study document to the FAA for approval. This document presents information regarding both Public Hearings. A list of document locations, a summary of both Public Meeting/Hearings, meeting materials, comments received, and response to those comments is included in Appendix G, of this Final Part 150 Noise Compatibility Study Document.

1.2.4 Additional Public Coordination

Additional efforts to provide information and opportunity for public involvement in this Part 150 Noise Compatibility Study Update included a project website. Information about the Study; including general information, upcoming and past meetings, and a method to contact the Study Team; was available online at the following address: https://www.airportprojects.net/cmh-part150/.

1.3 Status of 2007 Noise Compatibility Plan

The 2007 Part 150 Noise Compatibility Study Update included 27 recommended measures: nine noise abatement measures, 12 land use management measures, and six program management measures. Each measure is listed below, followed by the implementation status.

Summary of the 2007 NCP Noise Abatement Measures

NA-1: Amend the Port Columbus International Airport nighttime maintenance run-up policy to designate an additional run-up location north of the airfield for the relocation of the Executive Jet Aviation's (EJA) new facility. This measure will provide attenuation of jet engine maintenance run-ups for adjacent residential areas located along I-270.

Status: Implemented – Run-ups are performed at the EJA (now NetJets) facility on the north side of the airfield at CMH.

NA-2: Construct a new run-up barrier at the north airfield, if the EJA building does not adequately attenuate jet engine maintenance run-up noise for adjacent residential areas located along I-270.

Status: Implemented – A run-up barrier is used at the EJA (now NetJets) facility.

NA-3: Increase nighttime use of Runway 10L/28R, and amend the tower order CMH ATCT 7110.1 to read as follows:

- Unless wind, weather, runway closure or loss of NAVAIDS dictate otherwise, between the hours of 10:00 p.m. and 8:00 a.m. local time, Runways 28L and 10R are assigned to jet aircraft;

- Jet aircraft with Stage 3 engines may use Runway 10L/28R for arrival operations between the hours of 10:00 p.m. and 1:00 a.m. local time; and
- Jet aircraft with Stage 3 engines may use Runway 10L or 28R after 6:00 a.m.

Status: Partially implemented – The current Tower Order (CMH 7110.1L) includes a provision that unless wind, weather, runway closures, or loss of NAVAIDS dictate otherwise, Runway 10L/28R is a noise-sensitive runway. All arriving and departing aircraft must request Runway 10L/28R with an operational need between the hours of 10:00pm and 6:00am.

NA-4: Maximize east flow and amend FAA Tower Order CMH ATCT 7110.1B and the Airports Facilities Directory to reflect implementation of the "East Flow" informal preferential runway use system.

Status: Partially implemented – Complex conditions at the airport such as winds, flow control policies at destination airports, and taxi times have limited the use of this measure.

NA-5: Amend FAA Tower Order CMH ATCT 7110.1 and FAA Notice CMH ATCT N7110.22 to read as follows:

During nighttime operations, 10:30 p.m. to 7:00 a.m. local time, the following procedures shall be used for departures off Runway 10R:

i. Aircraft normally assigned a runway heading shall be assigned a heading of 100 degrees.

ii. Propeller driven aircraft, conventional or turboprop, shall be turned no further than 15 degrees left or right (085 degrees to 115 degrees). These headings shall not be altered until the aircraft has reached 3,000 feet Mean Sea Level (MSL) or is three miles from the runway end.

iii. The aircraft will begin the turn at 2.2 Distance Measuring Equipment (DME) from the Runway 10R Localizer(LOC)/DME.

iv. The aircraft must climb to an altitude of 1,215 feet MSL before turning.

Status: Withdrawn – The measure was developed for AirNet Systems, Inc. operations during the nighttime hours. In June 2005, AirNet relocated from CMH to Rickenbacker International Airport, so its application since then has not been required and the measure was withdrawn from the 2007 NCP.

NA-6: Implement a 15-degree divergent turn off of Runway 28R, after crossing the runway end to a 295-degree heading, only during peak operating periods when traffic warrants.

Status: Implemented – This measure is used when traffic conditions warrant.

NA-7: Create performance-based overlay procedures for all existing and proposed arrival/departure procedures. (RNAV/RNP/GPS/CDA).

Status: Partially Implemented – The FAA implemented Performance Based Navigation (PBN) arrival procedures at CMH in September 2021.

NA-8: Construct a noise berm/wall.

Status: Not Implemented – This measure was considered for the acquisition area along East 13th Avenue as mitigation for the runway relocation. Further investigation and surveys of property owners determined that a noise berm in the location was not desirable.

NA-9: Replacement and potential relocation of Ground Run-Up Barrier B

Status: Not Implemented – Potential replacement and relocation of the Ground Run-Up Barrier B was proposed to accommodate larger aircraft associated with potential new maintenance hangars proposed for the southeast airfield at CMH. The proposed maintenance hangars were not constructed. Therefore, an upgrade to Barrier B was not pursued.

Summary of the 2007 NCP Land Use Compatibility Measures

LU-1: Offer a program for noise insulation of noncompatible structures for noncompatible residences within the 65+ DNL contour of the Future (2012) Noise Compatibility Program (NCP) condition, in exchange for an avigation easement.

Status: Implemented – the boundary was updated based on the Future (2012) NEM/NCP Noise Exposure Contour from the 2007 Part 150 Noise Compatibility Program Update. To date, the CRAA has provided for sound insulation of nearly 800 residences. All homes eligible for sound insulation based on the 2007 NEM/NCP Update Study, have been sound insulated or have been offered sound insulation and the owner(s) declined or did not respond to the offer.

LU-2: Offer a program for noise insulation of noncompatible structures for noncompatible churches within the 65+ DNL contour of the Future (2012) Noise Compatibility Program (NCP) condition in exchange for an avigation easement.

Status: Implemented – One church, the Wonderland Community Church, was identified within the 65 DNL of the 2002 Part 150 Noise Compatibility Study. The CRAA purchased an avigation easement on the property and it is now considered a compatible land use. One other church, the Mount Judia Church, was contacted for potential inclusion in the program and did not respond. No other churches were identified within the 65+ DNL contour of the Future (2012) NEM/NCP Noise Exposure Contour.

LU-3: Seek cooperation from the City of Columbus and Franklin County to amend their Land Use Compatibility Standards to achieve the level of compatibility identified in the Recommended Land Use Compatibility Guidelines.

Status: Partially implemented – Both the City of Columbus and Franklin County have adopted land use development standards similar to what was recommended in the previous NCP. However, in some cases these standards are not as strict as was recommended. (See Chapter Four for additional details).

LU-4: Seek cooperation from the City of Columbus and Franklin County to amend the AEO (Airport Environs Overlay) District boundaries to include the proposed Airport Land Use Management District (ALUMD) corresponding to the 60 DNL of the 20 year NCP contour.[2]

Status: Not implemented – Both Columbus and Franklin County set the AEO boundary at the 65 DNL contour.

LU-5: Seek cooperation from Franklin County, the City of Gahanna, and Jefferson Township to amend each jurisdiction's zoning resolution to require applicants for rezoning, change of use, or special use permit to convey an avigation easement to the appropriate airport.

Status: Partially implemented – Section 660.07 requires conveyance of avigation easements for variance or conditional use permits only.

LU-6: Seek cooperation from Jefferson Township and the City of Gahanna to adopt the proposed Airport Land Use Management District (ALUMD) as part of their official zoning regulations.

Status: Not implemented – Coordination with local jurisdictions has occurred; however, zoning regulations have not been updated.

[2] In accordance with Federal Policy, the 65 DNL is the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) are considered significantly impacted. Below the 65 DNL, all land uses are determined to be compatible for Part 150 noise compatibility planning purposes.

LU-7: Seek cooperation from Franklin County, Jefferson Township, Mifflin Township, and the City of Gahanna to adopt subdivision codes applicable to the proposed Airport Land Use Management District (ALUMD).

Status: Partially implemented – Coordination with local jurisdictions has occurred; however, only Franklin County has updated it subdivision regulations to require a note identifying whether or not the plat is located wholly or in part in an established ALUMD (Franklin County Subdivision Regulations Section 307.03 (M)).

LU-8: Seek cooperation from Franklin County, Jefferson Township, Mifflin Township, and the City of Gahanna to adopt building codes applicable to the proposed Airport Land Use Management District (ALUMD).

Status: Not implemented – Coordination with local jurisdictions has occurred; however, building codes have not been updated. Franklin, Jefferson, and Mifflin all reference Ohio Building Code. Gahanna adopted the OBC as their own. There is no reference to the ALUMD or airport compatibility in the OBC.

LU-9: Seek cooperation from the Board of Realtors to participate in a voluntary fair disclosure program for property located within the proposed Airport Land Use Management District (ALUMD).

Status: Not implemented – Coordination has occurred; however, local jurisdictions elected not to amend their ordinances to include the ALUMD. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

LU-10: Periodically place advertisements in real estate sections of local newspapers delineating the boundaries of the proposed Airport Land Use Management District (ALUMD).

Status: Not implemented – Coordination has occurred; however, local jurisdictions elected not to amend their ordinances to include the ALUMD. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

LU-11: Purchase the Buckles property to prevent imminent noncompatible developments from occurring.

Status: Not implemented – The Buckles property is located to the northeast of CMH east of Hamilton Road and southwest of I-270. Much of the land area is undeveloped although since the 2007 Part 150 Noise Compatibility Study the property has been bisected by Techcenter Drive and some lots have been subdivided with new commercial development at the eastern end of Techcenter Drive. The other undeveloped parcels are zoned for commercial use. Therefore, this measure was previously withdrawn in the 2008 NCP.

LU-12: Develop an Airport Land Use Management District (ALUMD) based on the 20-year Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, natural geographic and jurisdictional boundaries.

Status: Not implemented – The intent of this measure was to eliminate changing boundaries set by the current noise exposure contours and establish a fixed boundary for consistency. The suggested fixed boundary was not implemented. The City of Columbus and Franklin County continue to apply an Airport Environs Overlay Zone, the boundaries of which correspond to the noise exposure contour from the previous Part 150 Noise Compatibility Study Update which is subject to periodic review and potential revision.

Summary of the 2007 NCP Program Management Measures

PM-1: Maintain the noise abatement elements of the FAA ATCT Tower Order

Status: Implemented – The noise abatement elements are contained in the current Tower Order.

PM-2: Maintain the Noise Management Office for noise compatibility program management.

Status: Ongoing.

PM-3: Maintain an ongoing public involvement program regarding the noise compatibility program.

Status: Ongoing.

PM-4: Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary. Add up to eight permanent NMTs and upgrade the computer software and hardware as necessary.

Status: Implemented – In 2014, four additional permanent noise monitors (NMTs) were installed, two west of the relocated Runway 10R/28L and two east of Runway 10R/28L, which expanded the system to include a total of 16 NMTs. In addition, in 2015, the other existing 12 NMTs were upgraded with newer equipment. The CRAA Airport Operations department continues to monitor the operation of the system and receives ongoing software updates.

PM-5: Routinely update the noise contours and periodically update the noise program.

Status: Ongoing.

PM-6: Establish a land use compatibility task force which meets periodically to discuss issues relevant to airport noise compatibility planning.

Status: Previously implemented but no longer active.

1.4 Airport Facilities and Activity

The following sections provide a basic discussion of the history of the Airport, a description of the area surrounding the Airport, an inventory of the existing airport facilities, and an identification of the typical aircraft activity at CMH.

1.4.1 Airport History

CMH opened in 1929 as Port Columbus which served as a stop for transcontinental air/rail travel. That year Transcontinental & Western Air (TWA) began its New York to West Coast air/rail service through Columbus. By 1939 there were 15 daily flights leaving from CMH. At the onset of World War II, CMH was one of only 31 non-military airports in the country that could accommodate military aircraft of the time; in 1941 the Federal government took control of and expanded CMH. After the War, CMH began to grow and in 1952 the east/west runway was extended from 4,500 to 8,000 feet in length. A new passenger terminal was dedicated in 1958 as part of a $12 million upgrade to CMH. That same year CMH was ranked as the 16th busiest airport in the nation. In 1965 the Airport gained “international” status when a U.S. Customs facility was established. In 1979, the 50th anniversary of air travel at CMH, the airport undertook a $70 million expansion that included the addition of enclosed jetways at every gate.[3]

In 1989, 17th Avenue was renamed as International Gateway, which leads to the front door of the Airport. The terminal was expanded in 1989 with the opening of the seven-gate South Concourse, (also known as

[3] Columbus Regional Airport Authority, online at https://columbusairports.com/storage/staging/20171211172828-columbus-regional-airport-authority-history.pdf, Accessed, June 2, 2021.

Concourse A) and again expanded in 1996 with the four-gate North Concourse (also known as Concourse C).[4] Later, there was a second expansion to Concourse C adding 7 gates.

In 1991, the Columbus Municipal Airport Authority was formed. Operation of CMH was transferred from the City of Columbus to the Authority. In late 2002, the City of Columbus, Franklin County, and the Columbus Municipal Airport Authority approved the merger of the Columbus Airport Authority and the Rickenbacker Port Authority, forming the new CRAA, effective January 1, 2003.[5]

The North Runway (Runway 10L/28R) was extended from 6,000 to 8,000 feet in 1997. Other improvements included the realignment of International Gateway in 2008 and construction of the I-670 / Stelzer Road overpass in 2009 to provide more convenient access by eliminating the former intersection of Stelzer Road and International Gateway. In 2013, the CRAA completed construction of a replacement to the South Runway (Runway 10R/28L), which was relocated approximately 700 feet south of its original location. The relocated runway became fully operational in August 2013.[6] The CRAA rehabilitated Runway 10L/28R in 2016 by replacing or repairing the existing pavement. Other recent development at CMH includes the ongoing construction of a new consolidated rental car facility and redevelopment of other facilities along International Gateway to improve passenger convenience.

In 2016, CMH was renamed from Port Columbus International Airport to John Glenn Columbus International Airport to honor Ohio native and former Marine Corps aviator, astronaut, and U.S. Senator John Glenn. The name change was unanimously agreed upon by the CRAA, and Governor John Kasich signed a bill officially renaming the Airport in June 2016.[7]

1.4.2 Airport Location

CMH is located on the eastern edge of the City of Columbus, to the north of the cities of Bexley and Whitehall, southwest of the City of Gahanna and west of Jefferson Township. The area surrounding CMH includes a mixture of land uses, including single-family residential housing, multi-family residential communities and mobile home parks, commercial, and industrial areas. **Exhibit 1-2, *Airport Location,*** shows the location of CMH in relation to the Columbus Area.

1.4.3 Airport Runways

The airfield at CMH consists of two parallel, east/west runways spaced approximately 3,500 feet apart. Runway 10R/28L, the south runway, is the longest runway on the airfield at 10,113 feet. Runway 10L/28R, the north runway, is 8,001 feet in length.

1.4.4 Airport Operators and Facilities

As of June 2024, CMH had scheduled passenger service by the following commercial airline operators:

- Air Canada Express (Air Georgian & Jazz)
- Alaska Airlines
- American Airlines
- Breeze Airways
- Delta Air Lines / Delta Connection
- Frontier Airlines
- Southwest Airlines
- Spirit Airlines
- Sun Country Airlines
- United Airlines / United Express

[4] Ibid.
[5] Ibid.
[6] Ibid.
[7] *Port Columbus officially renamed after John Glenn,* WBNS 10TV, June 28, 2016. Available online at: https://www.10tv.com/article/john-glenn-be-honored-today-port-columbus-renaming-ceremony.

1.4.4.1 Terminal Facilities

The Passenger Terminal at CMH includes 31 total gates in three separate concourses. As of August 2024, Concourse A, the South Concourse, has five gates, Concourse B has 15 gates, and Concourse C, the North Concourse, has 11 gates.

1.4.4.2 Airside Facilities

CMH property can be divided into three distinct areas – north airfield, midfield, and south airfield. The north airfield, which is north of Runway 10L/28R, consists of the airfield maintenance facilities, NetJets, MPW hangar, and Nationwide hangars, and other airport-related commercial facilities. The midfield area is situated between Runway 10L/28R and Runway 10R/28L. The midfield includes the passenger terminal and apron area and the Lane Aviation facility. A new consolidated rental car facility (CONRAC) was recently constructed within the midfield area to the west of the existing terminal. The primary access to the terminal and parking is from International Gateway, which connects the Airport to I-670 and I-270 to the west. Access from the east is available via Sawyer Road and Bridgeway Avenue. The passenger terminal and parking garage is located at the east end of International Gateway. Several hotels, surface parking lots, and the airport traffic control tower (ATCT) are located along International Gateway west of the terminal. The south airfield is located to the south of Runway 10R/28L. The original terminal building is located in the southeast corner of the airfield. The Columbus International Air Center is also located south of the airfield along 5th Avenue which accommodates maintenance operations for Republic Airways. The airport facilities at CMH are shown on **Exhibit 1-3, *Existing Airport Layout***.

1.4.5 Fixed-Base Operators (FBOs)

There are two fixed-base operators (FBOs), Lane Aviation and Signature Flight Support ,at CMH, that provide aircraft services such as fueling services, ramp parking, hangar parking/storage, parts, and maintenance for general aviation (GA) aircraft.

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Exhibit 1-2 Airport Location

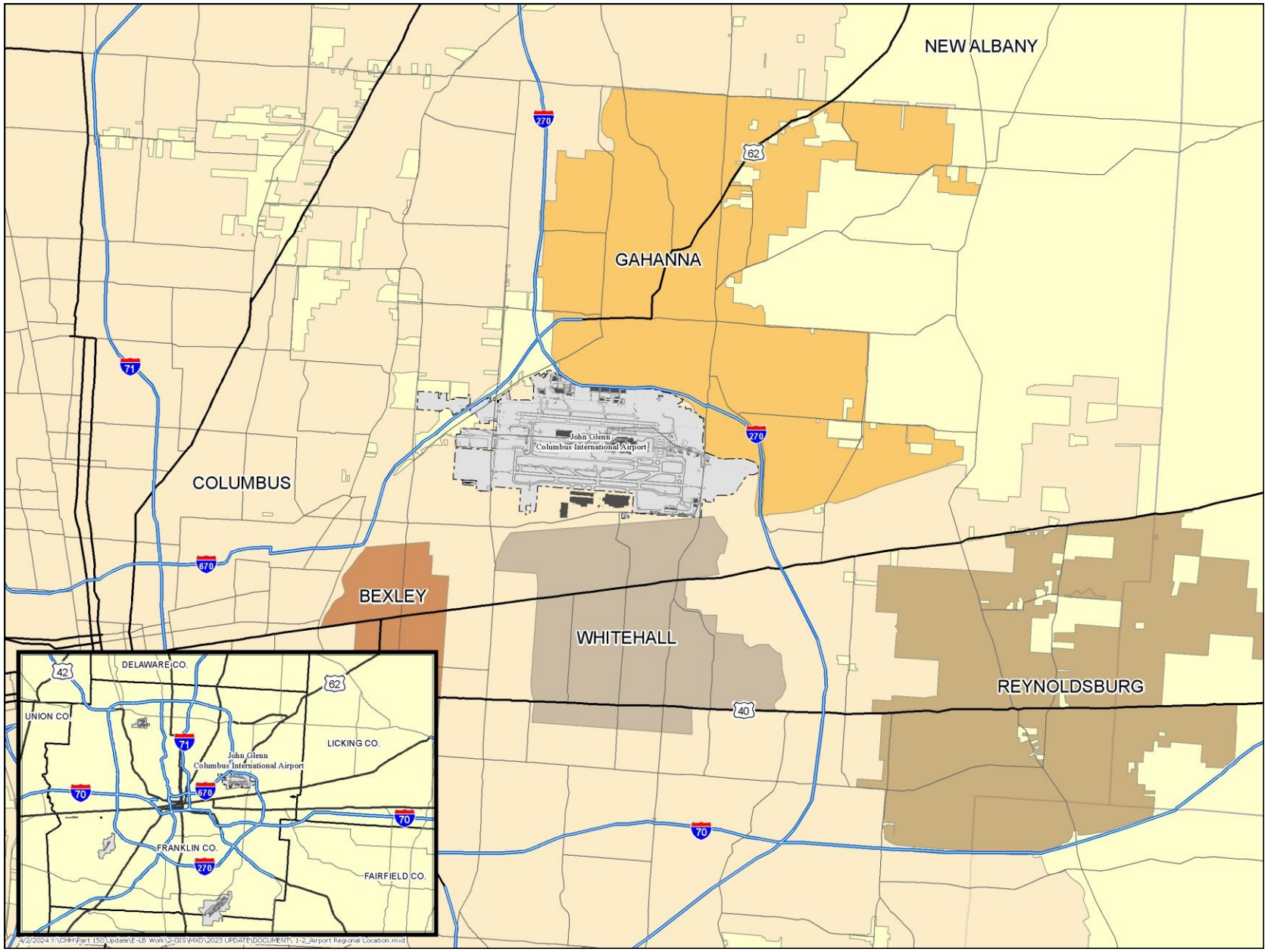

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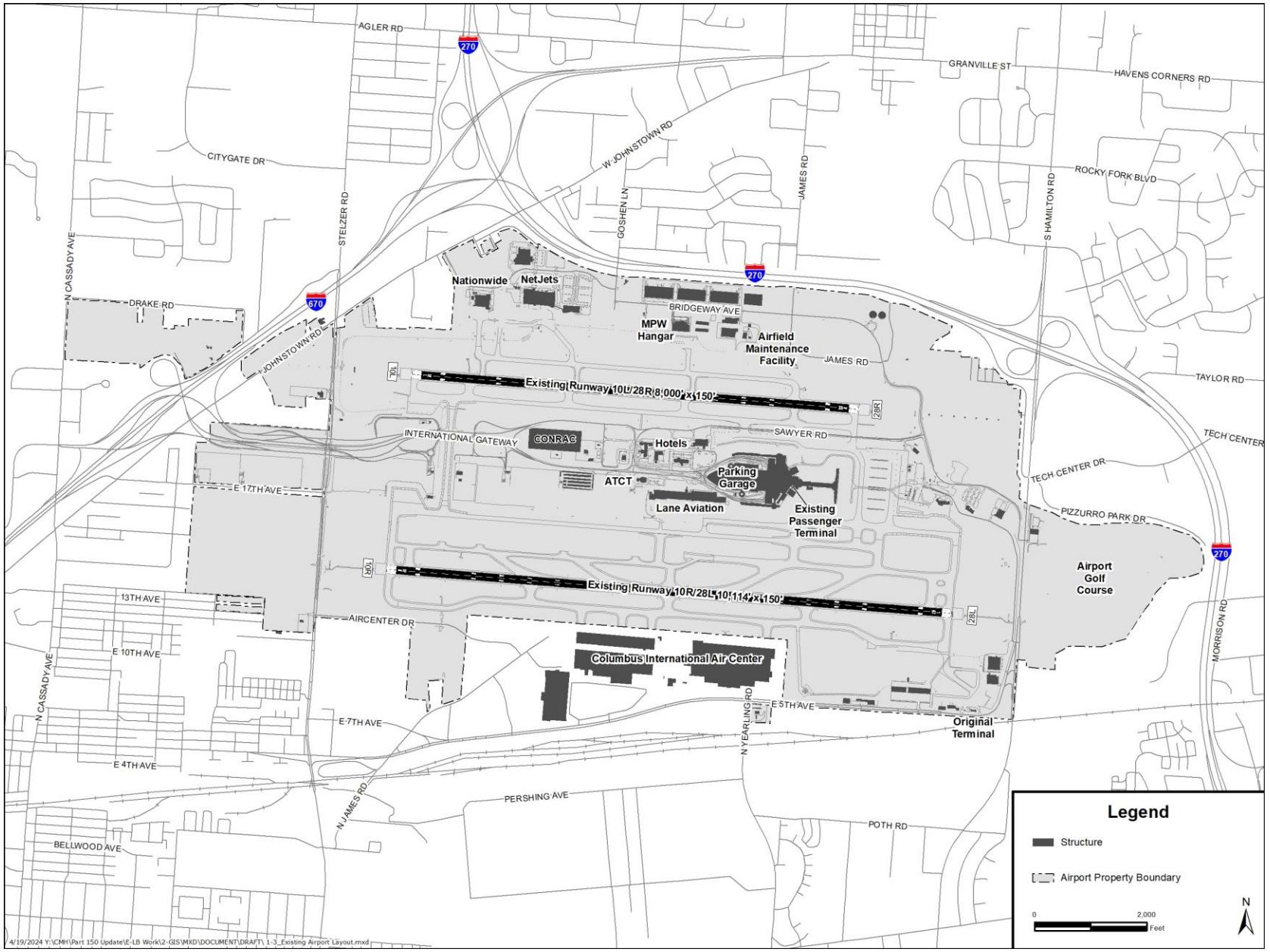
Exhibit 1-3 Existing Airport Layout



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1.4.6 Based Aircraft

A total of 66 aircraft are based at CMH. **Table 1-1** provides the number of general aviation aircraft based at CMH by aircraft type.

Table 1-1 Based Aircraft

Aircraft Type	Number
Single engine airplanes	10
Multi engine airplanes	7
Jet airplanes	46
Helicopters	3
Total aircraft based on the field	**66**

Source: www.airnav.com. Airport information published as of December 31, 2022.

1.4.7 Annual Operations

The number of annual operations at CMH for the Existing (2024) Baseline period was 118,397, which results in 324.4 average-annual day operations. The number of annual operations at CMH was based on ATCT records, airport landing fee reports, and discussions with operations. **Table 1-2** shows a summary of the Existing (2024) average daily operations by primary user group. For a detailed breakdown of the annual operations, refer to Appendix C, *Noise Methodology*.

Table 1-2 Summary of Average-Annual Day Operations

Aircraft Type	Arrivals		Departures		Total	Percent of Total
	Daytime	Nighttime	Daytime	Nighttime		
Large Jets	90.9	23.4	94.6	19.7	228.6	70%
Regional / Air Taxi Jets	22.4	1.6	21.3	2.7	48.0	15%
General Aviation Jets	15.5	1.0	15.5	1.0	33.0	10%
General Aviation / Commuter Props	7.0	0.4	6.9	0.5	14.8	4%
Total	**135.8**	**26.4**	**138.3**	**23.9**	**324.4**	**100%**

Notes: Sum may not equal total due to rounding.
Daytime = 7:00 am – 9:59 pm, Nighttime = 10:00 pm – 6:59 am.
Source: Federal Aviation Administration (FAA) Operations Network (OpsNet) data, CRAA Landing Fee Reports from September 2022 through August 2023, CMH ANOMS data from September 2022 through August 2023, Landrum & Brown analysis, 2024.

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Chapter 2 Affected Environment

Airports and aircraft operations generally have direct benefits and impacts on surrounding communities as aviation activity is inherently intertwined with its neighbors. This includes both positive and negative impacts. Identifying and evaluating land uses surrounding an airport is an important step in quantifying potential impacts through the Noise Compatibility Study process. This evaluation identifies the residential and other noise-sensitive land uses around CMH. A discussion of the land use mapping methodology and zoning information is provided in **Appendix D, *Land Use Assessment Methodology***.

2.1 Airport Location

CMH is located on the eastern edge of the City of Columbus in Franklin County, Ohio, to the north of the cities of Bexley and Whitehall, southwest of the City of Gahanna, west of Jefferson Township, and northwest of the City of Reynoldsburg. These jurisdictions generally share both the benefits and the potentially negative impacts of airport operations at CMH, and therefore, are the subject of the land use evaluation in this study.

2.1.1 Columbus Regional Airport Authority

CMH is operated by the Columbus Regional Airport Authority (CRAA), which sets the policies under which the airport is operated. The CRAA is an independent governmental entity responsible for the operation of CMH as well as Rickenbacker International Airport (LCK) and Bolton Field Airport (TZR). The creation of the CRAA was a result of a merger between the Columbus Municipal Airport Authority and the Rickenbacker Port Authority (RPA) on January 1, 2003.

A Board of Directors is the governing body of the CRAA and is composed of nine business and community leaders. Four members of the Board are appointed by the Mayor of the City of Columbus with the advice and consent of City Council, four are appointed by the Franklin County Board of Commissioners, and one member is appointed jointly by the Mayor and the Franklin County Board of Commissioners. All Board members serve four-year staggered terms.

2.1.2 Airport Environs

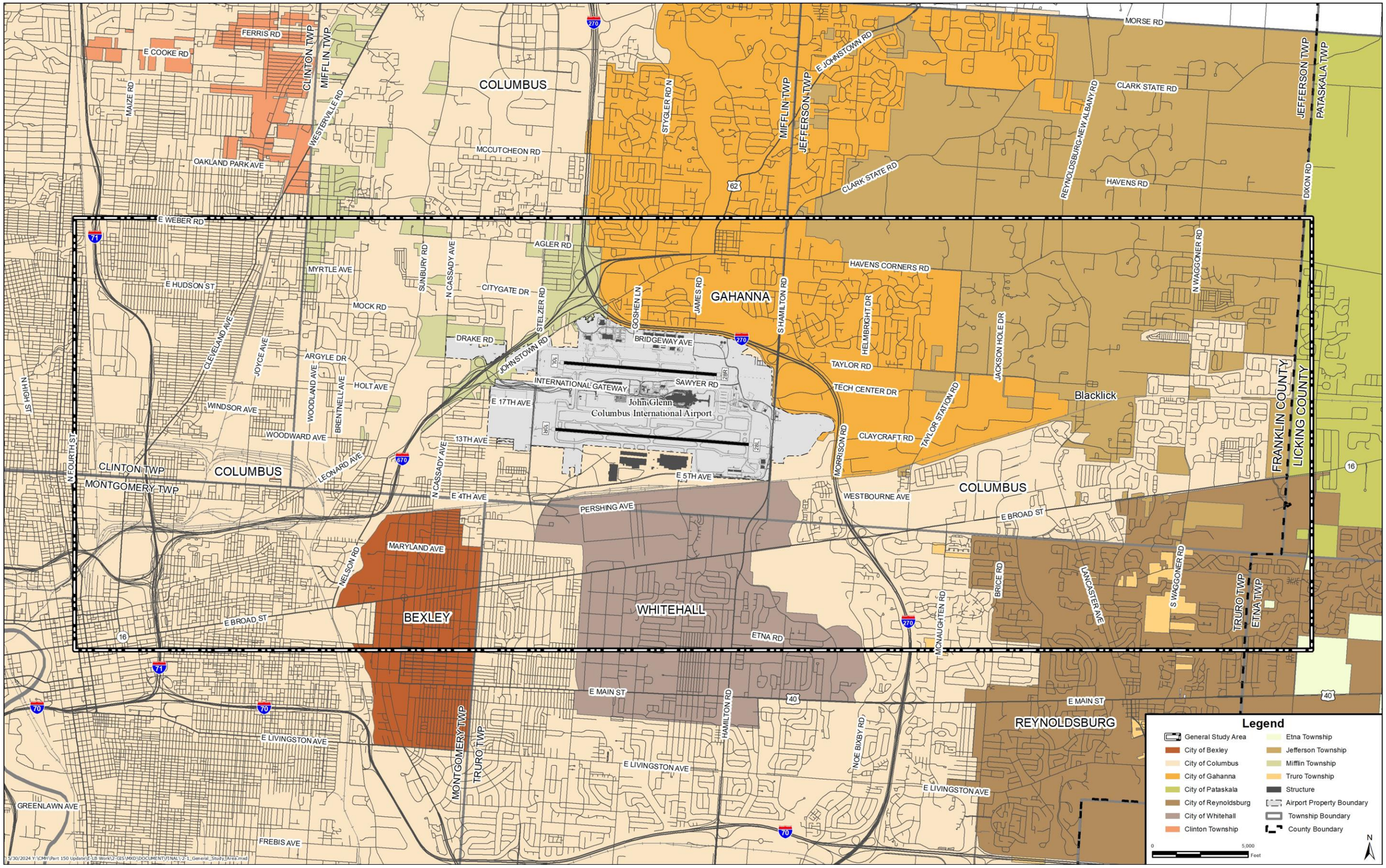
The airport environs refers to the regional area that may experience broader effects from the noise due to aircraft operations. The airport environs does not have a specifically defined boundary as these effects do not stop at geographic or jurisdictional lines. The airport environs roughly encompasses the area of northeast Columbus and other jurisdictions in eastern Franklin County and western Licking County as shown in **Exhibit 2-1, *Airport Environs and General Study Area***. This map includes jurisdictional boundaries, local roads and major highways, the airport property boundary, and other geographical features. For the purpose of this study, the airport environs encompasses an area approximately 14 by 9 miles (126 square miles). The area extends approximately four miles to the north and south of the airport, and six miles to the east and west, covering the full extent of Exhibit 2-1. The area is of adequate size to depict flight tracks and the jurisdictional boundaries used in this study.

2.1.3 General Study Area (GSA)

The General Study Area (GSA) is defined as the area that experiences direct overflights of aircraft at lower altitudes. The GSA was determined by examining the boundaries of previous 65 Day-Night Average Sound Level (DNL) noise exposure contours (the FAA-defined threshold for significant noise impacts), and by reviewing flight tracks of aircraft operating in the airport vicinity and/or under the control of the CMH Air Traffic Control Tower (ATCT). The GSA, shown in Exhibit 2-1, is the map used to show existing and future noise contours, as well as noise abatement alternatives in this document.

To the north, the GSA extends past Agler Road in Columbus, Granville Street in Gahanna, and Havens Corners Road in Jefferson Township. To the east, the GSA extends just beyond the Franklin/Licking County border. To the south the GSA extends past East Broad Street/State Route 16 and almost to U.S. Route 40. To the west, the GSA extends into downtown Columbus, just past I-71.

Exhibit 2-1 Airport Environs and General Study Area



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2.1.4 Existing Land Uses in the General Study Area

Land uses in the GSA were identified, mapped, and categorized in terms of the general land use classifications presented in 14 CFR Part 150, which includes residential (single and multi-family), commercial, industrial/manufacturing, public/institutional, parks/recreational, and agriculture/open space. These uses were identified based on each county's Geographic Information System (GIS) database (where available), and was supplemented as necessary by review of current aerial photography and field verification. Appendix D*, Land Use Assessment Methodology*, provides additional detailed information regarding the classification and identification of land uses. **Exhibit 2-2, *Existing Land Uses***, depicts the existing land uses within the GSA.

The area for which existing land uses were identified involves two levels of delineation: 1) the area directly adjacent to the airport and the areas directly in line with the east/west orientation of the runways that may be affected by specific localized impacts of noise abatement measures; and 2) the regional area that may experience the broader incompatibilities of aircraft overflight and noise impacts. To the immediate east and within previous 65 DNL noise exposure contours, land uses are characterized by commercial/industrial areas, interspersed with low density to medium density residential areas. To the west of CMH, land uses include a mix of medium density residential, commercial and industrial development.

2.1.5 Existing Noise-Sensitive Public Facilities in the General Study Area

Land uses that could be considered noncompatible with airport operations include more than just residential uses. 14 CFR Part 150 defines certain public facilities as noise-sensitive: churches, schools, nursing homes, libraries, and hospitals. Within the GSA there are 160 schools (including licensed daycare facilities), 230 churches, two hospitals, and three libraries as shown on **Exhibit 2-3, *Existing Noise-Sensitive Public Facilities***. Appendix D*, Land Use Assessment Methodology*, presents the methodology for collecting and organizing the noise-sensitive facility data and **Table D-2** provides a list of all facilities.

2.1.6 Existing Historic Sites

Historic properties on or eligible for inclusion in the National Register of Historic Places (NRHP) should be identified on the NEMs per 14 CFR Part 150. The NRHP is the official list of historic places worthy of preservation in the U.S. as authorized by the National Historic Preservation Act of 1966. Efforts to identify historic structures within the GSA included reviewing the list of properties on the NRHP maintained by the U.S. National Park Service, as well as reviewing previous environmental studies, including the 2009 Final Environmental Impact Statement (EIS).[8] Within the GSA, there are 72 existing structures that are listed on or determined eligible for the NRHP. These historic sites are shown on **Exhibit 2-4, *Existing Historic Sites***, and listed in Appendix D, **Table D-3**.

8 Port Columbus International Airport Final Environmental Impact Statement Section 303(C) And Section 106 of the National Historic Preservation Act Evaluation U.S. Department of Transportation Federal Aviation Administration, March 2009

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Exhibit 2-2 Existing Land Uses

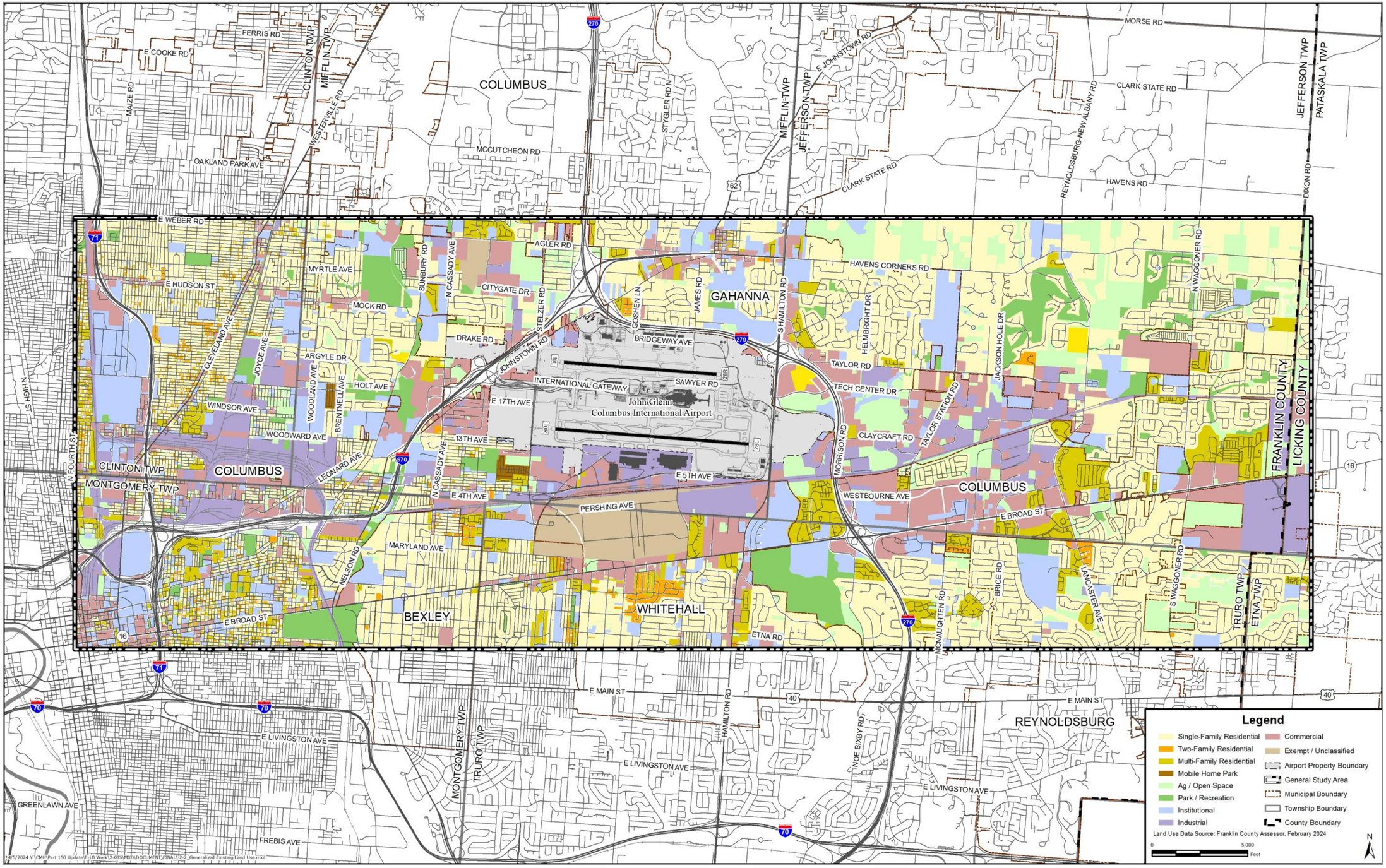

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Exhibit 2-3 Existing Noise-Sensitive Public Facilities

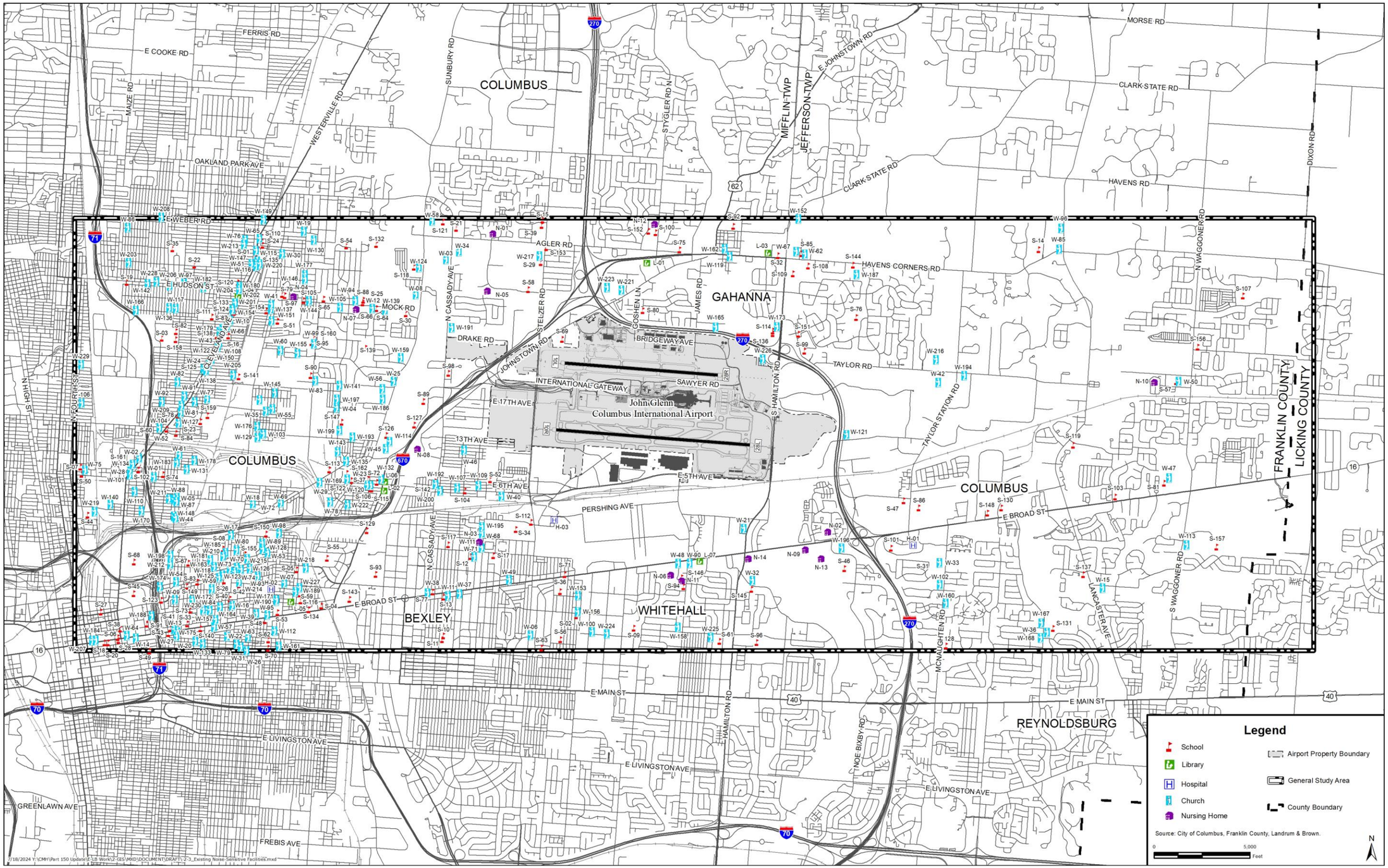

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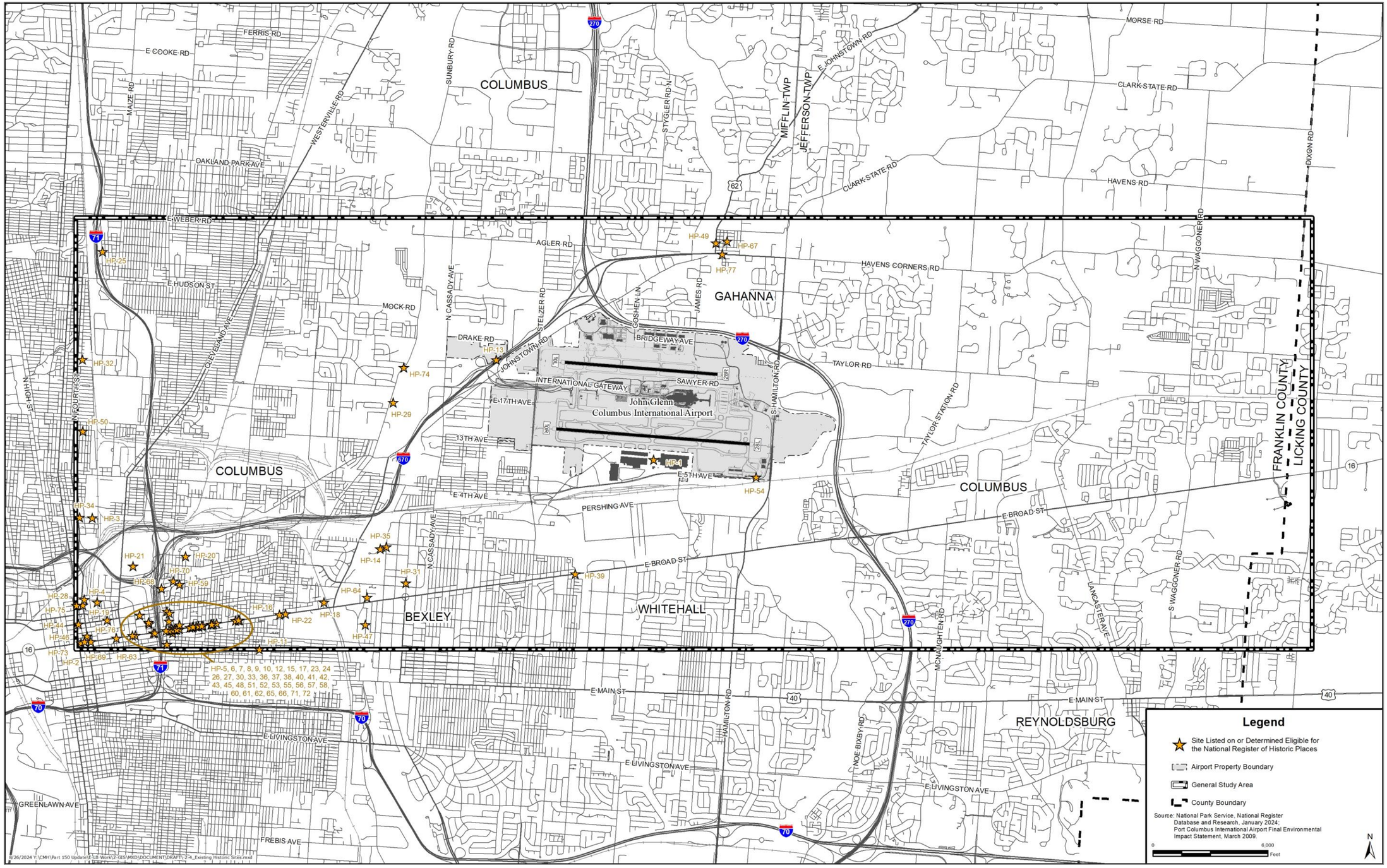
Exhibit 2-4 Existing Historic Sites



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2.2 Land Use Policies and Regulatory Authority

Neither the CRAA nor the Federal government has the authority to implement or enforce local land use policies and regulations. That responsibility falls to the local jurisdictions, which in Ohio could include a county, city, or township. The Part 150 process includes a review of local comprehensive planning efforts, land use regulations, zoning ordinances, building codes, and subdivision regulations.

In most cities and counties, the chief land use regulatory document is the zoning ordinance, which regulates the types of uses, building height, bulk, and density permitted in various locations. Subdivision regulations are another important land use tool, regulating the platting of land. Local communities also regulate development through building codes and, in some cases, enforce noise regulations. The local capital improvements program, a schedule for constructing and improving public facilities such as streets, sewers, and water lines, is another important policy document that could influence development; although, on its own it does not involve regulation.

The Part 150 planning process does not propose, recommend, or fund the mitigation of future proposed development. It does, however, identify areas of potential future noise exposure for use by local planners in the development of comprehensive planning documents and land use policies. By preparing a comprehensive plan and setting land use policies, a jurisdiction or community can develop land appropriately and according to a locally accepted, approved plan. It is important that these planning efforts identify the likely development potential of land near the airport, within the published airport noise contours, or under existing or proposed future aircraft flight tracks. The local land use planning policies provide the airport sponsor with a description of the types of future development that should occur in areas not yet developed or to be redeveloped within the community.

Within the GSA, six municipalities (Bexley, Columbus, Gahanna, Pataskala, Reynoldsburg, and Whitehall), Franklin County, and Jefferson Township share the responsibility for land use regulations. Summaries of the existing and future land use and zoning plans for these jurisdictions are included in Section 2.2.1.1 through Section 2.2.1.7 of this chapter.

2.2.1 Existing Land Use Planning and Development Regulations

This section summarizes the land use development regulations related to airport noise compatibility planning for each jurisdiction within the GSA. Coordination with local governments to plan for airport noise compatibility is an integral step in the Part 150 Noise Compatibility Planning process.

The previous Part 150 Noise Compatibility Study in 1993 recommended the establishment of an Airport Environs Overlay (AEO) Zone to assist in controlling residential development within the higher noise levels resulting from Airport activity. Two jurisdictions within the GSA, the City of Columbus and Franklin County, have adopted the AEO to limit development within areas that are significantly impacted by airport noise. The local ordinances are based on model regulations developed by the Mid-Ohio Regional Planning Commission (MORPC) in 1991. The City of Columbus adopted the AEO in 1994 and Franklin County adopted a similar ordinance in 1996. Both ordinances added an overlay zone that established additional development standards and criteria for property within areas that are significantly impacted by noise. The AEO ordinances establish sub-districts according to the 65+, 70+, and 75+ DNL indicated by the most recently published NEM. Within these sub-districts, land use is regulated to prevent noncompatible development that is not compatible with high levels of aircraft noise. The overlay zone boundary changes accordingly to updates to the NEM and is therefore not static. Specific regulations from each jurisdiction’s zoning ordinance regarding the application of the AEO are discussed in the following sections.

2.2.1.1 Franklin County

Franklin County encompasses approximately 540 square miles, of which the unincorporated areas of Mifflin Township comprise approximately 1.4 square miles and unincorporated Truro Township comprises just over one square mile. The county has a total estimated population of 1,321,820 in 2022, including 37,780 and 30,243 in Mifflin and Truro Townships, respectively.[9] Franklin County administers planning and zoning within the unincorporated areas, excluding Jefferson Township which has a separate planning and zoning department. Franklin County administers planning and zoning on behalf of Mifflin and Truro Townships, both of which are partially within the GSA.

The Franklin County Board of Commissioners approved the Clinton-Mifflin Land Use Plan on January 13, 2009.[10] This plan identified land use and development goals; including the topics of safe neighborhoods, complete streets, and economic development; within the planning area bounded by Morse Road to the north, I-270 to the east, Mock Road and I-670 to the south, and Karl Road to the west. The plan includes land use recommendations for minimizing noise-sensitive land uses along Drake Road to the northwest of CMH.[11]

The county has adopted an Airport Environs Overlay (AEO) District to restrict development within areas impacted by aircraft noise. **Table 2-1** shows the land use development standards for Franklin County within the Airport Environs Overlay District.

Franklin County has subdivision regulations that address platting of new land subdivision within the AEO District. Section 307.03(U) stipulates that the final plat shall contain a “note identifying whether or not the plat is located wholly or in part in an established Airport Land Use Management District.” Furthermore, under Section 404.15 an avigation easement and nonsuit covenant may be required within identified airport noise zones.[12]

[9] US Census Bureau, Annual Population Estimates, 2022.
[10] Clinton-Mifflin Land Use Plan, Clinton and Mifflin Townships, Franklin County, Ohio, January 13, 2009; Online at https://development.franklincountyohio.gov/planning-zoning/land-use-planning/clinton-mifflin-land-use-plan, Accessed: May 30, 2024.
[11] Franklin County Zoning Resolution, Amended and readopted August 13, 2019.
[12] Franklin County Subdivision Regulations, for unincorporated areas of Franklin County, Ohio, Adopted March 27, 2012.

Table 2-1 Franklin County Airport Environs Overlay District Land Use Compatibility Standards

Land Use (provided it is permitted in the district overlaid)	Sub-district A	Sub-district B	Sub-district C
	65 DNL	70 DNL	75 DNL
Residential			
Single, Two & Multi	Y(1)	N	N
Manufactured housing	N	N	N
Hotels, Motels	Y(2)	Y(3)	N
All other residential	Y(1)	Y(1)	N
Commercial			
Retail	Y	Y(2)	Y(3)
Business services	Y	Y(2)	Y(3)
Personal services	Y	Y(2)	N
Professional services	Y	Y(2)	Y(3)
Offices	Y	Y(2)	N
All other commercial	Y	Y(2)	Y(3)
Manufacturing			
Manufacturing, warehousing, distribution	Y	Y(2)	Y(3)
Parking facilities	Y	Y(2)	Y(3)
All other manufacturing	Y	Y(2)	Y(3)
Institutional			
Hospitals, Nursing	Y(2)	Y(3)	N
Other medical facilities	Y	Y(2)	Y(3)
Educational facilities	Y(2)	Y(3)	N
Public assembly, churches	Y(2)	Y(3)	N
Government facilities	Y	Y(2)	Y(3)
Parks, recreation	Y	Y(2)	Y(3)
All other public/semi public	Y	Y	Y
All Other Uses	Y	Y	Y

Key:
Y – Land use is permitted
N – Land use is prohibited
(1) Interior noise level reduction of 25dB required in District A, 30 dB in District B
(2) Interior noise level reduction of 25dB is required for all areas where the public is received, office areas, noise-sensitive areas, or where normal noise level is low.
(3) Interior noise level reduction of 30dB is required for all areas where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
Source: Franklin County Zoning Resolution, Section 660, Airport Environs (Noise) Overlay District.

2.2.1.2 City of Bexley

The City of Bexley is located to the south of CMH and encompasses approximately 2.4 square miles. It had an estimated population of over 12,800 in 2022 according to the U.S. Census Bureau.[13] The City updated its Strategic Plan in December 2023.[14] It contains no land use provisions regarding compatibility with airport operations.

2.2.1.3 City of Columbus

The City of Columbus is located to the north, south, east, and west of CMH and encompasses approximately 225.9 square miles. It had an estimated population of over 907,900 in 2022 according to the U.S. Census Bureau.[15] Development within the City of Columbus is guided by its Comprehensive Plan, adopted in December of 1993.[16] The Columbus Comprehensive Plan includes recommendations for limiting noise-sensitive development within the current 65 DNL (Ldn) noise contour, requiring soundproofing and other preventive measures for new development. In addition to the Comprehensive Plan, the Columbus Citywide Planning Policies (C2P2), adopted in July 2018, and various neighborhood plans, address targeted areas.

Land use regulations are enforced through the City Zoning Code. The City of Columbus has established an Airport Environs Overlay (AEO) District to "…protect the public health, safety, and welfare by regulating development and land use within airport environs and airport hazard areas; to ensure compatibility between existing airports, and any future airport and surrounding land uses; and to protect said airports from incompatible encroachment." The AEO is divided into three sub-districts (A,B,C), which represent different levels of noise impact and within which incompatible development is restricted. Sub-district A includes the 65 DNL to 70 DNL noise exposure area. Sub-district B includes the 70 DNL to 75 DNL noise exposure area. Sub-district C includes the 75 DNL and greater noise exposure area.[17] **Table 2-2** shows the land use development standards within the AEO District.

[13] U.S. Census Bureau, Annual Population Estimates, 2022.
[14] City of Bexley Strategic Plan, Revised 2013, Version 1.2; Online at http://www.bexley.org/strategic, Accessed on May 30, 2024.
[15] US Census Bureau, Annual Population Estimates, 2022.
[16] Columbus Comprehensive Plan, December 1993; Online at: https://www.columbus.gov/Templates/Detail.aspx?id=24074, Accessed: June 2, 2021.
[17] City of Columbus Code, Title 33, Zoning Code, Chapter 3384, Airport Environs Overlay.

Table 2-2 City of Columbus Airport Environs Overlay District Land Use Compatibility Standards

Land Use	Sub-district A	Sub-district B	Sub-district C
	65 DNL	70 DNL	75 DNL
Residential			
Single-, Two-, Three-, or Four-Family	Y	N	N
Apartment	Y	N	N
Manufactured Housing, Mobile Homes	N	N	N
Hotels, Motels	Y	Y	N
Church, House of Worship	Y	Y	N
Public Park, Noncommercial Recreation	Y	Y	Y
All Other Residential	Y	Y	N
Commercial			
Retail	Y	Y	Y
Business Services	Y	Y	Y
Personal Services	Y	Y	N
Professional Services	Y	Y	Y
Offices	Y	Y	N
All Other Commercial	Y	Y	Y
Manufacturing			
Manufacturing, Warehousing, Distribution	Y	Y	Y
Parking Facilities	Y	Y	Y
All Other Manufacturing	Y	Y	Y
Institutional			
Hospitals, Nursing Homes	Y	Y	N
Other Medical Facilities	Y	Y	Y
Educational Facilities	Y	Y	N
Public Assembly	Y	Y	N
Government Facilities	Y	Y	Y
All Other Public and Semi-Public	Y	Y	Y
Industrialized Unit	**N**	**N**	**N**
All Other Uses	**Y**	**Y**	**Y**

Y = Land Use is Permitted
N = Land Use is Permitted
Source: City of Columbus Code, Title 33, Zoning Code, Chapter 3384, Airport Environs Overlay.

2.2.1.4 City of Gahanna

The City of Gahanna is located to the north, northeast, and east of CMH and encompasses approximately 12.5 square miles. According to the 2022 U.S. Census Bureau estimates Gahanna had a population of over 35,100.[18] The City updated its Land Use Plan in September 2019.[19] The Plan contains no land use management recommendations regarding compatibility with airport operations. However, the City of Gahanna and the CRAA have coordinated on land use compatibility issues for the areas immediately east of the Airport.

2.2.1.5 City of Reynoldsburg

The City of Reynoldsburg is located approximately 2.5 miles southeast of CMH and encompasses over 10.5 square miles. The city had an estimated population of over 41,000 in 2022 according to the U.S. Census Bureau.[20] The city updated its Comprehensive Plan in 2018,[21] which contains no recommendations regarding compatibility between land use and airport operations.

2.2.1.6 City of Whitehall

The City of Whitehall is located to the south of CMH and encompasses approximately 5.2 square miles. It had an estimated population of just over 19,900 people in 2022 according to the U.S. Census Bureau.[22] The City published a draft comprehensive plan in 2019.[23] The City currently has no plans or zoning codes that address land use and airport noise compatibility.

2.2.1.7 Jefferson Township

Jefferson Township is located to the northeast of CMH and encompasses approximately 17 square miles. The township had an estimated population of over 14,100 in 2022 according to the U.S. Census Bureau.[24] Jefferson Township adopted its Comprehensive Plan in September 2018.[25] The Comprehensive Plan contains no recommendations regarding compatibility between land use and airport operations. The Zoning Ordinance includes airports as a special use that will be subject to the Exceptional Use District regulations but does not specifically address the compatibility between airports and the Exceptional Use District and other land uses.[26]

2.3 Growth/Risk Significant Development Trends

The Central Ohio region continues to experience growth in population and employment. The Mid-Ohio Regional Planning Commission has prepared population and employment estimates for each jurisdiction through the year 2050. **Table 2-3** shows the population growth of the jurisdictions within the GSA between 2020 and 2023. As shown in **Table 2-3**, the population of the jurisdictions within the GSA grew by approximately 0.49 percent. The greatest population growth was seen in Jefferson Township to the east of CMH.

18 US Census Bureau, Annual Population Estimates, 2022.
19 Gahanna Land Use Plan, 2019; Online at https://www.gahanna.gov/planning/, Accessed: May 30, 2024.
20 US Census Bureau, Annual Population Estimates, 2022.
21 Reynoldsburg Comprehensive Plan 2018; Online at https://www.reynoldsburg.gov/168/Comprehensive-Master-Plan, Accessed: May 30, 2024.
22 US Census Bureau, Annual Population Estimates, 2022.
23 Whitehall Works Development Blueprint, 2019; Online at: https://whitehallmeansbusiness.com/why-whitehall/economic-community-development-plan/, Accessed: May 30, 2024.
24 US Census Bureau, Annual Population Estimates, 2022.
25 Jefferson Township 2050: A Vision for the Future, Adopted September 10, 2018; Online at https://jeffersontownship.org/departments___services/economic_development___planning/comprehensive_plan.php, Accessed: May 30, 2024.
26 Jefferson Township Zoning Resolution, Amended November 20, 2019; Online at: https://www.jeffersontownship.org/departments___services/zoning_and_building/zoning_resolution.php, Accessed: May 30, 2024.

Table 2-3 Population Change, 2020 - 2023

Jurisdiction	Population		Percent Growth, 2020-2025
	2020	2023	
City of Bexley	13,928	13,517	-2.95%
City of Columbus	905,748	912,274	0.72%
City of Gahanna	35,726	34,778	-2.65%
City of Reynoldsburg	41,076	40,548	-1.29%
City of Whitehall	20,127	19,968	-0.79%
Jefferson Township	13,603	14,211	4.47%
Mifflin Township	2,637	2,600	-1.40%
Total	1,032,845	1,037,896	0.49%

Source: Mid-Ohio Regional Planning Commission, online at: https://www.morpc.org/tool-resource/estimates-projections/, 2024

Currently, predominant land uses in the areas surrounding CMH are medium to high density residential, commercial, industrial/manufacturing, vacant property and parks/open space. Land use patterns are expected to change in response to demand from population and employment growth. Future residential growth near CMH could occur and, if not specifically restricted through zoning, could occur in areas that receive noise in excess of 65 DNL. The Mid-Ohio Regional Planning Commission (MORPC) has developed projected future land use patterns for the year 2025. These future land use projections include additional industrial/commercial development along I-270, and conversion from agricultural to residential land uses east of the Airport, particularly in Blacklick[27] and Reynoldsburg. Additional industrial development has occurred along the I-270 corridor near Tech Center Drive and Claycraft Road and this type of development in this location is expected to continue in the future. Other infill development and increased development density may occur within vacant and underutilized land surrounding the Airport. This could include conversion of vacant land and pockets of older residential development into commercial and office uses, but may also include new residential uses.[28]

Development is also expected to occur to meet the demands for residential and commercial uses created by population growth. To the northwest, west, and southwest of CMH, infill development and/or redevelopment could occur along Stelzer Road and Cassady Avenue. To the south and east of the Airport, new residential development could occur through infill within existing neighborhoods and new subdivision development on large tracts of vacant land. Details about new residential development that is underway or proposed within the GSA is included in Appendix D. Properties that are under development or proposed for development are displayed as “transitional / mixed-use” on the Future (2029) NEM.

The existing and future noise impacts upon land uses in the vicinity of CMH is discussed in Chapter Three.

[27] Blacklick is an unincorporated community within Jefferson Township.
[28] Mid-Ohio Regional Planning Commission, Land Use Estimates and Forecasts 2015-2020. Population and employment projections were prepared prior to the COVID-19 outbreak. Impacts of COVID-19 are expected to be short-term and the overall trend in growth is expected to resume between 2020 and 2025.

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Chapter 3 Baseline Noise Exposure

3.1 Overview

The discussion of the affected environment for noise and compatible land uses describes the existing noise exposure on communities surrounding John Glenn Columbus International Airport (CMH or Airport). The noise analysis presents the noise exposure for the existing conditions base year – 2024.

This chapter also provides information about the current and potential noise levels in 2029 without any changes to the Airport's noise abatement measures. Aircraft-related noise exposure is defined through noise contours prepared using the Federal Aviation Administration (FAA) Aviation Environmental Design Tool (AEDT) Version 3f. This noise exposure is presented using the Day-Night Average Sound Level (DNL) metric. The noise patterns are presented on exhibits, and the numbers of persons and housing units that fall within them are quantified.

An explanation of the AEDT and the DNL metric, along with a review of the physics of noise, noise impacts on humans, social impacts of noise, and the data required to develop noise exposure contours, is summarized in **Appendix C, *Noise Methodology*.** This information details the operating characteristics in use at the Airport, the number of operations, and the use of flight paths to and from the airport both now and as they are expected to be in 2029.

3.2 Existing (2024) Baseline Noise Contour

The number of operations, runway use, flight track, and trip length data presented in Appendix C, *Noise Methodology,* are used as input to the AEDT computer model for calculation of noise exposure in the airport environs. **Exhibit 3-1, *Existing (2024) Baseline Noise Contour***, reflects the average-annual noise exposure pattern present at the airport during the existing baseline period and **Table 3-1** summarizes the area within each noise contour level. Noise contours are presented for the 60, 65, 70, and 75 DNL. The FAA uses the 65 DNL as the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) become significantly impacted. Below the 65 DNL, all land uses are determined to be compatible. However, the Columbus Regional Airport Authority (CRAA) has chosen to show the 60 DNL because it indicates marginal noise levels and is useful for land use planning purposes.[29]

[29] In accordance with Federal Policy, the 65 DNL is the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) are considered significantly impacted. Below the 65 DNL, all land uses are determined to be compatible for Part 150 noise compatibility planning purposes.

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Exhibit 3-1 Existing (2024) Baseline Noise Contour

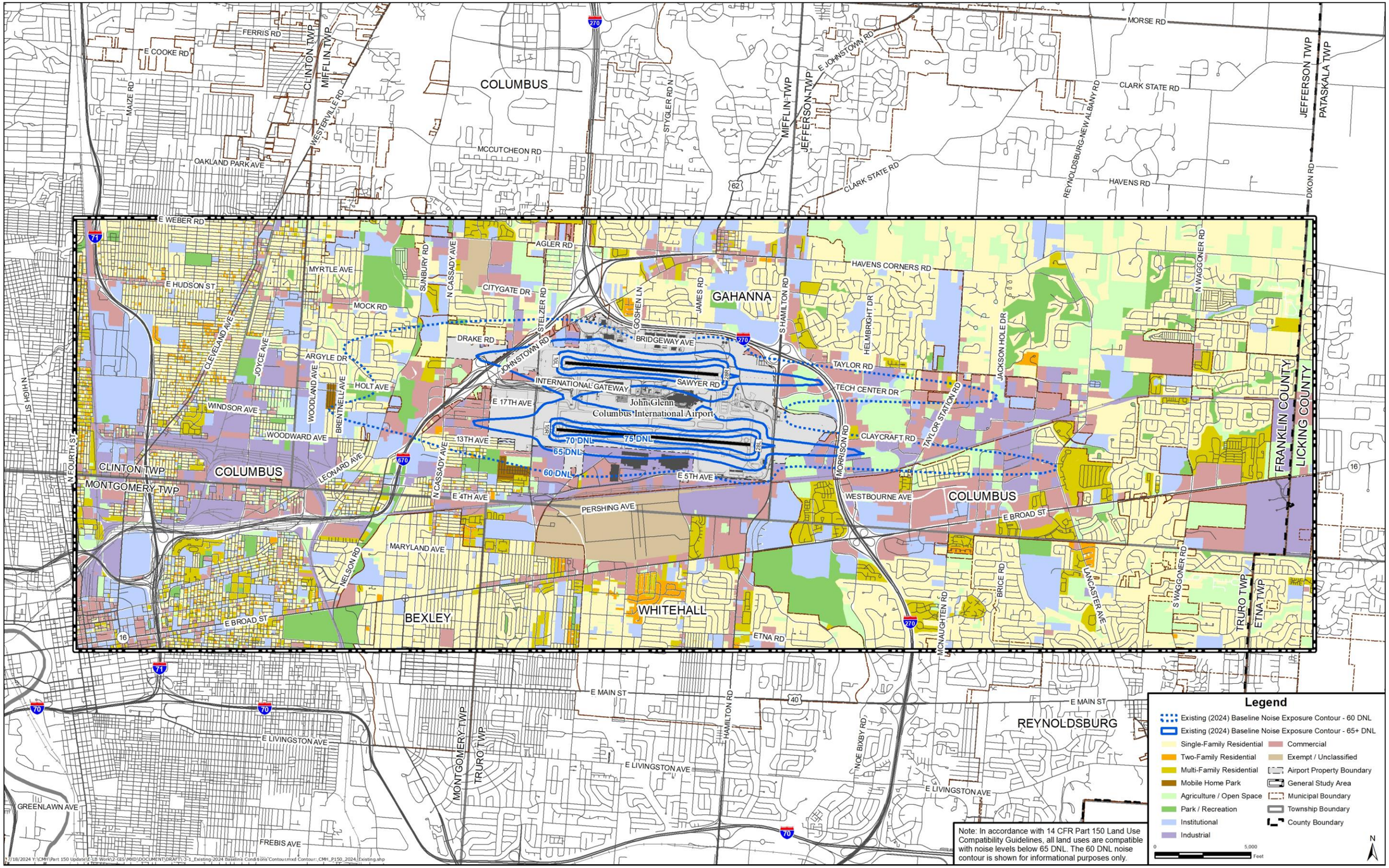

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Table 3-1 Areas Within Existing (2024) Noise Exposure Contour (in Square Miles)

Contour Range	Existing (2024) Baseline
60-65 DNL*	4.52
65-70 DNL	1.49
70-75 DNL	0.44
75 + DNL	0.35
65 + DNL	2.28

*Note: In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The 60-65 DNL noise contour is shown for informational purposes only.

Source: Landrum & Brown, 2024.

A DNL noise contour does not represent the noise levels present on any specific day, but, represents the energy-average of all 365 days of operation during the year. Noise contour patterns extend from an airport along each extended runway centerline, reflective of the flight tracks used by all aircraft. The relative distance of a contour from the Airport along each route is a function of the frequency of use of each runway end for total arrivals and departures, as well as use at night, and the type of aircraft assigned to each runway end.

The size and shape of the noise contours for CMH are a function of the combination of flight tracks and runway use. During the existing baseline period, the airport operated approximately 76 percent of the time in west flow (arriving to and departing from Runways 28L/28R) and approximately 24 percent of the time in east flow (arriving to and departing from Runways 10L/10R). Typically, noise contours from departure operations are typically wider due to the wider distribution of flight corridors and higher engine thrust settings on departure compared to arrivals. As a result, the Existing (2024) Baseline noise contour is longer and wider to the west of the Airport than to the east.

West of the Airport, the noise contour primarily reflects usage by aircraft departing to the west and to a lesser degree aircraft arriving from the west. The 65 DNL of the Existing (2024) Noise Contour extends approximately 0.82 miles beyond the west end of Runway 10R/28L and extends approximately 0.88 miles beyond the west end of Runway 10L/28R. This area is comprised of a mix of medium-density residential, commercial, and industrial uses located in the City of Columbus and Mifflin Township. The 60 DNL of the Existing (2024) Noise Contour extends approximately 2.91 miles beyond the west end of Runway 10R/28L and extends approximately 2.85 miles beyond the west end of Runway 10L/28R. The area between the 60 and 65 DNL is comprised of medium density residential, commercial, and industrial uses located in the City of Columbus.

To the east of the Airport, the noise contour primarily reflects usage by aircraft arriving from the east and to a lesser degree aircraft departing to the east. The 65 DNL of the Existing (2024) Noise Contour extends approximately 1.11 miles east from the end of Runway 10R/28L and extends approximately 1.02 miles east from the end of Runway 10L/28R. The area east of the airport within the 65 DNL is comprised of commercial and industrial land uses, and undeveloped land within the cities of Columbus and Gahanna. The 60 DNL of the Existing (2024) Noise Contour extends approximately 3.02 miles beyond the east end of Runway 10R/28L and extends approximately 2.76 miles beyond Runway 10L/28R. The area between the 60 and 65 DNL is comprised of a mix of low to medium density residential, commercial, and industrial land uses and undeveloped property located in the cities of Columbus and Gahanna and Jefferson Township. The 70 and 75 DNL of the Existing (2024) Noise Contour remain over airport property.

3.3 Future (2029) Baseline Noise Contour

The baseline noise exposure contour projected for 2029 is presented in **Exhibit 3-2, *Future (2029) Baseline Noise Contour***. This projected contour assumes growth as forecasted in the *Aviation Activity Forecast, John Glenn Columbus International Airport* (see Appendix H). This forecast was approved by the FAA on February 20, 2024. The Future (2029) Baseline noise contour is larger than the Existing (2024) Baseline noise contour due to a projected increase in the number of operations. **Table 3-2** provides a comparison of the areas within the Existing (2024) Baseline and Future (2029) Baseline noise contours.

Table 3-2 Comparison of Areas Within Existing (2024) and Future (2029) Noise Exposure Contour (in Square Miles)

Contour Range	Existing (2024) Baseline	Future (2029) Baseline	Difference
60-65 DNL*	4.52	4.81	0.29
65-70 DNL	1.49	1.66	0.17
70-75 DNL	0.44	0.46	0.02
75 + DNL	0.35	0.36	0.01
65 + DNL	2.28	2.48	0.20

*Note: In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The 60-65 DNL noise contour is shown for informational purposes only.

Source: Landrum & Brown, 2024.

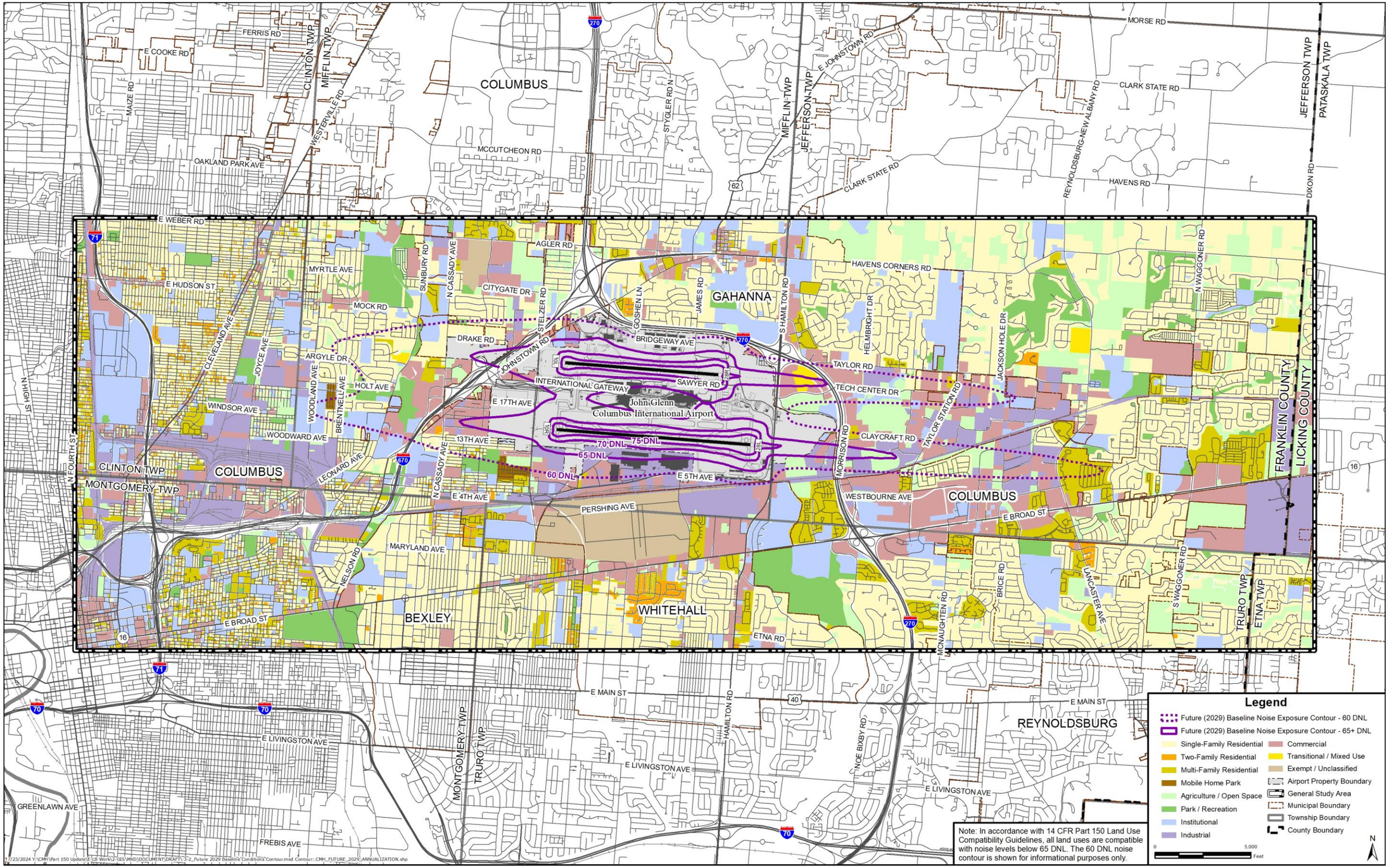
For the Future (2029) Baseline conditions, operating levels are expected to increase from 324.4 average-annual day operations to 390.7 average-annual day operations. The Future (2029) Baseline noise contour increases in size compared to the Existing (2024) Baseline noise contour due to the increase in operations projected for 2029. The shape of the Future (2029) Baseline noise contour remains similar to the Existing (2024) noise contour because runway use patterns and flight tracks would be expected to remain similar to Existing (2024) conditions with minor variations in runway use based on long-term wind and weather patterns.

The 65 DNL of the Future (2029) Noise Contour extends approximately 0.95 miles beyond the west end of Runway 10R/28L and extends approximately 0.93 miles beyond the west end of Runway 10L/28R. The 60 DNL of the Future (2029) Noise Contour extends approximately 2.44 miles beyond the west end of Runway 10R/28L and extends approximately 2.30 miles beyond the west end of Runway 10L/28R.

The 65 DNL of the Future (2029) Noise Contour extends approximately 1.43 miles east from the end of Runway 10R/28L and extends approximately 1.07 miles east from the end of Runway 10L/28R. The 60 DNL of the Future (2029) Noise Contour extends approximately 3.47 miles beyond the east end of Runway 10R/28L and extends approximately 2.93 miles beyond Runway 10L/28R. The 70 and 75 DNL of the Future (2029) Noise Contour remain over airport property.

In accordance with Federal Policy, the 65 DNL is the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) are considered significantly impacted. Below the 65 DNL, all land uses are determined to be compatible for Part 150 noise compatibility planning purposes.

Exhibit 3-2 Future (2029) Baseline Noise Contour



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3.4 Baseline Noise Contour Incompatibilities

Identifying and evaluating all land uses within the airport environs is necessary to quantify the number of residential and other noise-sensitive land uses that are impacted by aircraft noise. Chapter Two, *Affected Environment*, and **Appendix D, *Land Use Assessment Methodology***, summarize the land use data collection process. The FAA has created land use compatibility guidelines relating types of land use to airport sound levels. These guidelines are defined in 14 CFR Part 150, Land Use Compatibility with Yearly Day-Night Average Sound Levels. The compatibility table is reproduced in Appendix A, *FAA Policies, Guidance, and Regulations*, of this document (see Table A-1).

These guidelines show the compatibility parameters for residential, public (schools, churches, nursing homes, hospitals, libraries), commercial, manufacturing and production, and recreational land uses. All land uses exposed to noise levels below the 65 DNL noise contour are generally considered compatible with airport operations. Information about land uses within the 60-65 DNL noise contour band is shown for informational purposes only.[30]

Summaries of the residential population, housing units, and noise-sensitive facilities affected by noise level for the Existing (2024) and Future (2029) Baseline noise contours are provided in **Table 3-3** and **Table 3-4**. A summary of land uses within the Existing (2024) and Future (2029) Baseline is provided in **Table 3-5**. These tables show the number of housing units within each noise contour band (e.g. 60-65 DNL, 65-70 DNL) by jurisdiction. The tables also present the current mitigation status of each housing unit. Some housing units have been previously sound insulated, or the owner granted an avigation easement for the property, in which cases the housing unit is considered to be mitigated. Unmitigated housing units include those that are not within the sound insulation program boundary and are not previously mitigated, and housing units that were potentially eligible but not sound insulated. Housing units that were potentially eligible but not sound insulated include those in which the owners declined or did not respond to an offer to sound insulate the housing unit, or housing units that were tested and determined to already achieve the acceptable level of sound attenuation.

There are no housing units, schools, places of worship, libraries, hospitals, or nursing homes located within the 65+ DNL of the Existing (2024) Baseline noise contour. There are approximately 1,762 housing units; an estimated 3,207 residents, ten churches / places of worship, and five schools / educational facilities within the 60-65 DNL of the Existing (2024) Baseline noise contour. All land uses below 65 DNL are considered compatible for Part 150 purposes and are presented here for informational purposes only.

There are no housing units, schools, places of worship, libraries, hospitals, or nursing homes located within the 65+ DNL of the Future (2029) Baseline noise contour.

There are approximately 2,613 housing units; an estimated 4,756 residents, 11 churches / places of worship and six schools / educational facilities within the 60-65 DNL of the Future (2029) Baseline noise contour. All land uses below 65 DNL are considered compatible for Part 150 purposes and are presented here for informational purposes only.

[30] In accordance with Federal Policy, the 65 DNL is the noise level in which noise-sensitive land uses (residences, churches, schools, libraries, and nursing homes) are considered significantly impacted. Below the 65 DNL, all land uses are determined to be compatible for Part 150 noise compatibility planning purposes.

Table 3-3 Existing (2024) Baseline Housing, Population, and Noise-Sensitive Facility Incompatibilities

Jurisdiction	60-65 DNL	65-70 DNL	70-75 DNL	75+ DNL	65+ DNL
Housing Counts					
Columbus	1,512	0	0	0	0
Gahanna	68	0	0	0	0
Jefferson Township	133	0	0	0	0
Mifflin Township	49	0	0	0	0
Total	**1,762**	**0**	**0**	**0**	**0**
Population					
Columbus	2,752	0	0	0	0
Gahanna	124	0	0	0	0
Jefferson Township	242	0	0	0	0
Mifflin Township	89	0	0	0	0
Total	**3,207**	**0**	**0**	**0**	**0**
Noise-Sensitive Facilities					
Schools / Daycares	5	0	0	0	0
Churches	10	0	0	0	0

Notes:

* In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The counts of land uses within the 60-65 DNL noise contour are shown for informational purposes only.

Noise contours were generated using the FAA's AEDT, Version 3f computer model.

Population numbers are estimated based on the housing counts multiplied by the average household size by Block Group from the U.S. Census Bureau 2022 American Community Survey (ACS) data.

Source: Landrum & Brown, 2024.

Table 3-4 Future (2029) Baseline Housing, Population, and Noise-Sensitive Facility Incompatibilities

Jurisdiction	60-65 DNL	65-70 DNL	70-75 DNL	75+ DNL	65+ DNL
Housing Counts					
Columbus	2,247	0	0	0	0
Gahanna	184	0	0	0	0
Jefferson Township	133	0	0	0	0
Mifflin Township	49	0	0	0	0
Total	**2,613**	**0**	**0**	**0**	**0**
Population					
Columbus	4,090	0	0	0	0
Gahanna	335	0	0	0	0
Jefferson Township	242	0	0	0	0
Mifflin Township	89	0	0	0	0
Total	**4,756**	**0**	**0**	**0**	**0**
Noise-Sensitive Facilities					
Schools / Daycares	6	0	0	0	0
Churches	11	0	0	0	0

Notes:

* In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The counts of land uses within the 60-65 DNL noise contour are shown for informational purposes only.

Noise contours were generated using the FAA's AEDT, Version 3f computer model.

Population numbers are estimated based on the housing counts multiplied by the average household size by Block Group from the U.S. Census Bureau 2022 American Community Survey (ACS) data.

Source: Landrum & Brown, 2024.

Table 3-5 Existing (2024) Baseline versus Future (2029) Baseline Housing, Population, and Noise-Sensitive Facility Incompatibilities

Category	Existing (2024) Baseline	Future (2029) Baseline
Housing Units		
60 – 65 DNL*	1,762	2,613
65 – 70 DNL	0	0
70 – 75 DNL	0	0
75+ DNL	0	0
65+ DNL	0	0
Population		
60 – 65 DNL*	4,207	4,756
65 – 70 DNL	0	0
70 – 75 DNL	0	0
75+ DNL	0	0
65+ DNL	0	0
Noise-Sensitive Facilities (Churches, Schools, Libraries, and Nursing Homes)		
60 – 65 DNL*	15	17
65 – 70 DNL	0	0
70 – 75 DNL	0	0
75+ DNL	0	0
65+ DNL	0	0

Notes:

* In accordance with 14 CFR Part 150 Land Use Compatibility Guidelines, all land uses are compatible with noise levels below 65 DNL. The counts of land uses within the 60-65 DNL noise contour are shown for informational purposes only.

Noise contours were generated using the FAA's AEDT, Version 3f computer model.

Population numbers are estimated based on the housing counts multiplied by the average household size by Block Group from the U.S. Census Bureau 2022 American Community Survey (ACS) data.

Source: Landrum & Brown, 2024.

Chapter 4 Noise Compatibility Program

The culmination of the 14 Code of Federal Regulations (CFR) Part 150 planning process is the development of a set of measures designed to enhance the compatibility between an airport and its surrounding environs. This chapter presents previous measures from the 2007 Part 150 program that are either being continued as is, continued with modifications, or are being withdrawn. Collectively these measures are referred to as the 2024 Noise Compatibility Program (2024 NCP). These include noise abatement, land use mitigation, and program management measures designed to reduce or mitigate the impact of aircraft noise upon the surrounding community.

4.1 Noise Compatibility Program Measures

The NCP measures recommended for implementation for the John Glenn Columbus International Airport (CMH or Airport) have resulted from the planning process described throughout this document. **Appendix E, *Noise Abatement Alternatives***, and **Appendix F, *Land Use Alternatives***, include a list of all alternatives assessed for this 2024 NCP. **Appendix G, *Public Involvement***, contains meeting materials and summaries of the Technical Advisory Committee (TAC) meetings and public meetings, that included discussion of NCP measures.

The NCP measures are presented as a series of “plates” that summarize pertinent information required about each of the measures by 14 CFR Part 150 guidance. This information includes:

- A description and the background and intent of the measure
- The anticipated effect on land use compatibility
- The party (or parties) responsible for implementation
- The steps necessary for implementation, the anticipated cost, and the projected timing of implementation
- The relationship to other planning programs and other measures

Where helpful for clarification, an exhibit associated with the measure is provided. **Table 4-1** summarizes the measures included in 2024 NCP for CMH.

Following the plates for individual program measures is an exhibit future NEM/NCP Noise Exposure Contour, as well as a description of the population, housing, and noise-sensitive land use impacts associated with its full implementation by the year 2029. The final section of this chapter summarizes the anticipated costs of implementing the 2024 NCP and provides an implementation schedule for the program. As discussed previously, the approval of the recommended measures in the 2024 NCP by the Federal Aviation Administration (FAA) does not commit the FAA or the Columbus Regional Airport Authority (CRAA) to the costs or the implementation schedule listed in this document. This information is provided here as a planning tool to assist the implementation of the NCP.

Implementation of the noise abatement, corrective land use, and program management measures is at the discretion of the CRAA and subject to available funding from both the FAA and CRAA. Implementation of the preventive land use measures is solely at the discretion of local governments and other local agencies.

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Table 4-1 2024 Noise Compatibility Program Recommendations

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Noise Abatement Recommendations					
NA-1: Amend the CMH Nighttime Aircraft Maintenance Run-Up Policy to designate an additional run-up location north of the airfield for the relocation of the NetJets' facility. This measure will provide attenuation of jet engine maintenance run-ups for adjacent residential areas located north of the Airport.	CRAA	None	None	None	Implemented – Run-ups are performed at the NetJets facility.
NA-2: Construct a new run-up barrier at the north airfield, if the NetJets building does not adequately attenuate jet engine maintenance run-up noise for adjacent residential areas located north of the Airport.	CRAA	None	None	None	Implemented – A run-up barrier is used at the NetJets facility.
NA-3: Increase nighttime use of Runway 10L/28R and amend FAA Tower Order CMH ATCT 7110.1 to read as follows: Unless wind, weather, runway closure, or loss of NAVAIDS dictate otherwise, between the hours of 10:00 p.m. and 8:00 a.m. local time, Runways 28L or 10R are assigned jet aircraft; jet aircraft with Stage 3 engines may use Runway 10L/28R for arrival operations between the hours of 10:00 p.m. and 1:00 a.m., local time; and jet aircraft with Stage 3 engines may use Runway 10L or 28R after 6:00 a.m.	CRAA, FAA	Minimal costs for staff time to periodically review the implementation of this measure.	None	None	This measure is partially implemented. The current Tower Order (CMH 7110.1L) includes a provision that unless wind, weather, runway closures, or loss of NAVAIDS dictate otherwise, Runway 10L/28R is a noise-sensitive runway. All arriving and departing aircraft must request Runway 10L/28R with an operational need between the hours of 10:00pm and 6:00am.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Noise Abatement Recommendations *(continued)*					
NA-4: Maximize east flow and amend FAA Tower order CMH ATCT 7110.1b and the Airport Facilities Directory to reflect implementation of the "east flow" informal preferential runway use system.	CRAA, FAA	Minimal costs for staff time to periodically review the implementation of this measure.	None	None	Partially implemented. Complex conditions at the Airport such as winds, flow control policies at destination airports, and taxi times have limited the use of this measure.
NA-5: previously withdrawn	n/a	n/a	n/a	n/a	n/a
NA-6: Implement a 15-degree divergent turn off of Runway 28R, after crossing the runway end to a 295-degree heading, only during peak operating periods when traffic warrants.	CRAA, FAA	Minimal costs for staff time to periodically review the implementation of this measure.	None	None	Implemented – This measure is used when traffic conditions warrant.
NA-7: Create performance-based overlay procedures for all existing and proposed arrival/departure procedures. (RNAV/RNP/GPS/CDA)	FAA, Aircraft Operators	Minimal cost for staff time to monitor the implementation of this measure.	None	Minimal cost for training and publication of materials for pilot awareness	Partially implemented – The FAA implemented PBN arrival procedures at CMH in September 2021.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Noise Abatement Recommendations *(continued)*					
NA-8: Construct a noise berm/wall – Withdraw Measure	CRAA	None	None	None	Not Implemented - This measure was considered for the acquisition area along East 13th Avenue as mitigation for the runway relocation. Further investigation and surveys of property owners determined that a noise berm in the location was not desirable. Therefore, this measure is recommended to be withdrawn.
NA-9: Replacement and potential relocation of Ground Run-up Barrier B (location/materials/size).	CRAA (if the need for an upgraded barrier arises)	None	None	None	Not Implemented – Potential replacement and relocation of the Ground Run-Up Barrier B was proposed to accommodate larger aircraft associated with potential new maintenance hangars proposed for the southeast airfield at CMH. The proposed maintenance hangars were not constructed. Therefore, an upgrade to Barrier B was not pursued.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Land Use Recommendations					
LU-1: Offer a program for noise insulation of noncompatible structures for noncompatible residences within the 65+ DNL contour of the Future (2012) Noise Compatibility Program (NCP) condition, in exchange for an avigation easement.	CRAA (no properties have been identified as currently eligible for this program)	None	None	None	Implemented. All homes eligible for sound insulation based on the 2007 NEM/NCP Update Study, have been sound insulated or have been offered sound insulation and the owner(s) declined or did not respond to the offer.
LU-2: Offer a program for noise insulation of noncompatible structures for noncompatible churches within the 65+ DNL contour of the Future (2012) Noise Compatibility Program (NCP) condition in exchange for an avigation easement.	CRAA (no properties have been identified as currently eligible for this program)	None	None	None	One church, the Wonderland Community Church, was identified within the 65 DNL of the 2002 Part 150 Noise Compatibility Study. The CRAA purchased an avigation easement on the property and it is now considered a compatible land use. One other church, the Mount Judia Church, was contacted for potential inclusion in the program and did not respond. No other churches were identified within the 65+ DNL contour of the Future (2012) NEM/NCP Noise Exposure Contour.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Land Use Recommendations *(continued)*					
LU-3: Seek cooperation from the City of Columbus and Franklin County to amend their land use compatibility standards to achieve the level of compatibility identified in the recommended land use compatibility guidelines.	City of Columbus, Franklin County, and CRAA	Minimal	Minimal	None	Partially implemented. Both the City of Columbus and Franklin County have adopted land use development standards similar to what was recommended in the previous NCP. However, in some cases these standards are not as strict as was recommended.
LU-4: Seek cooperation from the City of Columbus and Franklin County to amend the boundaries of the Airport Environs Overlay (AEO) district to reflect the proposed Airport Land Use Management District (ALUMD).	City of Columbus, Franklin County, and CRAA	Minimal	Minimal	None	Not implemented - Both Columbus and Franklin County set the AEO boundary at the 65 DNL contour.
LU-5: Seek cooperation from Franklin County, the City of Gahanna, and Jefferson Township to amend each jurisdiction's zoning resolution to require applicants for rezoning, change of use, or special use permit to convey an avigation easement to the appropriate airport.	Franklin County and CRAA	Minimal	Minimal	None	Partially implemented - Section 660.07 of the Franklin County Zoning Resolution requires conveyance of avigation easements for variance or conditional use permits only.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Land Use Recommendations *(continued)*					
LU-6: Seek cooperation from Jefferson Township and the City of Gahanna to adopt the proposed Airport Land Use Management District (ALUMD) as part of their official zoning regulations.	Jefferson Township, City of Gahanna, and CRAA	Minimal	Minimal	None	Not implemented - Coordination with local jurisdictions has occurred; however, zoning regulations have not been updated.
LU-7: Seek cooperation from Franklin County, Jefferson Township, and the City of Gahanna to adopt subdivision codes applicable to the proposed Airport Land Use Management District (ALUMD).	Franklin County, Jefferson Township, City of Gahanna, and CRAA	Minimal	Minimal	None	Not implemented – Coordination with local jurisdictions has occurred; however, only Franklin County has updated its subdivision regulations Section 307.03 (M)
LU-8: Seek cooperation from Franklin County, Jefferson Township, and the City of Gahanna to adopt building codes applicable to the proposed Airport Land Use Management District (ALUMD).	Franklin County, Jefferson Township, City of Gahanna, and CRAA	Minimal	Minimal	None	Not implemented – Coordination with local jurisdictions has occurred; however, building codes have not been updated.
LU-9: Seek cooperation from the board of realtors to participate in a fair disclosure program for property located within the proposed Airport Land Use Management District (ALUMD).	Columbus Area Board of Realtors and Homebuilders Association.	Approximately $10,000 for outside consulting assistance	None	None	Coordination has occurred; however, local jurisdictions elected not to amend their ordinances to include the ALUMD. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Land Use Recommendations *(continued)*					
LU-10: Periodically place advertisements in a variety of media outlets delineating the boundaries of the Airport Land Use Management District (ALUMD).	CRAA	Approximately $10,000 annually	None	None	Not implemented – The ALUMD has not been adopted. The CRAA makes the noise exposure maps and other noise compatibility information available on its website.
LU-11: previously withdrawn	n/a	n/a	n/a	n/a	n/a
LU-12: Develop an Airport Land Use Management District (ALUMD) based on the 2023 Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, natural geographic and jurisdictional boundaries.	Franklin County, Jefferson Township, City of Gahanna, City of Columbus, Bexley, Whitehall, Reynoldsburg, Truro Township, MORPC, and CRAA	Approximately $55,000 for outside consulting assistance	Minimal	None	Not implemented – The intent of this measure was to eliminate changing boundaries set by the current noise exposure contours and establish a fixed boundary for consistency. The suggested fixed boundary was not implemented. The City of Columbus and Franklin County continue to apply an Airport Environs Overlay Zone, the boundaries of which correspond to the noise exposure contour from the previous Part 150 Noise Compatibility Study Update which is subject to periodic review and potential revision.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Program Management Recommendations					
PM-1: Maintain the noise abatement elements of the FAA ATCT Tower Order	FAA	None	None	None	Implemented – The noise abatement elements are contained in the current Tower Order
PM-2: Maintain the Noise Management Office for noise compatibility program management	CRAA	Cost for staff time	None	None	Ongoing – The CRAA continues to address noise complaints through the operations department to minimize the noise impact of CMH.
PM-3: Maintain an ongoing public involvement program regarding the noise compatibility program	CRAA	Minimal cost for staff time	None	None	Ongoing – The CRAA maintains public involvement activities, including the 24-hour noise hotline, WebTrak tracking system, and noise monitoring system.

Table 4-1 2024 Noise Compatibility Program Recommendations, *(continued)*

Measure	Responsible Party	Cost to Airport	Cost to Local Governments	Cost to Users	Implementation Status
Program Management Recommendations *(continued)*					
PM-4: Maintain the noise and flight track monitoring system and expand and upgrade the system as necessary.	CRAA	Minimal cost for staff time	None	None	Implemented - In 2014, four additional permanent noise monitors (NMTs) were installed. The other existing 12 NMTs were upgraded with newer equipment. The CRAA continues to monitor the operation of the system and receives ongoing software updates.
PM-5: Routinely update the noise contours and periodically update the noise program	CRAA, FAA	NEMs ($500,000) NEMs and NCP ($1,500,000)	None	None	Ongoing – this 2024 NCP update represents the continuation of this measure. CRAA will continue to monitor and provide for periodic updates.
PM-6: Establish a land use compatibility task force which meets periodically to discuss issues relevant to airport noise compatibility planning	CRAA	Cost for staff time (dependent upon frequency of meetings)	None	None	Previously implemented but no longer active. Could be reestablished if determined to be necessary.

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Noise Compatibility Program Measure: NA-1

Exhibit: 4-1

Description: Amend the CMH Nighttime Aircraft Maintenance Run-Up Policy to designate an additional run-up location north of the airfield for the NetJets' facility. This measure will provide attenuation of jet engine maintenance run-ups for adjacent residential areas located north of the Airport.

Background and Intent: Approved Measure NA-1 was recommended due to NetJets' (formerly Executive Jet Aviation) relocation from the southeast side of the airfield to 1,000 feet north of the centerline of Runway 10L/28R. NetJets' primary location for performing engine maintenance run-ups was on the southeast corner of the airfield (Barrier B). The relocation to the north side of the airfield no longer made this location convenient. An additional run-up location was identified on the north airfield. Therefore, it was recommended that the CMH Nighttime Aircraft Maintenance Run-Up Policy be amended to include this location as an approved location for nighttime run-ups. Originally, it was recommended that aircraft be positioned in a way such that the existing hangar complex would provide noise attenuation. Since then, a run-up barrier was constructed on the southwest side of the NetJets ramp (as recommended in Measure NA-2) and the CMH Nighttime Aircraft Maintenance Run-Up Policy was amended to include this run-up barrier.

Relationship to 2007 NCP: Continues approved measure NA-1 of 2007 Part 150 Noise Compatibility Program (NCP) with modifications to include the use of the new run-up barrier.

Land Use Compatibility Improvement: Provides for noise reduction associated with ground run-up activity.

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: No additional costs.

Schedule: This measure is currently implemented.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: NA-2

Exhibit: 4-1

Description: Construct a new run-up barrier at the north airfield, if the NetJets building does not adequately attenuate jet engine maintenance run-up noise for adjacent residential areas located north of the Airport.

Background and Intent: Approved Measure NA-2 was recommended due to NetJets' (formerly Executive Jet Aviation) relocation from the southeast side of the airfield to 1,000 feet north of the centerline of Runway 10L/28R. NetJets primary location for performing engine maintenance run-ups was on the southeast corner of the airfield (Barrier B). The relocation to the north side of the airfield no longer made this location convenient. An additional run-up location was identified on the north airfield (NA-1) and eventually a run-up barrier was recommended (Barrier C). The barrier was constructed and is currently in use.

Relationship to 2007 NCP: Completed measure NA-2 from the 2007 Part 150 NCP.

Land Use Compatibility Improvement: Provides for noise reduction associated with ground run-up activity.

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

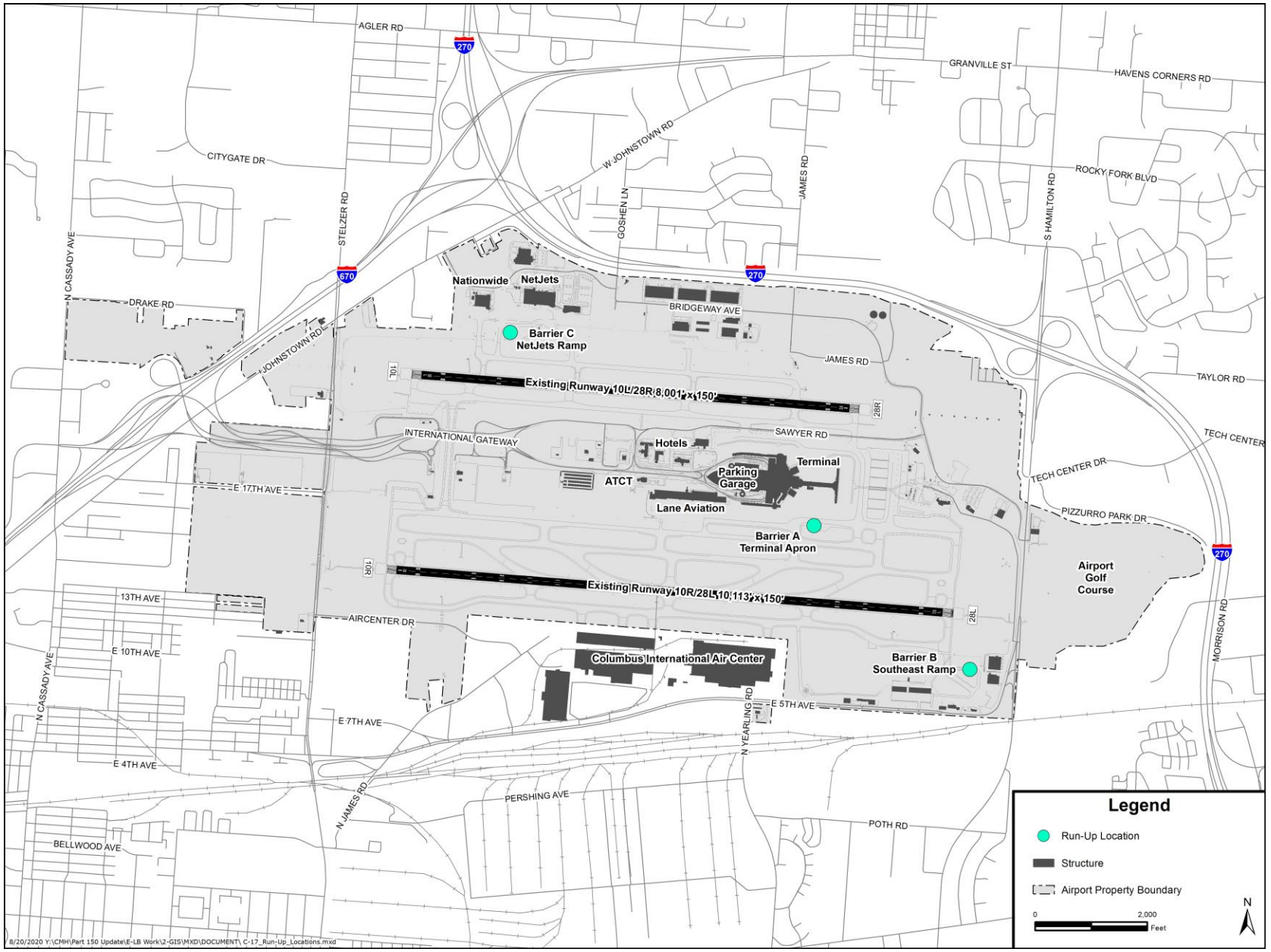
Steps: No additional steps.

Costs: No additional costs.

Schedule: This measure is complete

Effects on Other Programs/Measures: Measure NA-1 recommended modification to the CMH Nighttime Aircraft Maintenance Run-Up Policy to include use of the existing NetJets building for sound attenuation from run-ups. Once the new run-up barrier was complete, the CMH Nighttime Aircraft Maintenance Run-Up Policy was modified to include the new run-up barrier as an approved location for nighttime run-ups. This measure is not expected to impact any other measures or existing programs.

Exhibit 4-1 Aircraft Engine Run-Up Locations



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Noise Compatibility Program Measure: NA-3

Exhibit: N/A

Description: Increase nighttime use of Runway 10L/28R and amend FAA Tower Order CMH ATCT 7110.1 to read as follows: Unless wind, weather, runway closure, or loss of NAVAIDS dictate otherwise, between the hours of 10:00 p.m. and 8:00 a.m. local time, Runways 28L or 10R are assigned jet aircraft; jet aircraft with Stage 3 engines may use Runway 10L/28R for arrival operations between the hours of 10:00 p.m. and 1:00 a.m., local time; and jet aircraft with Stage 3 engines may use Runway 10L or 28R after 6:00 a.m.

Background and Intent: Approved Measure NA-3 implemented air traffic procedures which were designed to keep the noisiest aircraft on the south runway (Runway 10R/28L) during the nighttime, while providing flexibility to FAA ATCT to assign aircraft to the north runway (Runway 10L/28R) for operational efficiency. This measure has been implemented with modifications. The Tower Order reads as follow:

The following shall be utilized between the hours of 2200-0600 local time: Unless wind, weather, runway closures, or loss of NAVAIDS dictate otherwise, Runways 28R or 10L is a noise sensitive runway. All arriving and departing aircraft must request (Runway) 10L/28R with an operational need. Noise sensitive procedures are not applicable to emergency situations or if no other runway is available.

These procedures continue to guide the Airport's nighttime noise abatement initiatives.

Relationship to 2007 NCP: Continues approved measure NA-3 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Focuses nighttime activity over the most compatible areas around the Airport.

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA) and FAA Airport Air Traffic Control Tower (ATCT).

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: No additional costs.

Schedule: The program has been initiated and will continue without interruption

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: NA-4

Exhibit: N/A

Description: Maximize east flow and amend FAA Tower order CMH ATCT 7110.1b and the Airport Facilities Directory to reflect implementation of the "east flow" informal preferential runway use system.

Background and Intent: Approved measure NA-4 identified east flow as the preferred flow during calm winds due to land use patterns being more compatible to the east of the Airport. Currently, the Airport operates in east flow approximately 25 percent of the time in an average year depending upon seasonal wind conditions. This percentage is lower than what would be anticipated given historical weather data. This is due to airline scheduling and airfield layout. The CRAA continues to promote the use of east flow as often as possible.

Relationship to 2007 NCP: Continues approved measure NA-4 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Renewing efforts to maximize east flow will reduce noise-sensitive land use impacts.

Responsible Implementing Parties: Columbus Regional Airport Authority (CRAA) and FAA Airport Air Traffic Control Tower.

Implementation Steps, Costs, and Phasing:

Steps: CRAA will work to identify ways to increase the use of east flow and will continue to reach out for FAA ATCT and airline cooperation.

Costs: Minimal cost for staff time to review compliance with the measure and coordinate with FAA ATCT and airlines

Schedule: The program has been initiated and will continue without interruption.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: NA-6

Exhibit: 4-2

Description: Implement a 15-degree divergent turn off of Runway 28R, after crossing the runway end to a 295-degree heading, only during peak operating periods when traffic warrants.

Background and Intent: Current procedures instruct jet aircraft to fly runway heading until reaching five miles or 3,500 feet MSL. A divergent turn is a turn of at least 15 degrees from the typical departure path that allows departing aircraft to maintain separation from other aircraft in the air. During the 2007 Part 150 Study, FAA ATCT requested this additional departure headings in order to increase capacity and reduce delays during peak periods. In response to this request, a number of divergent departure headings off of each runway end were assessed for their ability to also reduce noise impacts. This measure includes a 15-degree right turn off of Runway 28R. It was recognized that this turn would only be used when air traffic warrants the need for an additional heading. This procedure was approved by the FAA in the 2007 Part 150 Study Record of Approval and was environmentally cleared in accordance with the National Environmental Policy Act (NEPA) in the 2009 Record of Decision (ROD) for the Environmental Impact Statement (EIS) for the Replacement Runway 10R/28L and Associated Development. This measure is implemented by FAA ATCT on an as-needed basis.

Relationship to 2007 NCP: This procedure reduces the number of homes within the 65 DNL and would reduce overflights of areas outside the 65 DNL along the Runway 28R centerline.

Land Use Compatibility Improvement: Performance based procedures have the potential to reduce noise levels for homes located near the Airport (within the 65 DNL) and for those homes located farther from the Airport (outside of the 65 DNL).

Responsible Implementing Parties: FAA

Implementation Steps, Costs, and Phasing:

Steps: n/a

Costs: n/a

Schedule: n/a

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

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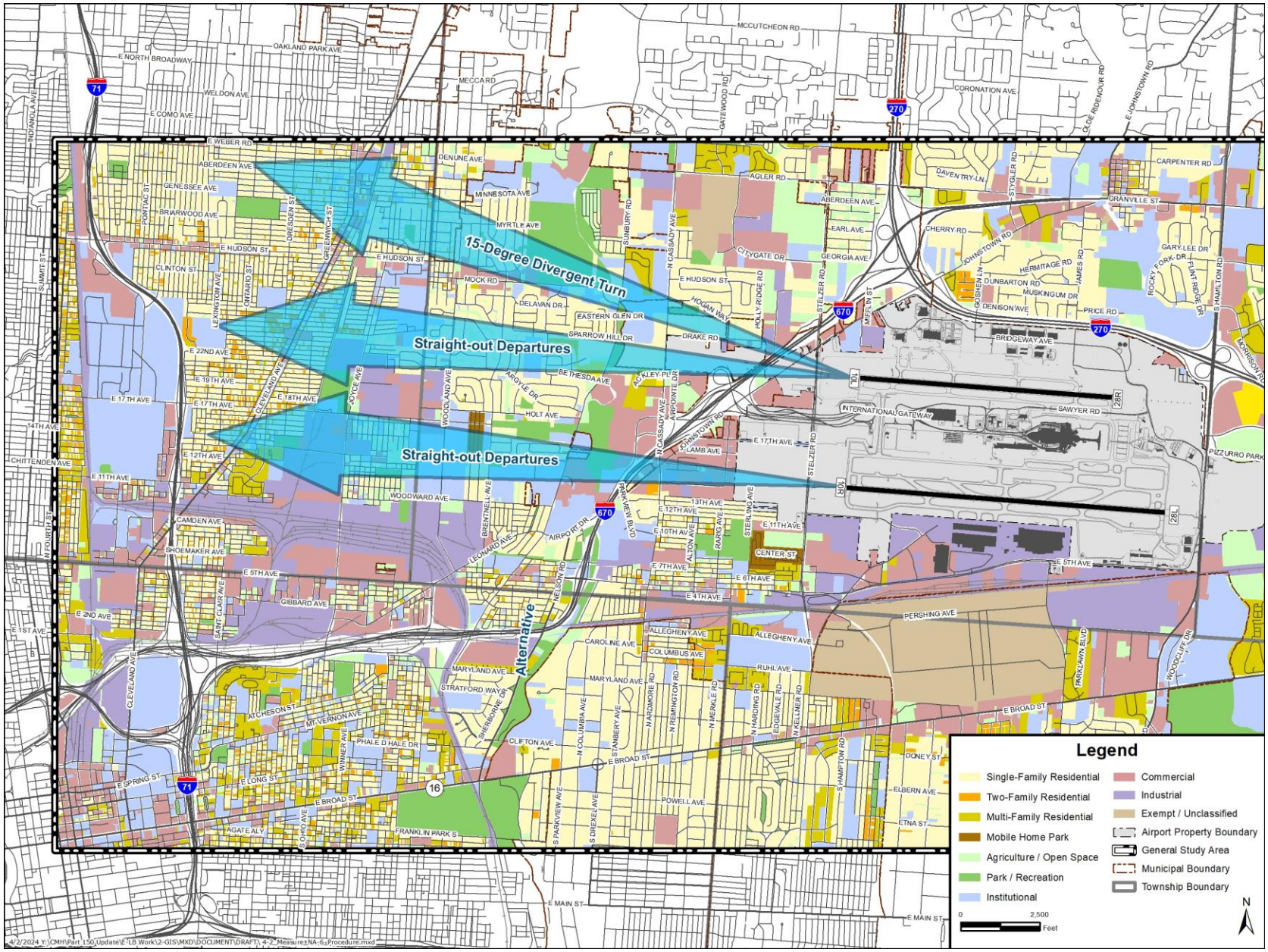
Exhibit 4-2 Measure NA-6 Flight Procedure



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Noise Compatibility Program Measure: NA-7

Exhibit: N/A

Description: Create performance based overlay procedures for all existing and proposed arrival/departure procedures. (RNAV/RNP/GPS/OPD)

Background and Intent: The FAA is modernizing the national airspace system at airports across the country by implementing a satellite-enabled navigation system and utilizing new Performance Based Navigation (PBN) technologies, such as Area Navigation (RNAV) and Required Navigation Performance (RNP), to assist in defining flight routes. RNAV/RNP procedures utilize ground-based Differential Global Positioning System (DGPS antenna); satellite-based, Global Positioning System (GPS); and on-board Flight Management System (FMS)/GPS equipment to assist the pilot in navigating from point to point. The systems work by identifying the geographic location of aircraft in relationship to another geographic location called a "waypoint." This provides the necessary information to guide the aircraft towards the desired "waypoint." With GPS, the pilot manually guides the aircraft towards the "waypoint," while an FMS works with the auto-pilot system on the aircraft to automatically fly the aircraft towards the desired "waypoint." In both cases, the use of GPS/FMS can reduce the width and size of departure corridors over standard navigation techniques. The advantage of FMS is that it can more accurately guide the aircraft towards the desired point than can the GPS/pilot system. Aircraft must be equipped with the necessary equipment to fly RNAV/FMS procedures. For RNP procedures, a specific equipment rating is applied to the procedure to ensure that aircraft are able to maintain the intended routes.

In addition, an Optimized Profile Descent (OPD), formerly referred to as a Continuous Descent Approach (CDA), procedure combines the benefits of a steady, continuous descent with optimized flap and landing gear management to create a quieter approach for noise-sensitive communities under the approach path. Current Air Traffic Control Tower (ATCT) procedures involve a series of short descents and periods of leveling off that require adjusting thrust or changing flap settings, before merging with the required three-degree glideslope for the final approach. The CDA procedure involves starting a continuous steady descent from as high as enroute altitudes (25,000-35,000 feet), which allows for a reduction in the required amount of power, thereby reducing noise exposure in two ways: by keeping the aircraft at a higher altitude above the ground; and by stabilizing the flap settings, which reduces airframe noise, and amount of applied thrust.

The FAA implemented Performance Based Navigation (PBN) arrival procedures at CMH in September 2021.

Relationship to 2007 NCP: Continues approved measure NA-7 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Performance based procedures have the potential to reduce noise levels for homes located near the Airport (within the 65 DNL) and for those homes located farther from the Airport (outside of the 65 DNL).

Responsible Implementing Parties: FAA
Implementation Steps, Costs, and Phasing:

Steps: The study of RNP procedures is being implemented independently by the FAA. CRAA continues to be involved in monitoring the review and implementation process.

Costs: The study of RNP procedures is being implemented independently by the FAA.

Schedule: The FAA implemented Performance Based Navigation (PBN) arrival procedures at CMH in September 2021.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: NA-8

Exhibit: N/A

Description: Withdraw measure to Construct a noise berm/wall on airport property along East 13th Avenue.

Background and Intent: In 2013 the CRAA completed construction of the relocated Runway 10R/28L, which was relocated 702 feet to the south of the old runway alignment runway. The FAA conducted an Environmental Impact Statement (EIS) to assess the impacts of the proposed project. As part of that EIS process, 35 homes on the north side of 13th Avenue in East Columbus were identified for removal to meet airport design standards. The homes were located within the relocated Runway Protection Zone (RPZ), which is an area around a runway that is required to be void of tall objects or places in which humans may congregate. The homes were purchased and the residents were relocated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act. During the EIS and 2007 Part 150 Study, the CRAA and FAA took into consideration effects of the removal of the 35 homes and relocation of the runway would have on the remaining homes in the area. In order to address this, the CRAA and FAA recommended a noise berm/wall be constructed to the north of 13th Avenue to help reduce noise and to minimize the visual impact of the removed homes. However, further investigation and surveys of property owners determined that a noise berm in the proposed location was not desirable. Therefore, this measure was not implemented and is being withdrawn from this NCP Update.

Relationship to 2007 NCP: Withdraws approved measure NA-8 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: n/a

Responsible Implementing Parties: n/a

Implementation Steps, Costs, and Phasing:

Steps: n/a

Costs: n/a

Schedule: n/a

Effects on Other Programs/Measures: n/a

Noise Compatibility Program Measure: NA-9

Exhibit: N/A

Description: Replacement and potential relocation of Ground Run-up Barrier B (location/materials/size).

Background and Intent: Run-up barriers are constructed to reduce noise impacts associated with run-up operations. They are typically installed at airports with heavy maintenance facilities and large numbers of complaints related to run-up operations.

The Airport currently has three ground run-up barriers at CMH. Barrier A (located to the south of Concourse B), Barrier B (located north of the southeast end of Taxiway G), and Barrier C (located on the north airfield north of Runway 10L/28R). An assessment of these barriers was conducted which found that Barriers A and C are properly sized and located for the types of operations they serve. That study identified the potential need to relocate and/or expanded Barrier B to accommodate larger aircraft that would be associated with a potential maintenance hangar that was proposed for the southeast side of the airfield at CMH. Currently Barrier B can accommodate up to Design Group C-II aircraft. It was recommended to upgrade Barrier B to accommodate larger aircraft (i.e.: Airbus A-319, B-737), and relocate or construct a new barrier if the existing barrier could not be expanded beyond its existing capacity. However, the proposed new maintenance hangar was never constructed and aircraft larger than Design Group C-II can use Barrier A. Therefore, no changes were made to Barrier B. This measure is recommended to be continued in the event a larger run-up barrier is ever needed in this location. However, a cost and implementation schedule are not needed at this time.

Relationship to 2007 NCP: Continues approved measure NA-9 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Upgrading the barrier will help to continue the noise reduction it provides today if it is needed to accommodate larger aircraft.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: n/a

Costs: n/a

Schedule: n/a

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: LU-1

Exhibit: 4-3

Description: Offer a program for noise insulation of noncompatible structures for noncompatible residences within the 65+ DNL contour of the Future (2029) Noise Compatibility Program (NCP) condition, in exchange for an avigation easement.

Background and Intent: The CRAA has sound insulated nearly 800 housing units as part of its residential sound insulation program. The 2007 NCP recommended sound insulating eligible housing units that were located within the 65 DNL of the 2012 NEM/NCP Noise Exposure Contour. The program also includes housing units that were adjacent to the 65 DNL and would be included in the program to preserve neighborhood continuity. Housing units were tested to determine if interior noise levels met the requirements set forth in the FAA Airport Improvement Program (AIP) Handbook. All homes that participated in the sound insulation program were required to confer an avigation easement to the CRAA in exchange for the improvements.

This modification to the measure would revise the sound insulation program boundary to be based on the 65 DNL of the Future (2029) Noise Compatibility Program (NCP) Noise Exposure Contour as shown in **Exhibit 4-3**. There are no housing units located within the 65+ DNL of the Future (2029) NEM/NCP Noise Exposure Contour. Therefore, no housing units are recommended for sound insulation at this time. This measure is being continued in the event noise levels increase in the future and land uses would become newly eligible.

Relationship to 2007 NCP: Continues approved measure LU-1 of 2007 Part 150 NCP, revised based on the 65 DNL noise contour for the Future (2029) NCP Noise Exposure Contour.

Land Use Compatibility Improvement: No new housing units are located within the 65 DNL of the Future (2029) NCP Noise Exposure Contour.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

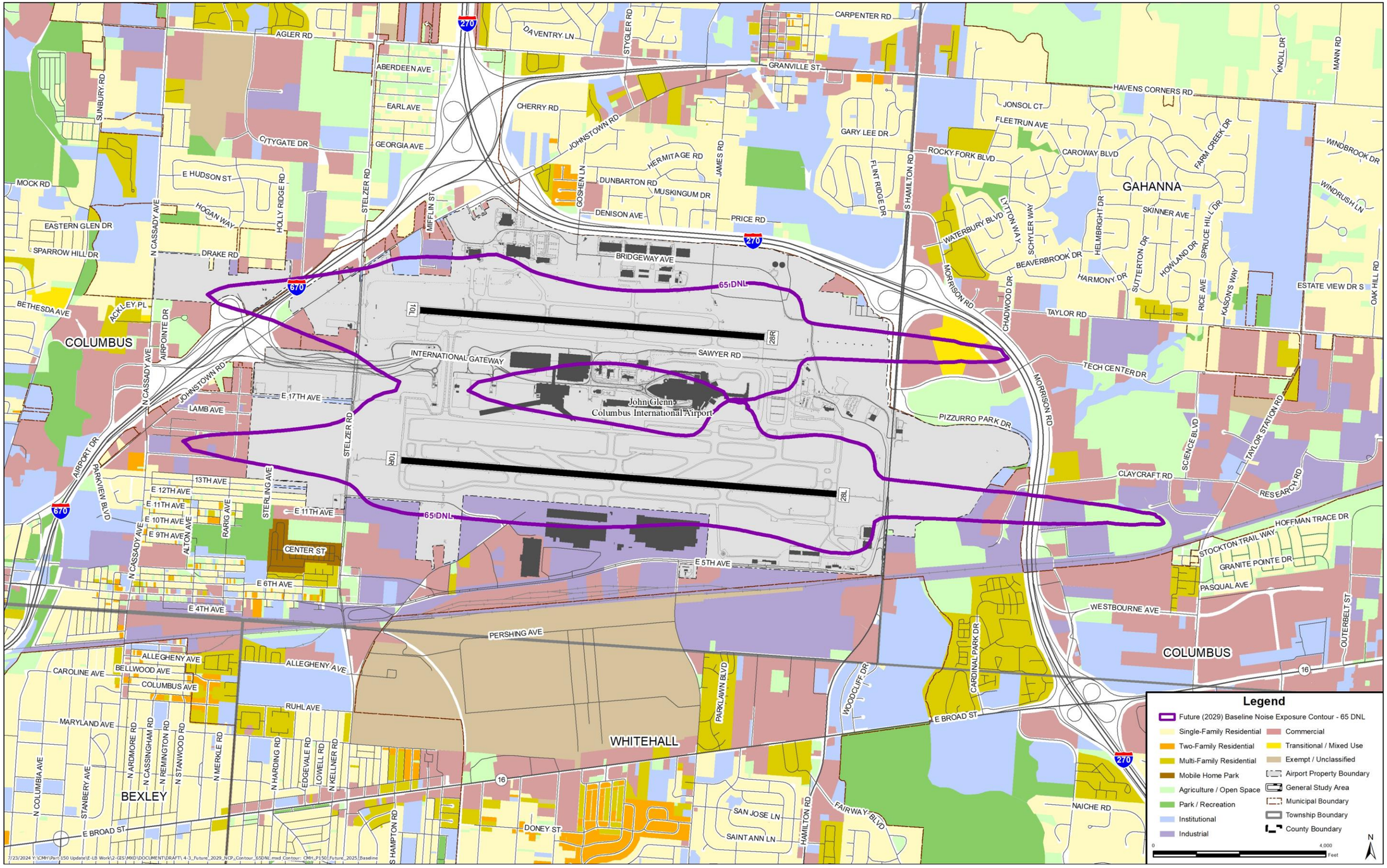
Steps: No eligible residences are located in the 65+ DNL of the Future (2029) NCP therefore no steps are needed at this time

Costs: n/a

Schedule: n/a

Effects on Other Programs/Measures: The implementation of this measure is not expected to adversely affect any other mitigation program measures.

Exhibit 4-3 Future (2029) Noise Exposure Contour – 65 DNL



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Noise Compatibility Program Measure: LU-2

Exhibit: 4-3

Description: Offer a program for noise insulation of noncompatible structures for noncompatible churches within the 65+ DNL contour of the Future (2029) Noise Compatibility Program (NCP) condition in exchange for an avigation easement.

Background and Intent: As part of the 1999 Part 150 Update two churches were identified within the 65 DNL of the Future (2003) Noise Exposure Contour: Mount Judia Church of Old Regular Baptists of Jesus Christ and Wonderland Community Church. The Mount Judia Church of Old Regular Baptists of Jesus Christ was contacted and advised that required paper work would need to be submitted to the IRS to confirm their church status with the IRS. To date, the CRAA has not heard back from the church that the paperwork has been filed. The church would not be located in the 65 DNL of the Future (2029) NCP noise contour. The CRAA currently has an avigation easement on the Wonderland Community Church, making the land use compatible. Neither of these church properties are located within the 65 DNL of the Future (2029) NCP noise contour and no additional churches have been identified within the 65 DNL of the Future (2029) NCP noise contour. This measure is being continued in the event noise levels increase in the future and land uses would become newly eligible.

Relationship to 2007 NCP: Continues approved measure LU-2 of 2007 Part 150 NCP, revised based on the 65 DNL noise contour for the Future (2029) NCP.

Land Use Compatibility Improvement: Continues the CRAA policy of providing sound insulation for churches within a 65 DNL noise contour.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: No churches are located in the 65+ DNL of the Future (2029) NCP therefore no steps are needed at this time.

Costs: None

Schedule: n/a

Effects on Other Programs/Measures: This measure is not expected to adversely affect any other mitigation program measures.

Noise Compatibility Program Measure: LU-3

Exhibit: N/A

Description: Seek cooperation from the City of Columbus and Franklin County to amend their land use compatibility standards to achieve the level of compatibility identified in the recommended land use compatibility guidelines.

Background and Intent: This measure was partially implemented. The recommended guidelines called for restrictions on certain land uses within the Airport Environs Overlay (AEO) sub-district boundaries. In some cases the jurisdictions have adopted the recommendations for land uses within the AEO sub-districts. However, in other cases the guidelines adopted are not as strict as the original recommendation. Coordination between local jurisdictions and the CRAA is ongoing.

Relationship to 2007 NCP: Continues approved measure LU-3 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land used surrounding the Airport.

Responsible Implementing Parties: City of Columbus, Franklin County, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA to continue working with local jurisdictions to achieve compatibility standards that are in accordance with Federal guidelines.

Costs: Minimal cost to the CRAA and local governments.

Schedule: This is an on-going measure that will continue.

Effects on Other Programs/Measures: This measure is not expected to adversely affect any other mitigation program measures.

Noise Compatibility Program Measure: LU-4

Exhibit: N/A

Description: Seek cooperation from the City of Columbus and Franklin County to amend the boundaries of the Airport Environs Overlay (AEO) district to reflect the proposed Airport Land Use Management District (ALUMD).

Background and Intent: This measure was not fully implemented. Both the City of Columbus and Franklin County have an Airport Environs Overlay District that establishes requirements for land use compatibility near an airport. Both jurisdictions set the AEO boundary at the most recently approved 65 DNL contour. In order to address concerns by the jurisdictions about overlay zoning boundaries that shift over time, and to provide a more reliable land use policy, a fixed boundary approach is being recommended through the implementation of the ALUMD. More information on the ALUMD is provided in Measure LU-12.

Relationship to 2007 NCP: Continues approved measure LU-4 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land used surrounding the Airport.

Responsible Implementing Parties: City of Columbus, Franklin County, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA to continue working with local jurisdictions to implement the recommendations for the area defined in the ALUMD.

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-5

Exhibit: N/A

Description: Seek cooperation from Franklin County, the City of Gahanna, and Jefferson Township to amend each jurisdiction's zoning resolution to require applicants for rezoning, change of use, or special use permit to convey an avigation easement to the appropriate airport.

Background and Intent: This measure was partially implemented. Section 660.07 of the Franklin County Zoning Resolution requires conveyance of avigation easements for variance or conditional use permits only.

Relationship to 2007 NCP: Continues approved measure LU-5 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land use surrounding the Airport.

Responsible Implementing Parties: Franklin County, City of Gahanna, Jefferson Township, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA will continue to work with the local jurisdiction to implement the original language of the measure.

Costs: Minimal cost to the CRAA and local governments.

Schedule: This is an ongoing measure that will continue.

Effects on Other Programs/Measures: This measure is not expected to adversely affect any other mitigation program measures.

Noise Compatibility Program Measure: LU-6

Exhibit: N/A

Description: Seek cooperation from Jefferson Township and the City of Gahanna to adopt the proposed Airport Land Use Management District (ALUMD) as part of their official zoning regulations.

Background and Intent: This measure was not implemented as originally recommended using the Airport Environs Overlay (AEO) boundary. Neither the City of Gahanna nor Jefferson Township adopted the AEO boundary. In order to address concerns by the jurisdictions about moving boundaries and to provide a more reliable land use policy, a fixed boundary approach is being recommended through the implementation of the ALUMD. More information on the ALUMD is provided in Measure LU-12.

Relationship to 2007 NCP: Continues approved measure LU-6 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land used surrounding the Airport.

Responsible Implementing Parties: Jefferson Township, City of Gahanna, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA to continue working with local jurisdictions to implement the recommendations for the area defined in the ALUMD.

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-7

Exhibit: N/A

Description: Seek cooperation from Franklin County, Jefferson Township, and the City of Gahanna to adopt subdivision codes applicable to the proposed Airport Land Use Management District (ALUMD).

Background and Intent: This measure was not implemented as originally recommended using the Airport Environs Overlay (AEO) boundary. None of the jurisdictions listed adopted subdivision codes applicable to development near the Airport for the AEO boundary. In order to address concerns by the jurisdictions about moving boundaries and to provide a more reliable land use policy, a fixed boundary approach is being recommended through the implementation of the ALUMD. More information on the ALUMD is provided in Measure LU 12.

Relationship to 2007 NCP: Continues approved measure LU-7 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land use surrounding the Airport.

Responsible Implementing Parties: Franklin County, Jefferson Township, City of Gahanna, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA to continue working with local jurisdictions to implement the recommendations for the area defined in the ALUMD.

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-8

Exhibit: N/A

Description: Seek cooperation from Franklin County, Jefferson Township, and the City of Gahanna to adopt building codes applicable to the proposed Airport Land Use Management District (ALUMD).

Background and Intent: This measure was not implemented as originally recommended using the Airport Environs Overlay (AEO) boundary. None of the jurisdictions listed adopted building codes applicable to development near the Airport for the AEO boundary. In order to address concerns by the jurisdictions about moving boundaries and to provide a more reliable land use policy, a fixed boundary approach is being recommended through the implementation of the ALUMD. More information on the ALUMD is provided in Measure LU-12.

Relationship to 2007 NCP: Continues approved measure LU-8 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will enhance the compatibility of land used surrounding the Airport.

Responsible Implementing Parties: Franklin County, Jefferson Township, City of Gahanna, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps: CRAA to continue working with local jurisdictions to implement the recommendations for the area defined in the ALUMD.

Costs: Minimal cost to the CRAA and local governments.

Schedule: Can be implemented immediately.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-9

Exhibit: N/A

Description: Seek cooperation from the board of realtors to participate in a fair disclosure program for property located within the proposed Airport Land Use Management District (ALUMD).

Background and Intent: Fair disclosure regulations are intended to ensure that prospective buyers of property are informed that the property is, or may be, exposed to potentially disruptive aircraft noise.

Proposed State Legislation (House Bill 133) was written for the 122nd Ohio General Assembly (1997-1998). This Bill, introduced by Representatives Thomas, Corbin, and Terwilleger, included a fair disclosure element. The Bill proposed that the Aviation Administrator for the State of Ohio Department of Transportation would publish a notice in a newspaper of general circulation in each affected political subdivision, indicating that an airport zone had been identified, and indicating where the public could inspect the airport zone delineation. The Administrator would also notify each landowner of record of land located in the airport zone. This notification would be sent by certified mail to the landowner at the address indicated in the most recent tax duplicate. Any person who received written notice that a parcel of real property that the person owns is included in an airport zone shall not sell or transfer any interest in that real property unless the person first provides written notice to the purchaser or grantee that the real property is included in an airport zone. House Bill 133 never received any further action, and was never moved forward. Currently there is no state law that addresses the issue of fair disclosure.

Since the regulatory approach did not succeed, it may be possible to achieve fair disclosure through voluntary programs. Assistance should be sought from local groups in the housing industry such as the Board of Realtors and the Homebuilders Association and their ethics committees, and local lending institutions. The Columbus Regional Airport Authority (CRAA) should also periodically place advertisements in the real estate sections of the newspapers.

Since owners of property located within the ALUMD are subject to the regulations imposed by the ALUMD, it follows that prospective buyers of real property or lessees of residential property located within the ALUMD should receive fair disclosure regarding the location of the property with respect to the ALUMD.

Relationship to 2007 NCP: Continues approved measure LU-9 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: This measure would notify potential homeowners of the proximity to the Airport and the noise associated with aircraft operations.

Responsible Implementing Parties: Columbus Area Board of Realtors and Homebuilders Association

Implementation Steps, Costs, and Phasing:

Steps:

- CRAA contacts local Board of Realtors/Homebuilders Association.
- Develop model Fair Disclosure Statement.
- Fair Disclosure Statement is implemented by the Board of Realtors.

Costs: Approximately $10,000 for outside consulting assistance.

Schedule: This measure can be implemented immediately, contingent upon the availability of funding.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-10

Exhibit: N/A

Description: Periodically place advertisements in a variety of media outlets delineating the boundaries of the Airport Land Use Management District (ALUMD).

Background and Intent: The intent of this measure is to notify people living near the Airport that aircraft may cause noise that they find objectionable. This outreach effort would be focused on placing advertisements in the local newspapers, on websites, and other media outlets, as appropriate.

Relationship to 2007 NCP: Continues approved measure LU-10 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Will notify people interested in living in the area about the proximity of the Airport.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: After FAA approval and funding is secured, advertisements will be developed and placed through local media outlets.

Costs: Approximately $10,000 annually for advertising

Schedule: This measure can be implemented immediately, contingent upon the availability of funding.

Effects on Other Programs/Measures: This measure is dependent upon measure LU-12 which defines the boundary of the ALUMD.

Noise Compatibility Program Measure: LU-12

Exhibit: 4-4

Description: Develop an Airport Land Use Management District (ALUMD) based on the 2023 Noise Exposure Map/Noise Compatibility Program (NCP) noise contour, other geographic, and jurisdictional boundaries.

Background and Intent: This measure would develop a fixed boundary within which land use controls will be recommended. These land use controls will include noise overlay zoning, updates to subdivision regulations and building codes, and formal fair disclosure policies, as discussed in currently approved measures LU-4 through LU-9.

This measure would identify a boundary, within which, the Airport has some influence. This influence includes indirect economic benefits such as hotel and commercial development, noise from aircraft overflights, and restrictions on the use of land or height of structures. All jurisdictions within the ALUMD have been contacted and coordinated with to discuss incorporating this boundary into their planning documents.

The ALUMD is envisioned with a series of sub-districts where different land use controls can be applied. It is recommended that the sub-districts also be fixed boundaries so that normal increases and decreases in the Airport's noise contours do not require reestablishing the land use boundaries. The boundaries and suggested levels of restrictions are summarized below:

Boundary A: 2,000' x 5,000' Runway End Boxes:

This area is defined using the existing north and proposed south runway locations. Within 5,000 feet of the end of the runway and 1,000' to either side of the runway centerline is generally an area that will receive the highest noise levels and number of disruptive overflights. In general, within these areas the aircraft, no matter how quiet, are likely to be disruptive to noise-sensitive land uses. It is recommended that no new noise-sensitive land uses be allowed in this area and that the CRAA and the appropriate jurisdiction work to redevelop existing noise-sensitive land uses to something more compatible. This may take the form of changes in zoning and/or avigation easements that restrict the use if sold.

Boundary B: 4,000' x 10,000' Runway End Boxes Modified to Reflect Noise Contours:

Within 10,000 feet of the end of the runway and 2,000 feet to either side of the runway is an area that will likely receive high levels of noise and numerous overflights now and in the future. This area was modified slightly to reflect the boundaries of the 2012 and 2023 noise exposure contours from the 2007 Part 150 Study and to follow naturally occurring boundaries within the community. It is recommended that new noise-sensitive development is discouraged and allowed only if the owner is willing to sign an avigation easement and upgrade building materials to meet noise level reduction criteria consistent with FAA standards.

Noise Compatibility Program Measure: LU-12, *(continued from previous page)*

Background and Intent, *continued*:

Boundary C: Community Based Boundary:

This area was defined using the 60 DNL of the 2023 noise exposure contour from the 2007 Part 150 Study and community landmarks and boundaries, such as political boundaries and roads. This area would occasionally experience direct overflights and would generally recognize that an airport is nearby. It is acknowledged that at times, the noise levels could be disruptive for those living in this area. It is recommended that within this area, a program for notification should be implemented that alerts people to the fact that they live near an airport and at times there may be some disruption. Suggestions to deal with excessive noise levels for both existing and new development would be offered to people, schools and churches in this area. The CRAA should be given an opportunity for discretionary review from all of the jurisdictions with zoning powers for all projects in the green zone that are noise-sensitive (residential, schools, churches, etc.). This review would allow the CRAA to compare the proposed project with the most current DNL contours available at that time. If the 65 DNL contours extend into the area and the project falls within the 65 DNL, then the recommendation from the CRAA could be less favorable and may include a request for an avigation easement. If the project is outside the noise contours, then the recommendation could be more of a notification and suggested ways to reduce noise. This approach allows the use of the most recent contours while having a fixed boundary that provides more uniform protection.

Because there are nine jurisdictions with various land use and zoning regulations, implementation would require the assistance of the Mid-Ohio Regional Planning Agency (MORPC) or some similar organization to help coordinate and facilitate this process.

Relationship to 2007 NCP: Continues approved measure LU-12 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: This measure would establish a fixed boundary around the Airport within which consistent land use planning for compatibility purposes can be conducted.

Responsible Implementing Parties: Franklin County, Jefferson Township, City of Gahanna, City of Columbus, Bexley, Whitehall, Reynoldsburg, Truro Township, MORPC, and Columbus Regional Airport Authority (CRAA)

Implementation Steps, Costs, and Phasing:

Steps:

- Secure Federal Aviation Administration (FAA) funding and CRAA budget approval.
- Contract with MORPC (or similar agency) to assist with definition and initial contacts with jurisdictions.
- Identify the boundary of the ALUMD
- Request that local jurisdictions incorporate the ALUMD into their current land use planning documents.

Costs: The costs of implementing this measure will include contracting with MORPC (or similar agency) to coordinate and facilitate the implementation of this measure. There will also be administrative costs of the CRAA and local jurisdictions. Total cost estimated at approximately $55,000.

Schedule: This measure can be implemented immediately, contingent upon the availability of funding.

Effects on Other Programs/Measures: This measure would enable measures LU-4, LU 6, LU-7, LU-8, LU-9, LU-10, and any other future measures that would recommend land use control strategies within the airport area.

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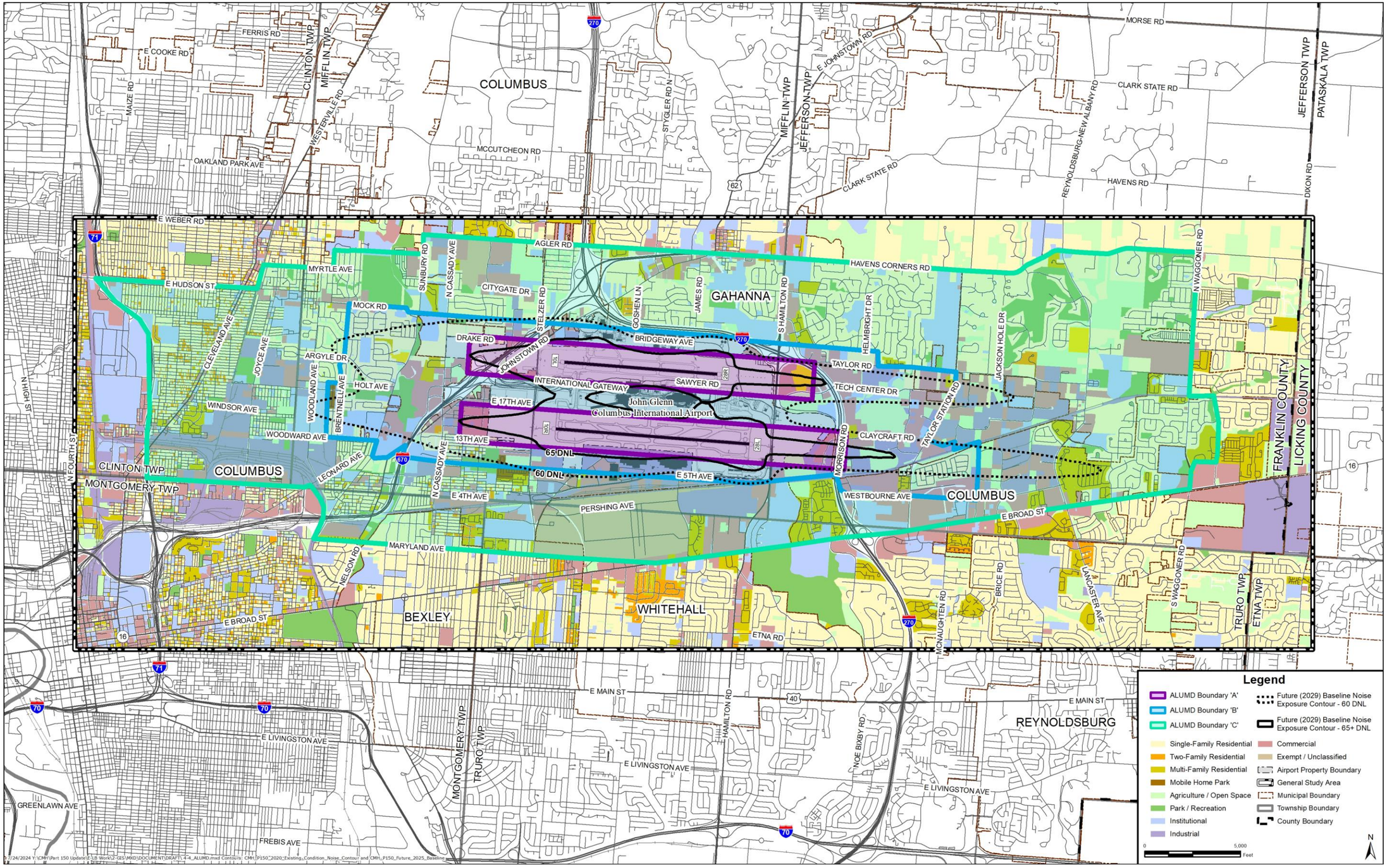
Exhibit 4-4 Measure LU-12 – Recommended Airport Land Use Management District Boundary



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Noise Compatibility Program Measure: PM-1

Description: Maintain the noise abatement elements of the FAA ATCT Tower Order.

Background and Intent: The Columbus Regional Airport Authority (CRAA) has and will continue to work with the John Glenn Columbus International Airport (CMH) Air Traffic Control Tower (ATCT) to implement noise abatement procedures. This includes insuring that the ATCT Tower Order clearly and correctly states the noise abatement procedures in a way that reflects the intent of the measure. The CRAA will work with the ATCT to update the existing Tower Order to recognize the recommended measures from this Part 150 Update.

Relationship to 2007 NCP: Continues approved measure PM-1 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Does not specifically improve land use compatibility, however, it does help to ensure that the intended procedures are being implemented by the ATCT.

Responsible Implementing Parties: CRAA and FAA

Implementation Steps, Costs, and Phasing:

Steps: After FAA approval of the Part 150 Noise Compatibility Program, the CRAA would work with the ATCT to update the Tower Order as necessary.

Costs: No additional costs.

Schedule: The program has been initiated and will continue without interruption.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: PM-2

Description: Maintain the Noise Management Office for noise compatibility program management.

Background and Intent: Typically, the management of an ongoing Noise Compatibility Plan (NCP) involves the designation of a person (or persons) that will manage the short-term and long-term activities related to noise at the Airport. The Part 150 NCP may involve the implementation of several actions that will require the close management and coordination by the facilitator of the NCP. The Columbus Regional Airport Authority (CRAA) manages noise complaints and the noise monitoring system through the operations department. Operations is responsible for receiving and responding to noise complaints, reviewing compliance with noise abatement procedures, evaluating progress on implementing land use recommendations, etc.

Relationship to 2007 NCP: Continues approved measure PM-2 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: No specific improvement to land use compatibility, but improved communications between the Airport and neighboring communities.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: No additional steps.

Costs: Minimal cost for staff time to manage the program

Schedule: The program has been initiated and will continue without interruption.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: PM-3

Description: Maintain an ongoing public involvement program regarding the noise compatibility program.

Background and Intent: The basic elements of the Part 150 Study public involvement program could be refined and adapted as continuing program elements. Components of the program include: holding routine public workshops, routine distribution of newsletters, and sending out press releases. Other elements could be added such as tours of the noise abatement office and demonstration of the noise and flight track monitoring system.

Relationship to 2007 NCP: Continues approved measure PM-3 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: No specific improvement to land use compatibility, but improved communications between the Airport and neighboring communities would identify and correct possible deviations from approved flight operating procedures that could be noncompatible with surrounding land use.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: Continuation of current outreach efforts. No new steps required.

Costs: $25,000 annually to produce outreach materials such as the noise complaint hotline annual report and pilot awareness materials.

Schedule: The program has been initiated and will continue without interruption.

Effects on Other Programs/Measures: The measure is not expected to impact other measures or existing programs.

Noise Compatibility Program Measure: PM-4

Description: Maintain the noise and flight track monitoring system, and expand and upgrade the system as necessary.

Background and Intent: The Columbus Regional Airport Authority (CRAA) has an Airport Noise & Flight Track Monitoring System, which is located at John Glenn Columbus International Airport (CMH). This system provides aircraft flight tracks and noise measurement data for all three airports managed by the CRAA (CMH, Rickenbacker International (LCK), and Bolton Field (TZR)). The system originally included 12 permanent noise monitors (NMTs) in the community surrounding CMH and two permanent noise monitors near LCK. The system provides data that can be used by the CRAA noise office to monitor flight events, noise levels, and to assist in responding to noise complaints. The 2007 Part 150 Study recommended several enhancements to the system to improve the ability of the CRAA to collect and analyze data for CMH and respond to public requests for information.

These enhancements included:

- The purchase and installation of up to eight additional permanent noise monitors to be located around the Airport.
- Other system enhancements as technology improves.

In 2014, the system was upgraded with new software and hardware, including replacement of the original NMTs and addition of four new NMTs at CMH along the extended centerline of the relocate Runway 10R/28L. CRAA staff continue to monitor the operation of the system and provide for periodic maintenance and upgrades.

Relationship to 2007 NCP: Continues approved measure PM-4 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: Improvements to the system would enable the Airport's Noise Office to better respond to the needs of the community.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: Continue to monitor the system hardware and software and make periodic system updates as necessary and/or recommended by the vendor.

Costs: Minimal cost to monitor the system hardware and software.

Schedule: The program has been initiated and will continue without interruption.

Effects on Other Programs/Measures: This measure will provide additional noise and operations data that can be used in PM-2 and PM-3.

Noise Compatibility Program Measure: PM-5

Description: Routinely update the noise contours and periodically update the noise program.

Background and Intent: The NEMs are likely to become outdated and will need to be updated periodically. The NEMs should be updated every two to three years to consider changes in operating levels and patterns, as well as updates of the noise modeling software. In addition, the NEMs should be updated in accordance with the Federal Aviation Administration's (FAA's) guidelines for determining what constitutes a potentially significant increase in operations (17 percent increase in the area impacted by 65+ DNL). The NCP should be updated every five years, or as necessary, to reflect larger changes in the nature of aircraft noise surrounding the Airport. Should any development, such as runway realignments or significant modifications to ground facilities, enlarge the area of incompatible use exposed to aircraft noise above 65 Day-Night Average Sound Level (DNL), the NCP should be updated prior to the implementation of those improvements. A full update may not be required, but rather, a targeted assessment of the changes occasioned by specific development projects may suffice to bring the NCP to conformity and to qualify additional areas for NCP programs, if appropriate.

Relationship to 2007 NCP: Continues approved measure PM-5 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: No specific improvement to land use compatibility; the measure provides for continuing planning and care in assuring the greatest compatibility between the Airport and its environs.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps:

- Evaluate the need of NEM or NCP update based on conditions.
- If appropriate, retain a qualified planning consultant to conduct the update(s).
- Complete and publish the results, modifying or expanding NCP programmatic boundaries as appropriate at the time of update.

Costs: Update of the NEMs could be accomplished for approximately $500,000. The NCP could be updated at a cost of $1,500,000 or less, assuming moderate facility changes. Substantial changes could increase the costs of NCP update significantly. Both updates are eligible for funding through FAA AIP grant monies at 80 percent FAA participation.

Schedule: Review operating levels periodically for significant changes. Conduct NEM update when changes to conditions warrant or by 2029/2030, with NCP update as needed.

Effects on Other Programs/Measures: Reviews all other programs and measures to assure their incorporation into the description of the noise condition at the Airport.

Noise Compatibility Program Measure: PM-6

Description: Establish a land use compatibility task force which meets periodically to discuss issues relevant to airport noise compatibility planning.

Background and Intent: A meeting was held on October 28, 1998, to discuss the Airport Environs Overlay (AEO) district. Representatives from the City of Columbus, Franklin County, John Glenn Columbus International Airport, Ohio State University Airport, and Rickenbacker International Airport participated in the meeting. The goal of the meeting was to achieve consensus amongst all the airports and jurisdictions that currently have an AEO in place regarding an approach to updating the AEO.

The group should continue to meet, as needed, to discuss land use compatibility planning issues that relate to all airports in the Columbus area. Jurisdictions that do not currently have an AEO in place should also be invited to participate.

Relationship to 2007 NCP: Continues approved measure PM-6 of 2007 Part 150 NCP.

Land Use Compatibility Improvement: the committee is intended to communicate the nature of land use compatibility to the community and assist with implementation of land use measures.

Responsible Implementing Parties: CRAA

Implementation Steps, Costs, and Phasing:

Steps: At this point the committee is no longer active, however if it is determined the committee is needed, the following steps would be taken.

- Identify organizations and communities desired for participation
- Request each organization/community to identify/assign a participant (continuation of membership by interested current members of the Part 150 PAC would be encouraged)
- Establish agenda and committee goals
- Begin meetings

Costs: Administrative costs for printing, staff support, report production, meeting facilities and refreshments, and potentially room rental costs. Total cost estimated at approximately $10,000 to $20,000 annually depending on frequency and type of meetings.

Schedule: Meetings as necessary, with continuing participation by all members during interim periods.

Effects on Other Programs/Measures: None

4.2 Noise Compatibility Program Map

No new noise abatement measures are proposed in this NCP update that would change the pattern of aircraft noise at CMH. As noted in this chapter, existing noise abatement measures are recommended to be continued. **Exhibit 4-5, *Future (2029) NEM/NCP Noise Exposure Contour***, constitutes the official NEM for the year 2029, and is reflective of implementation of all of the previously-recommended noise abatement measures.

Table 4-2 presents the noise impacts for the Future (2029) NEM/NCP noise exposure contour. There are no housing units and no noise-sensitive facilities located within the Future (2029) NEM/NCP noise exposure contour.

Table 4-2 Future (2029) NEM/NCP Housing, Population, and Noise-Sensitive Facilities Incompatibilities

Category	Future (2029) NEM/NCP
Housing Units	
65 – 70 DNL	0
70 – 75 DNL	0
75+ DNL	0
65+ DNL	0
Population	
65 – 70 DNL	0
70 – 75 DNL	0
75+ DNL	0
65+ DNL	0
Noise-Sensitive Facilities	
65 – 70 DNL	0
70 – 75 DNL	0
75+ DNL	0
65+ DNL	0

Source: Landrum & Brown, 2024.

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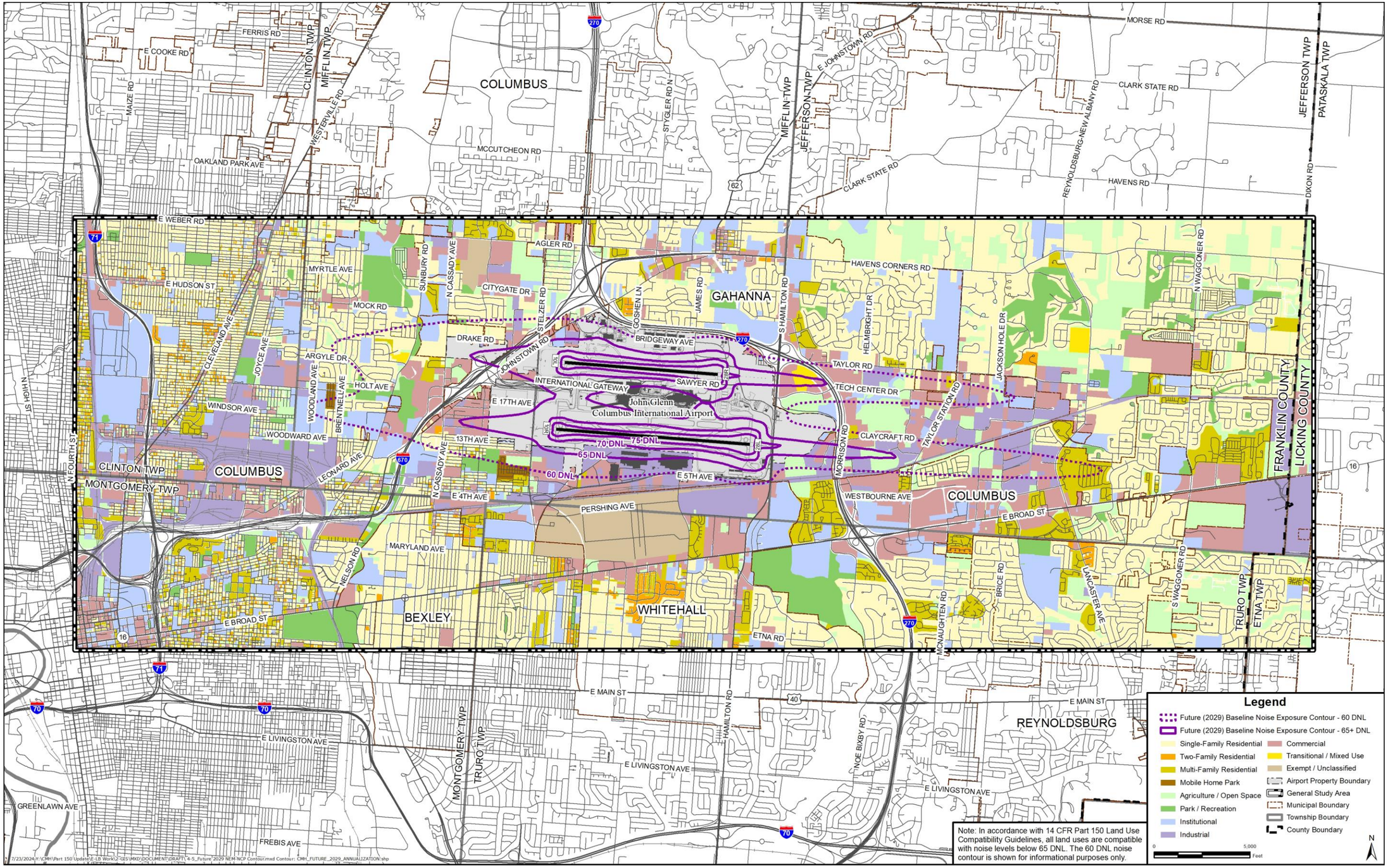
Exhibit 4-5 Future (2029) NEM/NCP Noise Exposure Contour



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4.3 Noise Compatibility Program Costs

The CRAA, supplemented by funding from the FAA, will incur the direct costs associated with the recommended NCP measures. Costs for continuation of the program have been estimated in 2024 dollars and are presented in **Table 4-3**. These costs are separated between costs to the CRAA, costs to local governments, and costs to users (e.g. airlines, corporate aviation, general aviation) if any, with CRAA carrying the vast majority of responsibility for the costs of the program measures. Where applicable, Table 4-3 notes if costs are annual or one-time expenses. The CRAA-funded mitigation actions recommended for implementation are eligible for Federal matching funds amounting to approximately 80 percent of the total program cost. The costs of each individual measure are detailed earlier in this chapter.

Annual costs consist of the administrative expenses to review flight procedures or to coordinate public outreach efforts and land use compatibility planning meetings related to implementation of the ALUMD and related land use efforts. Costs for staff review of noise abatement measures NA-3, NA-4, NA-5, and NA-6 is estimated to be approximately $10,000 annually. The total estimated cost for all NCP recommendations is between $45,000 to $55,000 annually, plus a one-time cost of $575,000 to $1,575,000.

Table 4-3 2024 NCP Implementation Costs

Type of Measure	Direct Cost to CRAA	Direct Cost to Local Government	Direct Cost to Users
Noise Abatement Measures			
- Periodic Review of flight procedures	$10,000 annually	None	None
Subtotal	*$10,000 annually*	*None*	*None*
Land Use Measures			
- Implement ALUMD and provide public/ realtor notification	$75,000 (on time cost)	*Minimal*	None
Subtotal	*$75,000 (one-time cost)*	*Minimal*	None
Program Management Measures			
- Public Involvement	$25,000 annually	None	None
- Update NEM or Update NEM and NCP	$500,000 to $1,500,000 (one-time cost)	None	None
- Miscellaneous staff and administrative costs	$10,000 to $20,000 annually	None	None
Subtotal	*$35,000 to $45,000 annually plus one-time cost of $500,000 to $1,500,000*	*None*	None
Total	***$45,000 to $55,000 annually plus one-time cost of $575,000 to $1,575,000***	**Minimal**	**None**

Notes: The CRAA-funded mitigation actions recommended for implementation are eligible for Federal matching funds amounting to approximately 80 percent of the total program cost.
Source: Landrum & Brown, 2024.

4.4 Implementation Schedule

As shown in Table 4-1, the existing noise abatement measures (NA-1 through NA-9) are from the previously approved 2007 Part 150 NCP and can continue uninterrupted. The existing corrective land use mitigation measures (LU-1 and LU-2) are previously approved; although, no land uses have been identified for implementation. The preventive land use measures (LU-3, LU-4, LU-5, LU-6, LU-7, LU-8, LU-9, LU-10 and LU-12) can be implemented immediately. Program management measures PM-1, PM-2, PM-3, PM-4, and PM-6 are continuations of previous measures and can be implemented immediately. Measure PM-5 is a continuation of a previously-approved measure and can be implemented at any time with a full update to the NEMs or NEMs/NCP expected to occur by the year 2029 or 2030.